

# **Potential Flow Forces and Moments from Selected Ship Flow Codes in a Set of Numerical Experiments**

## **Appendix G — Time History Plots for 0-DOF Motion of Model 5613 in Waves**

# Report Documentation Page

*Form Approved*  
*OMB No. 0704-0188*

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|   |                                    |                                     |   |  |                                 |
|---|------------------------------------|-------------------------------------|---|--|---------------------------------|
| 1. REPORT DATE<br><b>01 MAY 2008</b>  |                                    | 2. REPORT TYPE<br><b>N/A</b>        |   | 3. DATES COVERED<br><b>-</b>             |                                 |
| 4. TITLE AND SUBTITLE<br><b>Potential Flow Forces and Moments from Selected Ship Flow Codes in a Set of Numerical Experiments Appendix G Time History Plots for 0-DOF Motion of Model 5613 in Waves</b> |                                    |                                     |   | 5a. CONTRACT NUMBER                      |                                 |
|   |                                    |                                     |   | 5b. GRANT NUMBER                         |                                 |
|   |                                    |                                     |   | 5c. PROGRAM ELEMENT NUMBER               |                                 |
| 6. AUTHOR(S)  |                                    |                                     |   | 5d. PROJECT NUMBER                       |                                 |
|   |                                    |                                     |   | 5e. TASK NUMBER                          |                                 |
|   |                                    |                                     |   | 5f. WORK UNIT NUMBER                     |                                 |
| 7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)<br><b>Naval Surface Warfare Center Carderock Division 9500 Macarthur Boulevard West Bethesda, MD 20817-5700</b>                                      |                                    |                                     |   | 8. PERFORMING ORGANIZATION REPORT NUMBER |                                 |
| 9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)   |                                    |                                     |   | 10. SPONSOR/MONITOR'S ACRONYM(S)         |                                 |
|   |                                    |                                     |   | 11. SPONSOR/MONITOR'S REPORT NUMBER(S)   |                                 |
| 12. DISTRIBUTION/AVAILABILITY STATEMENT<br><b>Approved for public release, distribution unlimited</b>   |                                    |                                     |   |  |                                 |
| 13. SUPPLEMENTARY NOTES<br><b>See also ADM002134. Potential Flow Forces and Moments from Selected Ship Flow Codes in a Set of Numerical Experiments, The original document contains color images.</b>   |                                    |                                     |   |  |                                 |
| 14. ABSTRACT  |                                    |                                     |   |  |                                 |
| 15. SUBJECT TERMS   |                                    |                                     |   |  |                                 |
| 16. SECURITY CLASSIFICATION OF:   |                                    |                                     | 17. LIMITATION OF ABSTRACT<br><b>UU</b> | 18. NUMBER OF PAGES<br><b>2241</b>       | 19a. NAME OF RESPONSIBLE PERSON |
| a. REPORT<br><b>unclassified</b>  | b. ABSTRACT<br><b>unclassified</b> | c. THIS PAGE<br><b>unclassified</b> |   |  |                                 |

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- G-852. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1944
- G-853. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1946
- G-854. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1948
- G-855. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1950
- G-856. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1952
- G-857. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1954
- G-858. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1956
- G-859. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1958
- G-860. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1960
- G-861. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1962
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- G-864. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1968
- G-865. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1970

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- G-866. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1972
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- G-872. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1984
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- G-875. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1990
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- G-877. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1994
- G-878. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1996
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- G-880. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2000
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- G-883. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2006
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- G-885. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2010
- G-886. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2012
- G-887. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2014
- G-888. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2016
- G-889. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2018
- G-890. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2020
- G-891. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2022
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- G-894. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2028
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- G-896. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2032
- G-897. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2034
- G-898. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2036
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- G-902. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2044
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- G-907. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2054

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| G-908. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/10$ , $\lambda/L = 1$ , $\beta = 45^\circ$ , $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2056 |
| G-909. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/60$ , $\lambda/L = 1$ , $\beta = 90^\circ$ , $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . .  | G-2058 |
| G-910. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/20$ , $\lambda/L = 1$ , $\beta = 90^\circ$ , $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . .  | G-2060 |
| G-911. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/15$ , $\lambda/L = 1$ , $\beta = 90^\circ$ , $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . .  | G-2062 |
| G-912. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/10$ , $\lambda/L = 1$ , $\beta = 90^\circ$ , $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . .  | G-2064 |
| G-913. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/60$ , $\lambda/L = 1$ , $\beta = 135^\circ$ , $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2066 |
| G-914. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/20$ , $\lambda/L = 1$ , $\beta = 135^\circ$ , $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2068 |
| G-915. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/15$ , $\lambda/L = 1$ , $\beta = 135^\circ$ , $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2070 |
| G-916. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/10$ , $\lambda/L = 1$ , $\beta = 135^\circ$ , $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2072 |
| G-917. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/60$ , $\lambda/L = 1$ , $\beta = 180^\circ$ , $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2074 |
| G-918. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/20$ , $\lambda/L = 1$ , $\beta = 180^\circ$ , $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2076 |
| G-919. | Time history of $M_x^{\text{dif}}$ for one period for $H/\lambda = 1/15$ , $\lambda/L = 1$ , $\beta = 180^\circ$ , $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . . | G-2078 |
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| G-921. | Time history of $M_y^{\text{dif}}$ for one period for $H/\lambda = 1/60$ , $\lambda/L = 1$ , $\beta = 0^\circ$ , $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to $L = 154$ m. . . . .   | G-2082 |



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- G-922. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2084
- G-923. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2086
- G-924. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2088
- G-925. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2090
- G-926. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2092
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- G-994. Minimum and maximum of of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1235
- G-995. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1237
- G-996. Minimum and maximum of of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1237
- G-997. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1239
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- G-1036. Minimum and maximum of of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1277
- G-1037. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1279
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- G-1041. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1283
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- G-1048. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1289
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- G-1050. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1291
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- G-1052. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1293
- G-1053. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1295
- G-1054. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1295
- G-1055. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1297
- G-1056. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1297
- G-1057. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1299
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- G-1480. Minimum and maximum of of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1721
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- G-1484. Minimum and maximum of of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1725
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- G-1487. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1729
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- G-1489. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1731
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- G-1612. Minimum and maximum of of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1853
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- G-1661. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1903
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- G-1663. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1905
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- G-1665. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1907
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- G-1667. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1909
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- G-1669. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1911
- G-1670. Minimum and maximum of of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1911
- G-1671. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1913

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- G-1672. Minimum and maximum of of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1913
- G-1673. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1915
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- G-1677. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1919
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- G-1691. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1933
- G-1692. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1933
- G-1693. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1935
- G-1694. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1935
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- G-1696. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1937
- G-1697. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1939
- G-1698. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1939
- G-1699. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1941
- G-1700. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1941
- G-1701. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1943
- G-1702. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1943
- G-1703. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1945
- G-1704. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1945
- G-1705. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1947
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- G-1707. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1949

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- G-1708. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1949
- G-1709. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1951
- G-1710. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1951
- G-1711. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1953
- G-1712. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1953
- G-1713. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1955
- G-1714. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1955
- G-1715. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1957
- G-1716. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1957
- G-1717. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1959
- G-1718. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1959
- G-1719. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1961

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- G-1720. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1961
- G-1721. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1963
- G-1722. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1963
- G-1723. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1965
- G-1724. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1965
- G-1725. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1967
- G-1726. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1967
- G-1727. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1969
- G-1728. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1969
- G-1729. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1971
- G-1730. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1971
- G-1731. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1973

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- G-1732. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1973
- G-1733. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1975
- G-1734. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1975
- G-1735. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1977
- G-1736. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1977
- G-1737. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1979
- G-1738. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1979
- G-1739. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1981
- G-1740. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1981
- G-1741. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1983
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- G-1743. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-1985

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- G-1744. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1985
- G-1745. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1987
- G-1746. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1987
- G-1747. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1989
- G-1748. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1989
- G-1749. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1991
- G-1750. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1991
- G-1751. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1993
- G-1752. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1993
- G-1753. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1995
- G-1754. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1995
- G-1755. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1997



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- G-1756. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1997
- G-1757. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1999
- G-1758. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-1999
- G-1759. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2001
- G-1760. Minimum and maximum of of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2001
- G-1761. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2003
- G-1762. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2003
- G-1763. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2005
- G-1764. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2005
- G-1765. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2007
- G-1766. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2007
- G-1767. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2009

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- G-1768. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2009
- G-1769. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2011
- G-1770. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2011
- G-1771. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2013
- G-1772. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2013
- G-1773. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2015
- G-1774. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2015
- G-1775. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2017
- G-1776. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2017
- G-1777. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2019
- G-1778. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2019
- G-1779. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2021

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- G-1780. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2021
- G-1781. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2023
- G-1782. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2023
- G-1783. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2025
- G-1784. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2025
- G-1785. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2027
- G-1786. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2027
- G-1787. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2029
- G-1788. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2029
- G-1789. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2031
- G-1790. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2031
- G-1791. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2033

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- G-1792. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2033
- G-1793. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2035
- G-1794. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2035
- G-1795. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2037
- G-1796. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2037
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- G-1809. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2051
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- G-1821. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2063
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- G-1823. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2065
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- G-1828. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2069
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- G-1833. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2075
- G-1834. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2075
- G-1835. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2077
- G-1836. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2077
- G-1837. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2079
- G-1838. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2079
- G-1839. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2081

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- G-1840. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2081
- G-1841. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2083
- G-1842. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2083
- G-1843. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2085
- G-1844. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2085
- G-1845. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2087
- G-1846. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2087
- G-1847. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2089
- G-1848. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2089
- G-1849. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2091
- G-1850. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2091
- G-1851. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2093



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- G-1852. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2093
- G-1853. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2095
- G-1854. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2095
- G-1855. Coefficients of the Fourier fit  $a_0+a_1 \sin(\omega t + \Phi_1)+a_2 \sin(2\omega t + \Phi_2)+\dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2097
- G-1856. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2097
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- G-1888. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2129
- G-1889. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2131
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- G-1892. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2133
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- G-1900. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2141
- G-1901. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2143
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- G-1903. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2145
- G-1904. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2145
- G-1905. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2147
- G-1906. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2147
- G-1907. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2149
- G-1908. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2149
- G-1909. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2151
- G-1910. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2151
- G-1911. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2153

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- G-1912. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2153
- G-1913. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2155
- G-1914. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2155
- G-1915. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2157
- G-1916. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2157
- G-1917. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2159
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- G-1925. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2167
- G-1926. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2167
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- G-1929. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2171
- G-1930. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2171
- G-1931. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2173
- G-1932. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2173
- G-1933. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2175
- G-1934. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2175
- G-1935. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2177

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- G-1936. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2177
- G-1937. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2179
- G-1938. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2179
- G-1939. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2181
- G-1940. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2181
- G-1941. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2183
- G-1942. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2183
- G-1943. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2185
- G-1944. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2185
- G-1945. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2187
- G-1946. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2187
- G-1947. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2189



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- G-1948. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2189
- G-1949. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2191
- G-1950. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2191
- G-1951. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2193
- G-1952. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2193
- G-1953. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2195
- G-1954. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2195
- G-1955. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2197
- G-1956. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2197
- G-1957. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2199
- G-1958. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2199
- G-1959. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2201

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- G-1960. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2201
- G-1961. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2203
- G-1962. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2203
- G-1963. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2205
- G-1964. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2205
- G-1965. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2207
- G-1966. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2207
- G-1967. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2209
- G-1968. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2209
- G-1969. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2211
- G-1970. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2211
- G-1971. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m. . . . . G-2213

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- G-1972. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2213
- G-1973. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2215
- G-1974. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2215
- G-1975. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2217
- G-1976. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2217
- G-1977. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2219
- G-1978. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2219
- G-1979. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2221
- G-1980. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2221
- G-1981. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2223
- G-1982. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2223
- G-1983. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2225

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- G-1984. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2225
- G-1985. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2227
- G-1986. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2227
- G-1987. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2229
- G-1988. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2229
- G-1989. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2231
- G-1990. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2231
- G-1991. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2233
- G-1992. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2233
- G-1993. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2235
- G-1994. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2235
- G-1995. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2237

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- G-1996. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2237
- G-1997. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2239
- G-1998. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2239
- G-1999. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2241
- G-2000. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m. . . . . G-2241

### Introduction

This appendix contains all the plots and tables for the simulations involving prescribed 0-DOF motion in waves of Model 5613 scaled to the length 154 m. Each of Figures G–1 through G–1000 contains time-history plots of the results from all codes for a single variable during one period of motion. If the code runner did not supply the data, the data vanish identically, or the data are insufficient for a single period, there is no curve for that code. The lack of data in any figure has been noted immediately below the figure. As necessary, the time that appears on the horizontal axis has been shifted so that the wave height at CG is of the form  $\eta = \eta_a \sin \omega t$  for some amplitude  $\eta_a$  and some frequency  $\omega$ . Furthermore, the time  $t$  has been replaced by  $t \bmod T_e$  where  $T_e$  is the period of the motion.

Tables G–1 through G–2000 contain information related to the results depicted in the figures. Two tables follow each figure. The first table gives estimates of the mean value and the amplitudes and phases of the first and second harmonics obtained by Fourier analysis. The second table gives the minimum and maximum of the variable plotted in the figure. The minimum and maximum of both the filtered and unfiltered variable are provided.

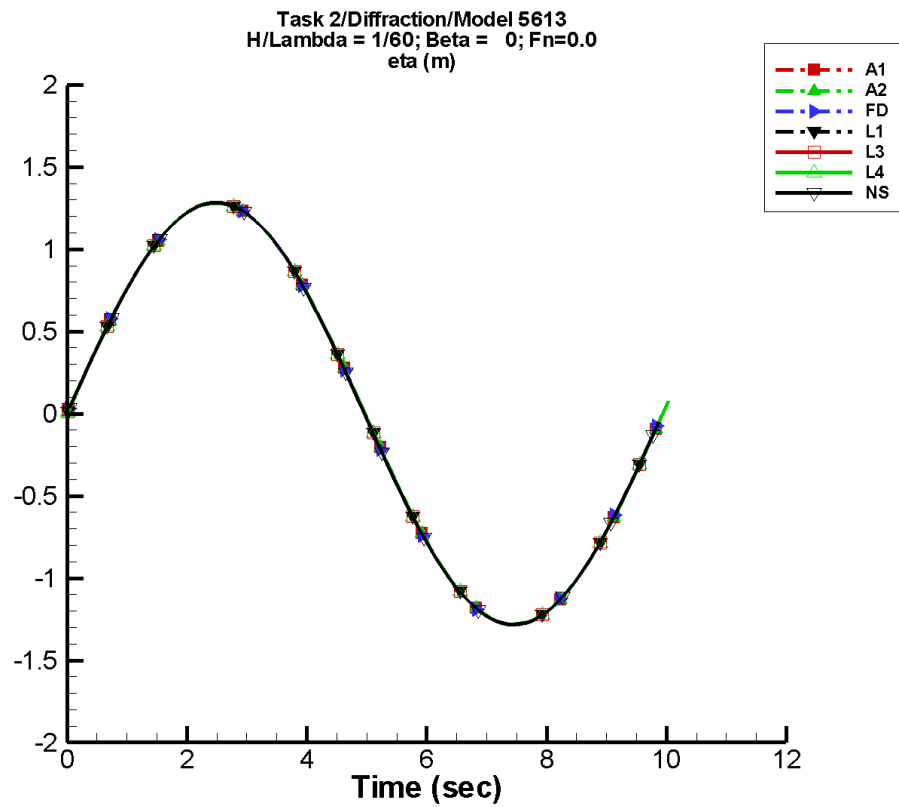
Appendix Q contains plots and tables for the behavior of the minimum and the maximum of each variable plotted in this appendix versus the wave steepness  $\lambda/H$ .

The headings are the same for both ships and speeds, as are the nondimensional wavelengths and wave steepnesses. The description of the waves is given in tables in the main part of the report. For ease of reference, the tables are reproduced here:

| $\beta$ ( $^\circ$ ) | Seas             |
|----------------------|------------------|
| 0                    | Following        |
| 45                   | Stern quartering |
| 90                   | Beam             |
| 135                  | Bow quartering   |
| 180                  | Head             |

| Wavelength<br>$\lambda/L$ | Wave Steepness<br>$H/\lambda$ |
|---------------------------|-------------------------------|
| 1                         | 1/60                          |
| 1                         | 1/20                          |
| 1                         | 1/15                          |
| 1                         | 1/10                          |

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Data identically zero, insufficient, or not available from NFA.

Figure G-1. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–1. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

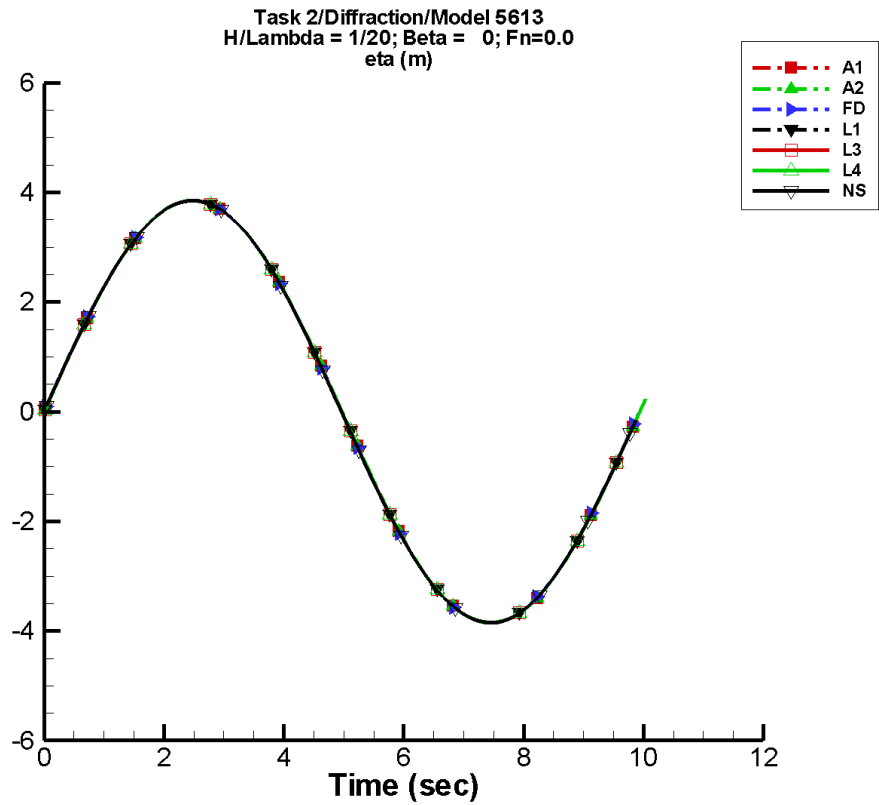
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| A2   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| FD   | 3.79E-04     | 1.28         | -8                | 5.64E-04     | 21                |
| L1   | 6.20E-04     | 1.28         | -4                | 1.27E-03     | 27                |
| L3   | 6.20E-04     | 1.28         | -4                | 1.27E-03     | 27                |
| L4   | 6.20E-04     | 1.28         | -4                | 1.27E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.79E-04    | 1.28         | 0                 | 4.17E-04     | -18               |

Table G–2. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.27          | 1.27           |
| A2   | -1.28          | 1.28           | -1.27          | 1.27           |
| FD   | -1.28          | 1.28           | -1.28          | 1.27           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.29           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-2. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

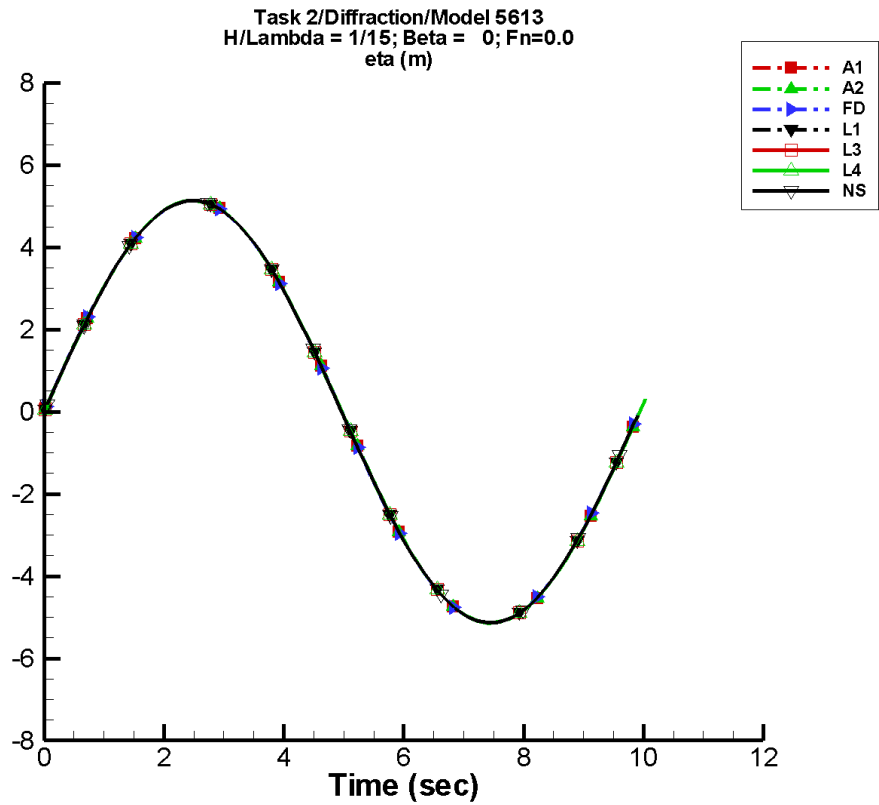
Table G-3. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| A2   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| FD   | 1.14E-03     | 3.85         | -8                | 1.69E-03     | 21                |
| L1   | 1.86E-03     | 3.85         | -4                | 3.80E-03     | 27                |
| L3   | 1.86E-03     | 3.85         | -4                | 3.80E-03     | 27                |
| L4   | 1.86E-03     | 3.85         | -4                | 3.80E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -8.36E-04    | 3.85         | 0                 | 1.25E-03     | -18               |

Table G-4. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.81          | 3.81           |
| A2   | -3.85          | 3.85           | -3.81          | 3.81           |
| FD   | -3.85          | 3.85           | -3.84          | 3.81           |
| L1   | -3.85          | 3.85           | -3.84          | 3.84           |
| L3   | -3.85          | 3.85           | -3.84          | 3.84           |
| L4   | -3.85          | 3.85           | -3.84          | 3.84           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.87           |

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Data identically zero, insufficient, or not available from NFA.

Figure G-3. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

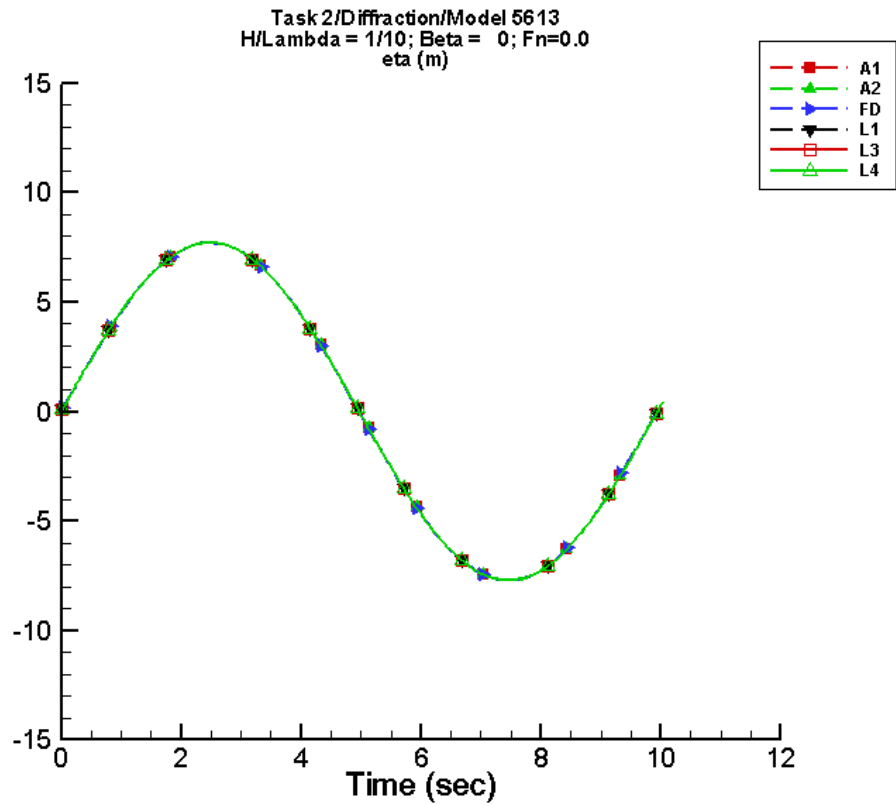
Table G-5. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| A2   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| FD   | 1.52E-03     | 5.13         | -8                | 2.26E-03     | 21                |
| L1   | 2.48E-03     | 5.13         | -4                | 5.07E-03     | 27                |
| L3   | 2.48E-03     | 5.13         | -4                | 5.07E-03     | 27                |
| L4   | 2.48E-03     | 5.13         | -4                | 5.07E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -1.13E-03    | 5.13         | 0                 | 1.69E-03     | -19               |

Table G-6. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.09          | 5.09           |
| A2   | -5.14          | 5.14           | -5.09          | 5.09           |
| FD   | -5.13          | 5.13           | -5.12          | 5.08           |
| L1   | -5.13          | 5.13           | -5.11          | 5.11           |
| L3   | -5.13          | 5.13           | -5.11          | 5.11           |
| L4   | -5.13          | 5.13           | -5.11          | 5.11           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.15           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-4. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

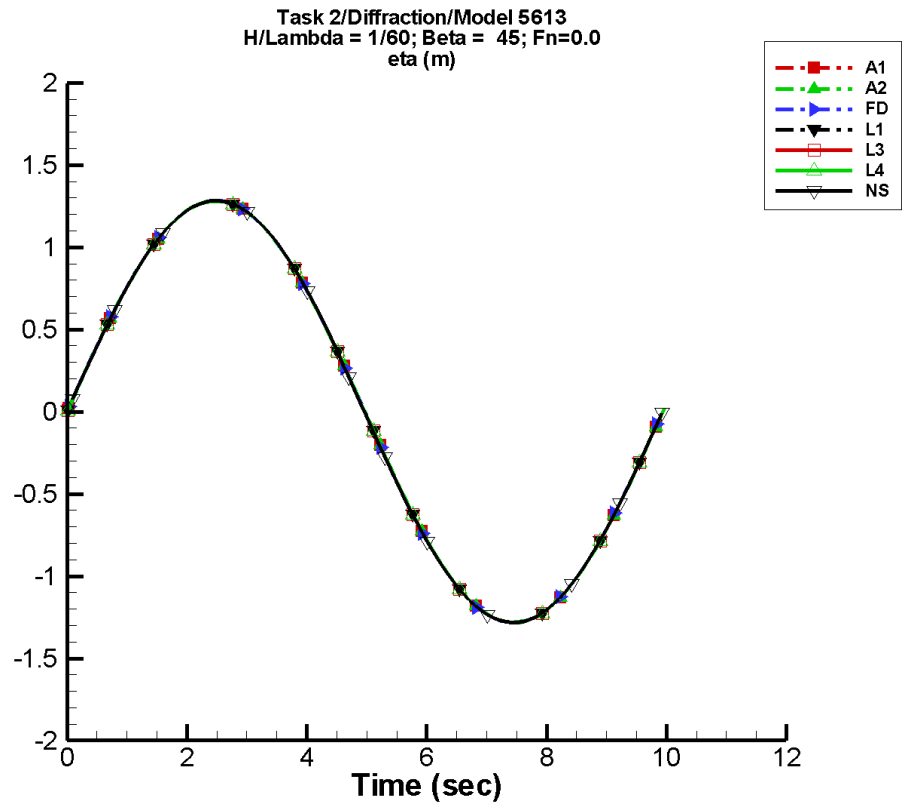
Table G-7. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| A2   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| FD   | 2.27E-03     | 7.70         | -8                | 3.38E-03     | 21                |
| L1   | 3.72E-03     | 7.70         | -4                | 7.61E-03     | 27                |
| L3   | 3.72E-03     | 7.70         | -4                | 7.61E-03     | 27                |
| L4   | 3.72E-03     | 7.70         | -4                | 7.61E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-8. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.63          | 7.63           |
| A2   | -7.71          | 7.71           | -7.63          | 7.63           |
| FD   | -7.70          | 7.70           | -7.68          | 7.62           |
| L1   | -7.70          | 7.70           | -7.67          | 7.67           |
| L3   | -7.70          | 7.70           | -7.67          | 7.67           |
| L4   | -7.70          | 7.70           | -7.67          | 7.67           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-5. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–9. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

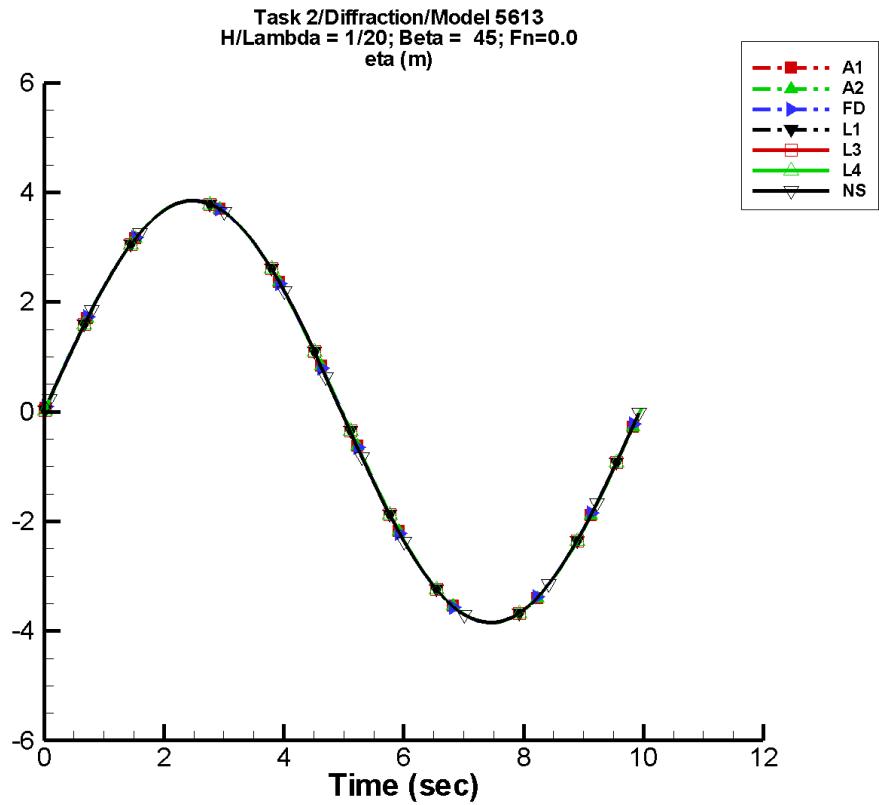
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| A2   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| FD   | 3.79E-04     | 1.28         | -8                | 5.64E-04     | 21                |
| L1   | 7.07E-04     | 1.28         | -4                | 1.09E-03     | 31                |
| L3   | 7.07E-04     | 1.28         | -4                | 1.09E-03     | 31                |
| L4   | 7.07E-04     | 1.28         | -4                | 1.09E-03     | 31                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.90E-04    | 1.28         | 0                 | 4.29E-04     | -20               |

Table G–10. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.27          | 1.27           |
| A2   | -1.28          | 1.28           | -1.27          | 1.27           |
| FD   | -1.28          | 1.28           | -1.28          | 1.27           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.29           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-6. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

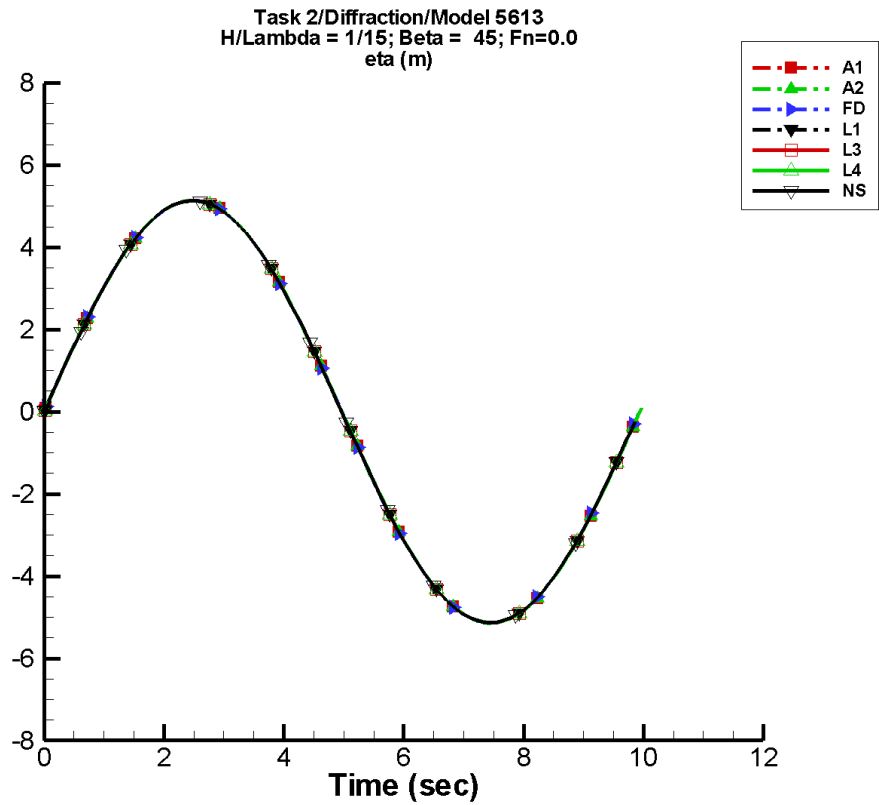
Table G–11. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| A2   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| FD   | 1.14E-03     | 3.85         | -8                | 1.69E-03     | 21                |
| L1   | 2.12E-03     | 3.85         | -4                | 3.26E-03     | 31                |
| L3   | 2.12E-03     | 3.85         | -4                | 3.26E-03     | 31                |
| L4   | 2.12E-03     | 3.85         | -4                | 3.26E-03     | 31                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -8.71E-04    | 3.85         | 0                 | 1.29E-03     | -20               |

Table G–12. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.81          | 3.81           |
| A2   | -3.85          | 3.85           | -3.81          | 3.81           |
| FD   | -3.85          | 3.85           | -3.84          | 3.81           |
| L1   | -3.85          | 3.85           | -3.84          | 3.84           |
| L3   | -3.85          | 3.85           | -3.84          | 3.84           |
| L4   | -3.85          | 3.85           | -3.84          | 3.84           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.86           |

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Data identically zero, insufficient, or not available from NFA.

Figure G-7. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

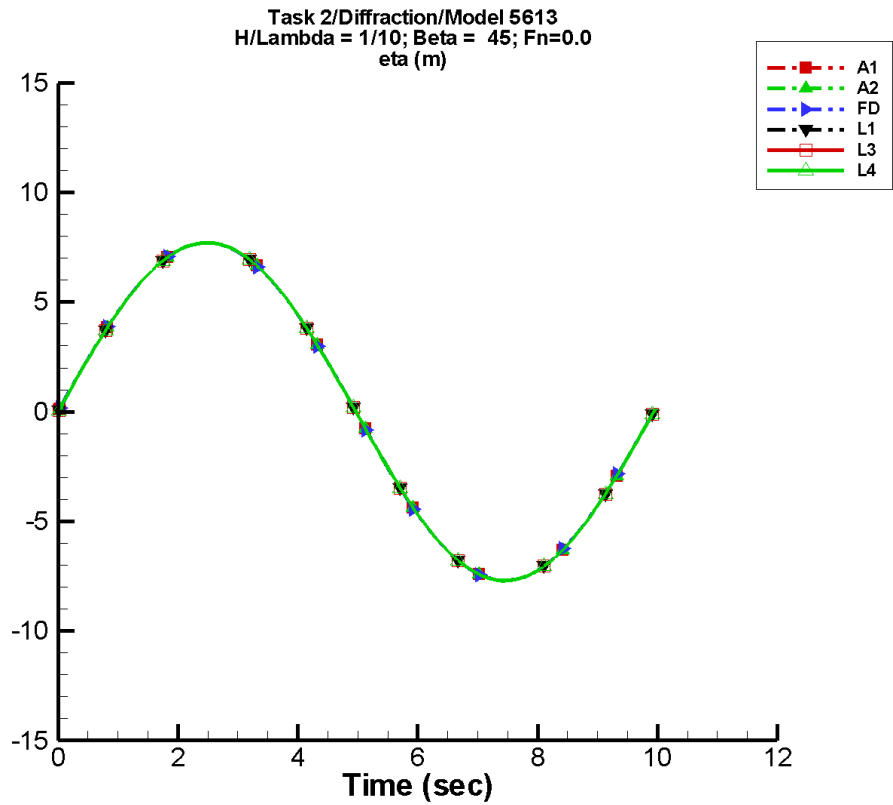
Table G-13. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| A2   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| FD   | 1.52E-03     | 5.13         | -8                | 2.26E-03     | 21                |
| L1   | 2.83E-03     | 5.13         | -4                | 4.35E-03     | 31                |
| L3   | 2.83E-03     | 5.13         | -4                | 4.35E-03     | 31                |
| L4   | 2.83E-03     | 5.13         | -4                | 4.35E-03     | 31                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -1.10E-03    | 5.13         | 0                 | 1.65E-03     | -16               |

Table G-14. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.09          | 5.09           |
| A2   | -5.14          | 5.14           | -5.09          | 5.09           |
| FD   | -5.13          | 5.13           | -5.12          | 5.08           |
| L1   | -5.13          | 5.13           | -5.11          | 5.11           |
| L3   | -5.13          | 5.13           | -5.11          | 5.11           |
| L4   | -5.13          | 5.13           | -5.11          | 5.11           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.15           |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-8. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

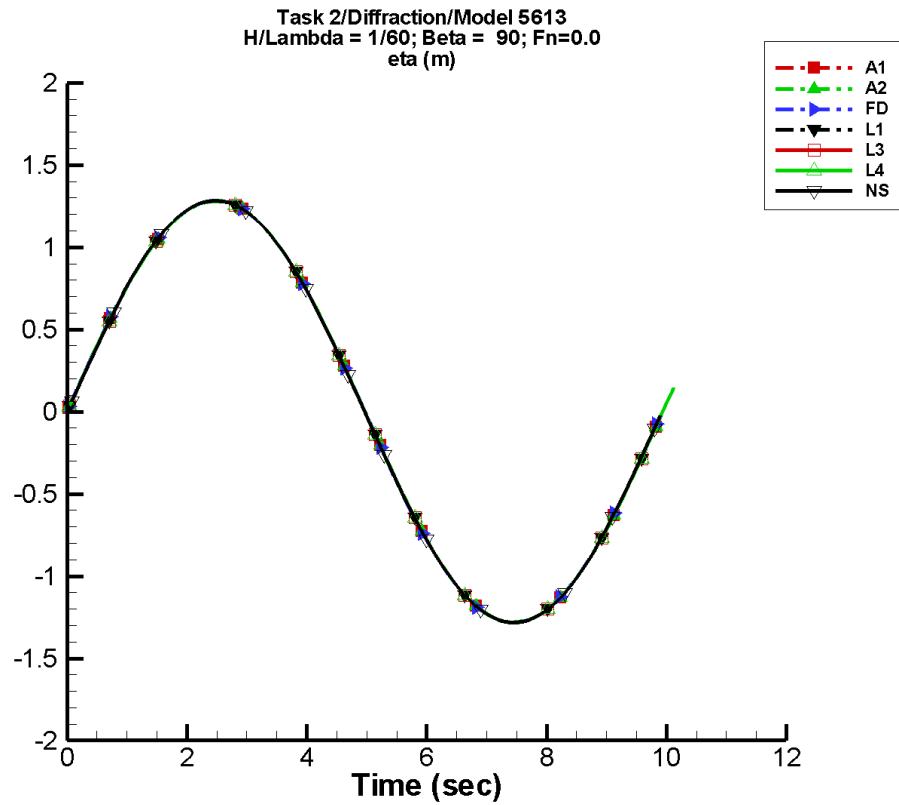
Table G–15. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| A2   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| FD   | 2.27E-03     | 7.70         | -8                | 3.38E-03     | 21                |
| L1   | 4.24E-03     | 7.70         | -4                | 6.52E-03     | 31                |
| L3   | 4.24E-03     | 7.70         | -4                | 6.52E-03     | 31                |
| L4   | 4.24E-03     | 7.70         | -4                | 6.52E-03     | 31                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G–16. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.63          | 7.63           |
| A2   | -7.71          | 7.71           | -7.63          | 7.63           |
| FD   | -7.70          | 7.70           | -7.68          | 7.62           |
| L1   | -7.70          | 7.70           | -7.67          | 7.67           |
| L3   | -7.70          | 7.70           | -7.67          | 7.67           |
| L4   | -7.70          | 7.70           | -7.67          | 7.67           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

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Data identically zero, insufficient, or not available from NFA.

Figure G-9. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–17. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

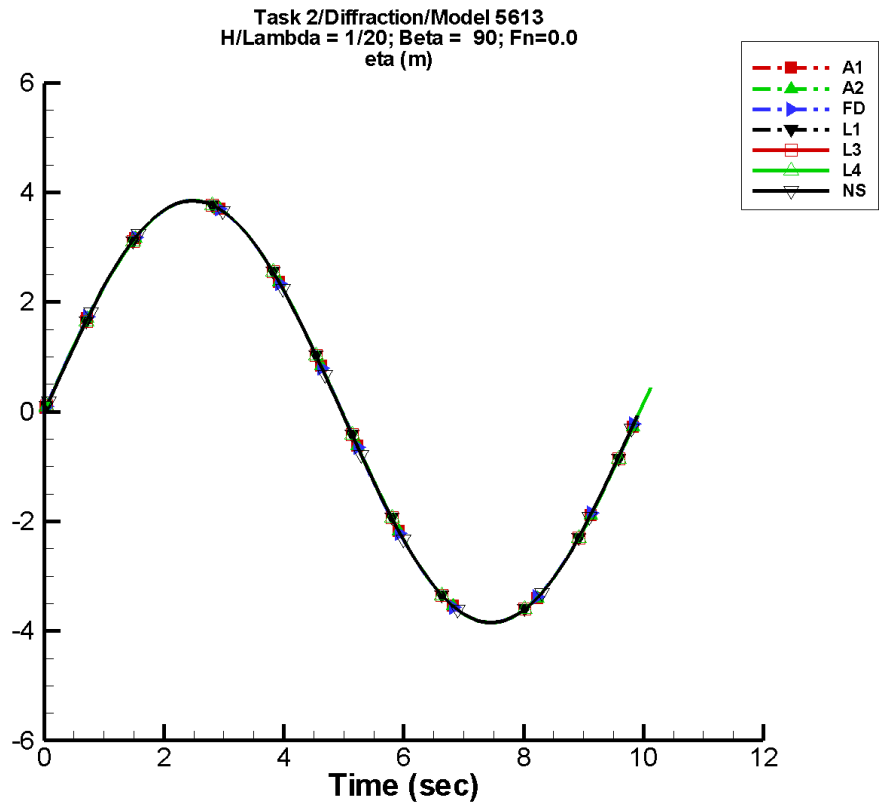
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| A2   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| FD   | 3.79E-04     | 1.28         | -8                | 5.64E-04     | 21                |
| L1   | -5.30E-04    | 1.28         | -4                | 8.44E-04     | -37               |
| L3   | -5.30E-04    | 1.28         | -4                | 8.44E-04     | -37               |
| L4   | -5.30E-04    | 1.28         | -4                | 8.44E-04     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.88E-04    | 1.28         | 0                 | 4.25E-04     | -18               |

Table G–18. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.27          | 1.27           |
| A2   | -1.28          | 1.28           | -1.27          | 1.27           |
| FD   | -1.28          | 1.28           | -1.28          | 1.27           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.28           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-10. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

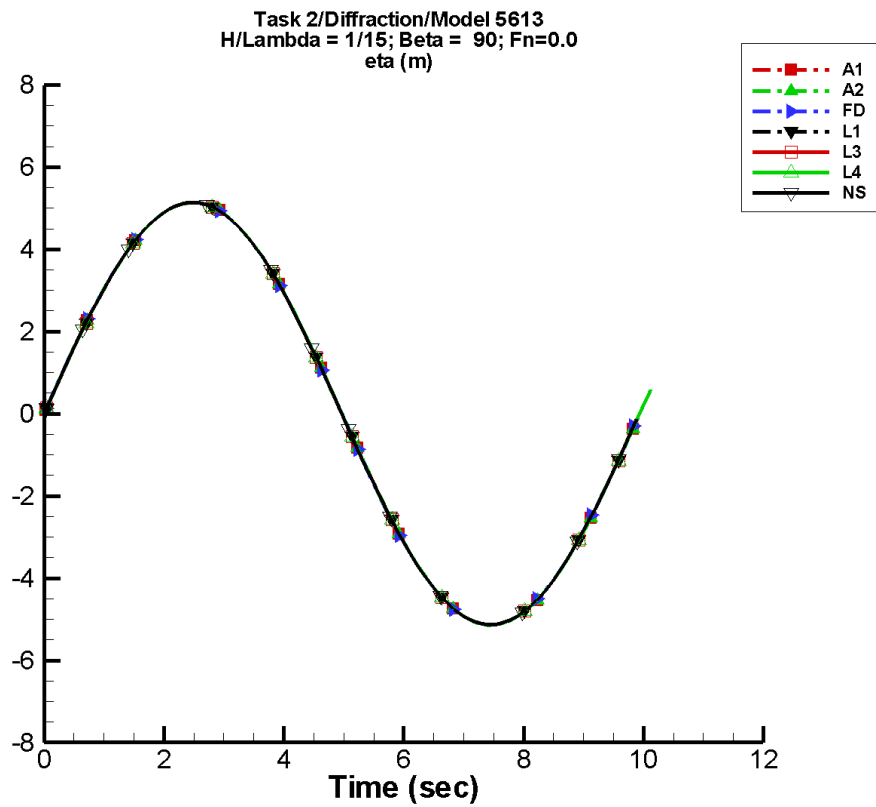
Table G–19. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| A2   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| FD   | 1.14E-03     | 3.85         | -8                | 1.69E-03     | 21                |
| L1   | -1.59E-03    | 3.85         | -4                | 2.53E-03     | -37               |
| L3   | -1.59E-03    | 3.85         | -4                | 2.53E-03     | -37               |
| L4   | -1.59E-03    | 3.85         | -4                | 2.53E-03     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -8.65E-04    | 3.85         | 0                 | 1.28E-03     | -18               |

Table G–20. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.81          | 3.81           |
| A2   | -3.85          | 3.85           | -3.81          | 3.81           |
| FD   | -3.85          | 3.85           | -3.84          | 3.81           |
| L1   | -3.85          | 3.85           | -3.84          | 3.84           |
| L3   | -3.85          | 3.85           | -3.84          | 3.84           |
| L4   | -3.85          | 3.85           | -3.84          | 3.84           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.84           |

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Data identically zero, insufficient, or not available from NFA.

Figure G-11. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

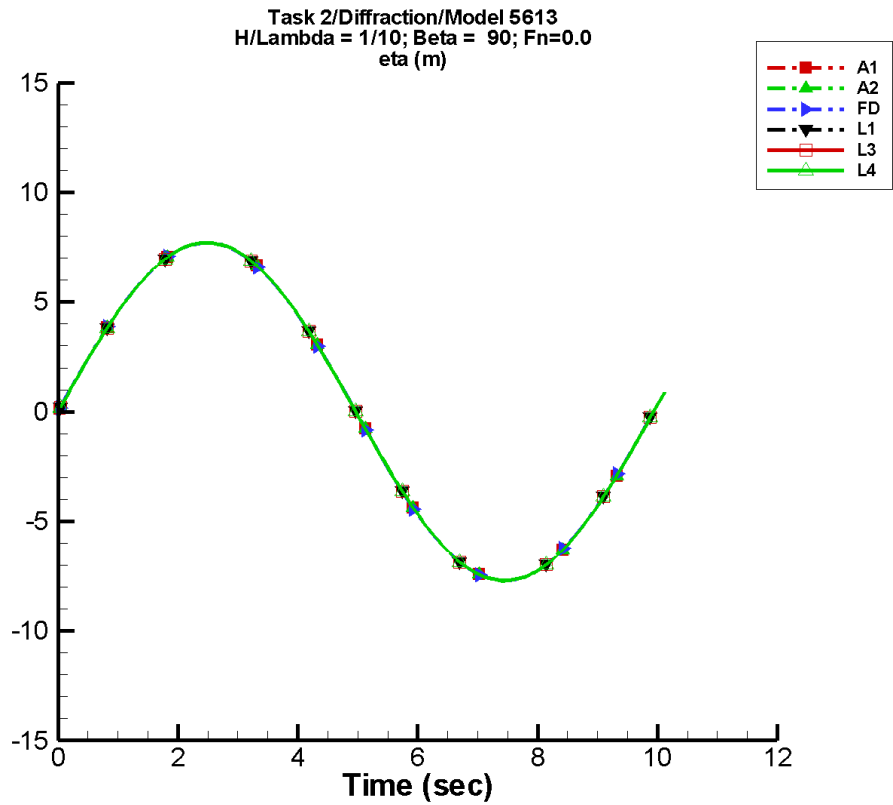
Table G–21. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| A2   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| FD   | 1.52E-03     | 5.13         | -8                | 2.26E-03     | 21                |
| L1   | -2.12E-03    | 5.13         | -4                | 3.38E-03     | -37               |
| L3   | -2.12E-03    | 5.13         | -4                | 3.38E-03     | -37               |
| L4   | -2.12E-03    | 5.13         | -4                | 3.38E-03     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -1.13E-03    | 5.13         | 0                 | 1.68E-03     | -17               |

Table G–22. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.09          | 5.09           |
| A2   | -5.14          | 5.14           | -5.09          | 5.09           |
| FD   | -5.13          | 5.13           | -5.12          | 5.08           |
| L1   | -5.13          | 5.13           | -5.11          | 5.12           |
| L3   | -5.13          | 5.13           | -5.11          | 5.12           |
| L4   | -5.13          | 5.13           | -5.11          | 5.12           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.13           |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-12. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

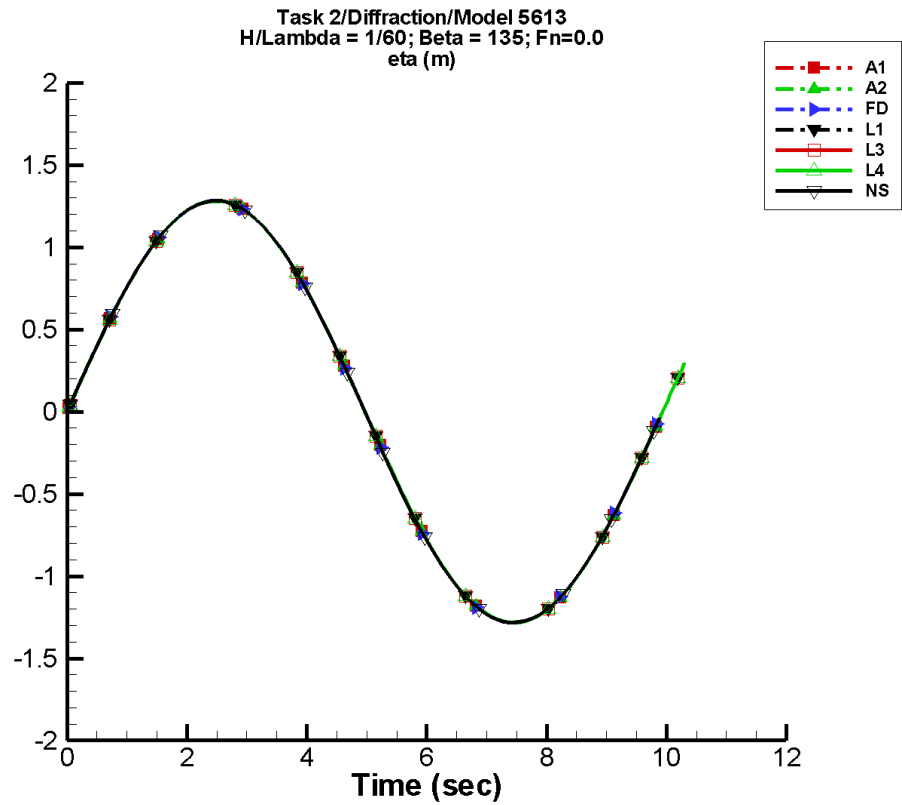
Table G-23. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| A2   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| FD   | 2.27E-03     | 7.70         | -8                | 3.38E-03     | 21                |
| L1   | -3.18E-03    | 7.70         | -4                | 5.06E-03     | -37               |
| L3   | -3.18E-03    | 7.70         | -4                | 5.06E-03     | -37               |
| L4   | -3.18E-03    | 7.70         | -4                | 5.06E-03     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-24. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.63          | 7.63           |
| A2   | -7.71          | 7.71           | -7.63          | 7.63           |
| FD   | -7.70          | 7.70           | -7.68          | 7.62           |
| L1   | -7.70          | 7.70           | -7.67          | 7.67           |
| L3   | -7.70          | 7.70           | -7.67          | 7.67           |
| L4   | -7.70          | 7.70           | -7.67          | 7.67           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-13. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–25. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

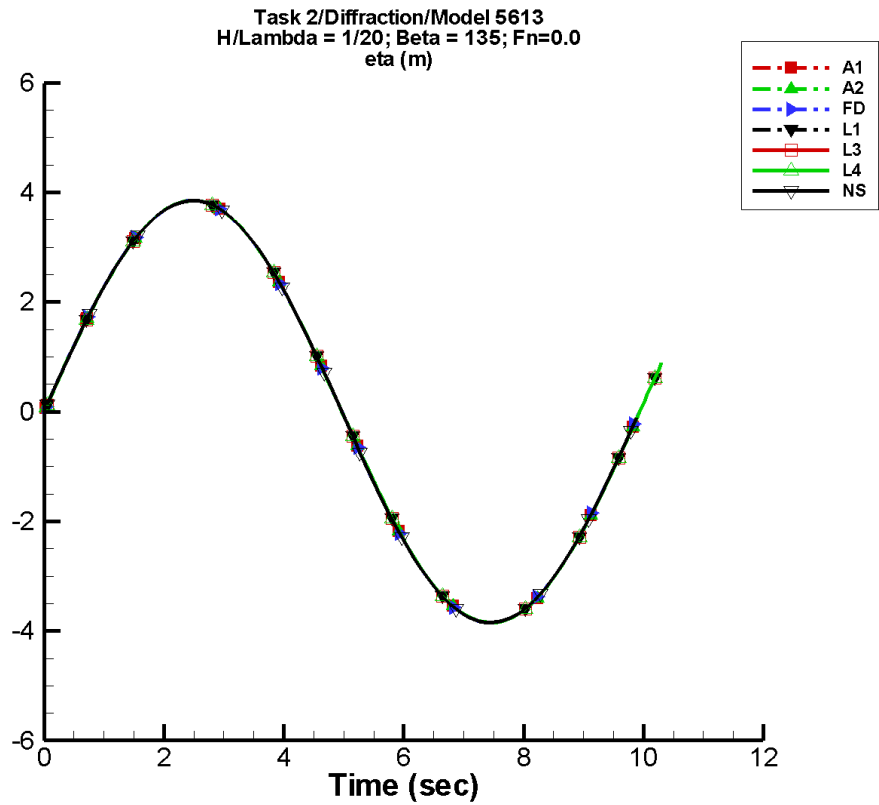
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| A2   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| FD   | 3.79E-04     | 1.28         | -8                | 5.64E-04     | 21                |
| L1   | 1.70E-04     | 1.28         | -4                | 1.76E-03     | 2                 |
| L3   | 1.70E-04     | 1.28         | -4                | 1.76E-03     | 2                 |
| L4   | 1.70E-04     | 1.28         | -4                | 1.76E-03     | 2                 |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.84E-04    | 1.28         | 0                 | 4.21E-04     | -18               |

Table G–26. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.27          | 1.27           |
| A2   | -1.28          | 1.28           | -1.27          | 1.27           |
| FD   | -1.28          | 1.28           | -1.28          | 1.27           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.27           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-14. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

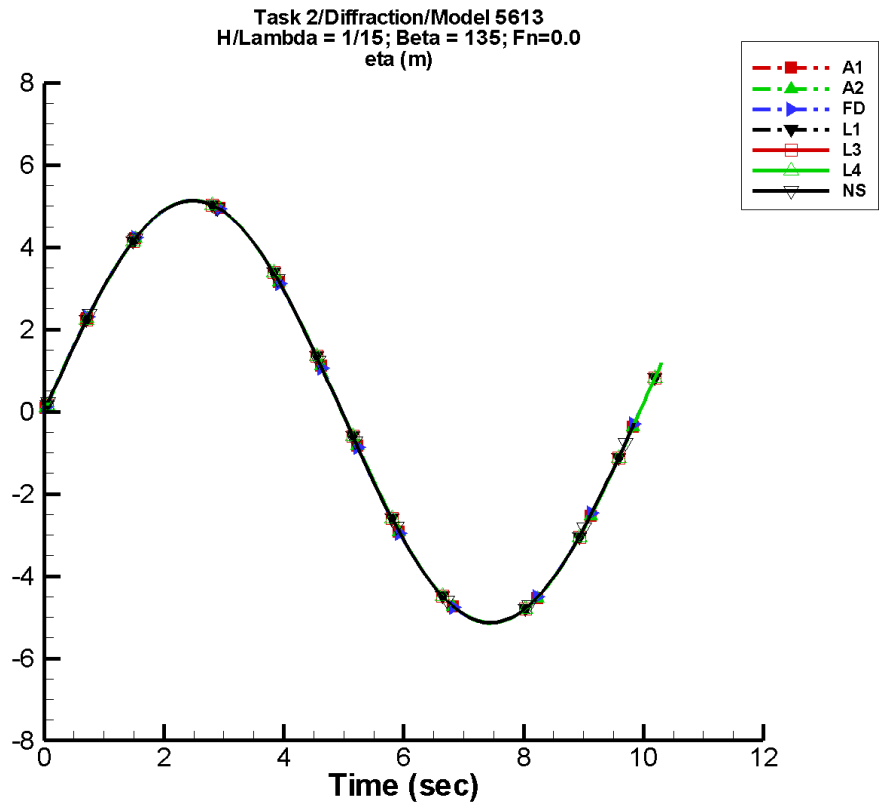
Table G–27. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| A2   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| FD   | 1.14E-03     | 3.85         | -8                | 1.69E-03     | 21                |
| L1   | 5.10E-04     | 3.85         | -4                | 5.27E-03     | 2                 |
| L3   | 5.10E-04     | 3.85         | -4                | 5.27E-03     | 2                 |
| L4   | 5.10E-04     | 3.85         | -4                | 5.27E-03     | 2                 |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -8.53E-04    | 3.85         | 0                 | 1.26E-03     | -18               |

Table G–28. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.81          | 3.81           |
| A2   | -3.85          | 3.85           | -3.81          | 3.81           |
| FD   | -3.85          | 3.85           | -3.84          | 3.81           |
| L1   | -3.85          | 3.85           | -3.84          | 3.84           |
| L3   | -3.85          | 3.85           | -3.84          | 3.84           |
| L4   | -3.85          | 3.85           | -3.84          | 3.84           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.81           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-15. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

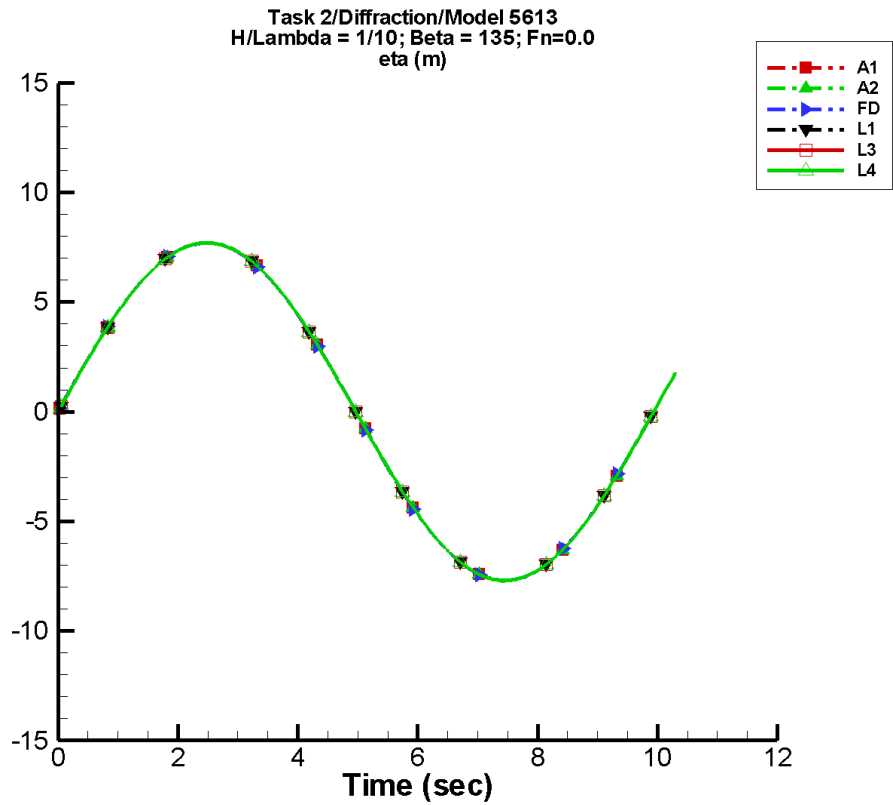
Table G–29. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| A2   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| FD   | 1.52E-03     | 5.13         | -8                | 2.26E-03     | 21                |
| L1   | 6.80E-04     | 5.14         | -4                | 7.02E-03     | 2                 |
| L3   | 6.80E-04     | 5.14         | -4                | 7.02E-03     | 2                 |
| L4   | 6.80E-04     | 5.14         | -4                | 7.02E-03     | 2                 |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -1.16E-03    | 5.13         | 0                 | 1.71E-03     | -19               |

Table G–30. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.09          | 5.09           |
| A2   | -5.14          | 5.14           | -5.09          | 5.09           |
| FD   | -5.13          | 5.13           | -5.12          | 5.08           |
| L1   | -5.13          | 5.13           | -5.11          | 5.11           |
| L3   | -5.13          | 5.13           | -5.11          | 5.11           |
| L4   | -5.13          | 5.13           | -5.11          | 5.11           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.10           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-16. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

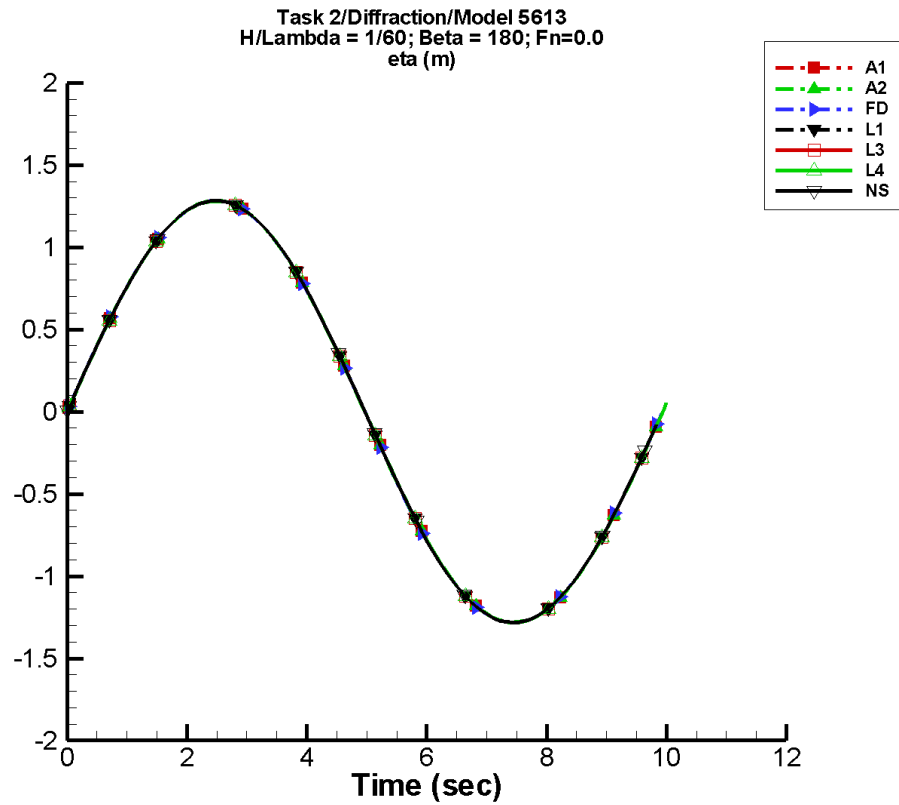
Table G–31. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| A2   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| FD   | 2.27E-03     | 7.70         | -8                | 3.38E-03     | 21                |
| L1   | 1.02E-03     | 7.70         | -4                | 1.05E-02     | 2                 |
| L3   | 1.02E-03     | 7.70         | -4                | 1.05E-02     | 2                 |
| L4   | 1.02E-03     | 7.70         | -4                | 1.05E-02     | 2                 |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G–32. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.63          | 7.63           |
| A2   | -7.71          | 7.71           | -7.63          | 7.63           |
| FD   | -7.70          | 7.70           | -7.68          | 7.62           |
| L1   | -7.70          | 7.70           | -7.67          | 7.67           |
| L3   | -7.70          | 7.70           | -7.67          | 7.67           |
| L4   | -7.70          | 7.70           | -7.67          | 7.67           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-17. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–33. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

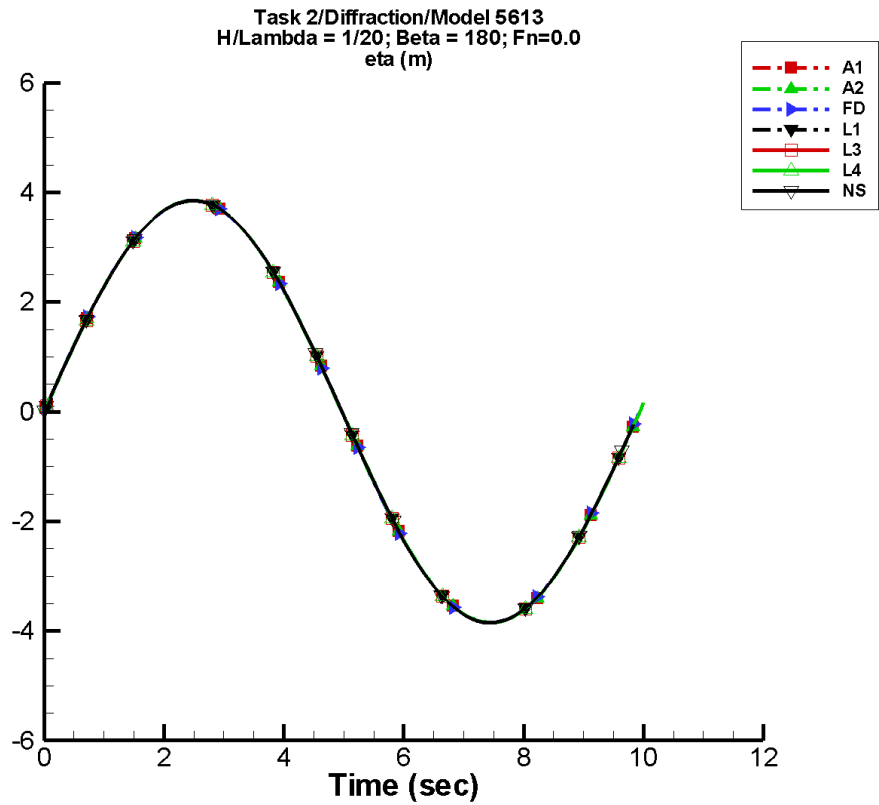
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| A2   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| FD   | 3.79E-04     | 1.28         | -8                | 5.64E-04     | 21                |
| L1   | 6.79E-04     | 1.28         | -4                | 1.14E-03     | 27                |
| L3   | 6.79E-04     | 1.28         | -4                | 1.14E-03     | 27                |
| L4   | 6.79E-04     | 1.28         | -4                | 1.14E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.74E-04    | 1.28         | 0                 | 4.10E-04     | -15               |

Table G–34. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.27          | 1.27           |
| A2   | -1.28          | 1.28           | -1.27          | 1.27           |
| FD   | -1.28          | 1.28           | -1.28          | 1.27           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.27           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-18. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

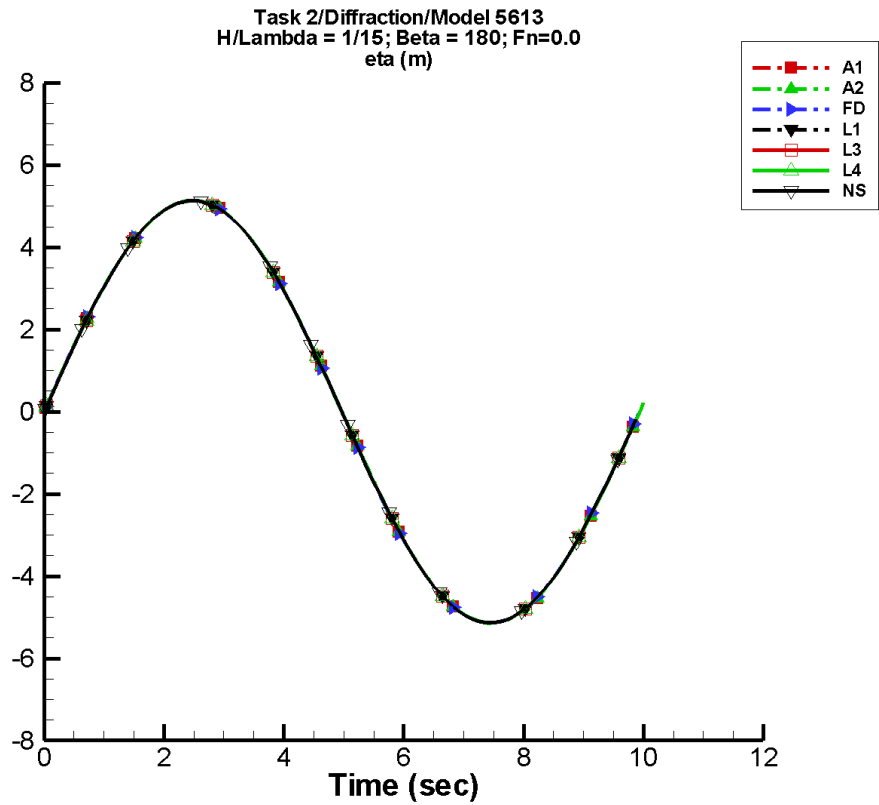
Table G–35. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| A2   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| FD   | 1.14E-03     | 3.85         | -8                | 1.69E-03     | 21                |
| L1   | 2.04E-03     | 3.85         | -4                | 3.41E-03     | 27                |
| L3   | 2.04E-03     | 3.85         | -4                | 3.41E-03     | 27                |
| L4   | 2.04E-03     | 3.85         | -4                | 3.41E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -8.23E-04    | 3.85         | 0                 | 1.23E-03     | -15               |

Table G–36. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.81          | 3.81           |
| A2   | -3.85          | 3.85           | -3.81          | 3.81           |
| FD   | -3.85          | 3.85           | -3.84          | 3.81           |
| L1   | -3.85          | 3.85           | -3.84          | 3.84           |
| L3   | -3.85          | 3.85           | -3.84          | 3.84           |
| L4   | -3.85          | 3.85           | -3.84          | 3.84           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.81           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-19. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

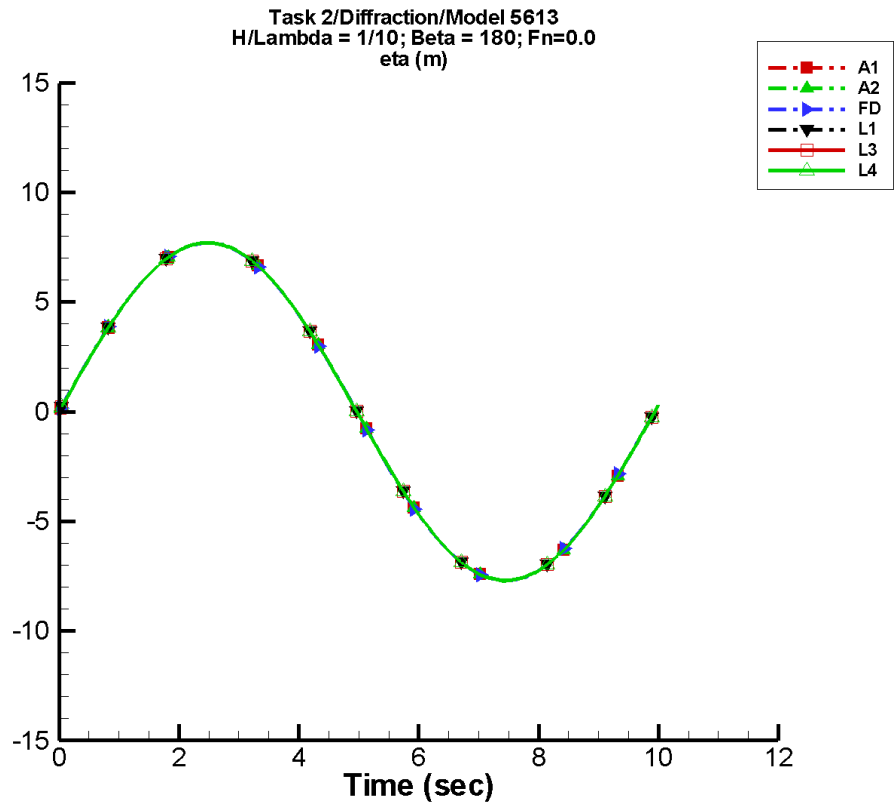
Table G–37. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| A2   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| FD   | 1.52E-03     | 5.13         | -8                | 2.26E-03     | 21                |
| L1   | 2.71E-03     | 5.13         | -4                | 4.54E-03     | 27                |
| L3   | 2.71E-03     | 5.13         | -4                | 4.54E-03     | 27                |
| L4   | 2.71E-03     | 5.13         | -4                | 4.54E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -1.12E-03    | 5.13         | 0                 | 1.66E-03     | -17               |

Table G–38. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.09          | 5.09           |
| A2   | -5.14          | 5.14           | -5.09          | 5.09           |
| FD   | -5.13          | 5.13           | -5.12          | 5.08           |
| L1   | -5.13          | 5.13           | -5.12          | 5.11           |
| L3   | -5.13          | 5.13           | -5.12          | 5.11           |
| L4   | -5.13          | 5.13           | -5.12          | 5.11           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.10           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-20. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

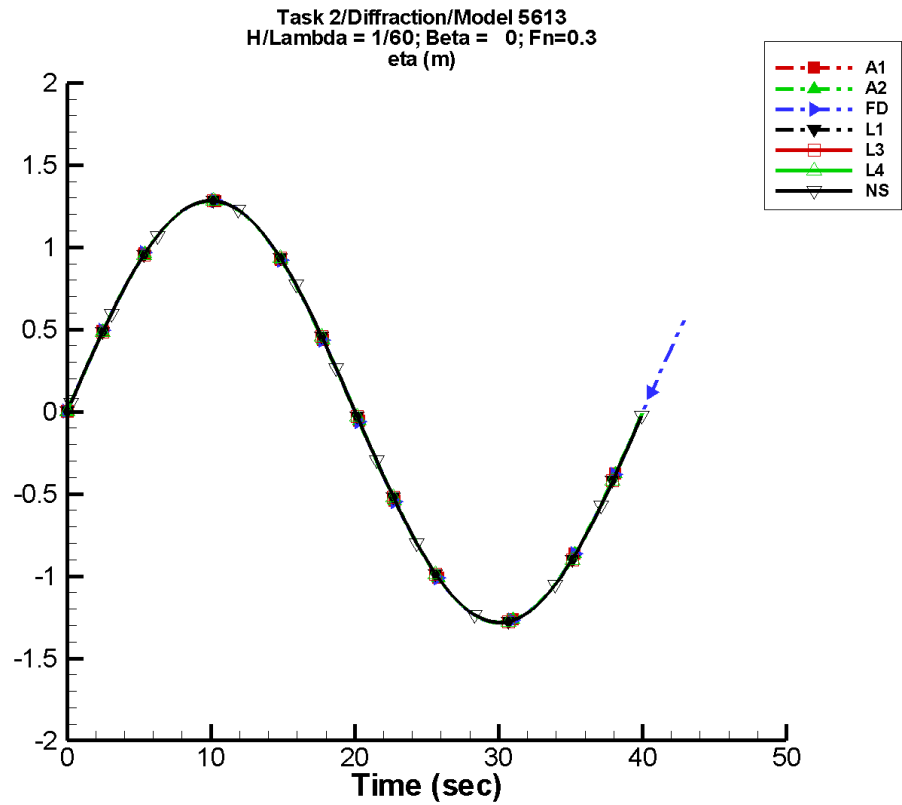
Table G-39. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| A2   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| FD   | 2.27E-03     | 7.70         | -8                | 3.38E-03     | 21                |
| L1   | 4.07E-03     | 7.70         | -4                | 6.81E-03     | 27                |
| L3   | 4.07E-03     | 7.70         | -4                | 6.81E-03     | 27                |
| L4   | 4.07E-03     | 7.70         | -4                | 6.81E-03     | 27                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-40. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.63          | 7.63           |
| A2   | -7.71          | 7.71           | -7.63          | 7.63           |
| FD   | -7.70          | 7.70           | -7.68          | 7.62           |
| L1   | -7.70          | 7.70           | -7.67          | 7.67           |
| L3   | -7.70          | 7.70           | -7.67          | 7.67           |
| L4   | -7.70          | 7.70           | -7.67          | 7.67           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-21. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-41. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

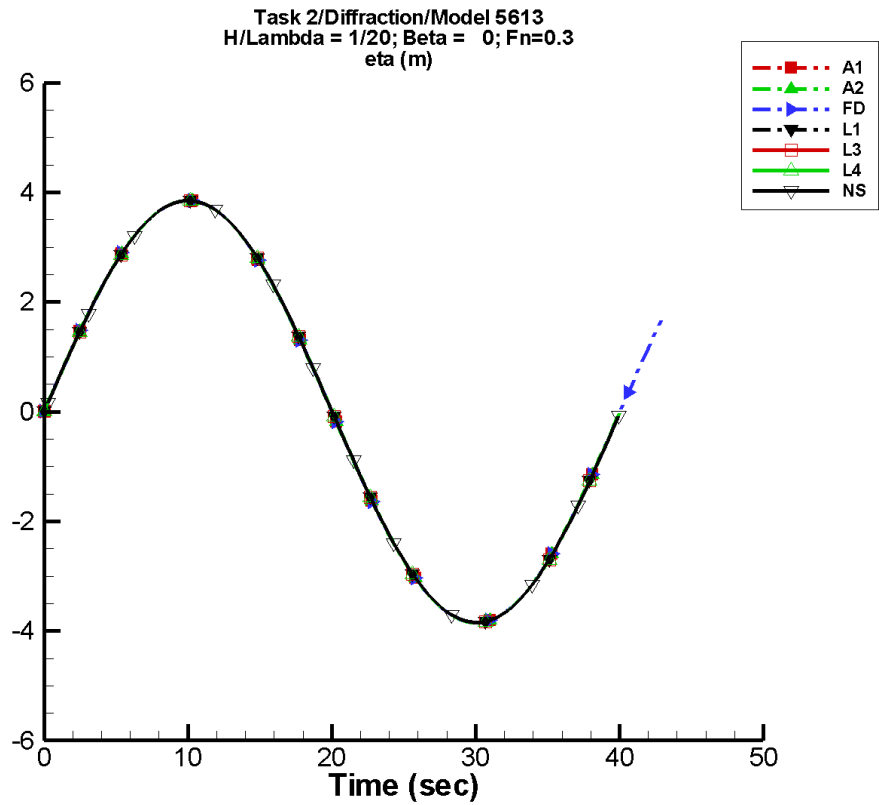
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.08E-05    | 1.28         | 0                 | 4.56E-05     | -16               |
| A2   | -3.08E-05    | 1.28         | 0                 | 4.56E-05     | -16               |
| FD   | 5.71E-05     | 1.28         | -2                | 1.91E-04     | 89                |
| L1   | 8.91E-04     | 1.28         | -2                | 1.12E-03     | 34                |
| L3   | 8.91E-04     | 1.28         | -2                | 1.12E-03     | 34                |
| L4   | 8.91E-04     | 1.28         | -2                | 1.12E-03     | 34                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -7.67E-04    | 1.28         | -1                | 1.14E-03     | -20               |

Table G-42. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.28          | 1.28           |
| A2   | -1.28          | 1.28           | -1.28          | 1.28           |
| FD   | -1.28          | 1.28           | -1.28          | 1.28           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.29           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-22. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

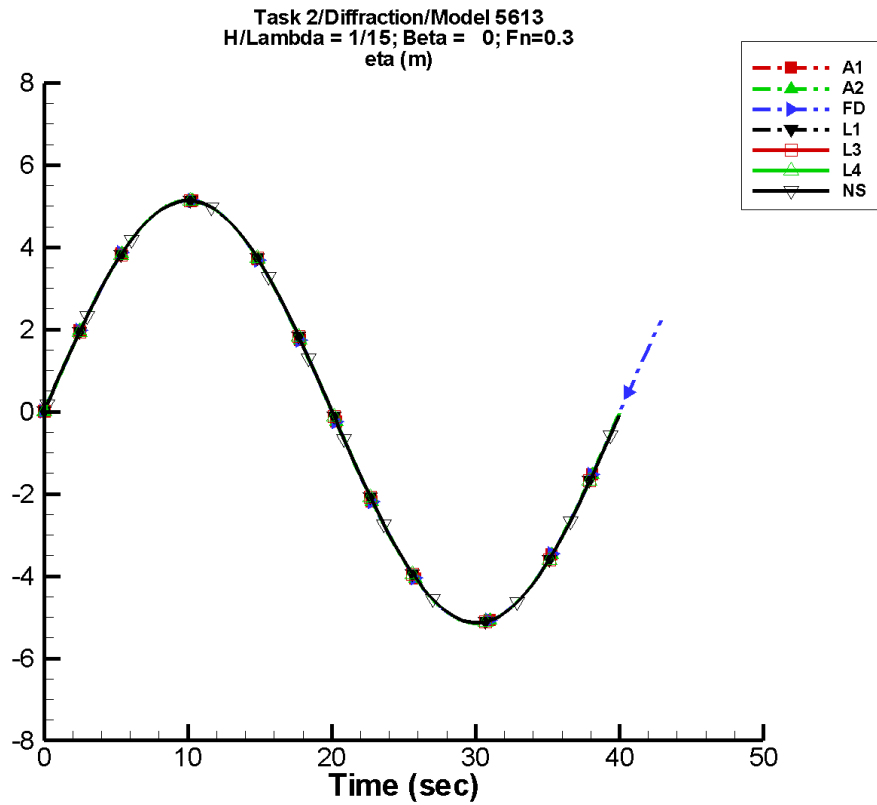
Table G-43. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -9.24E-05    | 3.85         | 0                 | 1.37E-04     | -16               |
| A2   | -9.24E-05    | 3.85         | 0                 | 1.37E-04     | -16               |
| FD   | 1.72E-04     | 3.85         | -2                | 5.72E-04     | 89                |
| L1   | 2.67E-03     | 3.85         | -2                | 3.37E-03     | 34                |
| L3   | 2.67E-03     | 3.85         | -2                | 3.37E-03     | 34                |
| L4   | 2.67E-03     | 3.85         | -2                | 3.37E-03     | 34                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.30E-03    | 3.85         | -1                | 3.42E-03     | -20               |

Table G-44. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.85          | 3.85           |
| A2   | -3.85          | 3.85           | -3.85          | 3.85           |
| FD   | -3.85          | 3.85           | -3.85          | 3.85           |
| L1   | -3.85          | 3.85           | -3.85          | 3.85           |
| L3   | -3.85          | 3.85           | -3.85          | 3.85           |
| L4   | -3.85          | 3.85           | -3.85          | 3.85           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.87           |

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Data identically zero, insufficient, or not available from NFA.

Figure G-23. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

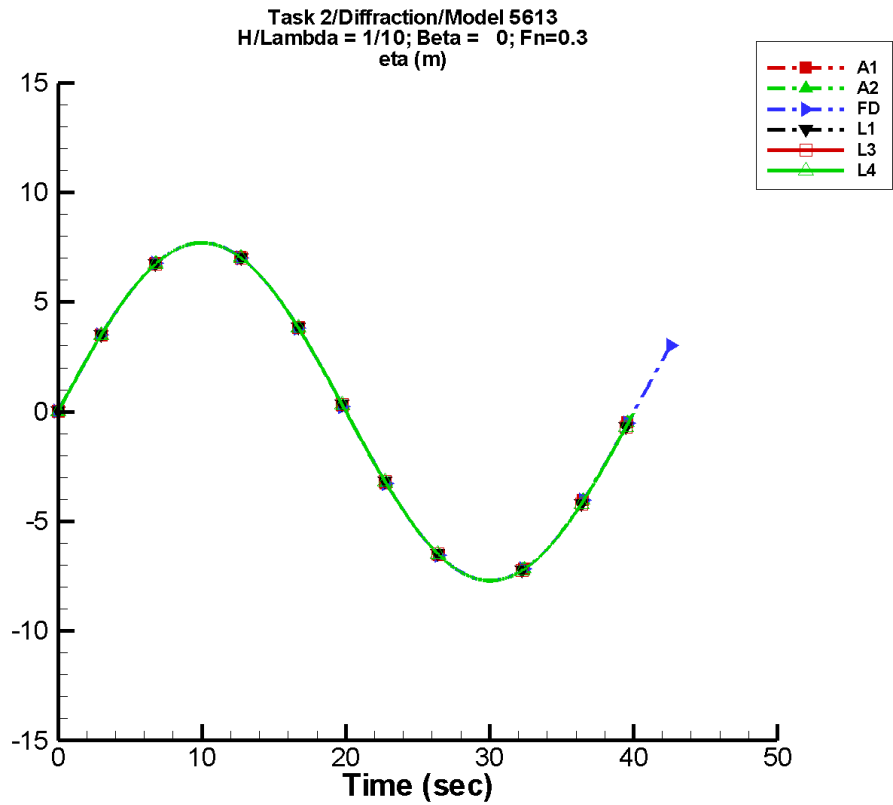
Table G-45. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -1.24E-04    | 5.14         | 0                 | 1.83E-04     | -17               |
| A2   | -1.24E-04    | 5.14         | 0                 | 1.83E-04     | -17               |
| FD   | 2.29E-04     | 5.13         | -2                | 7.63E-04     | 89                |
| L1   | 3.56E-03     | 5.13         | -2                | 4.49E-03     | 34                |
| L3   | 3.56E-03     | 5.13         | -2                | 4.49E-03     | 34                |
| L4   | 3.56E-03     | 5.13         | -2                | 4.49E-03     | 34                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -3.06E-03    | 5.13         | -1                | 4.55E-03     | -20               |

Table G-46. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.14          | 5.14           |
| A2   | -5.14          | 5.14           | -5.14          | 5.14           |
| FD   | -5.13          | 5.13           | -5.13          | 5.13           |
| L1   | -5.13          | 5.13           | -5.14          | 5.13           |
| L3   | -5.13          | 5.13           | -5.14          | 5.13           |
| L4   | -5.13          | 5.13           | -5.14          | 5.13           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.15           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-24. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

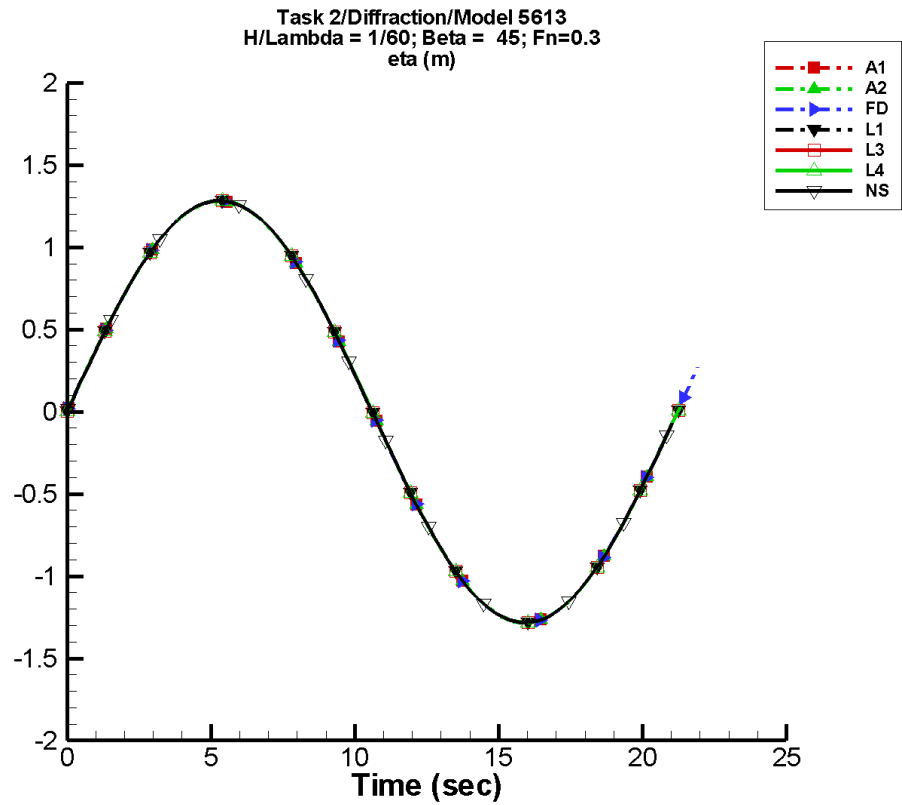
Table G-47. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -1.87E-04    | 7.71         | 0                 | 2.75E-04     | -17               |
| A2   | -1.87E-04    | 7.71         | 0                 | 2.75E-04     | -17               |
| FD   | 3.44E-04     | 7.70         | -2                | 1.15E-03     | 89                |
| L1   | 5.34E-03     | 7.70         | -2                | 6.74E-03     | 34                |
| L3   | 5.34E-03     | 7.70         | -2                | 6.74E-03     | 34                |
| L4   | 5.34E-03     | 7.70         | -2                | 6.74E-03     | 34                |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-48. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.71          | 7.71           |
| A2   | -7.71          | 7.71           | -7.71          | 7.71           |
| FD   | -7.70          | 7.70           | -7.70          | 7.70           |
| L1   | -7.70          | 7.70           | -7.71          | 7.70           |
| L3   | -7.70          | 7.70           | -7.71          | 7.70           |
| L4   | -7.70          | 7.70           | -7.71          | 7.70           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-25. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-49. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

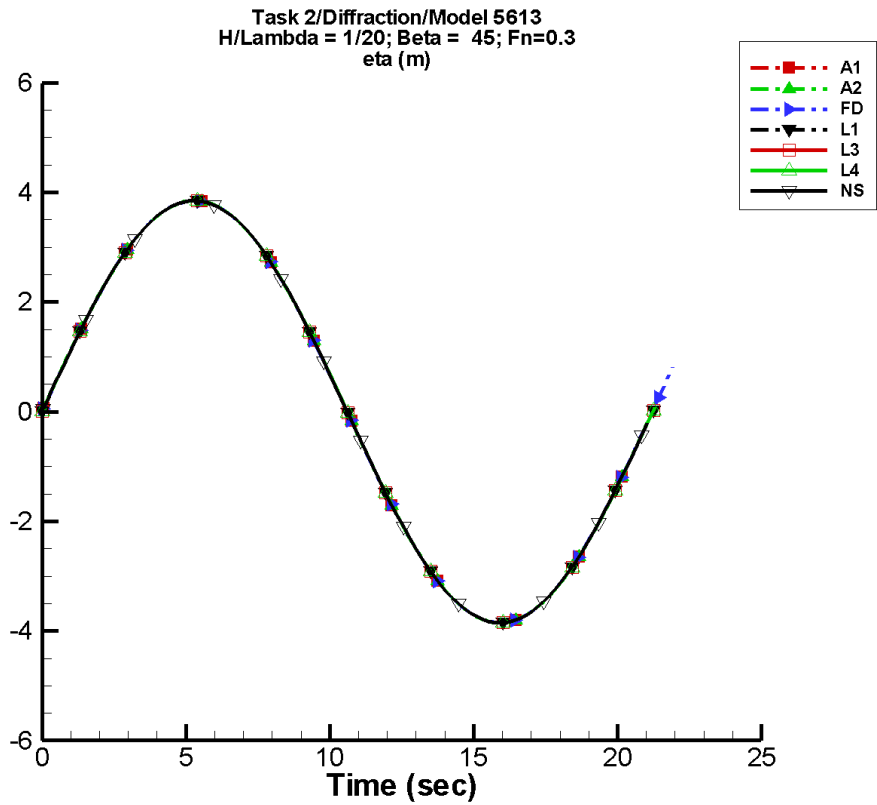
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | 3.06E-04     | 1.28         | 2                 | 4.53E-04     | 166               |
| A2   | 3.06E-04     | 1.28         | 2                 | 4.53E-04     | 166               |
| FD   | 3.44E-04     | 1.28         | 5                 | 5.60E-04     | 149               |
| L1   | 1.82E-04     | 1.28         | 1                 | 2.32E-04     | 159               |
| L3   | 1.82E-04     | 1.28         | 1                 | 2.32E-04     | 159               |
| L4   | 1.82E-04     | 1.28         | 1                 | 2.32E-04     | 159               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | 3.68E-04     | 1.28         | 0                 | 5.52E-04     | 165               |

Table G-50. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.28          | 1.28           |
| A2   | -1.28          | 1.28           | -1.28          | 1.28           |
| FD   | -1.28          | 1.28           | -1.28          | 1.28           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.29           |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-26. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

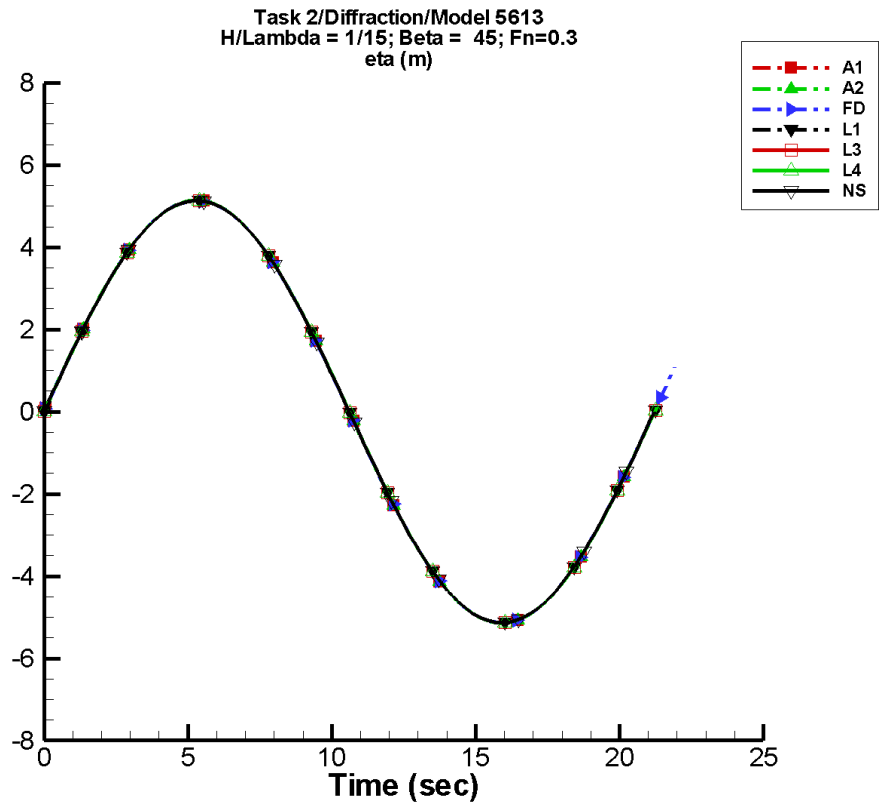
Table G-51. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | 9.20E-04     | 3.85         | 2                 | 1.36E-03     | 166               |
| A2   | 9.20E-04     | 3.85         | 2                 | 1.36E-03     | 166               |
| FD   | 1.03E-03     | 3.85         | 5                 | 1.68E-03     | 149               |
| L1   | 5.46E-04     | 3.85         | 1                 | 6.96E-04     | 159               |
| L3   | 5.46E-04     | 3.85         | 1                 | 6.96E-04     | 159               |
| L4   | 5.46E-04     | 3.85         | 1                 | 6.96E-04     | 159               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | 1.10E-03     | 3.85         | 0                 | 1.66E-03     | 165               |

Table G-52. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.84          | 3.85           |
| A2   | -3.85          | 3.85           | -3.84          | 3.85           |
| FD   | -3.85          | 3.85           | -3.84          | 3.84           |
| L1   | -3.85          | 3.85           | -3.85          | 3.85           |
| L3   | -3.85          | 3.85           | -3.85          | 3.85           |
| L4   | -3.85          | 3.85           | -3.85          | 3.85           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.86           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-27. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

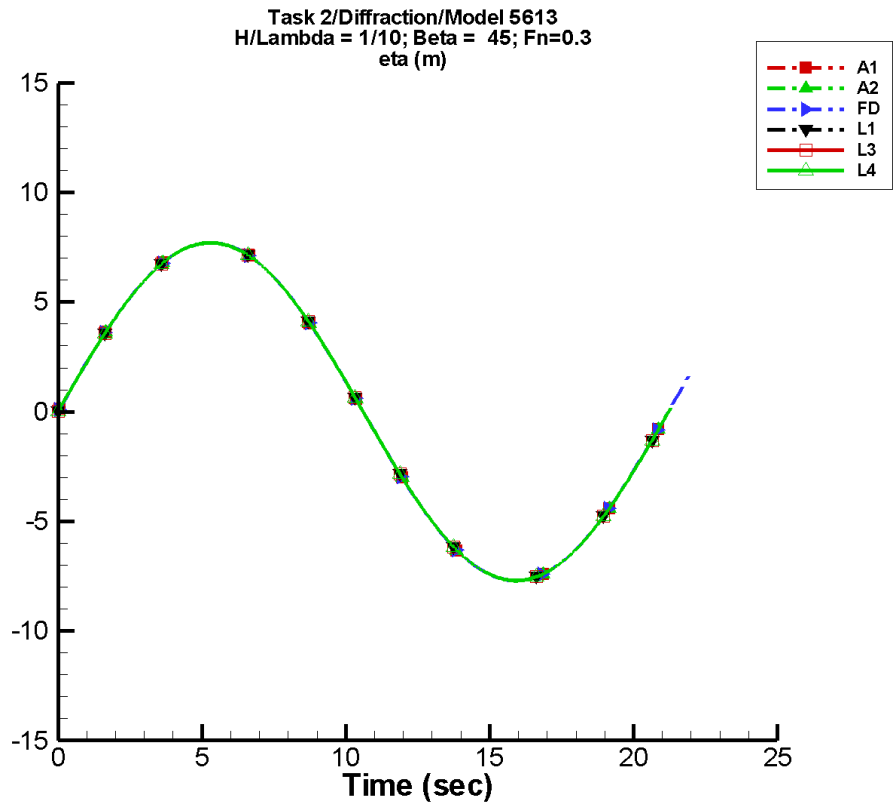
Table G-53. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | 1.23E-03     | 5.14         | 2                 | 1.82E-03     | 166               |
| A2   | 1.23E-03     | 5.14         | 2                 | 1.82E-03     | 166               |
| FD   | 1.37E-03     | 5.13         | 5                 | 2.24E-03     | 149               |
| L1   | 7.29E-04     | 5.13         | 1                 | 9.28E-04     | 159               |
| L3   | 7.29E-04     | 5.13         | 1                 | 9.28E-04     | 159               |
| L4   | 7.29E-04     | 5.13         | 1                 | 9.28E-04     | 159               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | 1.47E-03     | 5.13         | 0                 | 2.20E-03     | 165               |

Table G-54. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.13          | 5.14           |
| A2   | -5.14          | 5.14           | -5.13          | 5.14           |
| FD   | -5.13          | 5.13           | -5.12          | 5.12           |
| L1   | -5.13          | 5.13           | -5.13          | 5.13           |
| L3   | -5.13          | 5.13           | -5.13          | 5.13           |
| L4   | -5.13          | 5.13           | -5.13          | 5.13           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.14           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-28. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

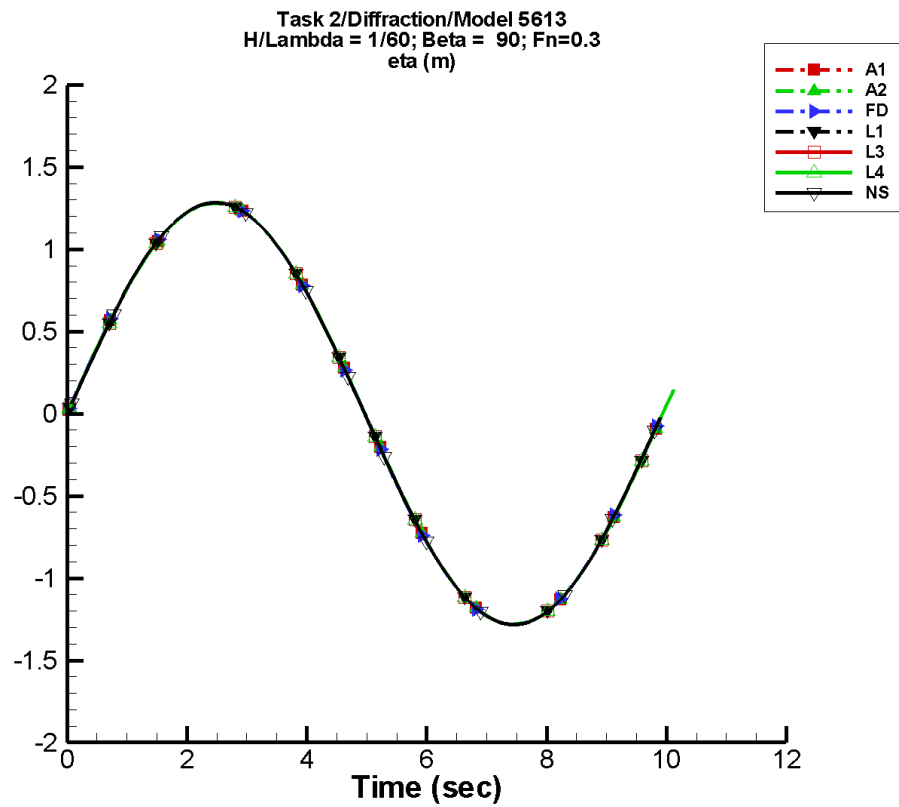
Table G-55. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | 1.84E-03     | 7.71         | 2                 | 2.73E-03     | 166               |
| A2   | 1.84E-03     | 7.71         | 2                 | 2.73E-03     | 166               |
| FD   | 2.06E-03     | 7.70         | 5                 | 3.36E-03     | 149               |
| L1   | 1.09E-03     | 7.70         | 1                 | 1.39E-03     | 159               |
| L3   | 1.09E-03     | 7.70         | 1                 | 1.39E-03     | 159               |
| L4   | 1.09E-03     | 7.70         | 1                 | 1.39E-03     | 159               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-56. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.69          | 7.71           |
| A2   | -7.71          | 7.71           | -7.69          | 7.71           |
| FD   | -7.70          | 7.70           | -7.68          | 7.68           |
| L1   | -7.70          | 7.70           | -7.69          | 7.70           |
| L3   | -7.70          | 7.70           | -7.69          | 7.70           |
| L4   | -7.70          | 7.70           | -7.69          | 7.70           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-29. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-57. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

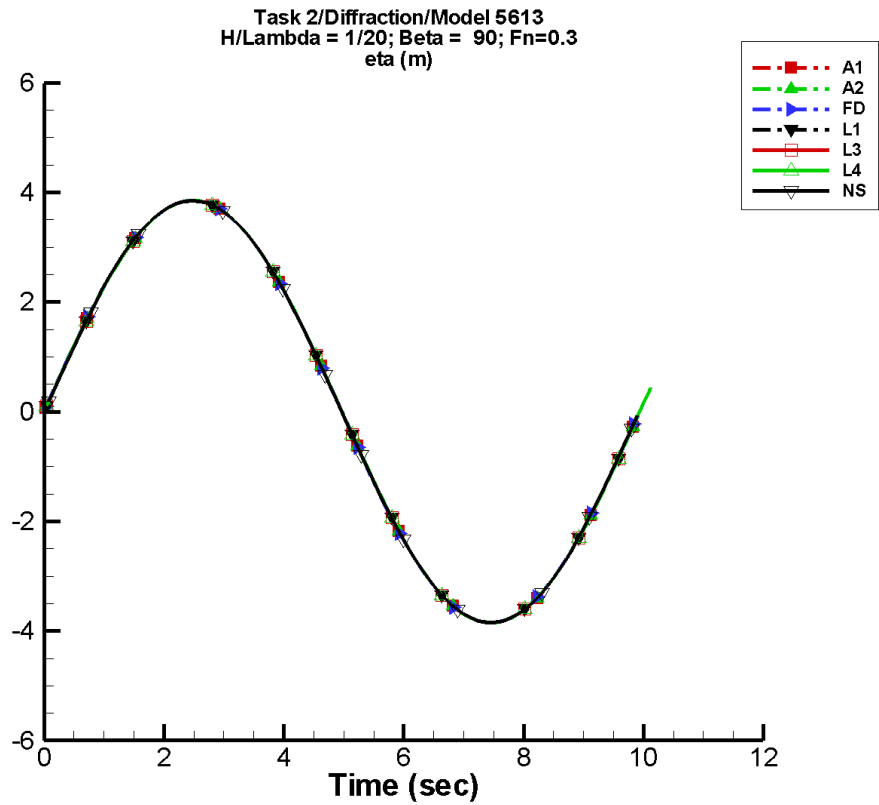
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| A2   | -8.09E-04    | 1.28         | -4                | 1.23E-03     | -25               |
| FD   | 3.79E-04     | 1.28         | -8                | 5.64E-04     | 21                |
| L1   | -5.30E-04    | 1.28         | -4                | 8.44E-04     | -37               |
| L3   | -5.30E-04    | 1.28         | -4                | 8.44E-04     | -37               |
| L4   | -5.30E-04    | 1.28         | -4                | 8.44E-04     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -2.89E-04    | 1.28         | 0                 | 4.25E-04     | -18               |

Table G-58. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.27          | 1.27           |
| A2   | -1.28          | 1.28           | -1.27          | 1.27           |
| FD   | -1.28          | 1.28           | -1.28          | 1.27           |
| L1   | -1.28          | 1.28           | -1.28          | 1.28           |
| L3   | -1.28          | 1.28           | -1.28          | 1.28           |
| L4   | -1.28          | 1.28           | -1.28          | 1.28           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.28           |



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Data identically zero, insufficient, or not available from NFA.

Figure G-30. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

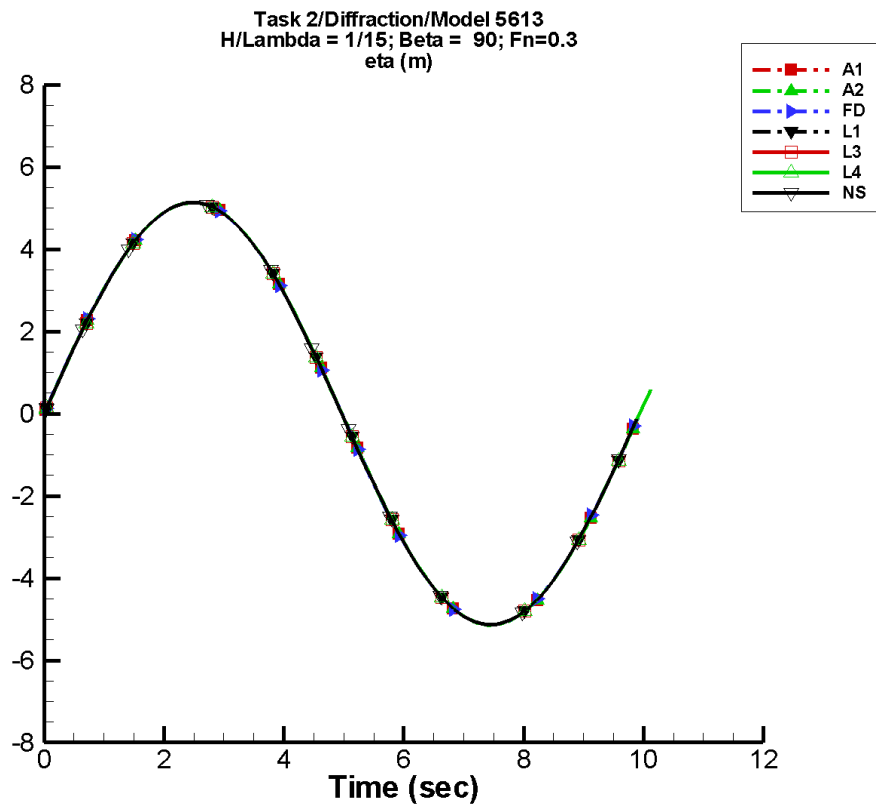
Table G-59. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| A2   | -2.43E-03    | 3.85         | -4                | 3.69E-03     | -25               |
| FD   | 1.14E-03     | 3.85         | -8                | 1.69E-03     | 21                |
| L1   | -1.59E-03    | 3.85         | -4                | 2.53E-03     | -37               |
| L3   | -1.59E-03    | 3.85         | -4                | 2.53E-03     | -37               |
| L4   | -1.59E-03    | 3.85         | -4                | 2.53E-03     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -8.66E-04    | 3.85         | 0                 | 1.28E-03     | -18               |

Table G-60. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.81          | 3.81           |
| A2   | -3.85          | 3.85           | -3.81          | 3.81           |
| FD   | -3.85          | 3.85           | -3.84          | 3.81           |
| L1   | -3.85          | 3.85           | -3.84          | 3.84           |
| L3   | -3.85          | 3.85           | -3.84          | 3.84           |
| L4   | -3.85          | 3.85           | -3.84          | 3.84           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.84           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-31. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

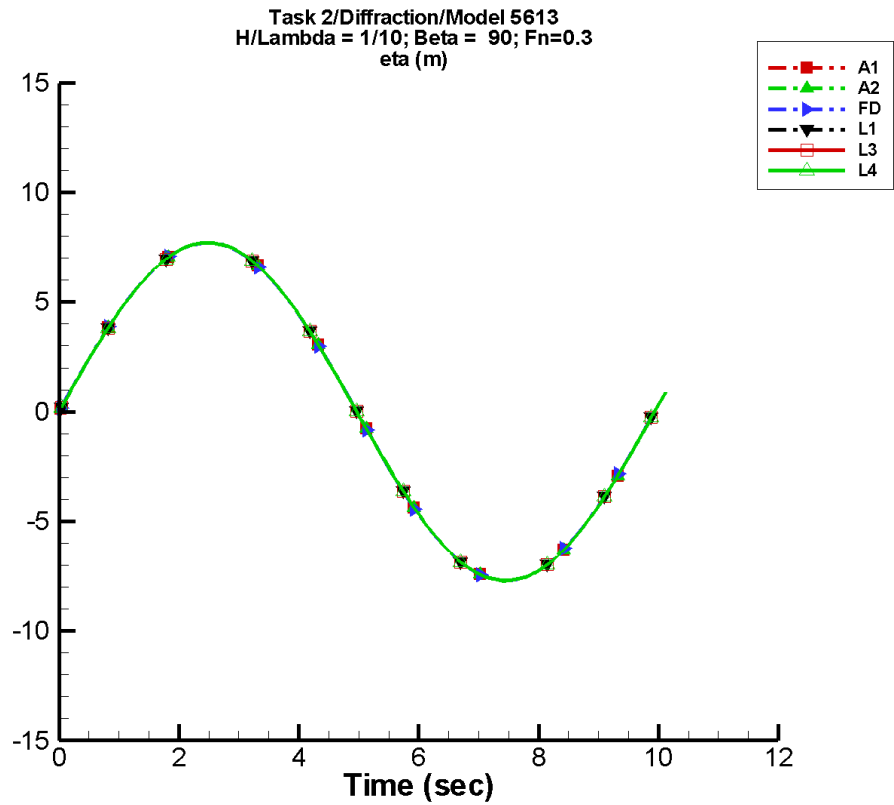
Table G-61. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| A2   | -3.25E-03    | 5.14         | -4                | 4.92E-03     | -25               |
| FD   | 1.52E-03     | 5.13         | -8                | 2.26E-03     | 21                |
| L1   | -2.12E-03    | 5.13         | -4                | 3.38E-03     | -37               |
| L3   | -2.12E-03    | 5.13         | -4                | 3.38E-03     | -37               |
| L4   | -2.12E-03    | 5.13         | -4                | 3.38E-03     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -1.13E-03    | 5.13         | 0                 | 1.68E-03     | -17               |

Table G-62. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.09          | 5.09           |
| A2   | -5.14          | 5.14           | -5.09          | 5.09           |
| FD   | -5.13          | 5.13           | -5.12          | 5.08           |
| L1   | -5.13          | 5.13           | -5.11          | 5.12           |
| L3   | -5.13          | 5.13           | -5.11          | 5.12           |
| L4   | -5.13          | 5.13           | -5.11          | 5.12           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.13           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-32. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

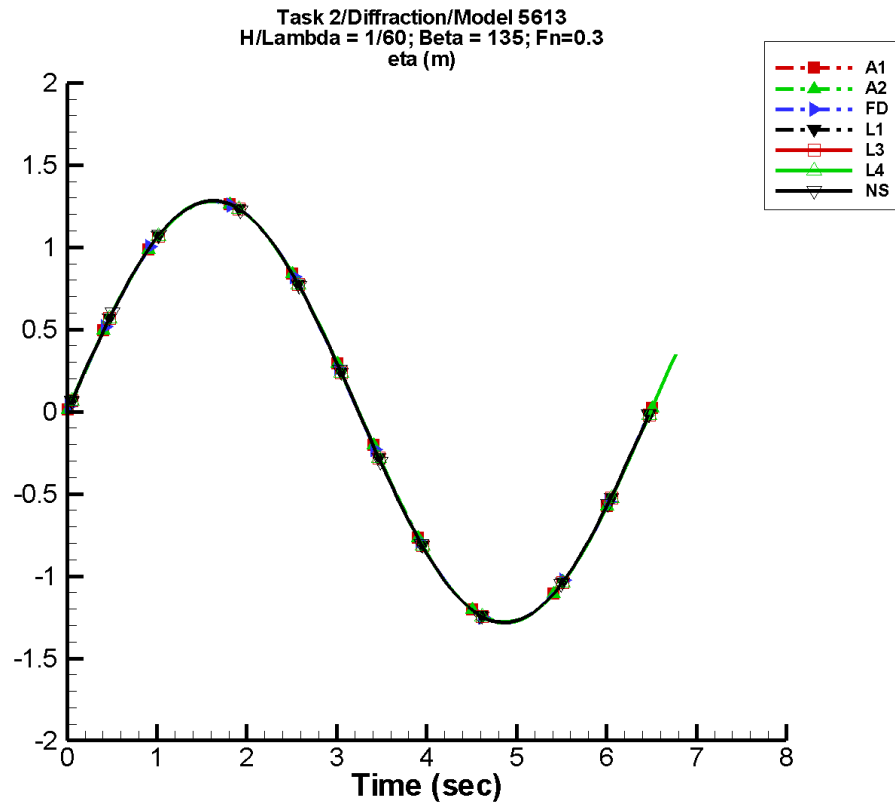
Table G-63. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| A2   | -4.87E-03    | 7.71         | -4                | 7.39E-03     | -25               |
| FD   | 2.27E-03     | 7.70         | -8                | 3.38E-03     | 21                |
| L1   | -3.18E-03    | 7.70         | -4                | 5.06E-03     | -37               |
| L3   | -3.18E-03    | 7.70         | -4                | 5.06E-03     | -37               |
| L4   | -3.18E-03    | 7.70         | -4                | 5.06E-03     | -37               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-64. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.63          | 7.63           |
| A2   | -7.71          | 7.71           | -7.63          | 7.63           |
| FD   | -7.70          | 7.70           | -7.68          | 7.62           |
| L1   | -7.70          | 7.70           | -7.67          | 7.67           |
| L3   | -7.70          | 7.70           | -7.67          | 7.67           |
| L4   | -7.70          | 7.70           | -7.67          | 7.67           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-33. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-65. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

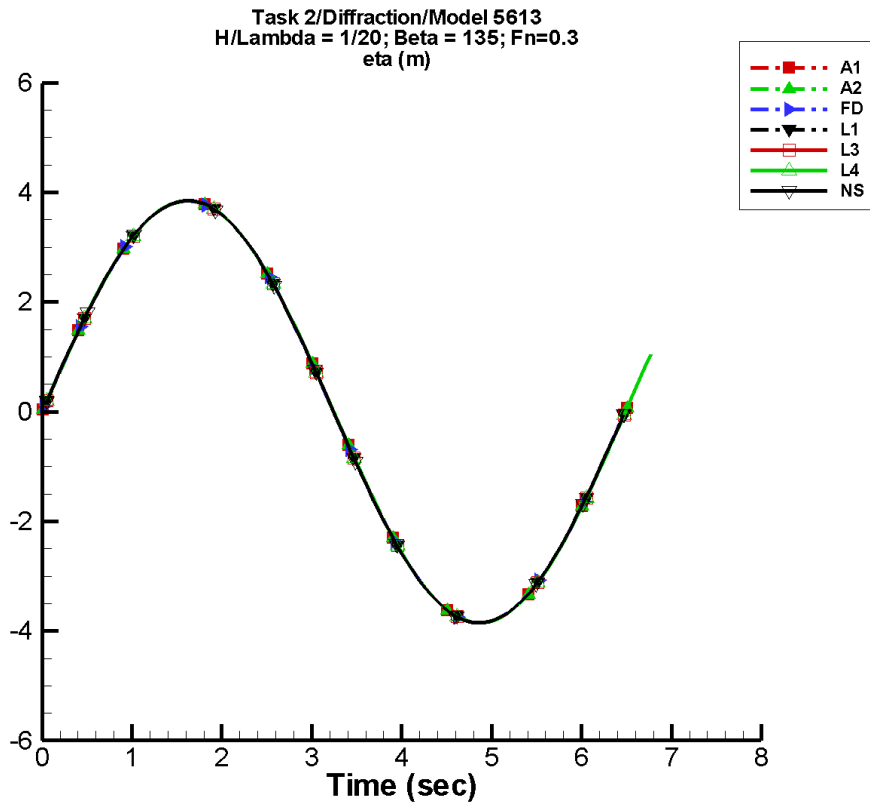
| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -5.32E-04    | 1.28         | -3                | 8.11E-04     | -21               |
| A2   | -5.32E-04    | 1.28         | -3                | 8.11E-04     | -21               |
| FD   | 3.19E-05     | 1.28         | 1                 | 5.08E-05     | 164               |
| L1   | -1.63E-04    | 1.28         | -3                | 2.55E-04     | -54               |
| L3   | -1.63E-04    | 1.28         | -3                | 2.55E-04     | -54               |
| L4   | -1.63E-04    | 1.28         | -3                | 2.55E-04     | -54               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | 1.34E-04     | 1.28         | 0                 | 1.98E-04     | 162               |

Table G-66. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.25          | 1.29           |
| A2   | -1.28          | 1.28           | -1.25          | 1.29           |
| FD   | -1.28          | 1.28           | -1.25          | 1.25           |
| L1   | -1.28          | 1.28           | -1.27          | 1.27           |
| L3   | -1.28          | 1.28           | -1.27          | 1.27           |
| L4   | -1.28          | 1.28           | -1.27          | 1.27           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.27           |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-34. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

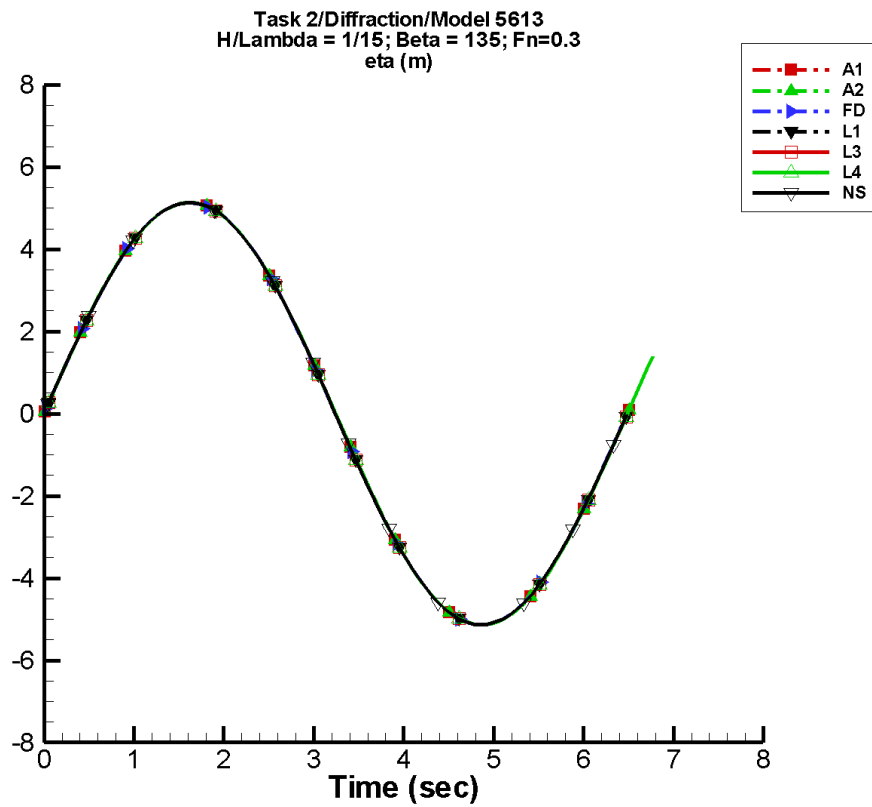
Table G-67. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -1.60E-03    | 3.85         | -3                | 2.44E-03     | -21               |
| A2   | -1.60E-03    | 3.85         | -3                | 2.44E-03     | -21               |
| FD   | 9.70E-05     | 3.85         | 1                 | 1.52E-04     | 164               |
| L1   | -4.88E-04    | 3.85         | -3                | 7.66E-04     | -54               |
| L3   | -4.88E-04    | 3.85         | -3                | 7.66E-04     | -54               |
| L4   | -4.88E-04    | 3.85         | -3                | 7.66E-04     | -54               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | 4.01E-04     | 3.85         | 0                 | 5.94E-04     | 162               |

Table G-68. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.76          | 3.87           |
| A2   | -3.85          | 3.85           | -3.76          | 3.87           |
| FD   | -3.85          | 3.85           | -3.76          | 3.76           |
| L1   | -3.85          | 3.85           | -3.82          | 3.82           |
| L3   | -3.85          | 3.85           | -3.82          | 3.82           |
| L4   | -3.85          | 3.85           | -3.82          | 3.82           |
| NF   | —              | —              | —              | —              |
| NS   | -3.85          | 3.85           | -3.81          | 3.81           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-35. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

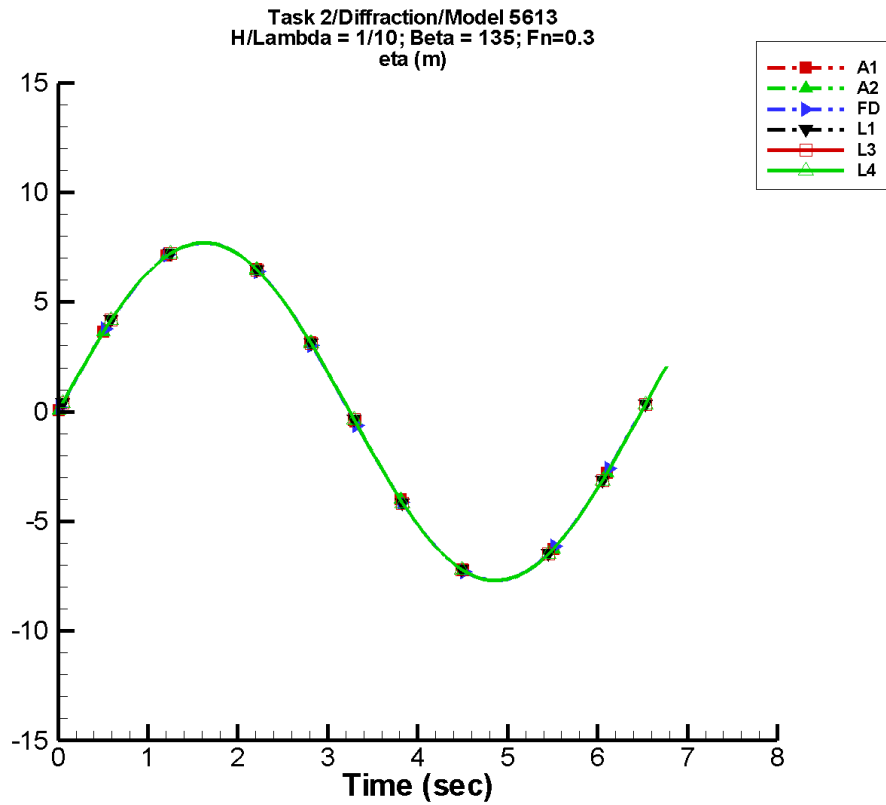
Table G-69. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -2.14E-03    | 5.14         | -3                | 3.26E-03     | -21               |
| A2   | -2.14E-03    | 5.14         | -3                | 3.26E-03     | -21               |
| FD   | 1.29E-04     | 5.13         | 1                 | 2.02E-04     | 164               |
| L1   | -6.51E-04    | 5.13         | -3                | 1.02E-03     | -54               |
| L3   | -6.51E-04    | 5.13         | -3                | 1.02E-03     | -54               |
| L4   | -6.51E-04    | 5.13         | -3                | 1.02E-03     | -54               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | 5.36E-04     | 5.13         | 0                 | 7.92E-04     | 162               |

Table G-70. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -5.01          | 5.16           |
| A2   | -5.14          | 5.14           | -5.01          | 5.16           |
| FD   | -5.13          | 5.13           | -5.01          | 5.01           |
| L1   | -5.13          | 5.13           | -5.09          | 5.09           |
| L3   | -5.13          | 5.13           | -5.09          | 5.09           |
| L4   | -5.13          | 5.13           | -5.09          | 5.09           |
| NF   | —              | —              | —              | —              |
| NS   | -5.13          | 5.13           | -5.10          | 5.10           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-36. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

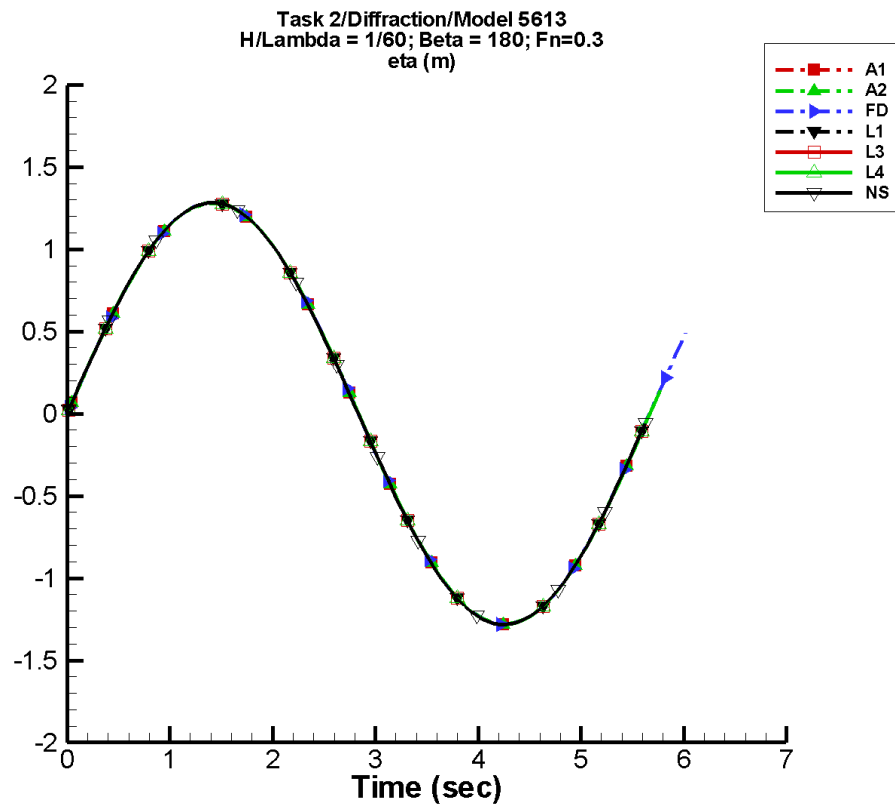
Table G-71. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.21E-03    | 7.71         | -3                | 4.88E-03     | -21               |
| A2   | -3.21E-03    | 7.71         | -3                | 4.88E-03     | -21               |
| FD   | 1.93E-04     | 7.70         | 1                 | 3.03E-04     | 164               |
| L1   | -9.76E-04    | 7.70         | -3                | 1.53E-03     | -54               |
| L3   | -9.76E-04    | 7.70         | -3                | 1.53E-03     | -54               |
| L4   | -9.76E-04    | 7.70         | -3                | 1.53E-03     | -54               |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | —            | —            | —                 | —            | —                 |

Table G-72. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.70          | 7.71           | -7.52          | 7.75           |
| A2   | -7.70          | 7.71           | -7.52          | 7.75           |
| FD   | -7.70          | 7.70           | -7.51          | 7.51           |
| L1   | -7.70          | 7.70           | -7.63          | 7.63           |
| L3   | -7.70          | 7.70           | -7.63          | 7.63           |
| L4   | -7.70          | 7.70           | -7.63          | 7.63           |
| NF   | —              | —              | —              | —              |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-37. Time history of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-73. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -1.33E-03    | 1.28         | -8                | 2.07E-03     | -39               |
| A2   | -1.33E-03    | 1.28         | -8                | 2.07E-03     | -39               |
| FD   | -3.62E-04    | 1.28         | -36               | 2.19E-03     | -88               |
| L1   | 8.56E-04     | 1.28         | -14               | 2.80E-03     | 0                 |
| L3   | 8.56E-04     | 1.28         | -14               | 2.80E-03     | 0                 |
| L4   | 8.56E-04     | 1.28         | -14               | 2.80E-03     | 0                 |
| NF   | —            | —            | —                 | —            | —                 |
| NS   | -7.40E-04    | 1.28         | -1                | 1.10E-03     | -17               |

Table G-74. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -1.28          | 1.28           | -1.24          | 1.27           |
| A2   | -1.28          | 1.28           | -1.24          | 1.27           |
| FD   | -1.28          | 1.28           | -1.24          | 1.24           |
| L1   | -1.28          | 1.28           | -1.27          | 1.27           |
| L3   | -1.28          | 1.28           | -1.27          | 1.27           |
| L4   | -1.28          | 1.28           | -1.27          | 1.27           |
| NF   | —              | —              | —              | —              |
| NS   | -1.28          | 1.28           | -1.27          | 1.27           |



TASK 2/0-DOF IN WAVES/MODEL 5613

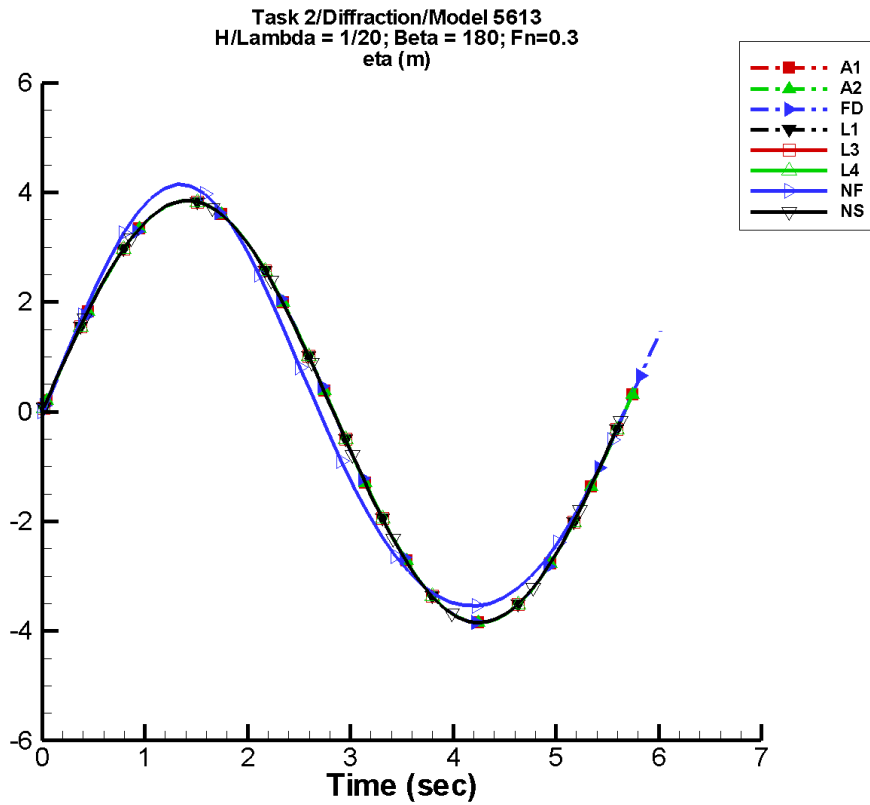


Figure G-38. Time history of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-75. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -3.99E-03    | 3.85         | -8                | 6.23E-03     | -39               |
| A2   | -3.99E-03    | 3.85         | -8                | 6.23E-03     | -39               |
| FD   | -1.09E-03    | 3.85         | -36               | 6.58E-03     | -88               |
| L1   | 2.57E-03     | 3.85         | -14               | 8.40E-03     | 0                 |
| L3   | 2.57E-03     | 3.85         | -14               | 8.40E-03     | 0                 |
| L4   | 2.57E-03     | 3.85         | -14               | 8.40E-03     | 0                 |
| NF   | -3.19E-03    | 3.85         | 86                | 0.308        | 82                |
| NS   | -2.22E-03    | 3.85         | -1                | 3.30E-03     | -17               |

Table G-76. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -3.85          | 3.85           | -3.73          | 3.81           |
| A2   | -3.85          | 3.85           | -3.73          | 3.81           |
| FD   | -3.85          | 3.85           | -3.73          | 3.73           |
| L1   | -3.85          | 3.85           | -3.81          | 3.81           |
| L3   | -3.85          | 3.85           | -3.81          | 3.81           |
| L4   | -3.85          | 3.85           | -3.81          | 3.81           |
| NF   | -3.54          | 4.15           | -3.40          | 3.89           |
| NS   | -3.85          | 3.85           | -3.81          | 3.81           |

TASK 2/0-DOF IN WAVES/MODEL 5613

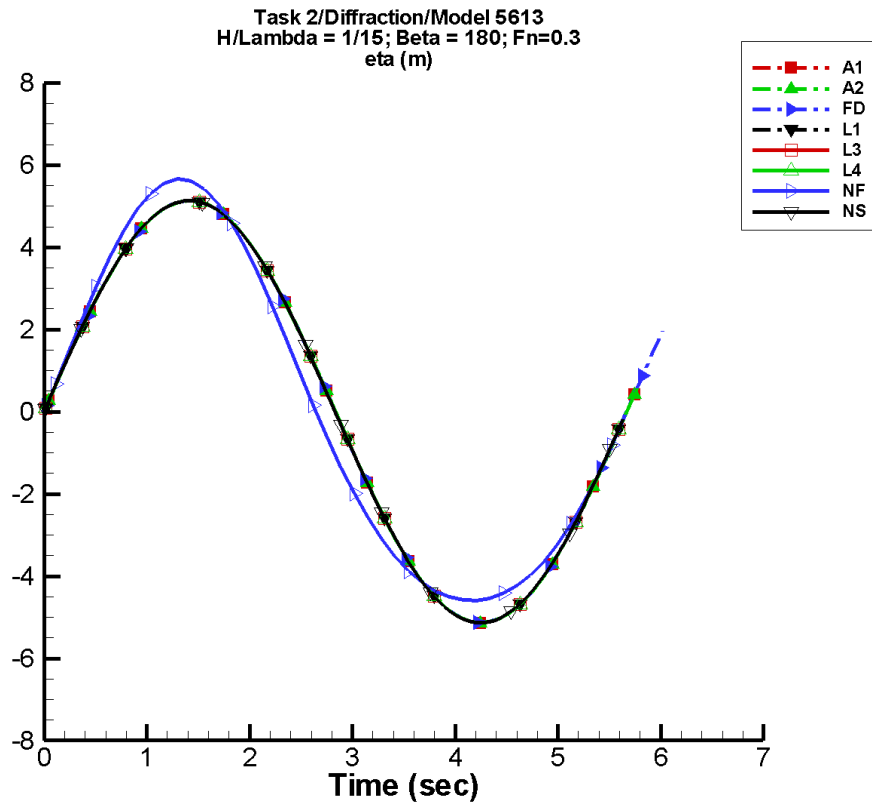


Figure G-39. Time history of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

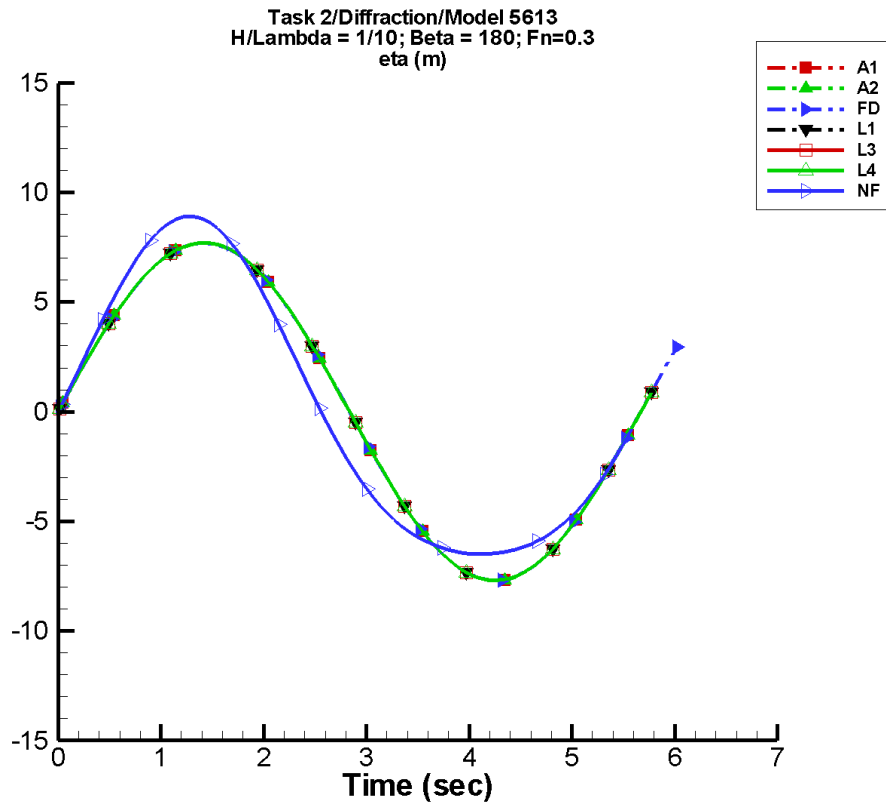
Table G-77. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -5.33E-03    | 5.14         | -8                | 8.31E-03     | -39               |
| A2   | -5.33E-03    | 5.14         | -8                | 8.31E-03     | -39               |
| FD   | -1.45E-03    | 5.14         | -36               | 8.77E-03     | -88               |
| L1   | 3.42E-03     | 5.14         | -14               | 1.12E-02     | 0                 |
| L3   | 3.42E-03     | 5.14         | -14               | 1.12E-02     | 0                 |
| L4   | 3.42E-03     | 5.14         | -14               | 1.12E-02     | 0                 |
| NF   | -3.65E-03    | 5.13         | 88                | 0.543        | 85                |
| NS   | -2.97E-03    | 5.13         | -1                | 4.41E-03     | -17               |

Table G-78. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -5.14          | 5.14           | -4.98          | 5.08           |
| A2   | -5.14          | 5.14           | -4.98          | 5.08           |
| FD   | -5.13          | 5.13           | -4.97          | 4.97           |
| L1   | -5.13          | 5.13           | -5.08          | 5.08           |
| L3   | -5.13          | 5.13           | -5.08          | 5.08           |
| L4   | -5.13          | 5.13           | -5.08          | 5.08           |
| NF   | -4.59          | 5.67           | -4.43          | 5.28           |
| NS   | -5.13          | 5.13           | -5.10          | 5.10           |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NSHIPMO.

Figure G-40. Time history of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

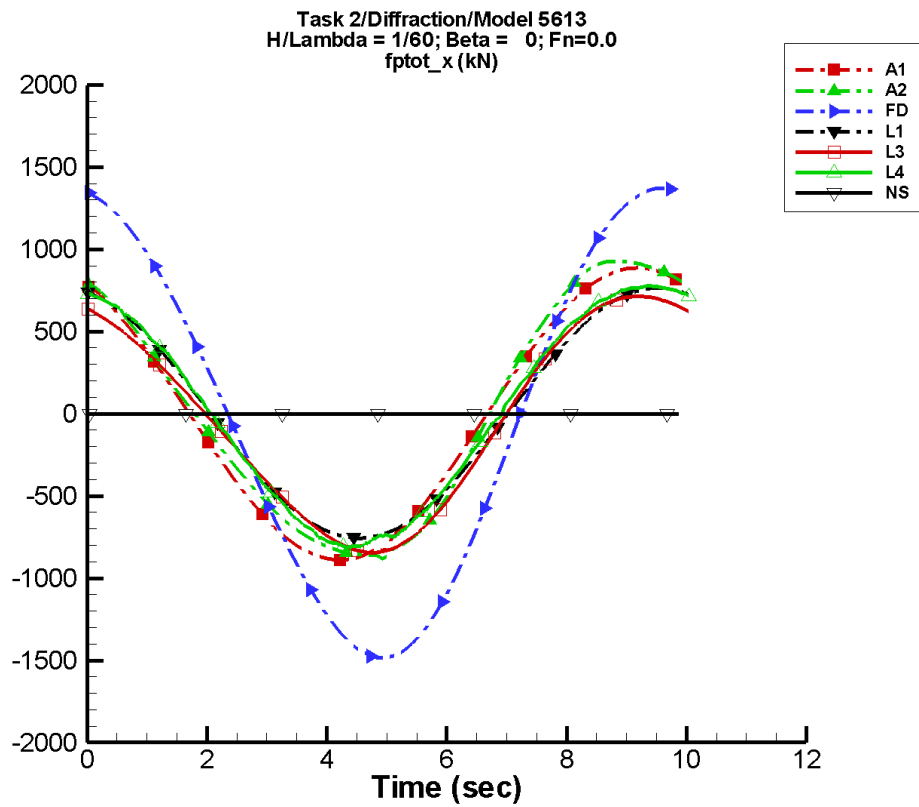
Table G-79. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(m) | $a_1$<br>(m) | $\Phi_1$<br>(deg) | $a_2$<br>(m) | $\Phi_2$<br>(deg) |
|------|--------------|--------------|-------------------|--------------|-------------------|
| A1   | -8.00E-03    | 7.71         | -8                | 1.25E-02     | -39               |
| A2   | -8.00E-03    | 7.71         | -8                | 1.25E-02     | -39               |
| FD   | -2.17E-03    | 7.70         | -36               | 1.32E-02     | -88               |
| L1   | 5.14E-03     | 7.70         | -14               | 1.68E-02     | 0                 |
| L3   | 5.14E-03     | 7.70         | -14               | 1.68E-02     | 0                 |
| L4   | 5.14E-03     | 7.70         | -14               | 1.68E-02     | 0                 |
| NF   | -1.90E-02    | 7.71         | 69                | 1.24         | 48                |
| NS   | —            | —            | —                 | —            | —                 |

Table G-80. Minimum and maximum of  $\eta$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered     |                | Filtered       |                |
|------|----------------|----------------|----------------|----------------|
|      | Minimum<br>(m) | Maximum<br>(m) | Minimum<br>(m) | Maximum<br>(m) |
| A1   | -7.71          | 7.71           | -7.47          | 7.62           |
| A2   | -7.71          | 7.71           | -7.47          | 7.62           |
| FD   | -7.70          | 7.70           | -7.46          | 7.45           |
| L1   | -7.70          | 7.70           | -7.61          | 7.61           |
| L3   | -7.70          | 7.70           | -7.61          | 7.61           |
| L4   | -7.70          | 7.70           | -7.61          | 7.61           |
| NF   | -6.49          | 8.91           | -6.45          | 8.75           |
| NS   | —              | —              | —              | —              |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-41. Time history of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–81. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

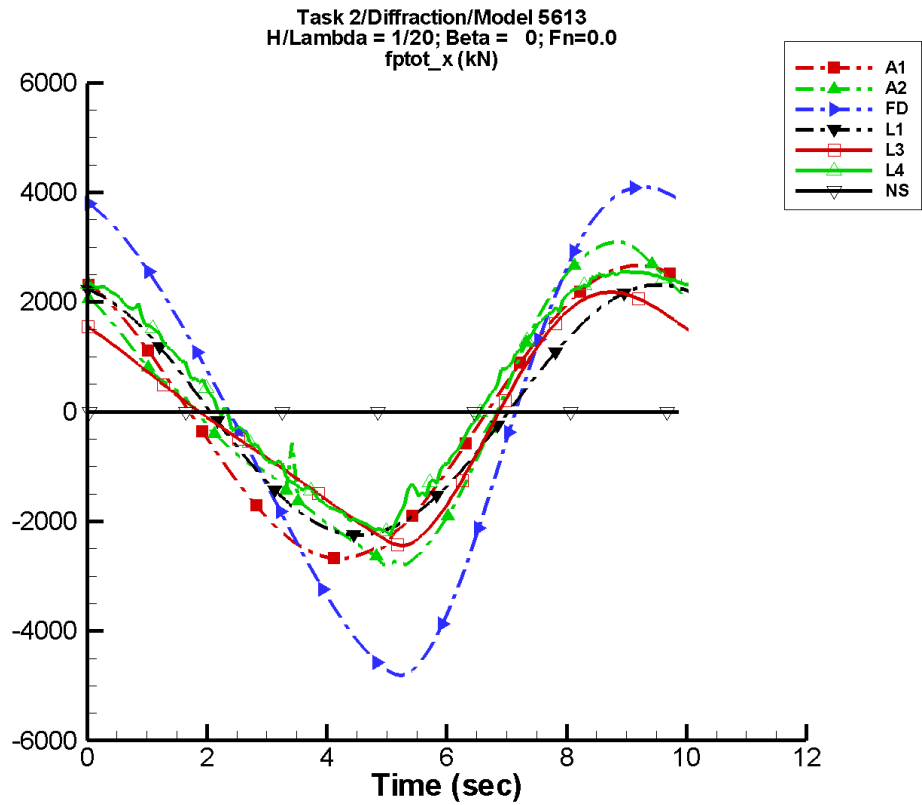
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.61         | 887.          | 114               | 1.20          | 29                |
| A2   | 23.4          | 913.          | 110               | 73.5          | -150              |
| FD   | -9.28         | 1.42E+03      | 89                | 77.1          | -147              |
| L1   | 0.880         | 760.          | 101               | 2.96          | 89                |
| L3   | -37.6         | 766.          | 103               | 69.5          | -134              |
| L4   | 13.0          | 793.          | 104               | 26.8          | -73               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–82. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -890.           | 886.            | -881.           | 877.            |
| A2   | -883.           | 928.            | -857.           | 920.            |
| FD   | -1.49E+03       | 1.37E+03        | -1.47E+03       | 1.36E+03        |
| L1   | -757.           | 764.            | -754.           | 761.            |
| L3   | -846.           | 713.            | -842.           | 710.            |
| L4   | -814.           | 779.            | -805.           | 772.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-42. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

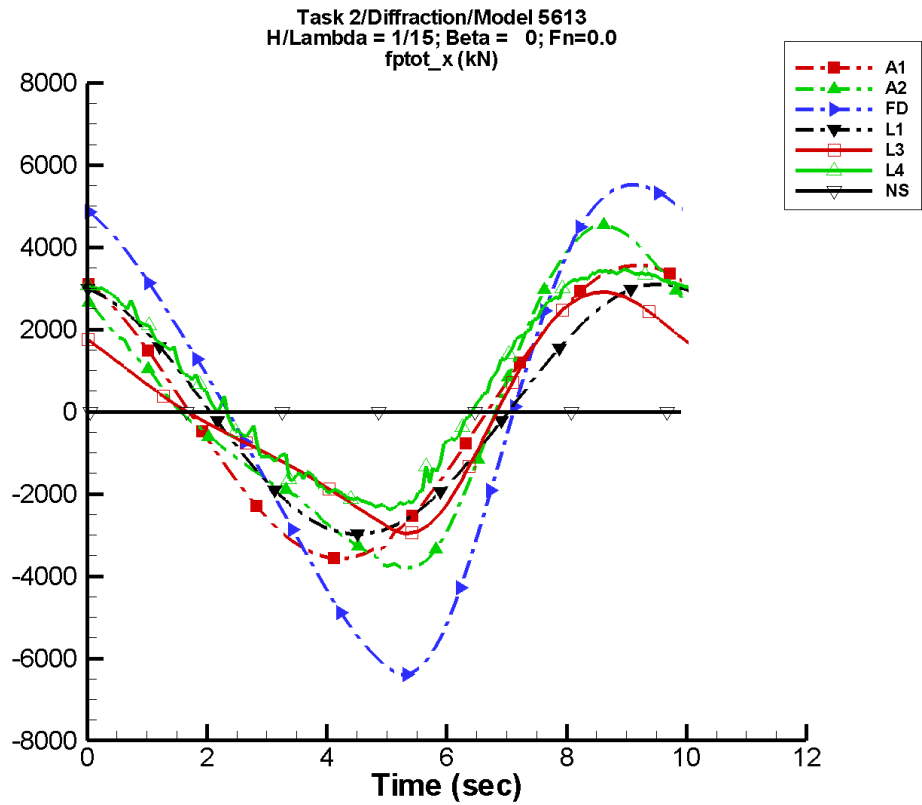
Table G–83. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.84         | 2.67E+03      | 114               | 3.62          | 29                |
| A2   | 89.3          | 2.65E+03      | 108               | 666.          | -156              |
| FD   | -1.12         | 4.30E+03      | 90                | 652.          | -157              |
| L1   | 12.3          | 2.28E+03      | 101               | 23.6          | 84                |
| L3   | -18.5         | 2.07E+03      | 105               | 540.          | -149              |
| L4   | 421.          | 2.29E+03      | 106               | 211.          | -115              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–84. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.68E+03       | 2.67E+03        | -2.65E+03       | 2.64E+03        |
| A2   | -2.79E+03       | 3.10E+03        | -2.72E+03       | 3.04E+03        |
| FD   | -4.82E+03       | 4.10E+03        | -4.71E+03       | 4.06E+03        |
| L1   | -2.25E+03       | 2.31E+03        | -2.24E+03       | 2.31E+03        |
| L3   | -2.44E+03       | 2.18E+03        | -2.41E+03       | 2.17E+03        |
| L4   | -2.25E+03       | 2.56E+03        | -2.14E+03       | 2.54E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-43. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

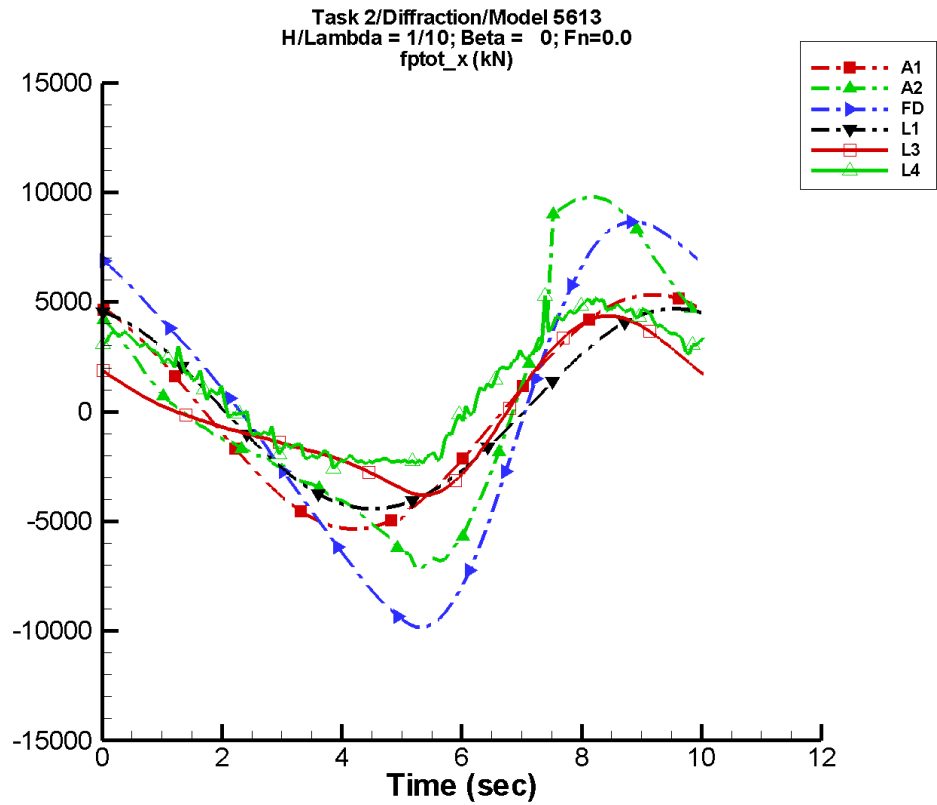
Table G–85. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.46         | 3.56E+03      | 114               | 4.83          | 29                |
| A2   | 107.          | 3.71E+03      | 111               | 1.09E+03      | -158              |
| FD   | 4.34          | 5.70E+03      | 91                | 1.07E+03      | -160              |
| L1   | 22.9          | 3.04E+03      | 101               | 41.3          | 83                |
| L3   | -3.25         | 2.54E+03      | 108               | 837.          | -154              |
| L4   | 719.          | 2.90E+03      | 109               | 306.          | -130              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–86. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.57E+03       | 3.56E+03        | -3.54E+03       | 3.52E+03        |
| A2   | -3.80E+03       | 4.55E+03        | -3.74E+03       | 4.45E+03        |
| FD   | -6.39E+03       | 5.51E+03        | -6.28E+03       | 5.46E+03        |
| L1   | -2.98E+03       | 3.10E+03        | -2.97E+03       | 3.09E+03        |
| L3   | -2.96E+03       | 2.91E+03        | -2.93E+03       | 2.89E+03        |
| L4   | -2.42E+03       | 3.46E+03        | -2.30E+03       | 3.41E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-44. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

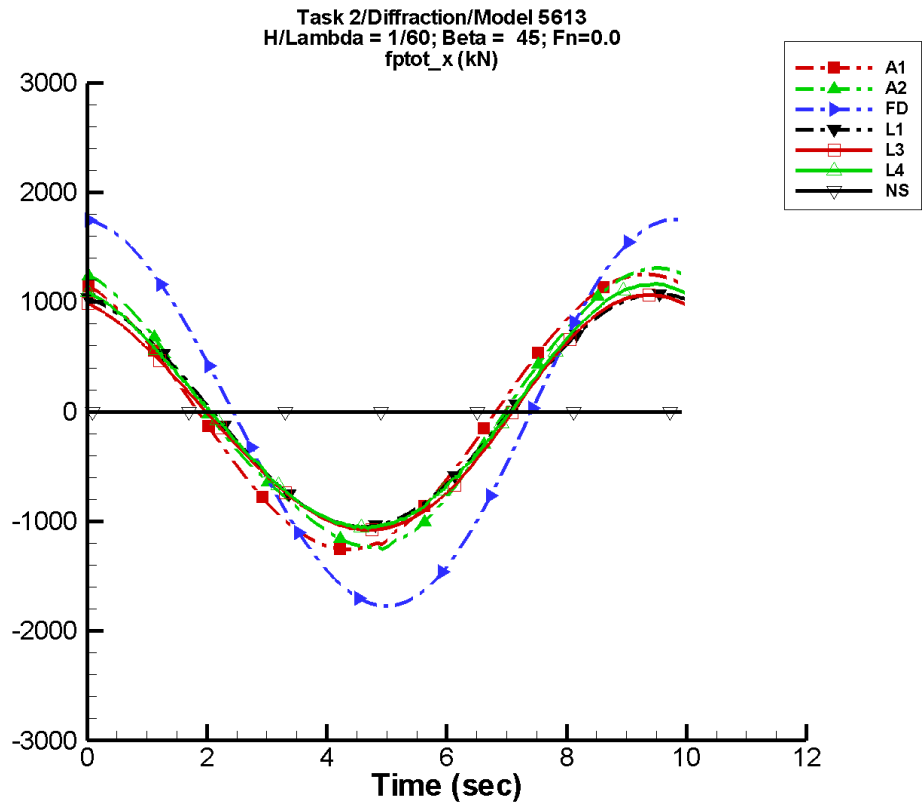
Table G–87. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.69         | 5.34E+03      | 114               | 7.25          | 29                |
| A2   | 457.          | 6.76E+03      | 115               | 2.92E+03      | -157              |
| FD   | 9.90          | 8.58E+03      | 93                | 2.05E+03      | -159              |
| L1   | 53.7          | 4.56E+03      | 101               | 91.5          | 83                |
| L3   | 30.3          | 3.32E+03      | 116               | 1.39E+03      | -154              |
| L4   | 1.20E+03      | 3.62E+03      | 119               | 524.          | -108              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–88. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.36E+03       | 5.34E+03        | -5.31E+03       | 5.28E+03        |
| A2   | -7.17E+03       | 9.81E+03        | -6.78E+03       | 9.81E+03        |
| FD   | -9.83E+03       | 8.67E+03        | -9.63E+03       | 8.55E+03        |
| L1   | -4.43E+03       | 4.70E+03        | -4.41E+03       | 4.68E+03        |
| L3   | -3.81E+03       | 4.36E+03        | -3.77E+03       | 4.33E+03        |
| L4   | -2.60E+03       | 5.27E+03        | -2.27E+03       | 5.13E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-45. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–89. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

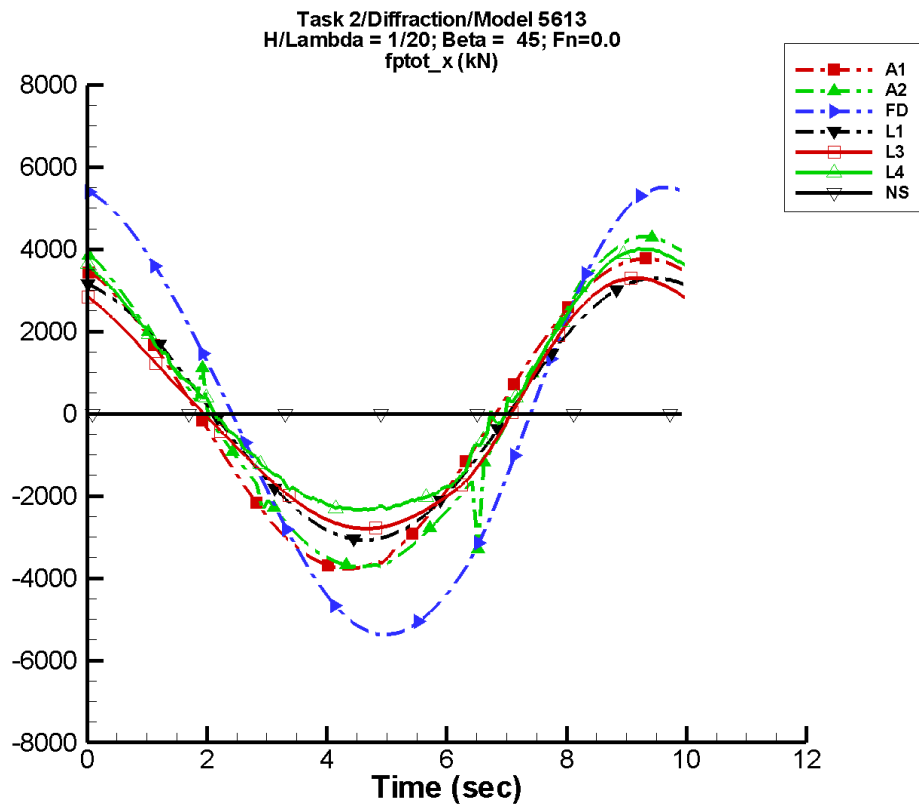
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.64         | 1.25E+03      | 108               | 1.61          | 35                |
| A2   | 22.1          | 1.26E+03      | 101               | 48.2          | 166               |
| FD   | -9.94         | 1.76E+03      | 84                | 42.0          | 168               |
| L1   | 8.24          | 1.06E+03      | 100               | 8.49          | 173               |
| L3   | -30.7         | 1.07E+03      | 101               | 58.1          | 179               |
| L4   | 19.2          | 1.10E+03      | 101               | 47.0          | 161               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–90. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.26E+03       | 1.25E+03        | -1.24E+03       | 1.24E+03        |
| A2   | -1.25E+03       | 1.31E+03        | -1.22E+03       | 1.30E+03        |
| FD   | -1.77E+03       | 1.75E+03        | -1.75E+03       | 1.74E+03        |
| L1   | -1.05E+03       | 1.07E+03        | -1.04E+03       | 1.07E+03        |
| L3   | -1.08E+03       | 1.06E+03        | -1.07E+03       | 1.06E+03        |
| L4   | -1.06E+03       | 1.17E+03        | -1.05E+03       | 1.16E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-46. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

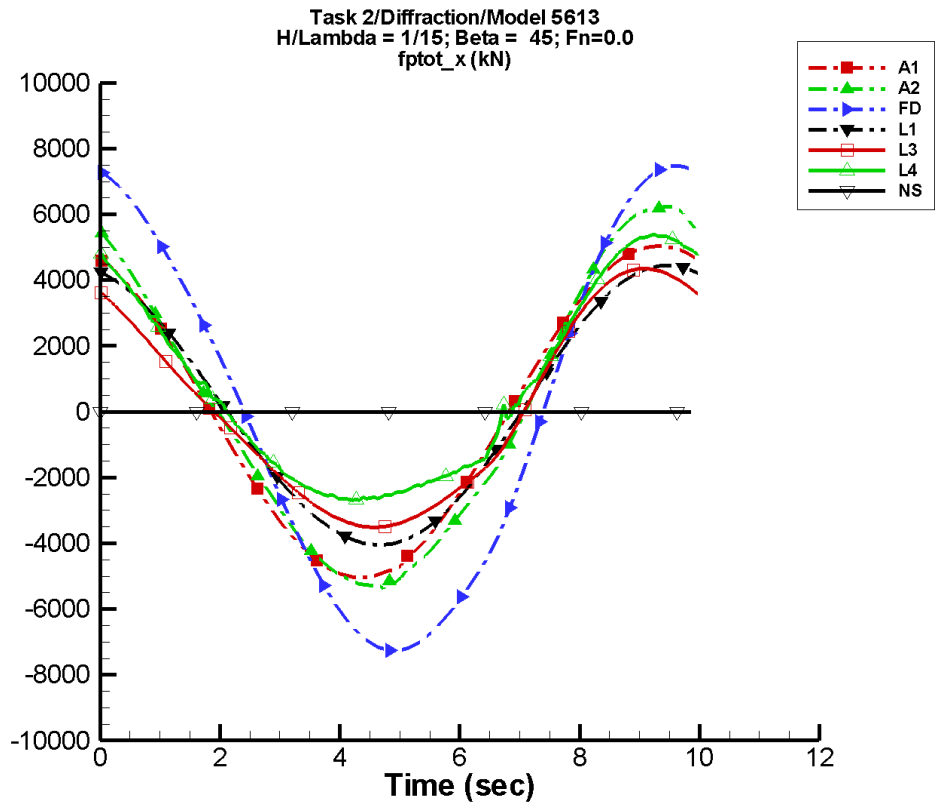
Table G-91. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.94         | 3.77E+03      | 108               | 4.84          | 35                |
| A2   | 48.6          | 3.95E+03      | 102               | 306.          | 158               |
| FD   | -14.9         | 5.44E+03      | 85                | 288.          | 161               |
| L1   | 77.3          | 3.18E+03      | 100               | 71.5          | 173               |
| L3   | 35.0          | 3.00E+03      | 103               | 351.          | 171               |
| L4   | 451.          | 3.14E+03      | 103               | 392.          | 146               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-92. Minimum and maximum of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.78E+03       | 3.77E+03        | -3.74E+03       | 3.73E+03        |
| A2   | -3.73E+03       | 4.31E+03        | -3.69E+03       | 4.25E+03        |
| FD   | -5.38E+03       | 5.51E+03        | -5.32E+03       | 5.45E+03        |
| L1   | -3.07E+03       | 3.29E+03        | -3.06E+03       | 3.28E+03        |
| L3   | -2.79E+03       | 3.30E+03        | -2.78E+03       | 3.29E+03        |
| L4   | -2.34E+03       | 4.01E+03        | -2.32E+03       | 3.98E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-47. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

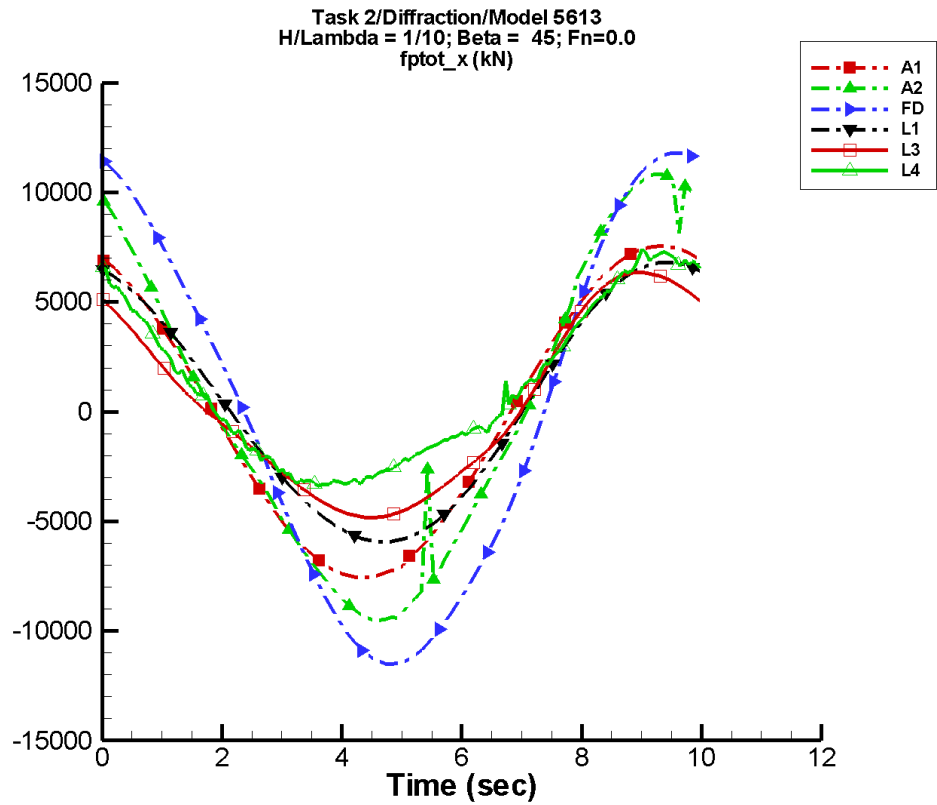
Table G-93. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.60         | 5.04E+03      | 108               | 6.46          | 35                |
| A2   | 83.4          | 5.53E+03      | 104               | 466.          | 154               |
| FD   | -22.3         | 7.32E+03      | 86                | 393.          | 159               |
| L1   | 138.          | 4.24E+03      | 100               | 126.          | 173               |
| L3   | 93.9          | 3.81E+03      | 105               | 479.          | 171               |
| L4   | 718.          | 3.91E+03      | 105               | 595.          | 133               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-94. Minimum and maximum of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.04E+03       | 5.04E+03        | -5.00E+03       | 4.98E+03        |
| A2   | -5.38E+03       | 6.24E+03        | -5.23E+03       | 6.16E+03        |
| FD   | -7.26E+03       | 7.47E+03        | -7.19E+03       | 7.39E+03        |
| L1   | -4.05E+03       | 4.44E+03        | -4.04E+03       | 4.42E+03        |
| L3   | -3.51E+03       | 4.35E+03        | -3.50E+03       | 4.33E+03        |
| L4   | -2.69E+03       | 5.38E+03        | -2.66E+03       | 5.33E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-48. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

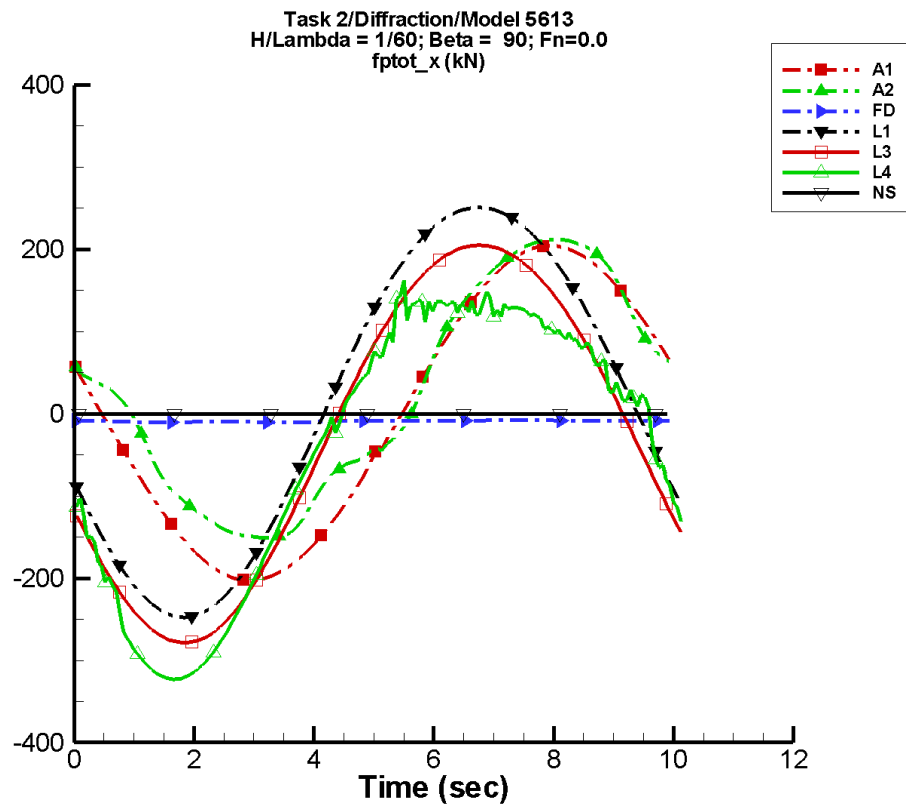
Table G-95. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.90         | 7.56E+03      | 108               | 9.69          | 35                |
| A2   | 160.          | 9.50E+03      | 105               | 827.          | 155               |
| FD   | -36.5         | 1.14E+04      | 88                | 576.          | 162               |
| L1   | 312.          | 6.36E+03      | 100               | 281.          | 173               |
| L3   | 269.          | 5.33E+03      | 110               | 723.          | 174               |
| L4   | 1.12E+03      | 4.87E+03      | 112               | 891.          | 108               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-96. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.57E+03       | 7.55E+03        | -7.49E+03       | 7.48E+03        |
| A2   | -9.53E+03       | 1.08E+04        | -9.42E+03       | 1.05E+04        |
| FD   | -1.15E+04       | 1.18E+04        | -1.14E+04       | 1.17E+04        |
| L1   | -5.94E+03       | 6.82E+03        | -5.92E+03       | 6.79E+03        |
| L3   | -4.83E+03       | 6.35E+03        | -4.81E+03       | 6.32E+03        |
| L4   | -3.58E+03       | 7.42E+03        | -3.29E+03       | 7.14E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-49. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-97. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

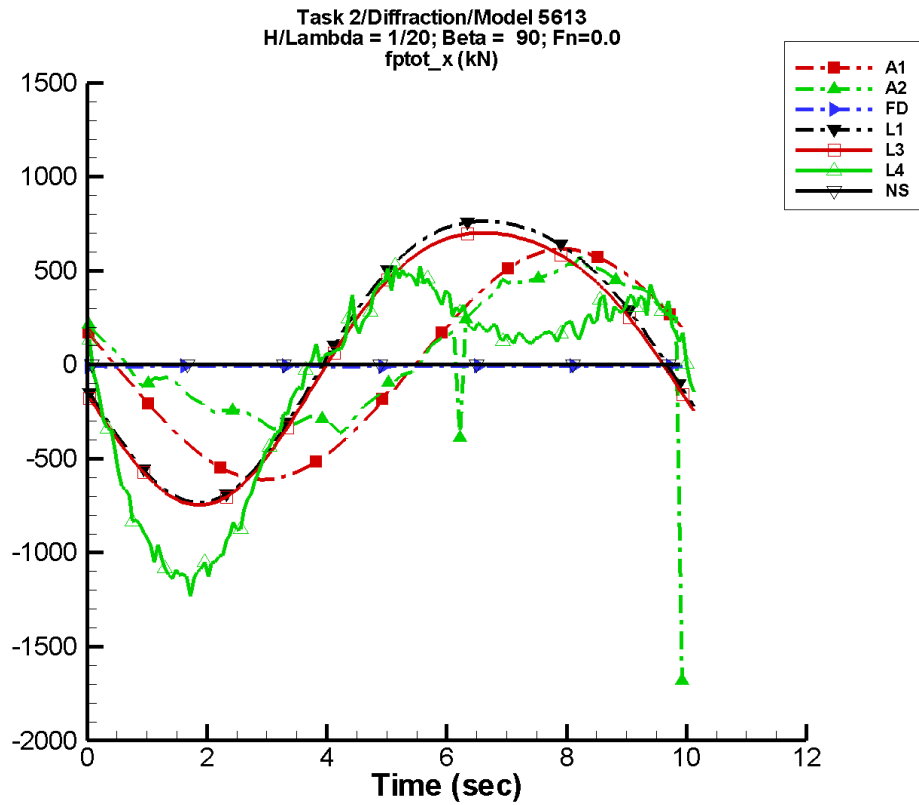
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.00          | 202.          | 158               | 0.675         | 130               |
| A2   | 25.1          | 176.          | 155               | 8.33          | -101              |
| FD   | -9.08         | 1.02          | 172               | 3.73E-02      | 109               |
| L1   | 11.6          | 249.          | -160              | 10.3          | 118               |
| L3   | -27.1         | 242.          | -160              | 10.1          | 119               |
| L4   | -45.3         | 224.          | -160              | 50.5          | 133               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-98. Minimum and maximum of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -203.           | 204.            | -201.           | 202.            |
| A2   | -151.           | 212.            | -150.           | 210.            |
| FD   | -10.7           | -8.02           | -10.5           | -8.03           |
| L1   | -248.           | 251.            | -247.           | 250.            |
| L3   | -279.           | 205.            | -278.           | 204.            |
| L4   | -323.           | 162.            | -321.           | 134.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-50. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

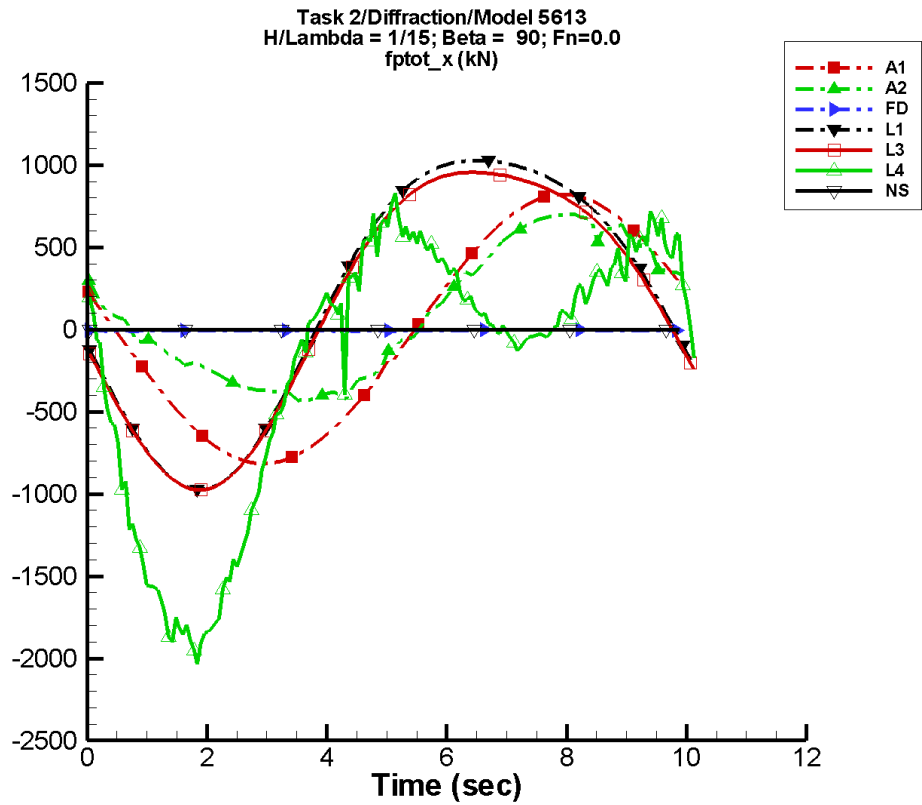
Table G-99. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.01          | 608.          | 158               | 2.03          | 130               |
| A2   | 53.7          | 402.          | 153               | 73.3          | -109              |
| FD   | -7.28         | 1.09          | 172               | 1.27          | -106              |
| L1   | 103.          | 748.          | -160              | 91.8          | 118               |
| L3   | 65.5          | 724.          | -160              | 91.2          | 118               |
| L4   | -95.5         | 616.          | -156              | 396.          | 127               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-100. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -611.           | 615.            | -605.           | 608.            |
| A2   | -1.68E+03       | 574.            | -312.           | 528.            |
| FD   | -9.27           | -4.90           | -8.70           | -4.96           |
| L1   | -734.           | 764.            | -731.           | 762.            |
| L3   | -747.           | 702.            | -744.           | 700.            |
| L4   | -1.25E+03       | 527.            | -1.14E+03       | 481.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-51. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

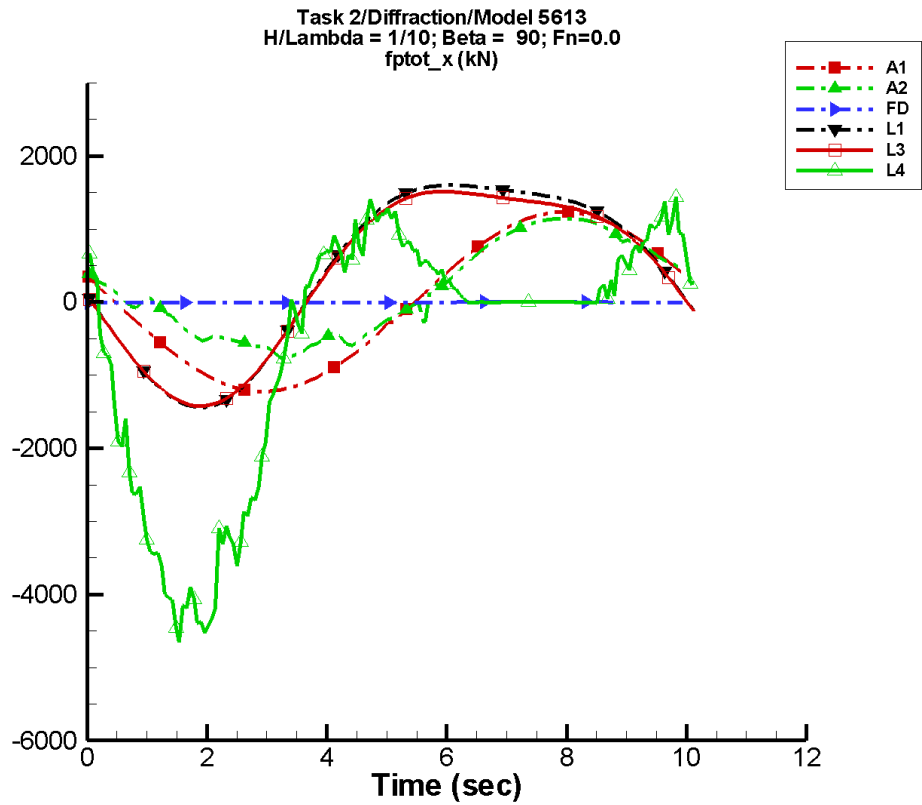
Table G–101. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.02          | 812.          | 158               | 2.71          | 130               |
| A2   | 98.5          | 546.          | 151               | 66.2          | -108              |
| FD   | -6.05         | 2.53          | 171               | 2.21          | -107              |
| L1   | 184.          | 997.          | -160              | 163.          | 118               |
| L3   | 145.          | 962.          | -160              | 163.          | 118               |
| L4   | -225.         | 865.          | -157              | 733.          | 125               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–102. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -816.           | 821.            | -808.           | 812.            |
| A2   | -432.           | 703.            | -410.           | 686.            |
| FD   | -9.05           | -0.689          | -8.39           | -0.811          |
| L1   | -974.           | 1.03E+03        | -968.           | 1.03E+03        |
| L3   | -976.           | 956.            | -970.           | 954.            |
| L4   | -2.04E+03       | 829.            | -1.90E+03       | 666.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-52. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

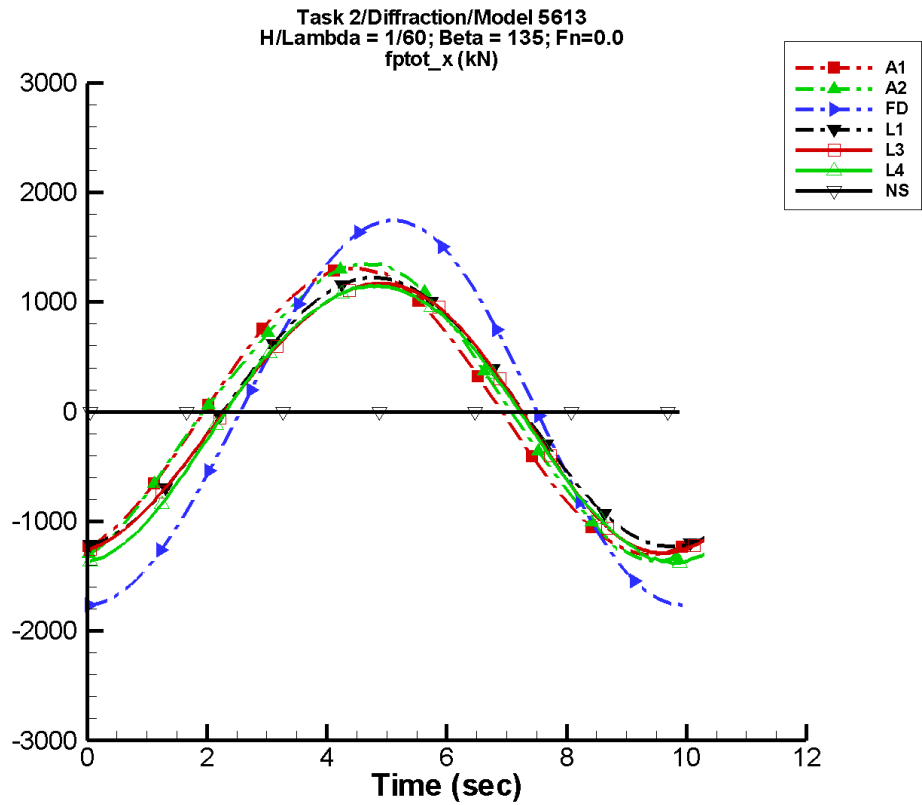
Table G-103. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 6.03          | 1.22E+03      | 158               | 4.07          | 130               |
| A2   | 159.          | 883.          | 151               | 103.          | -109              |
| FD   | -4.72         | 3.42          | 173               | 2.35          | -103              |
| L1   | 413.          | 1.50E+03      | -160              | 366.          | 118               |
| L3   | 372.          | 1.43E+03      | -160              | 369.          | 118               |
| L4   | -606.         | 1.75E+03      | -156              | 1.66E+03      | 125               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-104. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.22E+03       | 1.23E+03        | -1.21E+03       | 1.22E+03        |
| A2   | -764.           | 1.14E+03        | -694.           | 1.13E+03        |
| FD   | -8.60           | 0.436           | -7.91           | 0.125           |
| L1   | -1.44E+03       | 1.60E+03        | -1.43E+03       | 1.60E+03        |
| L3   | -1.42E+03       | 1.51E+03        | -1.41E+03       | 1.51E+03        |
| L4   | -4.70E+03       | 1.44E+03        | -4.32E+03       | 1.20E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-53. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–105. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

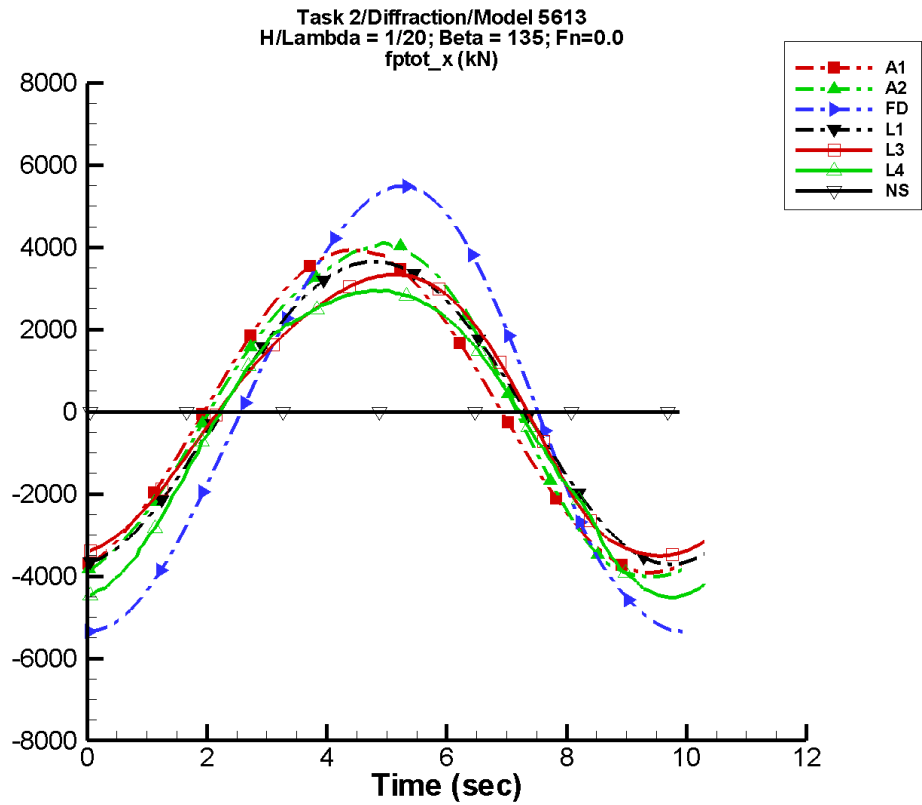
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.25          | 1.31E+03      | -75               | 1.84          | -162              |
| A2   | 26.9          | 1.33E+03      | -79               | 53.7          | -31               |
| FD   | -8.52         | 1.75E+03      | -100              | 42.4          | -21               |
| L1   | 8.36          | 1.23E+03      | -87               | 11.5          | -78               |
| L3   | -30.4         | 1.23E+03      | -87               | 56.6          | -27               |
| L4   | -68.4         | 1.26E+03      | -87               | 45.7          | -86               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–106. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.30E+03       | 1.31E+03        | -1.29E+03       | 1.30E+03        |
| A2   | -1.36E+03       | 1.35E+03        | -1.35E+03       | 1.33E+03        |
| FD   | -1.76E+03       | 1.75E+03        | -1.76E+03       | 1.73E+03        |
| L1   | -1.23E+03       | 1.22E+03        | -1.22E+03       | 1.22E+03        |
| L3   | -1.29E+03       | 1.17E+03        | -1.29E+03       | 1.17E+03        |
| L4   | -1.38E+03       | 1.14E+03        | -1.37E+03       | 1.14E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-54. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

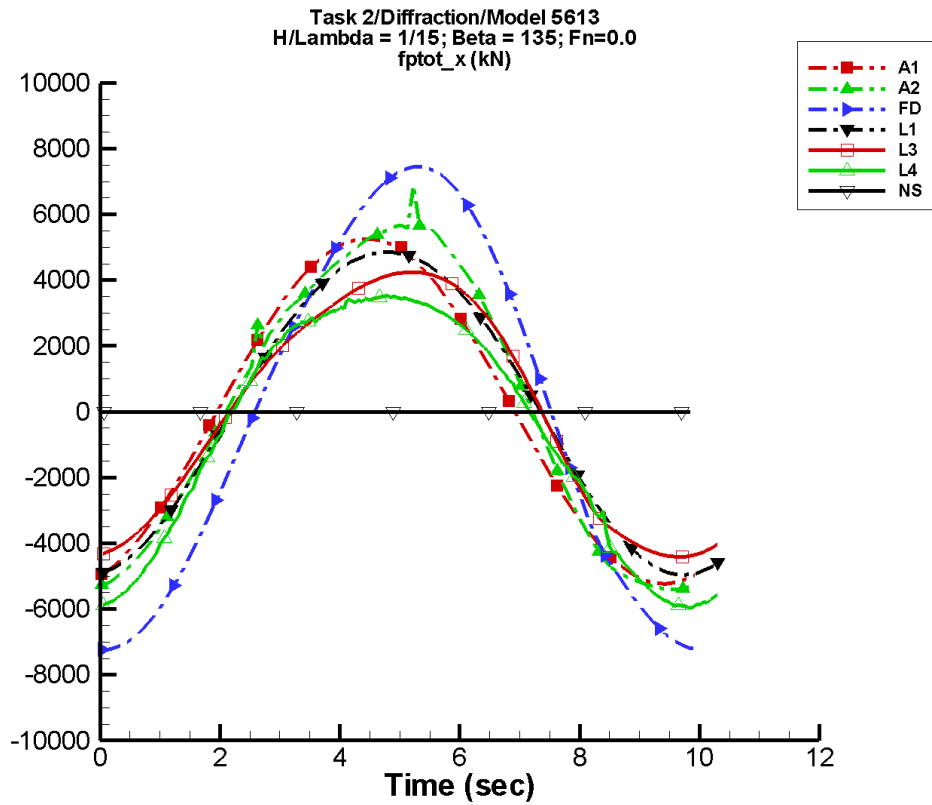
Table G–107. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 6.77          | 3.93E+03      | -75               | 5.54          | -162              |
| A2   | 69.7          | 4.08E+03      | -82               | 280.          | -8                |
| FD   | -7.28         | 5.43E+03      | -101              | 297.          | -15               |
| L1   | 67.4          | 3.68E+03      | -87               | 98.1          | -78               |
| L3   | 26.5          | 3.47E+03      | -87               | 342.          | -25               |
| L4   | -354.         | 3.71E+03      | -86               | 431.          | -88               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–108. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.92E+03       | 3.94E+03        | -3.88E+03       | 3.90E+03        |
| A2   | -4.01E+03       | 4.11E+03        | -3.98E+03       | 4.01E+03        |
| FD   | -5.35E+03       | 5.49E+03        | -5.34E+03       | 5.43E+03        |
| L1   | -3.71E+03       | 3.65E+03        | -3.70E+03       | 3.63E+03        |
| L3   | -3.50E+03       | 3.33E+03        | -3.49E+03       | 3.32E+03        |
| L4   | -4.52E+03       | 2.96E+03        | -4.50E+03       | 2.94E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-55. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

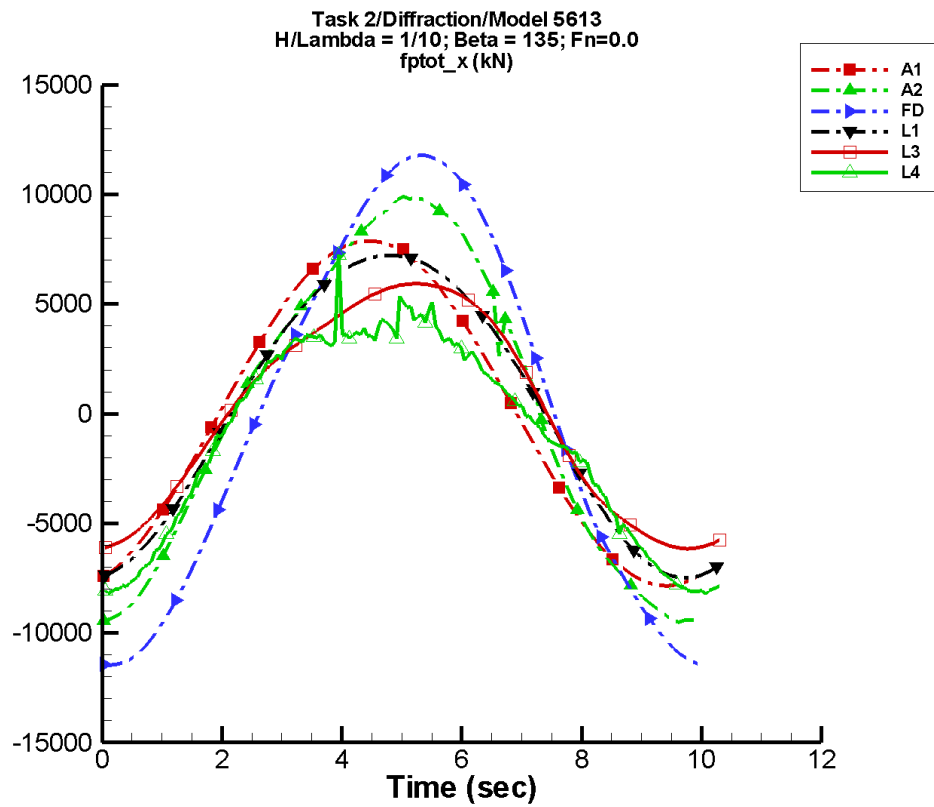
Table G–109. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 9.03          | 5.25E+03      | -75               | 7.39          | -162              |
| A2   | 121.          | 5.67E+03      | -84               | 429.          | -3                |
| FD   | -11.2         | 7.33E+03      | -102              | 424.          | -15               |
| L1   | 118.          | 4.90E+03      | -87               | 173.          | -78               |
| L3   | 75.3          | 4.40E+03      | -88               | 470.          | -28               |
| L4   | -579.         | 4.69E+03      | -85               | 666.          | -92               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–110. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.23E+03       | 5.26E+03        | -5.18E+03       | 5.21E+03        |
| A2   | -5.41E+03       | 6.87E+03        | -5.36E+03       | 5.77E+03        |
| FD   | -7.23E+03       | 7.45E+03        | -7.24E+03       | 7.37E+03        |
| L1   | -4.96E+03       | 4.85E+03        | -4.94E+03       | 4.83E+03        |
| L3   | -4.41E+03       | 4.25E+03        | -4.40E+03       | 4.23E+03        |
| L4   | -5.96E+03       | 3.53E+03        | -5.90E+03       | 3.48E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-56. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

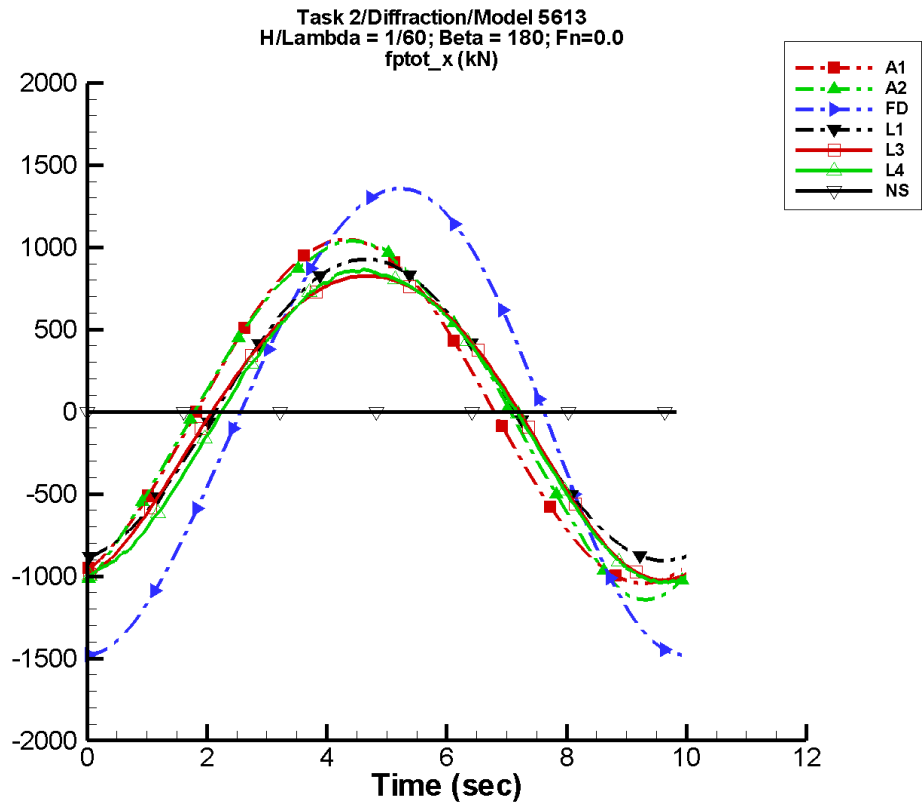
Table G–111. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 13.5          | 7.87E+03      | -75               | 11.1          | -162              |
| A2   | 132.          | 9.54E+03      | -89               | 772.          | -17               |
| FD   | -29.7         | 1.15E+04      | -104              | 667.          | -16               |
| L1   | 262.          | 7.35E+03      | -87               | 388.          | -77               |
| L3   | 215.          | 6.07E+03      | -90               | 721.          | -39               |
| L4   | -889.         | 5.94E+03      | -87               | 1.07E+03      | -111              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–112. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.84E+03       | 7.88E+03        | -7.77E+03       | 7.81E+03        |
| A2   | -9.53E+03       | 9.89E+03        | -9.41E+03       | 9.69E+03        |
| FD   | -1.15E+04       | 1.18E+04        | -1.15E+04       | 1.16E+04        |
| L1   | -7.48E+03       | 7.23E+03        | -7.45E+03       | 7.21E+03        |
| L3   | -6.16E+03       | 5.93E+03        | -6.13E+03       | 5.91E+03        |
| L4   | -8.25E+03       | 7.26E+03        | -8.09E+03       | 4.63E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-57. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–113. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

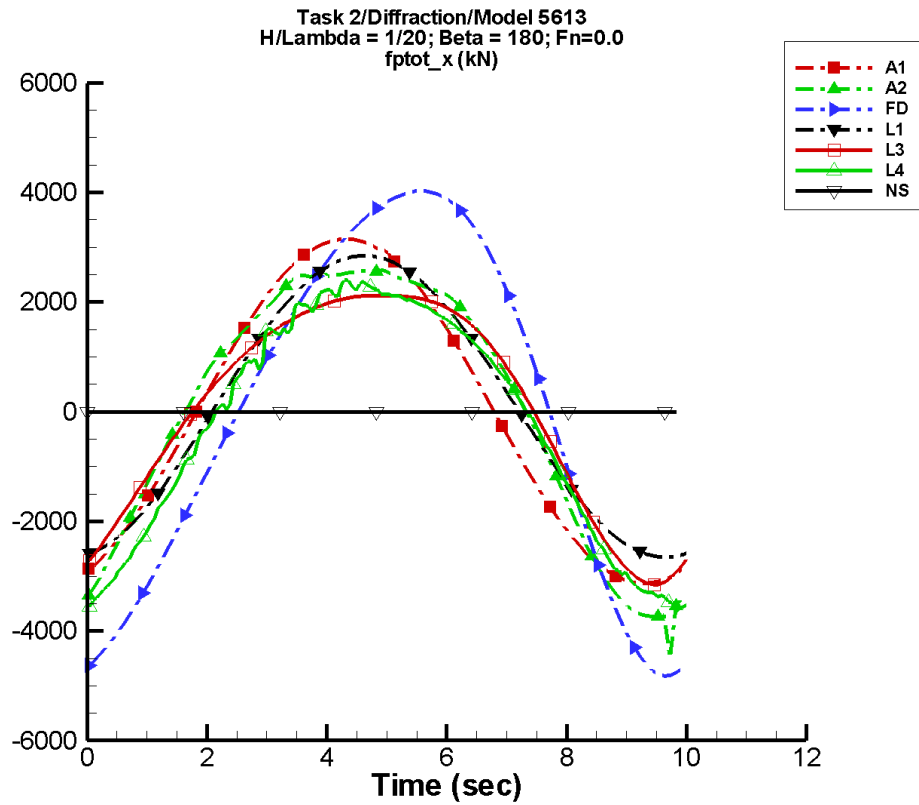
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.56          | 1.05E+03      | -71               | 1.37          | -157              |
| A2   | 26.6          | 1.05E+03      | -74               | 77.2          | -54               |
| FD   | -8.47         | 1.41E+03      | -102              | 76.9          | -64               |
| L1   | 13.6          | 916.          | -83               | 3.48          | -110              |
| L3   | -25.0         | 919.          | -83               | 73.6          | -67               |
| L4   | -50.3         | 941.          | -84               | 36.8          | -88               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–114. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.04E+03       | 1.05E+03        | -1.03E+03       | 1.04E+03        |
| A2   | -1.14E+03       | 1.04E+03        | -1.13E+03       | 1.03E+03        |
| FD   | -1.48E+03       | 1.36E+03        | -1.47E+03       | 1.34E+03        |
| L1   | -906.           | 927.            | -902.           | 924.            |
| L3   | -1.02E+03       | 826.            | -1.02E+03       | 823.            |
| L4   | -1.04E+03       | 867.            | -1.03E+03       | 855.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-58. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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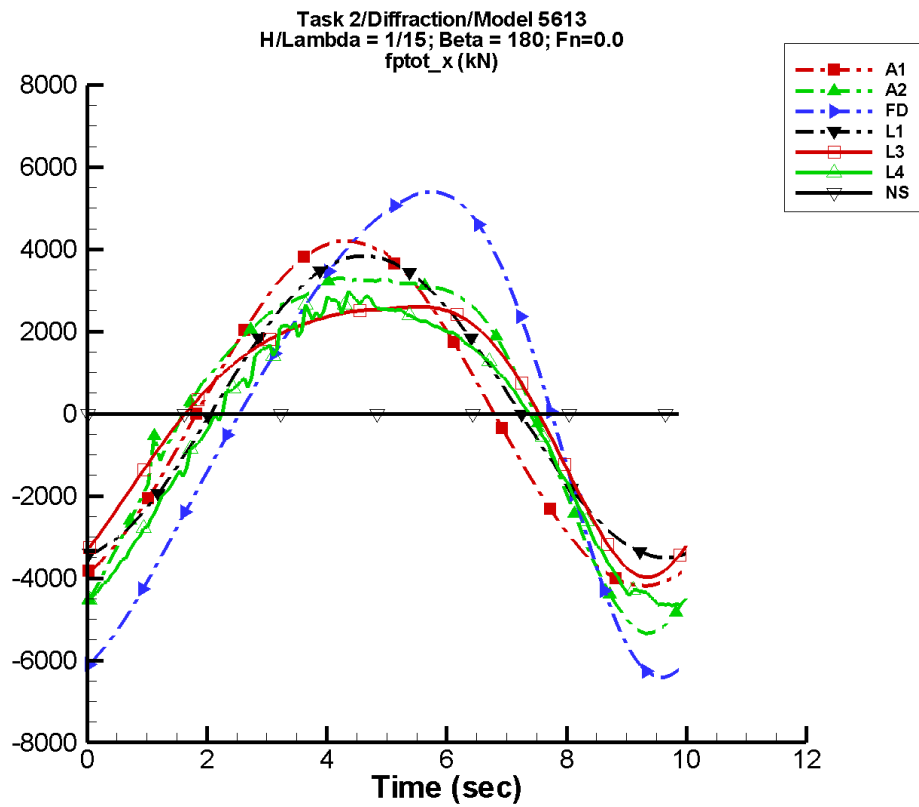
Table G–115. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.68          | 3.15E+03      | -71               | 4.12          | -157              |
| A2   | 84.1          | 3.07E+03      | -76               | 671.          | -55               |
| FD   | 2.89          | 4.24E+03      | -103              | 630.          | -55               |
| L1   | 117.          | 2.75E+03      | -83               | 28.9          | -118              |
| L3   | 89.4          | 2.48E+03      | -82               | 543.          | -53               |
| L4   | -219.         | 2.82E+03      | -86               | 386.          | -84               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–116. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.13E+03       | 3.15E+03        | -3.10E+03       | 3.12E+03        |
| A2   | -4.49E+03       | 2.59E+03        | -3.76E+03       | 2.55E+03        |
| FD   | -4.82E+03       | 4.03E+03        | -4.72E+03       | 3.99E+03        |
| L1   | -2.65E+03       | 2.85E+03        | -2.64E+03       | 2.84E+03        |
| L3   | -3.16E+03       | 2.12E+03        | -3.12E+03       | 2.12E+03        |
| L4   | -3.65E+03       | 2.44E+03        | -3.51E+03       | 2.32E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-59. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

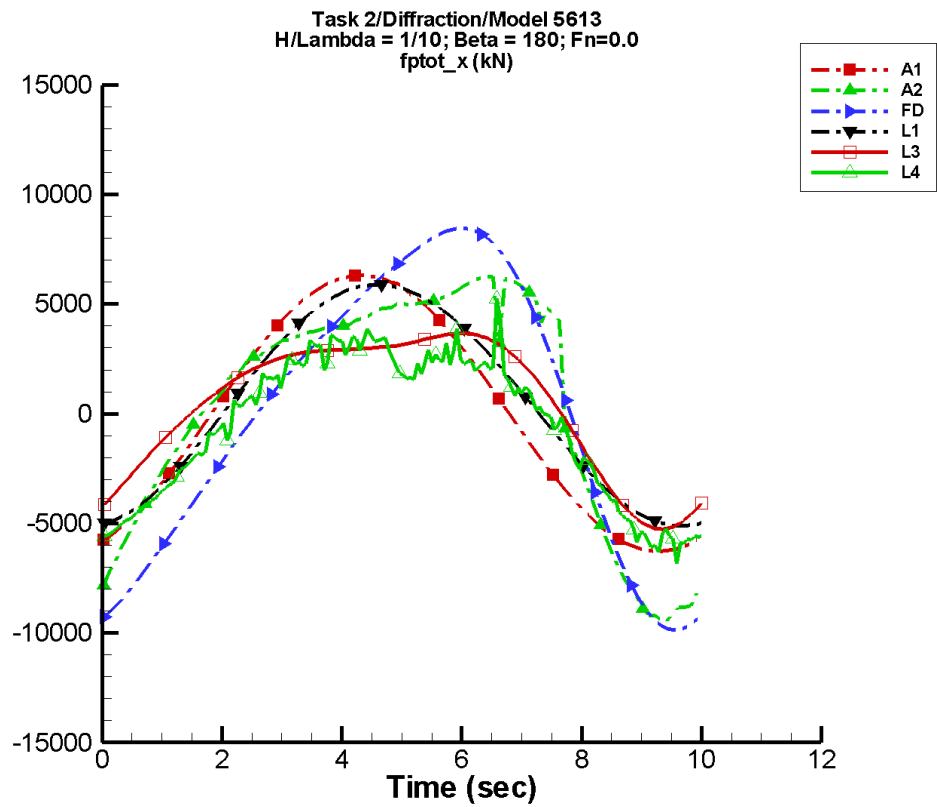
Table G–117. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 6.25          | 4.20E+03      | -71               | 5.50          | -157              |
| A2   | 126.          | 4.05E+03      | -79               | 1.12E+03      | -52               |
| FD   | 12.8          | 5.59E+03      | -104              | 1.04E+03      | -53               |
| L1   | 208.          | 3.66E+03      | -83               | 51.0          | -119              |
| L3   | 186.          | 3.04E+03      | -82               | 839.          | -50               |
| L4   | -346.         | 3.56E+03      | -85               | 602.          | -80               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–118. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.18E+03       | 4.20E+03        | -4.14E+03       | 4.16E+03        |
| A2   | -5.34E+03       | 3.30E+03        | -5.20E+03       | 3.27E+03        |
| FD   | -6.41E+03       | 5.40E+03        | -6.29E+03       | 5.35E+03        |
| L1   | -3.50E+03       | 3.84E+03        | -3.48E+03       | 3.82E+03        |
| L3   | -3.98E+03       | 2.60E+03        | -3.94E+03       | 2.59E+03        |
| L4   | -4.67E+03       | 3.00E+03        | -4.62E+03       | 2.78E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-60. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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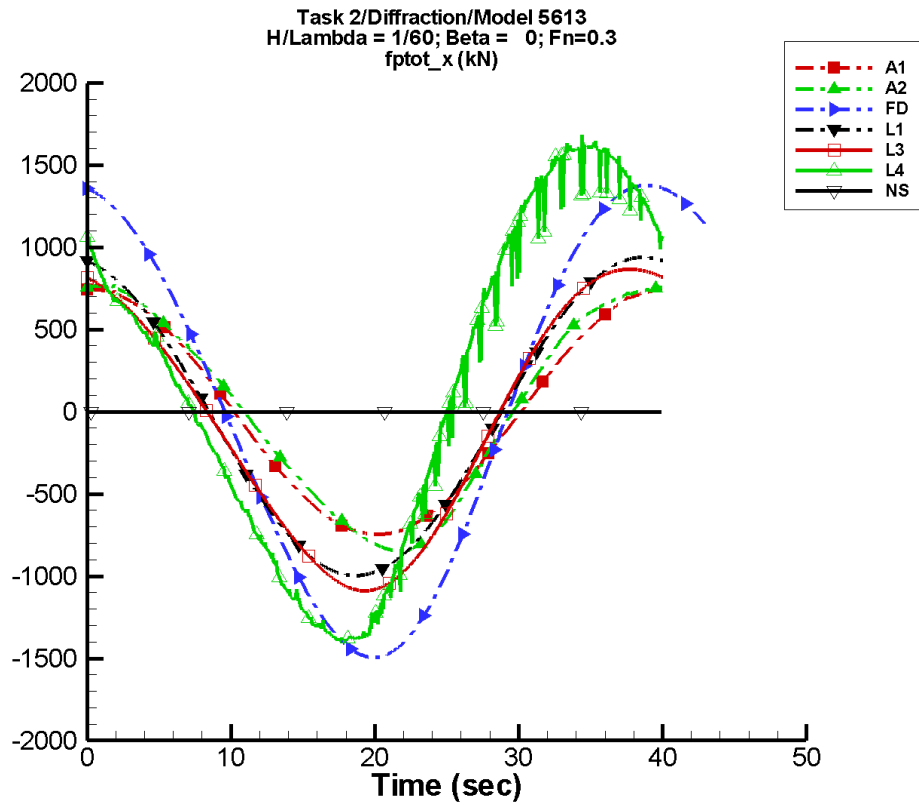
Table G–119. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 9.37          | 6.31E+03      | -71               | 8.25          | -157              |
| A2   | 439.          | 6.47E+03      | -90               | 2.87E+03      | -53               |
| FD   | 32.4          | 8.40E+03      | -107              | 2.00E+03      | -54               |
| L1   | 465.          | 5.50E+03      | -83               | 114.          | -120              |
| L3   | 451.          | 3.88E+03      | -83               | 1.43E+03      | -51               |
| L4   | -513.         | 4.38E+03      | -86               | 962.          | -82               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–120. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.28E+03       | 6.31E+03        | -6.21E+03       | 6.24E+03        |
| A2   | -9.44E+03       | 6.26E+03        | -9.13E+03       | 5.80E+03        |
| FD   | -9.86E+03       | 8.46E+03        | -9.66E+03       | 8.34E+03        |
| L1   | -5.12E+03       | 5.88E+03        | -5.10E+03       | 5.87E+03        |
| L3   | -5.27E+03       | 3.66E+03        | -5.21E+03       | 3.65E+03        |
| L4   | -6.81E+03       | 5.26E+03        | -5.86E+03       | 3.42E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-61. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–121. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

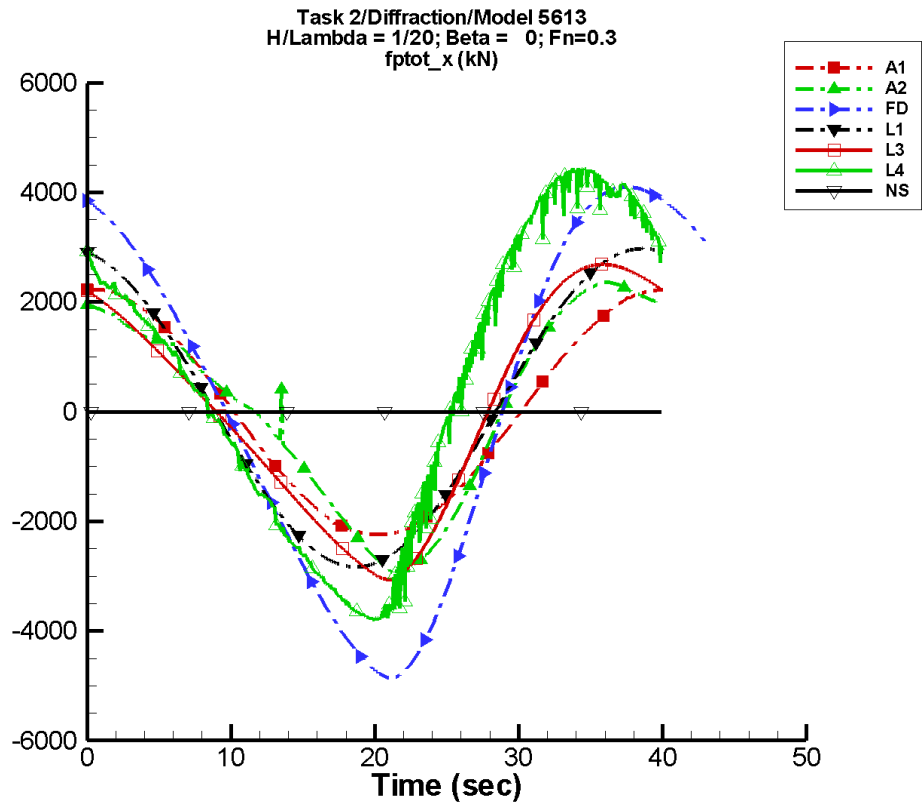
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.206         | 744.          | 89                | 2.44          | -120              |
| A2   | 25.0          | 794.          | 87                | 76.6          | -143              |
| FD   | -8.78         | 1.43E+03      | 93                | 76.3          | -135              |
| L1   | -26.9         | 968.          | 100               | 2.67          | -113              |
| L3   | -65.3         | 968.          | 101               | 74.5          | -124              |
| L4   | 146.          | 1.39E+03      | 124               | 234.          | -97               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–122. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -745.           | 742.            | -744.           | 742.            |
| A2   | -860.           | 773.            | -846.           | 765.            |
| FD   | -1.49E+03       | 1.38E+03        | -1.49E+03       | 1.38E+03        |
| L1   | -997.           | 939.            | -996.           | 939.            |
| L3   | -1.09E+03       | 867.            | -1.09E+03       | 867.            |
| L4   | -1.40E+03       | 1.68E+03        | -1.39E+03       | 1.62E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-62. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

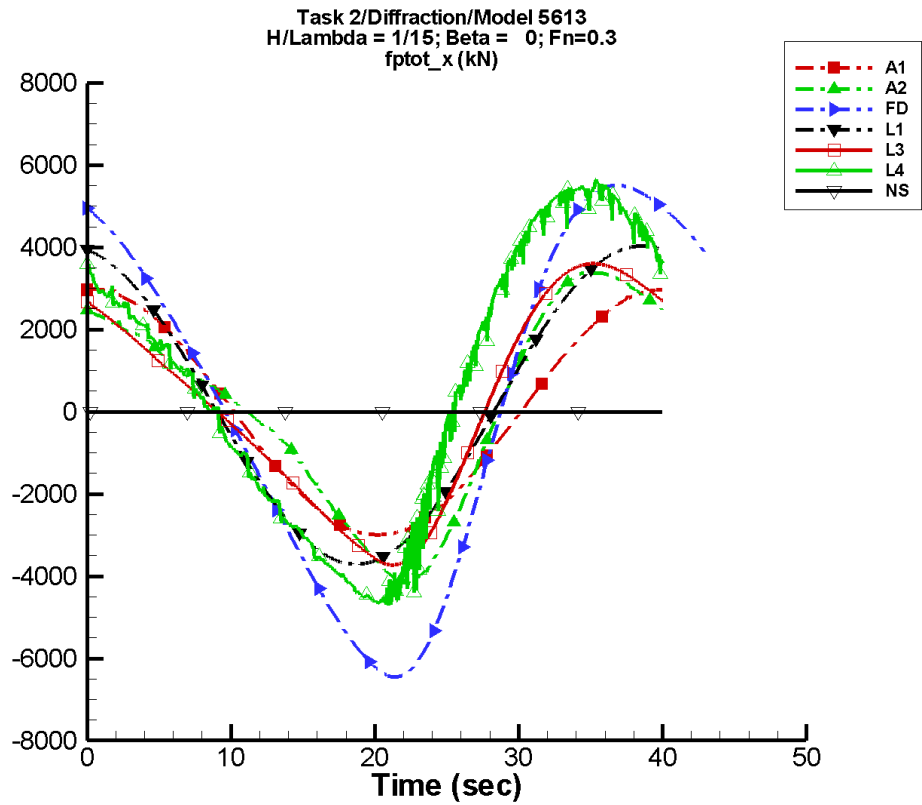
Table G–123. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.620         | 2.24E+03      | 89                | 7.34          | -120              |
| A2   | 84.2          | 2.34E+03      | 91                | 656.          | -142              |
| FD   | 2.40          | 4.31E+03      | 94                | 627.          | -146              |
| L1   | 94.2          | 2.90E+03      | 100               | 25.1          | -101              |
| L3   | 63.1          | 2.66E+03      | 103               | 574.          | -138              |
| L4   | 576.          | 3.68E+03      | 119               | 849.          | -106              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–124. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.24E+03       | 2.23E+03        | -2.24E+03       | 2.23E+03        |
| A2   | -2.99E+03       | 2.36E+03        | -2.92E+03       | 2.36E+03        |
| FD   | -4.86E+03       | 4.10E+03        | -4.85E+03       | 4.10E+03        |
| L1   | -2.83E+03       | 2.98E+03        | -2.83E+03       | 2.98E+03        |
| L3   | -3.06E+03       | 2.69E+03        | -3.06E+03       | 2.69E+03        |
| L4   | -3.82E+03       | 4.44E+03        | -3.79E+03       | 4.38E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-63. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

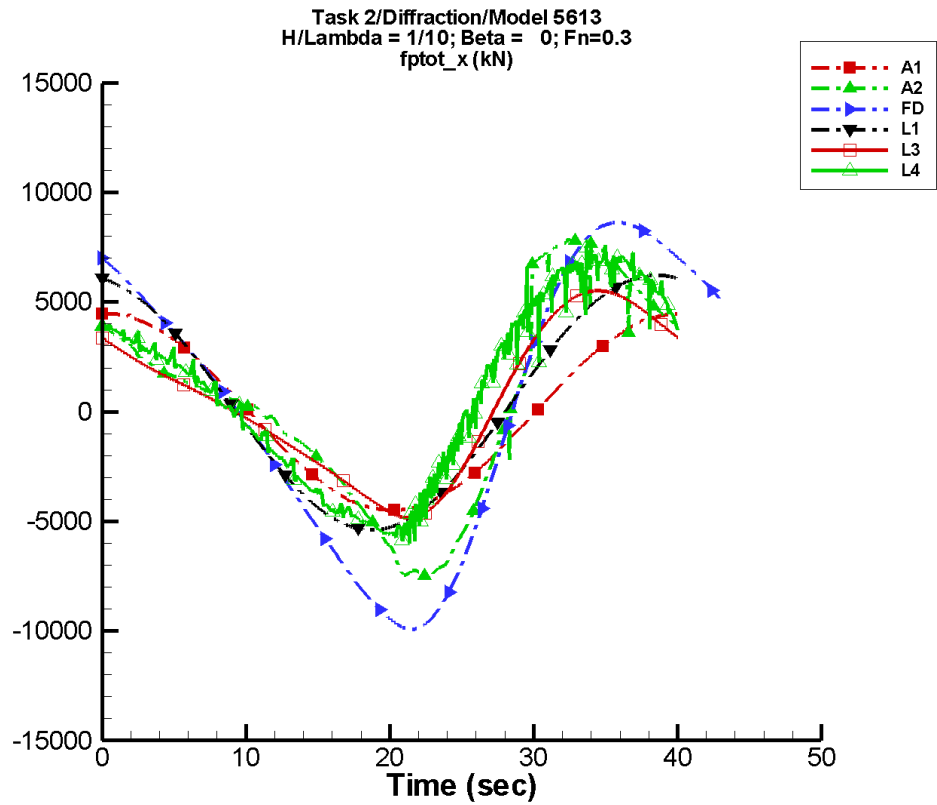
Table G–125. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.827         | 2.99E+03      | 89                | 9.80          | -120              |
| A2   | 111.          | 3.20E+03      | 95                | 1.10E+03      | -145              |
| FD   | 9.15          | 5.69E+03      | 95                | 1.03E+03      | -149              |
| L1   | 201.          | 3.87E+03      | 100               | 45.0          | -100              |
| L3   | 172.          | 3.31E+03      | 104               | 888.          | -142              |
| L4   | 713.          | 4.57E+03      | 118               | 1.14E+03      | -113              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–126. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.99E+03       | 2.98E+03        | -2.99E+03       | 2.98E+03        |
| A2   | -4.21E+03       | 3.38E+03        | -4.13E+03       | 3.38E+03        |
| FD   | -6.45E+03       | 5.50E+03        | -6.45E+03       | 5.50E+03        |
| L1   | -3.71E+03       | 4.03E+03        | -3.71E+03       | 4.03E+03        |
| L3   | -3.73E+03       | 3.60E+03        | -3.72E+03       | 3.60E+03        |
| L4   | -4.83E+03       | 5.65E+03        | -4.64E+03       | 5.53E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-64. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

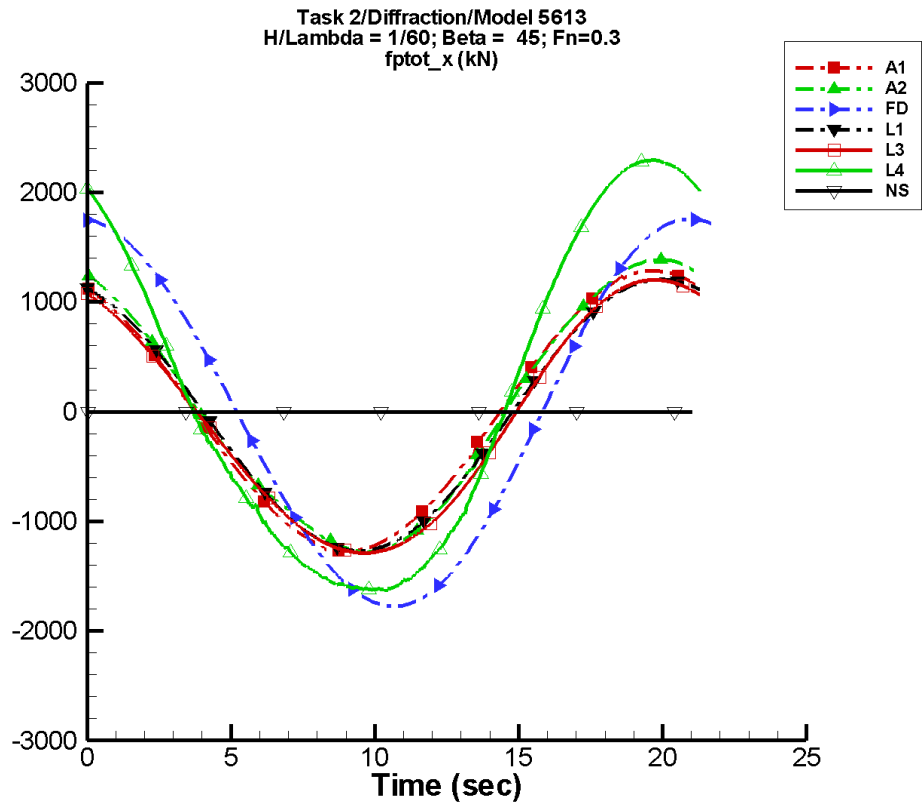
Table G–127. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.24          | 4.48E+03      | 89                | 14.7          | -120              |
| A2   | 432.          | 5.73E+03      | 103               | 2.89E+03      | -143              |
| FD   | 21.3          | 8.56E+03      | 98                | 1.97E+03      | -148              |
| L1   | 506.          | 5.81E+03      | 100               | 102.          | -98               |
| L3   | 475.          | 4.41E+03      | 109               | 1.50E+03      | -141              |
| L4   | 982.          | 5.55E+03      | 117               | 1.46E+03      | -112              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–128. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.49E+03       | 4.47E+03        | -4.48E+03       | 4.47E+03        |
| A2   | -7.60E+03       | 7.89E+03        | -7.53E+03       | 7.82E+03        |
| FD   | -9.92E+03       | 8.63E+03        | -9.91E+03       | 8.62E+03        |
| L1   | -5.39E+03       | 6.22E+03        | -5.39E+03       | 6.22E+03        |
| L3   | -4.84E+03       | 5.52E+03        | -4.84E+03       | 5.52E+03        |
| L4   | -6.00E+03       | 7.59E+03        | -5.58E+03       | 7.04E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-65. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–129. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

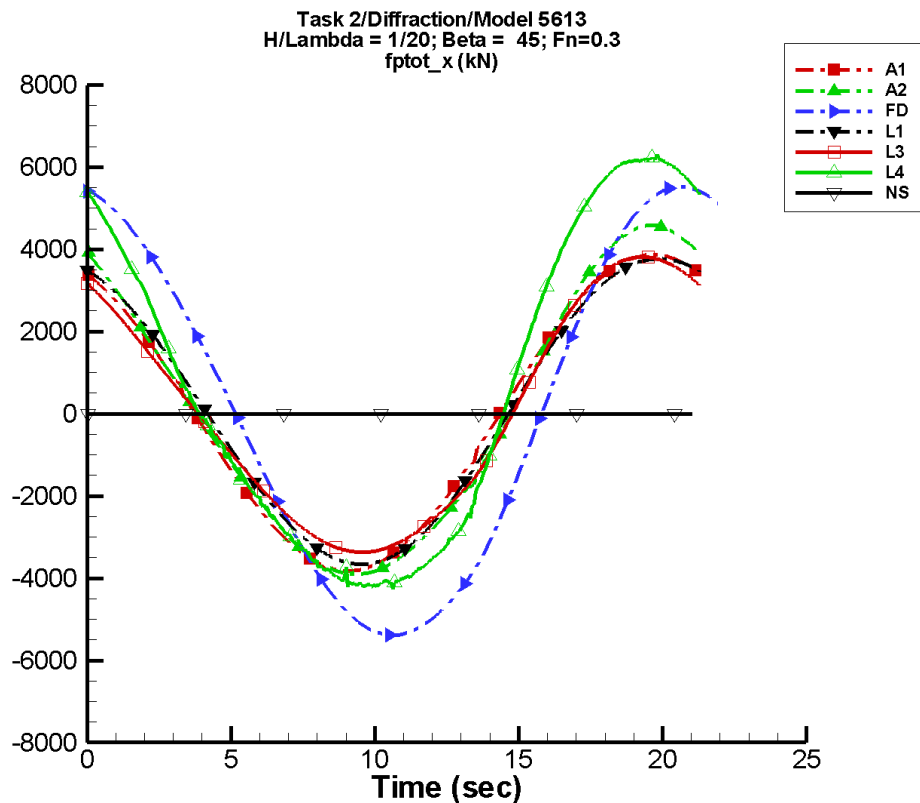
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.63          | 1.27E+03      | 118               | 2.53          | -166              |
| A2   | 26.8          | 1.32E+03      | 114               | 52.0          | -178              |
| FD   | -8.97         | 1.77E+03      | 97                | 41.9          | -164              |
| L1   | -29.1         | 1.24E+03      | 111               | 8.71          | -126              |
| L3   | -67.8         | 1.24E+03      | 111               | 56.7          | -162              |
| L4   | 160.          | 1.99E+03      | 115               | 222.          | 166               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–130. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.27E+03       | 1.29E+03        | -1.27E+03       | 1.28E+03        |
| A2   | -1.28E+03       | 1.39E+03        | -1.28E+03       | 1.38E+03        |
| FD   | -1.78E+03       | 1.76E+03        | -1.77E+03       | 1.75E+03        |
| L1   | -1.27E+03       | 1.21E+03        | -1.27E+03       | 1.21E+03        |
| L3   | -1.29E+03       | 1.20E+03        | -1.29E+03       | 1.20E+03        |
| L4   | -1.64E+03       | 2.29E+03        | -1.62E+03       | 2.29E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-66. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

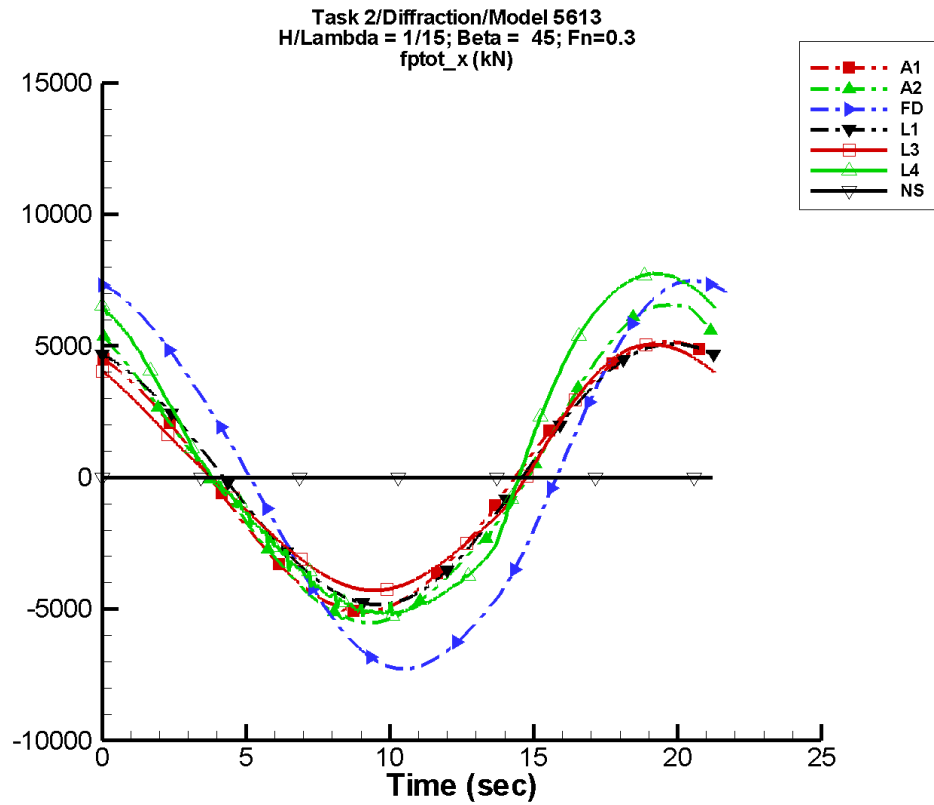
Table G–131. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 10.9          | 3.83E+03      | 118               | 7.62          | -166              |
| A2   | 80.3          | 4.14E+03      | 115               | 303.          | 175               |
| FD   | -8.10         | 5.45E+03      | 98                | 294.          | -170              |
| L1   | 70.3          | 3.71E+03      | 111               | 77.5          | -126              |
| L3   | 33.8          | 3.54E+03      | 113               | 347.          | -164              |
| L4   | 609.          | 5.26E+03      | 114               | 709.          | -176              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–132. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.82E+03       | 3.87E+03        | -3.82E+03       | 3.86E+03        |
| A2   | -3.90E+03       | 4.58E+03        | -3.90E+03       | 4.57E+03        |
| FD   | -5.39E+03       | 5.52E+03        | -5.38E+03       | 5.50E+03        |
| L1   | -3.66E+03       | 3.77E+03        | -3.66E+03       | 3.77E+03        |
| L3   | -3.37E+03       | 3.81E+03        | -3.37E+03       | 3.81E+03        |
| L4   | -4.26E+03       | 6.30E+03        | -4.18E+03       | 6.21E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-67. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

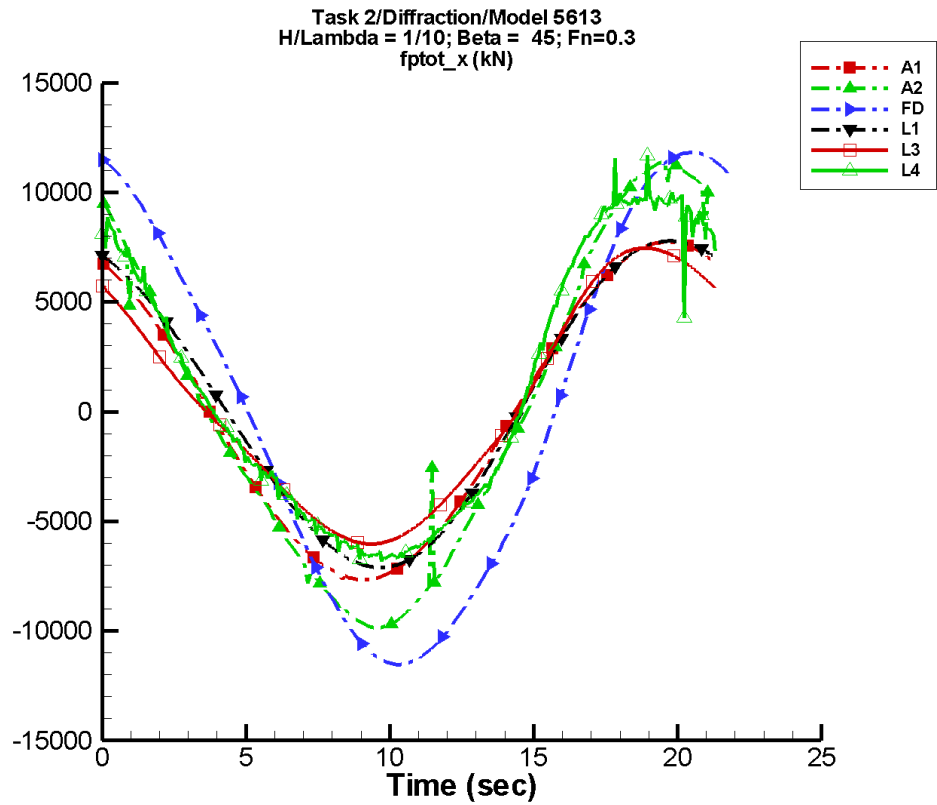
Table G–133. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 14.6          | 5.11E+03      | 118               | 10.2          | -166              |
| A2   | 114.          | 5.80E+03      | 115               | 478.          | 173               |
| FD   | -7.31         | 7.34E+03      | 99                | 416.          | -170              |
| L1   | 157.          | 4.95E+03      | 111               | 138.          | -126              |
| L3   | 121.          | 4.54E+03      | 115               | 483.          | -162              |
| L4   | 763.          | 6.53E+03      | 115               | 969.          | -172              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–134. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.11E+03       | 5.16E+03        | -5.09E+03       | 5.15E+03        |
| A2   | -5.53E+03       | 6.64E+03        | -5.51E+03       | 6.56E+03        |
| FD   | -7.28E+03       | 7.48E+03        | -7.26E+03       | 7.46E+03        |
| L1   | -4.83E+03       | 5.08E+03        | -4.83E+03       | 5.08E+03        |
| L3   | -4.29E+03       | 5.05E+03        | -4.29E+03       | 5.05E+03        |
| L4   | -5.29E+03       | 7.76E+03        | -5.12E+03       | 7.73E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-68. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

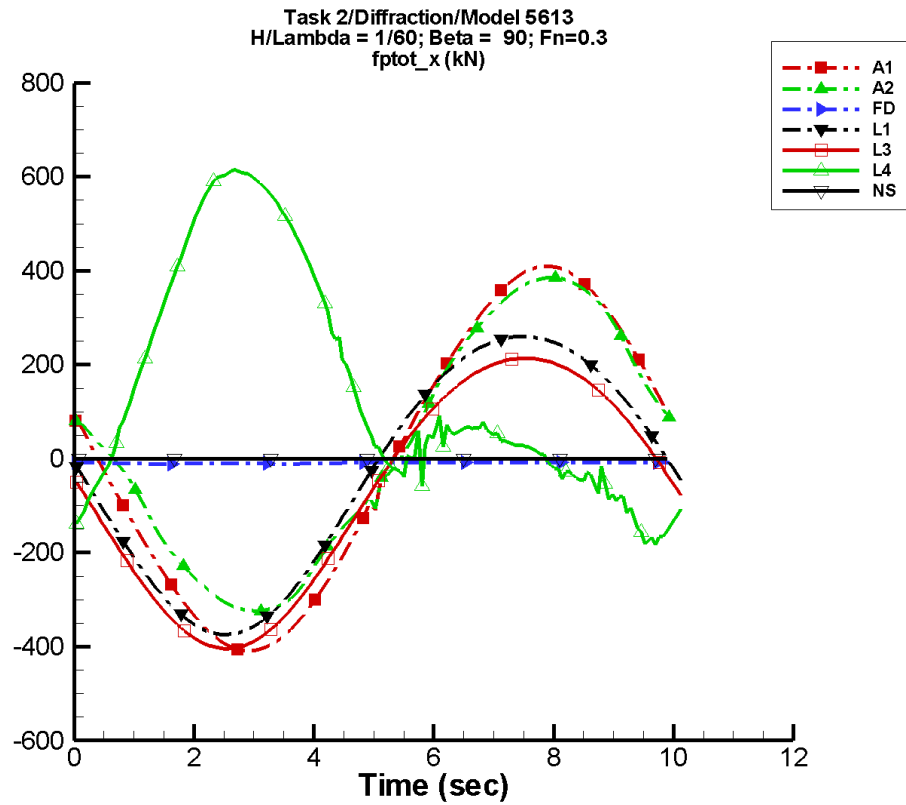
Table G–135. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 21.9          | 7.67E+03      | 118               | 15.3          | -166              |
| A2   | 168.          | 9.97E+03      | 116               | 872.          | 177               |
| FD   | -2.60         | 1.14E+04      | 100               | 657.          | -168              |
| L1   | 405.          | 7.42E+03      | 111               | 309.          | -126              |
| L3   | 366.          | 6.45E+03      | 119               | 743.          | -155              |
| L4   | 1.07E+03      | 8.33E+03      | 116               | 1.18E+03      | -171              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–136. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.66E+03       | 7.74E+03        | -7.64E+03       | 7.72E+03        |
| A2   | -9.85E+03       | 1.14E+04        | -9.83E+03       | 1.12E+04        |
| FD   | -1.15E+04       | 1.18E+04        | -1.15E+04       | 1.18E+04        |
| L1   | -7.11E+03       | 7.79E+03        | -7.10E+03       | 7.78E+03        |
| L3   | -6.03E+03       | 7.46E+03        | -6.02E+03       | 7.46E+03        |
| L4   | -6.81E+03       | 1.17E+04        | -6.60E+03       | 9.93E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-69. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–137. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

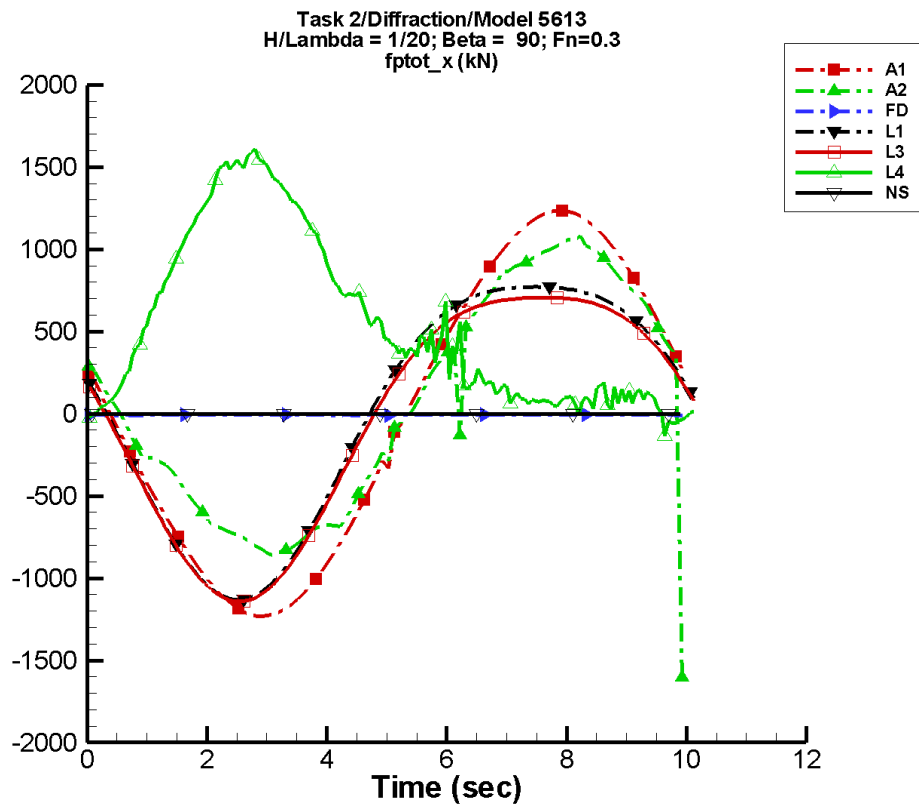
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.125         | 402.          | 162               | 0.985         | -78               |
| A2   | 24.2          | 343.          | 159               | 9.71          | -96               |
| FD   | -9.08         | 1.02          | 172               | 3.73E-02      | 109               |
| L1   | -36.6         | 317.          | 175               | 20.4          | 79                |
| L3   | -75.2         | 309.          | 173               | 20.1          | 79                |
| L4   | 154.          | 290.          | -26               | 179.          | -108              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–138. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -409.           | 410.            | -405.           | 405.            |
| A2   | -324.           | 385.            | -322.           | 381.            |
| FD   | -10.7           | -8.02           | -10.5           | -8.03           |
| L1   | -374.           | 260.            | -373.           | 259.            |
| L3   | -405.           | 214.            | -403.           | 213.            |
| L4   | -183.           | 616.            | -168.           | 610.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-70. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

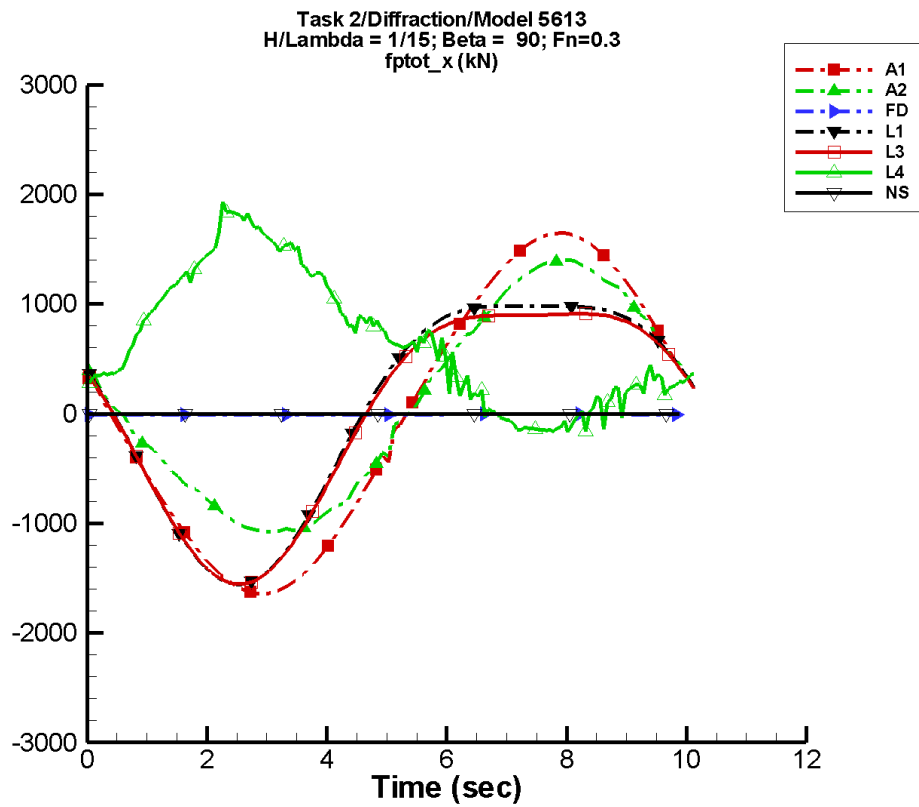
Table G–139. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.377         | 1.21E+03      | 162               | 2.96          | -78               |
| A2   | 51.0          | 904.          | 159               | 76.9          | -106              |
| FD   | -7.28         | 1.09          | 172               | 1.27          | -106              |
| L1   | 3.34          | 951.          | 175               | 183.          | 79                |
| L3   | -34.6         | 925.          | 174               | 182.          | 79                |
| L4   | 545.          | 668.          | -25               | 303.          | -109              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–140. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.23E+03       | 1.23E+03        | -1.22E+03       | 1.22E+03        |
| A2   | -1.61E+03       | 1.08E+03        | -824.           | 1.04E+03        |
| FD   | -9.26           | -4.90           | -8.70           | -4.96           |
| L1   | -1.13E+03       | 772.            | -1.13E+03       | 771.            |
| L3   | -1.14E+03       | 706.            | -1.14E+03       | 706.            |
| L4   | -136.           | 1.61E+03        | -43.4           | 1.55E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-71. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

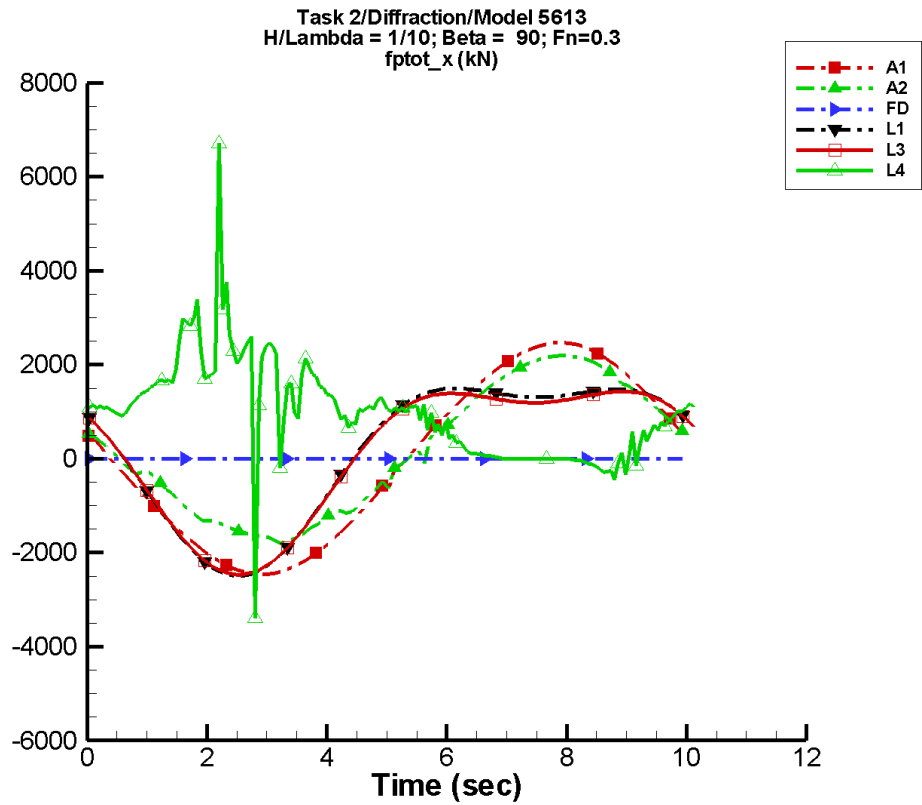
Table G–141. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.503         | 1.61E+03      | 162               | 3.96          | -78               |
| A2   | 96.0          | 1.22E+03      | 158               | 72.0          | -106              |
| FD   | -6.05         | 2.53          | 171               | 2.21          | -107              |
| L1   | 38.2          | 1.27E+03      | 175               | 326.          | 79                |
| L3   | -0.304        | 1.23E+03      | 174               | 326.          | 79                |
| L4   | 668.          | 833.          | -19               | 162.          | -110              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–142. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.64E+03       | 1.65E+03        | -1.62E+03       | 1.63E+03        |
| A2   | -1.07E+03       | 1.40E+03        | -1.07E+03       | 1.38E+03        |
| FD   | -9.04           | -0.689          | -8.39           | -0.811          |
| L1   | -1.56E+03       | 983.            | -1.55E+03       | 983.            |
| L3   | -1.55E+03       | 911.            | -1.55E+03       | 910.            |
| L4   | -169.           | 1.93E+03        | -148.           | 1.82E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-72. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

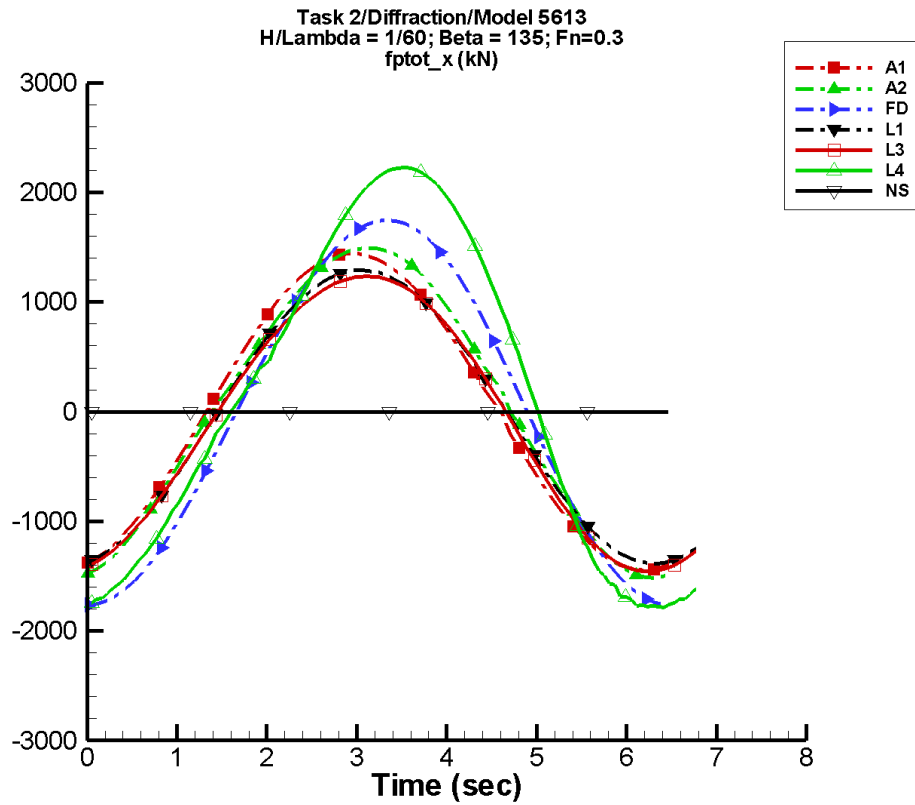
Table G-143. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.755         | 2.42E+03      | 162               | 5.93          | -78               |
| A2   | 153.          | 1.89E+03      | 158               | 110.          | -105              |
| FD   | -4.72         | 3.42          | 173               | 2.35          | -103              |
| L1   | 138.          | 1.90E+03      | 175               | 732.          | 79                |
| L3   | 96.4          | 1.83E+03      | 174               | 735.          | 79                |
| L4   | 959.          | 1.11E+03      | -6                | 328.          | -37               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-144. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.47E+03       | 2.47E+03        | -2.44E+03       | 2.44E+03        |
| A2   | -1.79E+03       | 2.19E+03        | -1.71E+03       | 2.17E+03        |
| FD   | -8.60           | 0.437           | -7.91           | 0.125           |
| L1   | -2.50E+03       | 1.49E+03        | -2.48E+03       | 1.49E+03        |
| L3   | -2.47E+03       | 1.43E+03        | -2.45E+03       | 1.42E+03        |
| L4   | -4.45E+03       | 6.70E+03        | -234.           | 3.19E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-73. Time history of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-145. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

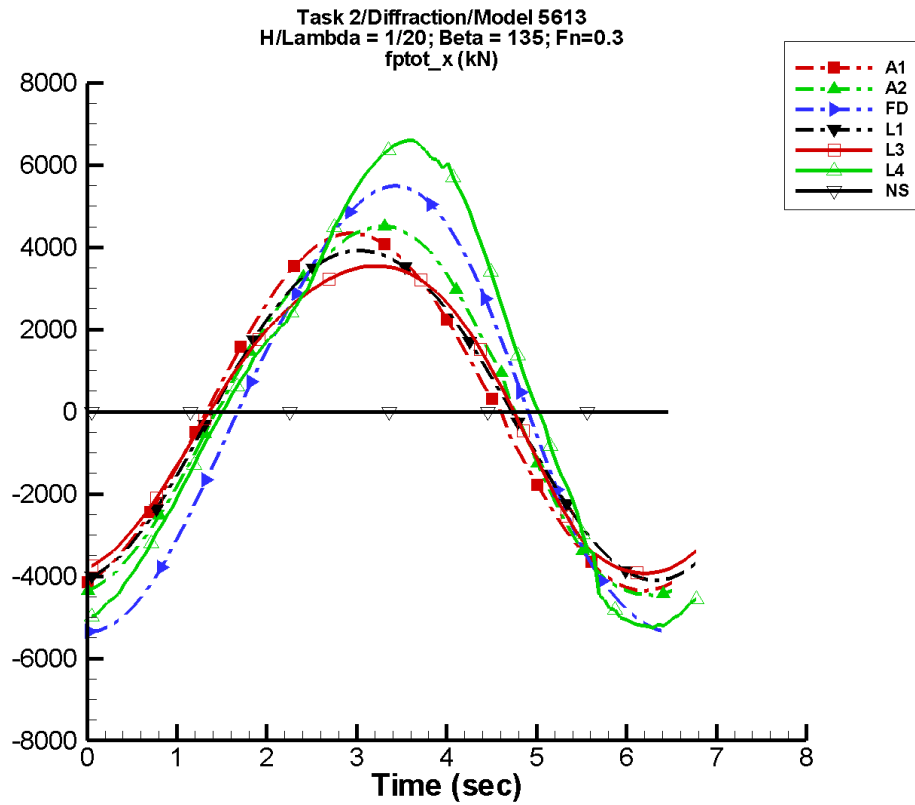
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.68E-03      | 1.44E+03      | -76               | 2.33          | -114              |
| A2   | 24.1          | 1.48E+03      | -83               | 54.8          | -32               |
| FD   | -9.30         | 1.76E+03      | -91               | 41.5          | -2                |
| L1   | -32.5         | 1.34E+03      | -82               | 15.5          | -95               |
| L3   | -71.0         | 1.35E+03      | -82               | 54.2          | -33               |
| L4   | 157.          | 1.96E+03      | -98               | 271.          | -4                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-146. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.45E+03       | 1.44E+03        | -1.41E+03       | 1.41E+03        |
| A2   | -1.52E+03       | 1.49E+03        | -1.47E+03       | 1.46E+03        |
| FD   | -1.76E+03       | 1.75E+03        | -1.75E+03       | 1.71E+03        |
| L1   | -1.38E+03       | 1.29E+03        | -1.37E+03       | 1.28E+03        |
| L3   | -1.46E+03       | 1.24E+03        | -1.44E+03       | 1.22E+03        |
| L4   | -1.79E+03       | 2.23E+03        | -1.77E+03       | 2.21E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-74. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

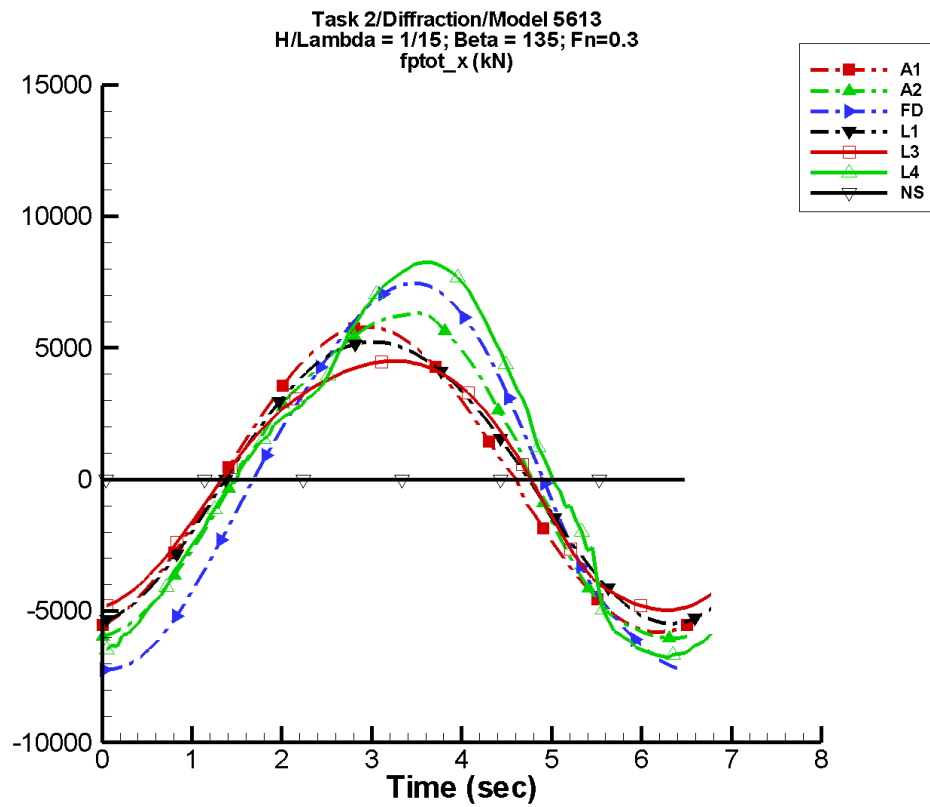
Table G-147. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.69E-03      | 4.34E+03      | -76               | 7.01          | -114              |
| A2   | 66.0          | 4.54E+03      | -86               | 281.          | -11               |
| FD   | -12.0         | 5.43E+03      | -92               | 285.          | 6                 |
| L1   | 40.2          | 4.01E+03      | -82               | 140.          | -95               |
| L3   | 3.22          | 3.82E+03      | -82               | 316.          | -35               |
| L4   | 551.          | 5.57E+03      | -97               | 935.          | -14               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-148. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.35E+03       | 4.34E+03        | -4.25E+03       | 4.24E+03        |
| A2   | -4.46E+03       | 4.52E+03        | -4.38E+03       | 4.40E+03        |
| FD   | -5.35E+03       | 5.50E+03        | -5.33E+03       | 5.36E+03        |
| L1   | -4.10E+03       | 3.92E+03        | -4.06E+03       | 3.89E+03        |
| L3   | -3.94E+03       | 3.54E+03        | -3.91E+03       | 3.52E+03        |
| L4   | -5.25E+03       | 6.60E+03        | -5.18E+03       | 6.48E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-75. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

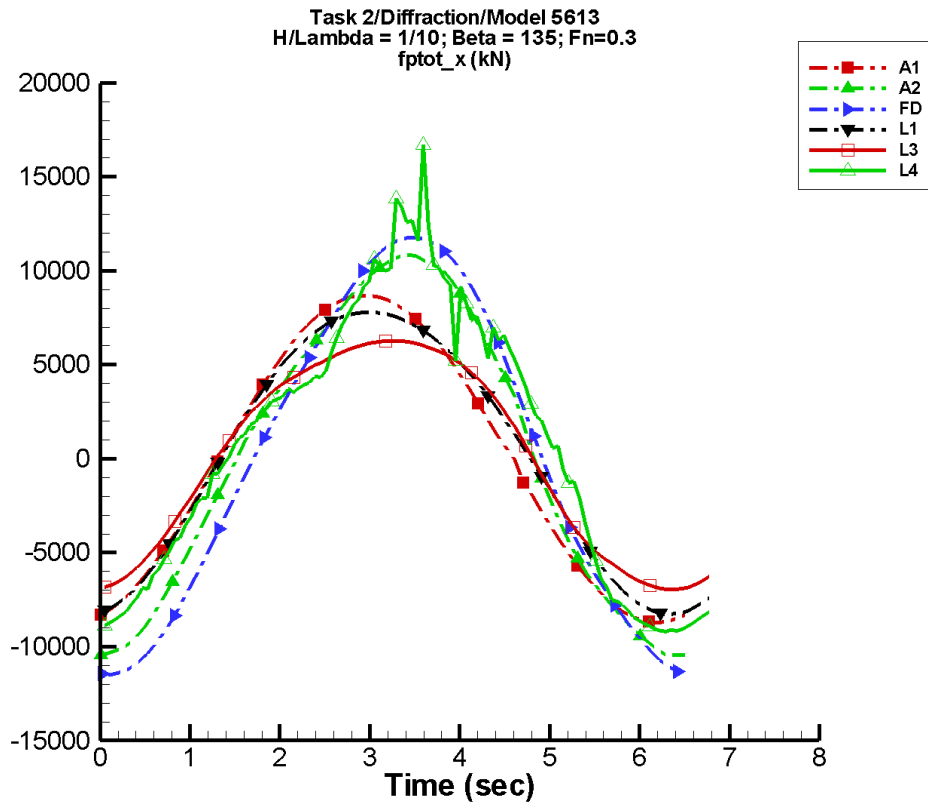
Table G–149. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 6.58E-03      | 5.79E+03      | -76               | 9.36          | -114              |
| A2   | 98.9          | 6.26E+03      | -88               | 427.          | -7                |
| FD   | -16.4         | 7.33E+03      | -93               | 393.          | 6                 |
| L1   | 104.          | 5.35E+03      | -82               | 249.          | -95               |
| L3   | 64.9          | 4.87E+03      | -83               | 444.          | -43               |
| L4   | 700.          | 7.05E+03      | -97               | 1.26E+03      | -20               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–150. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.81E+03       | 5.79E+03        | -5.67E+03       | 5.65E+03        |
| A2   | -6.04E+03       | 6.32E+03        | -5.92E+03       | 6.15E+03        |
| FD   | -7.24E+03       | 7.45E+03        | -7.22E+03       | 7.26E+03        |
| L1   | -5.48E+03       | 5.22E+03        | -5.43E+03       | 5.18E+03        |
| L3   | -4.97E+03       | 4.50E+03        | -4.93E+03       | 4.48E+03        |
| L4   | -6.77E+03       | 8.26E+03        | -6.63E+03       | 8.15E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-76. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

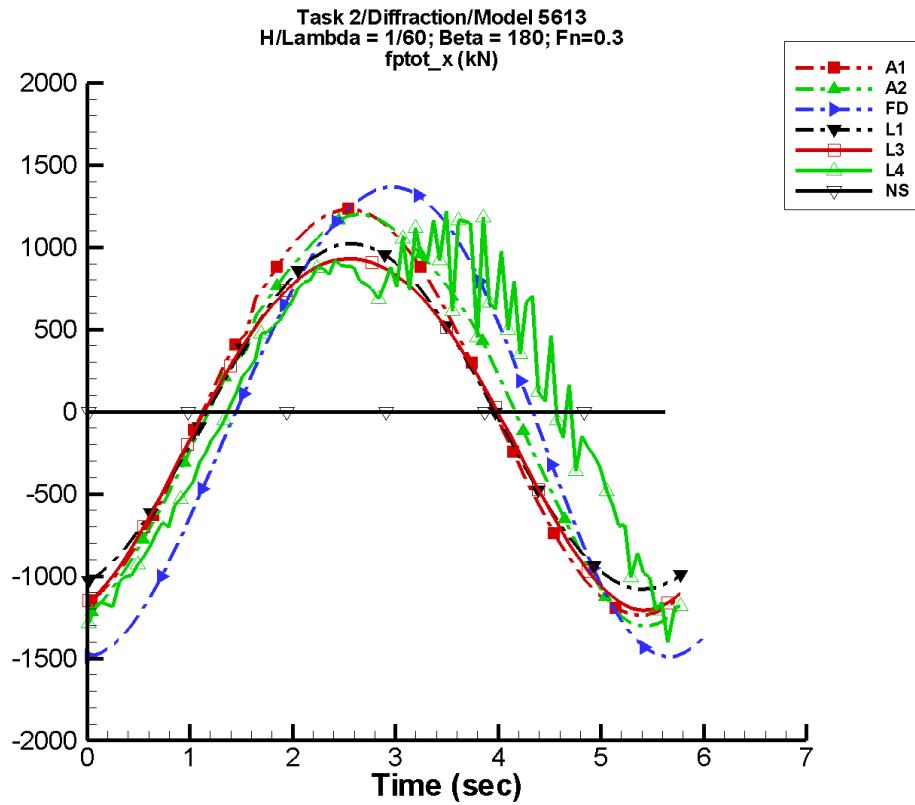
Table G–151. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 9.97E-03      | 8.69E+03      | -76               | 14.0          | -114              |
| A2   | 155.          | 1.05E+04      | -92               | 815.          | -21               |
| FD   | -25.9         | 1.15E+04      | -95               | 585.          | 2                 |
| L1   | 285.          | 8.02E+03      | -82               | 561.          | -95               |
| L3   | 238.          | 6.77E+03      | -84               | 770.          | -59               |
| L4   | 1.06E+03      | 9.53E+03      | -96               | 1.59E+03      | -22               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–152. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.71E+03       | 8.69E+03        | -8.51E+03       | 8.48E+03        |
| A2   | -1.05E+04       | 1.08E+04        | -1.04E+04       | 1.05E+04        |
| FD   | -1.15E+04       | 1.18E+04        | -1.15E+04       | 1.15E+04        |
| L1   | -8.27E+03       | 7.80E+03        | -8.18E+03       | 7.74E+03        |
| L3   | -6.97E+03       | 6.28E+03        | -6.90E+03       | 6.24E+03        |
| L4   | -9.20E+03       | 1.67E+04        | -9.08E+03       | 1.27E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-77. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–153. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

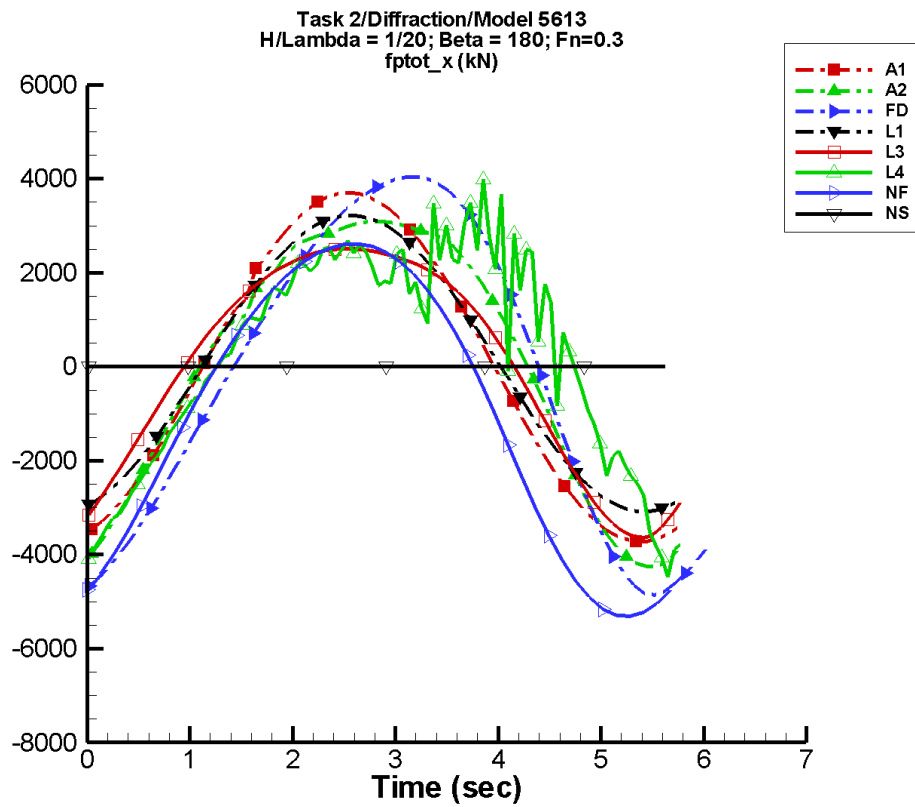
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.21         | 1.23E+03      | -79               | 1.49          | 160               |
| A2   | 22.2          | 1.21E+03      | -87               | 75.5          | -65               |
| FD   | -7.23         | 1.42E+03      | -130              | 77.9          | -123              |
| L1   | -24.1         | 1.05E+03      | -87               | 4.79          | -101              |
| L3   | -62.4         | 1.06E+03      | -87               | 75.7          | -89               |
| L4   | 117.          | 1.04E+03      | -116              | 235.          | -125              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–154. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.24E+03       | 1.23E+03        | -1.20E+03       | 1.19E+03        |
| A2   | -1.31E+03       | 1.20E+03        | -1.25E+03       | 1.15E+03        |
| FD   | -1.49E+03       | 1.36E+03        | -1.46E+03       | 1.33E+03        |
| L1   | -1.08E+03       | 1.02E+03        | -1.07E+03       | 1.01E+03        |
| L3   | -1.21E+03       | 930.            | -1.19E+03       | 920.            |
| L4   | -1.40E+03       | 1.22E+03        | -1.24E+03       | 1.03E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NSHIPMO.

Figure G-78. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

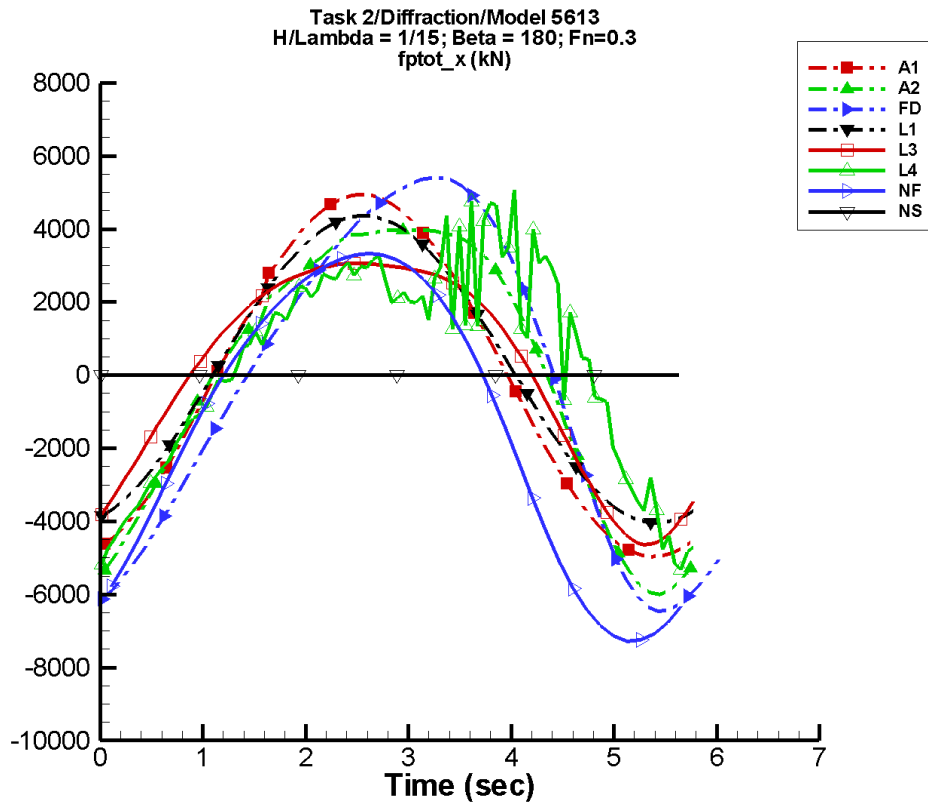
Table G–155. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.64         | 3.71E+03      | -79               | 4.49          | 160               |
| A2   | 71.8          | 3.56E+03      | -89               | 653.          | -66               |
| FD   | 4.09          | 4.27E+03      | -131              | 648.          | -112              |
| L1   | 103.          | 3.15E+03      | -87               | 35.2          | -105              |
| L3   | 75.2          | 2.91E+03      | -86               | 562.          | -75               |
| L4   | 343.          | 2.87E+03      | -115              | 1.00E+03      | -120              |
| NF   | -1.05E+03     | 3.95E+03      | 14                | 380.          | 148               |
| NS   | —             | —             | —                 | —             | —                 |

Table G–156. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.72E+03       | 3.70E+03        | -3.60E+03       | 3.59E+03        |
| A2   | -4.25E+03       | 3.10E+03        | -4.03E+03       | 3.03E+03        |
| FD   | -4.86E+03       | 4.04E+03        | -4.57E+03       | 3.94E+03        |
| L1   | -3.08E+03       | 3.22E+03        | -3.05E+03       | 3.19E+03        |
| L3   | -3.63E+03       | 2.51E+03        | -3.54E+03       | 2.50E+03        |
| L4   | -4.48E+03       | 3.99E+03        | -3.88E+03       | 2.95E+03        |
| NF   | -5.32E+03       | 2.61E+03        | -5.04E+03       | 2.46E+03        |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NSHIPMO.

Figure G-79. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

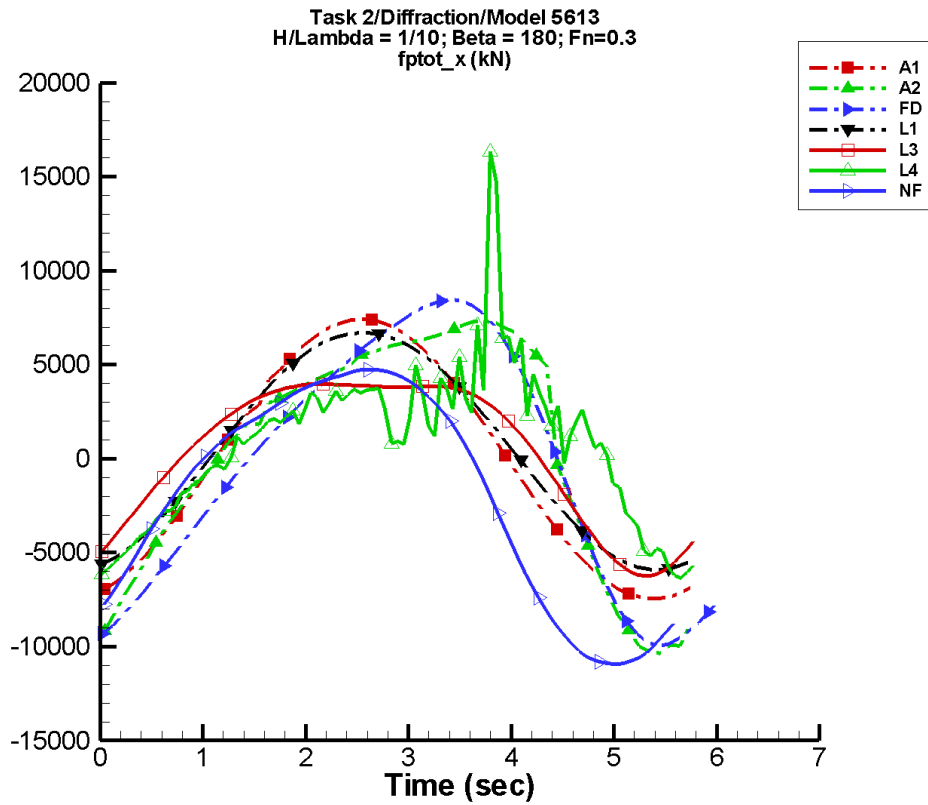
Table G–157. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -8.86         | 4.95E+03      | -79               | 6.00          | 160               |
| A2   | 97.0          | 4.75E+03      | -92               | 1.10E+03      | -64               |
| FD   | 12.7          | 5.64E+03      | -132              | 1.07E+03      | -109              |
| L1   | 212.          | 4.20E+03      | -87               | 60.9          | -105              |
| L3   | 188.          | 3.62E+03      | -85               | 877.          | -72               |
| L4   | 483.          | 3.48E+03      | -118              | 1.39E+03      | -119              |
| NF   | -1.46E+03     | 5.28E+03      | 17                | 666.          | 157               |
| NS   | —             | —             | —                 | —             | —                 |

Table G–158. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.96E+03       | 4.94E+03        | -4.81E+03       | 4.79E+03        |
| A2   | -6.00E+03       | 3.98E+03        | -5.59E+03       | 3.96E+03        |
| FD   | -6.46E+03       | 5.40E+03        | -6.10E+03       | 5.25E+03        |
| L1   | -4.05E+03       | 4.36E+03        | -4.00E+03       | 4.31E+03        |
| L3   | -4.63E+03       | 3.07E+03        | -4.51E+03       | 3.05E+03        |
| L4   | -5.33E+03       | 5.06E+03        | -4.86E+03       | 3.78E+03        |
| NF   | -7.28E+03       | 3.33E+03        | -6.88E+03       | 3.23E+03        |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NSHIPMO.

Figure G-80. Time history of  $F_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

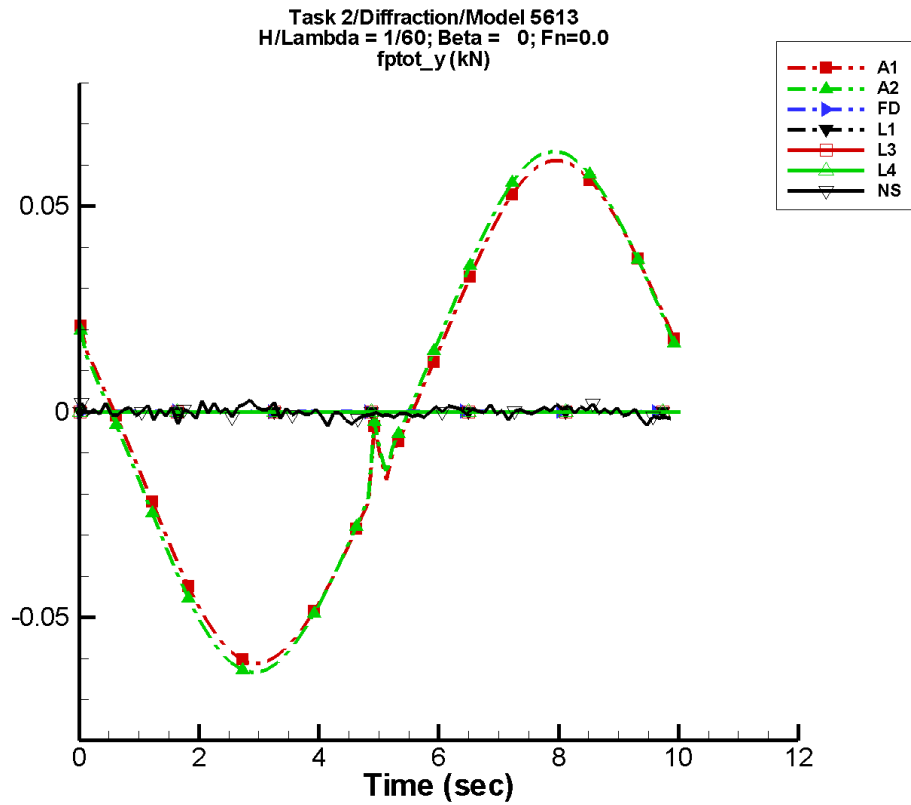
Table G–159. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.3         | 7.43E+03      | -79               | 9.00          | 160               |
| A2   | 426.          | 7.67E+03      | -101              | 2.89E+03      | -64               |
| FD   | 29.9          | 8.46E+03      | -134              | 2.05E+03      | -109              |
| L1   | 524.          | 6.30E+03      | -87               | 133.          | -106              |
| L3   | 501.          | 4.77E+03      | -85               | 1.51E+03      | -72               |
| L4   | 932.          | 4.43E+03      | -125              | 2.26E+03      | -111              |
| NF   | -2.09E+03     | 7.76E+03      | 6                 | 1.47E+03      | 135               |
| NS   | —             | —             | —                 | —             | —                 |

Table G–160. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.45E+03       | 7.42E+03        | -7.22E+03       | 7.19E+03        |
| A2   | -1.04E+04       | 7.32E+03        | -9.58E+03       | 7.13E+03        |
| FD   | -9.95E+03       | 8.45E+03        | -9.34E+03       | 8.12E+03        |
| L1   | -5.91E+03       | 6.70E+03        | -5.83E+03       | 6.63E+03        |
| L3   | -6.23E+03       | 3.97E+03        | -6.06E+03       | 3.95E+03        |
| L4   | -6.33E+03       | 1.63E+04        | -5.87E+03       | 8.01E+03        |
| NF   | -1.09E+04       | 4.75E+03        | -1.08E+04       | 4.66E+03        |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-81. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–161. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

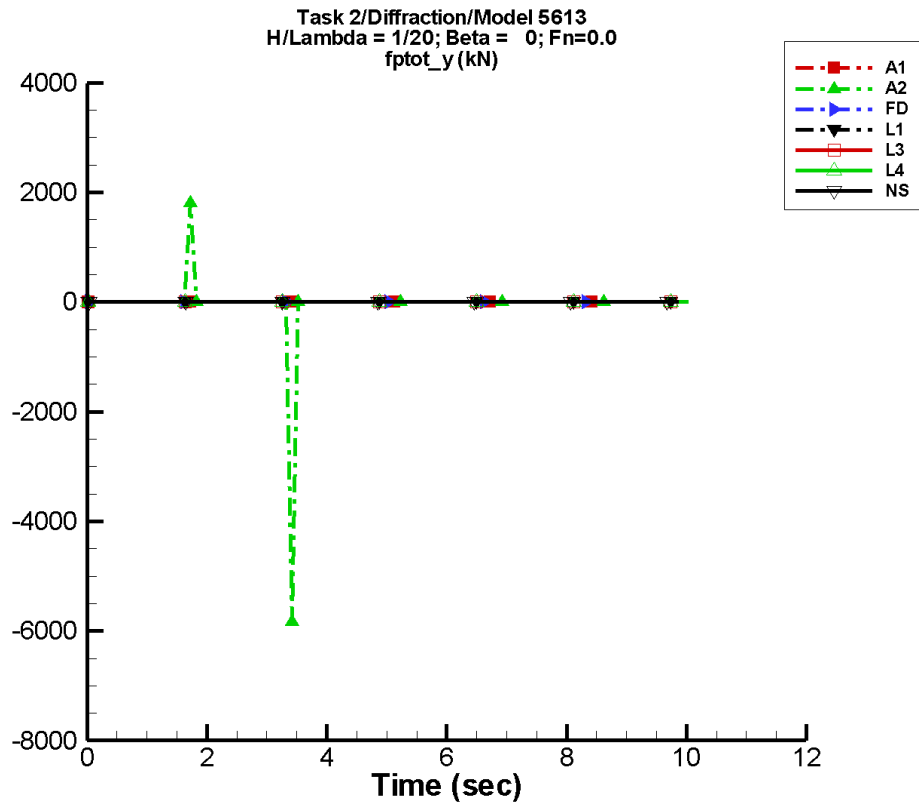
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.51E-04      | 5.83E-02      | 156               | 3.07E-04      | 29                |
| A2   | 2.63E-04      | 6.05E-02      | 158               | 3.08E-04      | 31                |
| FD   | 5.61E-06      | 7.69E-06      | -70               | 7.01E-06      | 160               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.29E-04     | 2.69E-04      | 102               | 6.78E-04      | -71               |

Table G–162. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.12E-02       | 6.11E-02        | -6.04E-02       | 6.03E-02        |
| A2   | -6.35E-02       | 6.33E-02        | -6.27E-02       | 6.25E-02        |
| FD   | -9.05E-05       | 1.00E-04        | -1.51E-05       | 3.37E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.64E-03       | 3.02E-03        | -2.03E-03       | 1.54E-03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-82. Time history of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

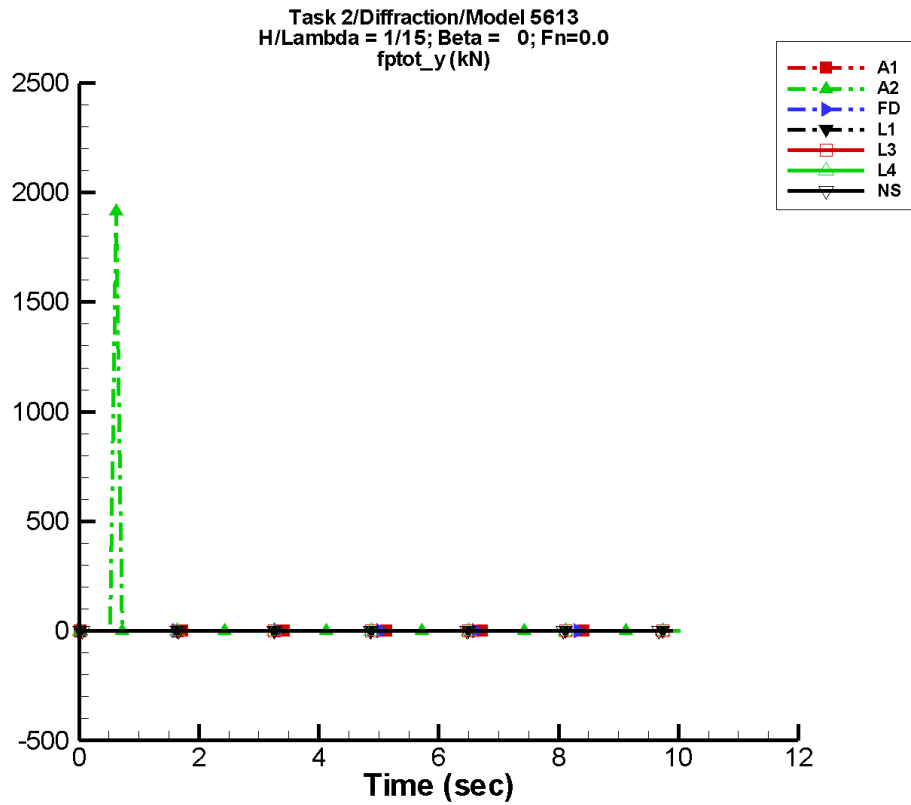
Table G–163. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 7.55E-04      | 0.175         | 156               | 9.22E-04      | 29                |
| A2   | -42.1         | 97.1          | 124               | 144.          | -5                |
| FD   | -1.13E-06     | 7.12E-06      | -168              | 3.71E-06      | -159              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.92E-04     | 3.62E-04      | -140              | 1.40E-03      | -109              |

Table G–164. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.184          | 0.184           | -0.182          | 0.181           |
| A2   | -5.83E+03       | 1.80E+03        | -776.           | 238.            |
| FD   | -1.39E-04       | 9.97E-05        | -3.38E-05       | 3.79E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.38E-02       | 1.01E-02        | -9.30E-03       | 4.57E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-83. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

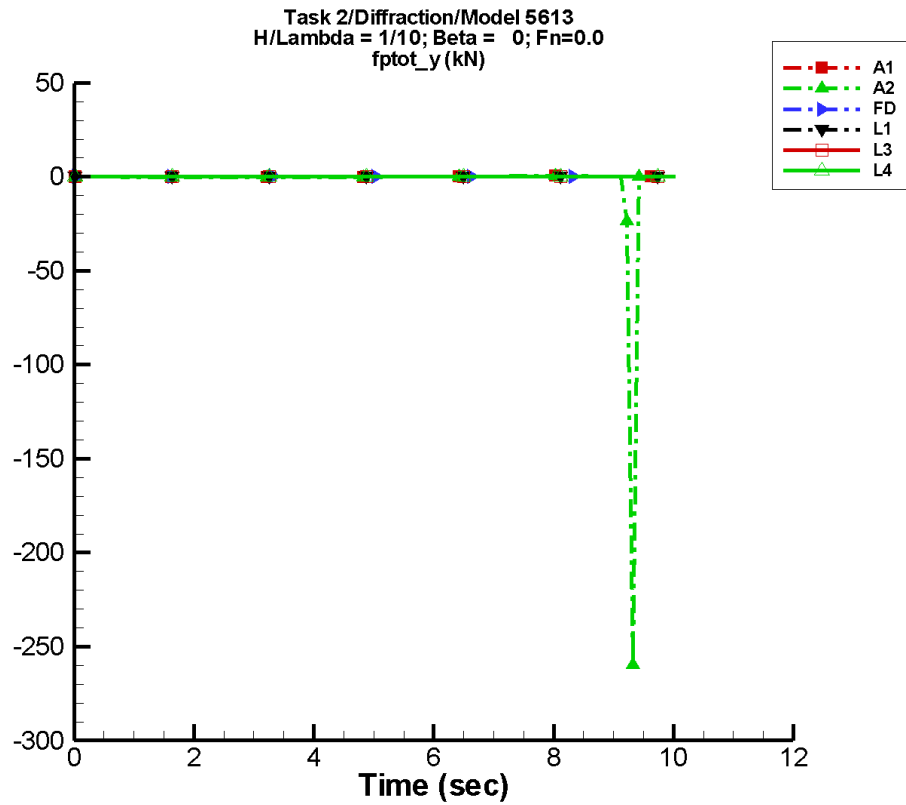
Table G-165. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.01E-03      | 0.234         | 156               | 1.23E-03      | 29                |
| A2   | 10.1          | 21.6          | 71                | 25.0          | 45                |
| FD   | -1.19E-05     | 7.62E-06      | -27               | 6.92E-06      | 61                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.14E-04     | 5.38E-04      | 79                | 1.53E-03      | 114               |

Table G-166. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.246          | 0.245           | -0.243          | 0.242           |
| A2   | -0.255          | 1.91E+03        | -22.0           | 255.            |
| FD   | -1.61E-04       | 1.86E-04        | -6.75E-05       | 2.93E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.04E-02       | 1.96E-02        | -4.41E-03       | 2.95E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-84. Time history of  $F_y^{p\text{tot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

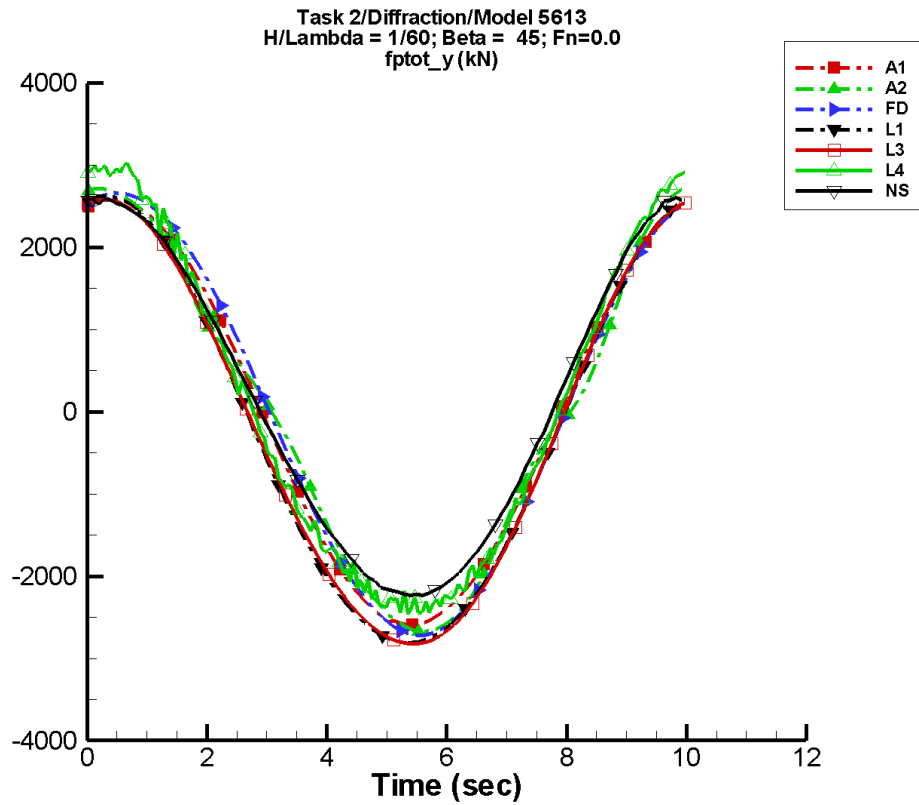
Table G-167. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.51E-03      | 0.351         | 156               | 1.85E-03      | 29                |
| A2   | -2.45         | 4.53          | -71               | 5.09          | -42               |
| FD   | 4.96E-06      | 6.08E-06      | 63                | 2.03E-05      | 111               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-168. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.368          | 0.368           | -0.364          | 0.363           |
| A2   | -260.           | 0.381           | -37.5           | 3.50            |
| FD   | -1.98E-04       | 2.10E-04        | -6.80E-05       | 6.00E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-85. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–169. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

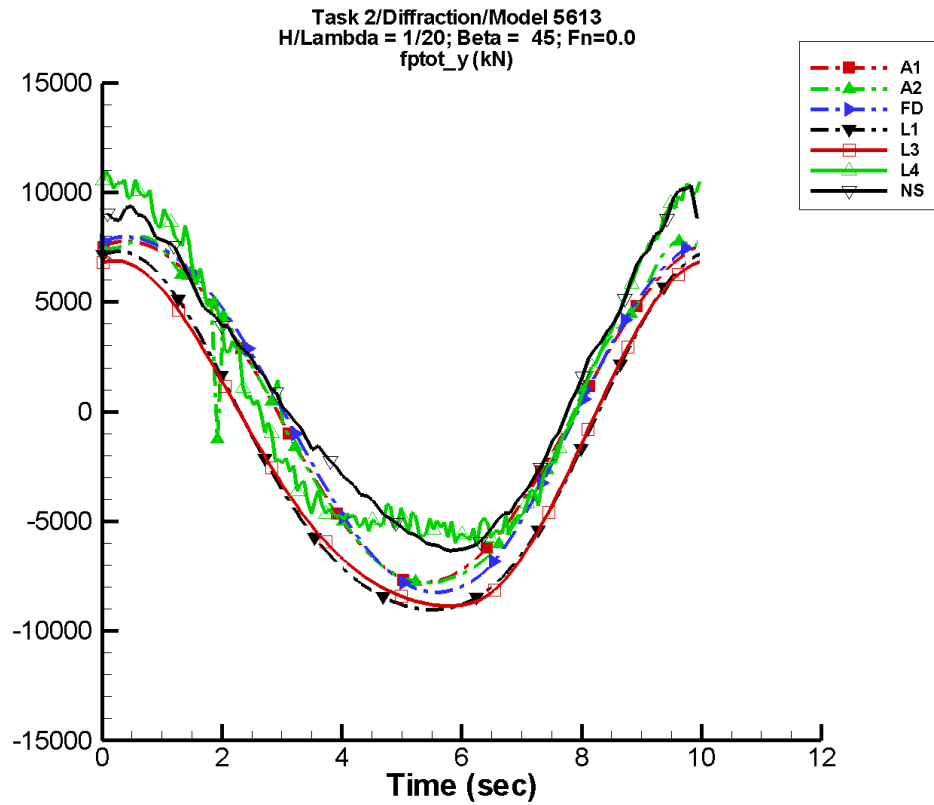
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.26         | 2.60E+03      | 70                | 1.80          | -12               |
| A2   | -4.17         | 2.56E+03      | 68                | 169.          | 123               |
| FD   | -0.874        | 2.69E+03      | 62                | 41.1          | 169               |
| L1   | -201.         | 2.72E+03      | 73                | 111.          | 73                |
| L3   | -201.         | 2.70E+03      | 73                | 108.          | 99                |
| L4   | 78.1          | 2.66E+03      | 73                | 233.          | 74                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 133.          | 2.42E+03      | 77                | 112.          | 128               |

Table G–170. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.59E+03       | 2.59E+03        | -2.57E+03       | 2.57E+03        |
| A2   | -2.68E+03       | 2.74E+03        | -2.64E+03       | 2.71E+03        |
| FD   | -2.72E+03       | 2.66E+03        | -2.69E+03       | 2.63E+03        |
| L1   | -2.81E+03       | 2.62E+03        | -2.80E+03       | 2.61E+03        |
| L3   | -2.82E+03       | 2.58E+03        | -2.82E+03       | 2.57E+03        |
| L4   | -2.46E+03       | 3.03E+03        | -2.37E+03       | 2.95E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.24E+03       | 2.60E+03        | -2.21E+03       | 2.59E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-86. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

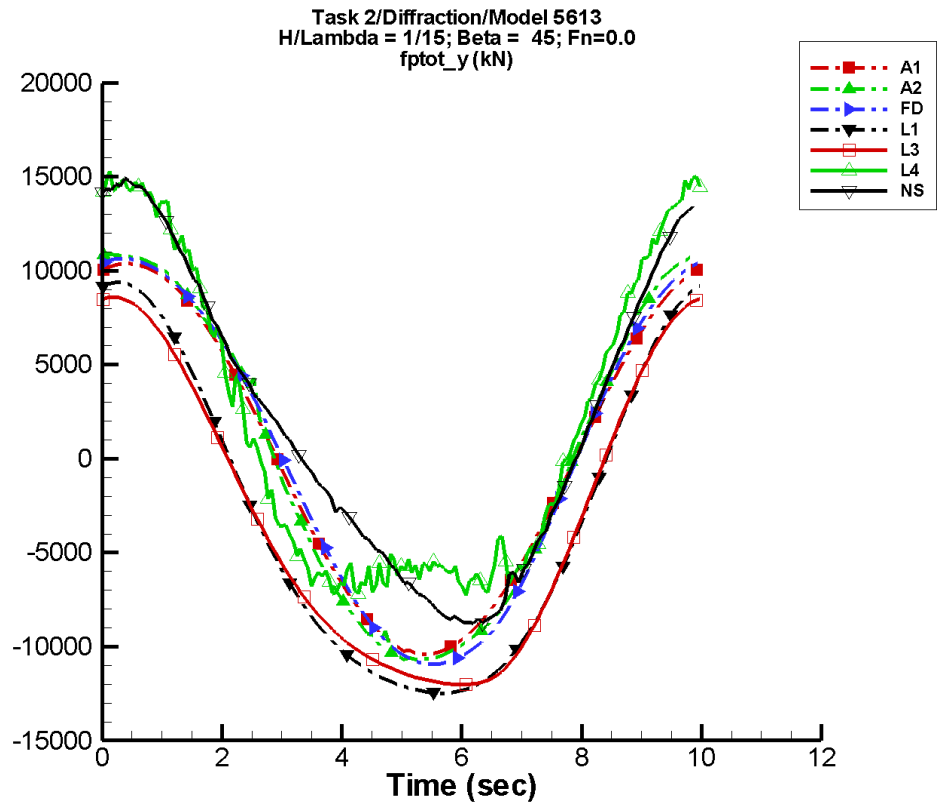
Table G–171. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.82         | 7.81E+03      | 70                | 5.42          | -12               |
| A2   | 10.0          | 8.00E+03      | 70                | 211.          | 136               |
| FD   | -7.60         | 8.18E+03      | 63                | 290.          | 161               |
| L1   | -1.81E+03     | 8.15E+03      | 73                | 1.00E+03      | 72                |
| L3   | -1.81E+03     | 7.86E+03      | 73                | 999.          | 89                |
| L4   | 812.          | 8.05E+03      | 75                | 1.88E+03      | 66                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.13E+03      | 7.54E+03      | 75                | 1.13E+03      | 122               |

Table G–172. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.79E+03       | 7.79E+03        | -7.72E+03       | 7.72E+03        |
| A2   | -7.80E+03       | 1.27E+04        | -7.74E+03       | 7.77E+03        |
| FD   | -8.24E+03       | 7.97E+03        | -8.17E+03       | 7.90E+03        |
| L1   | -9.03E+03       | 7.32E+03        | -9.01E+03       | 7.27E+03        |
| L3   | -8.86E+03       | 6.89E+03        | -8.84E+03       | 6.88E+03        |
| L4   | -6.15E+03       | 1.10E+04        | -5.60E+03       | 1.06E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -6.34E+03       | 1.03E+04        | -6.22E+03       | 9.46E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-87. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

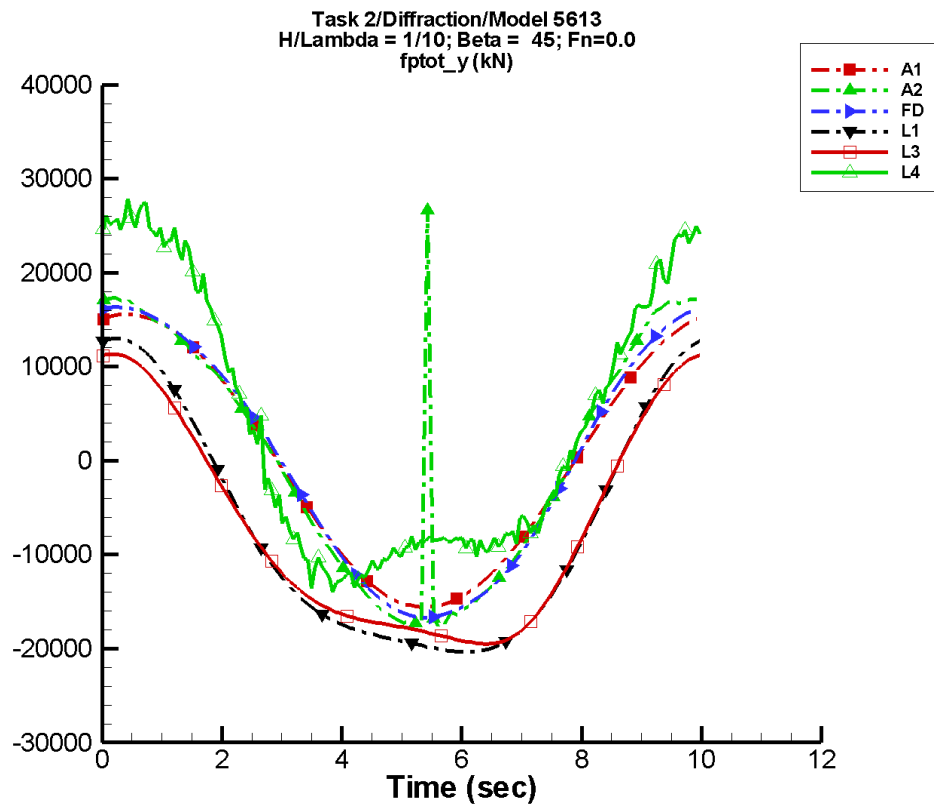
Table G-173. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.1         | 1.04E+04      | 70                | 7.23          | -12               |
| A2   | 25.7          | 1.11E+04      | 71                | 100.          | 135               |
| FD   | -16.2         | 1.09E+04      | 64                | 396.          | 159               |
| L1   | -3.21E+03     | 1.09E+04      | 73                | 1.78E+03      | 72                |
| L3   | -3.22E+03     | 1.02E+04      | 73                | 1.77E+03      | 84                |
| L4   | 1.72E+03      | 1.09E+04      | 77                | 2.86E+03      | 58                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.97E+03      | 1.08E+04      | 68                | 1.97E+03      | 101               |

Table G-174. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.04E+04       | 1.04E+04        | -1.03E+04       | 1.03E+04        |
| A2   | -1.07E+04       | 1.10E+04        | -1.06E+04       | 1.09E+04        |
| FD   | -1.09E+04       | 1.06E+04        | -1.08E+04       | 1.06E+04        |
| L1   | -1.25E+04       | 9.39E+03        | -1.25E+04       | 9.33E+03        |
| L3   | -1.20E+04       | 8.59E+03        | -1.20E+04       | 8.59E+03        |
| L4   | -7.56E+03       | 1.55E+04        | -6.62E+03       | 1.49E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -8.76E+03       | 1.49E+04        | -8.67E+03       | 1.45E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-88. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

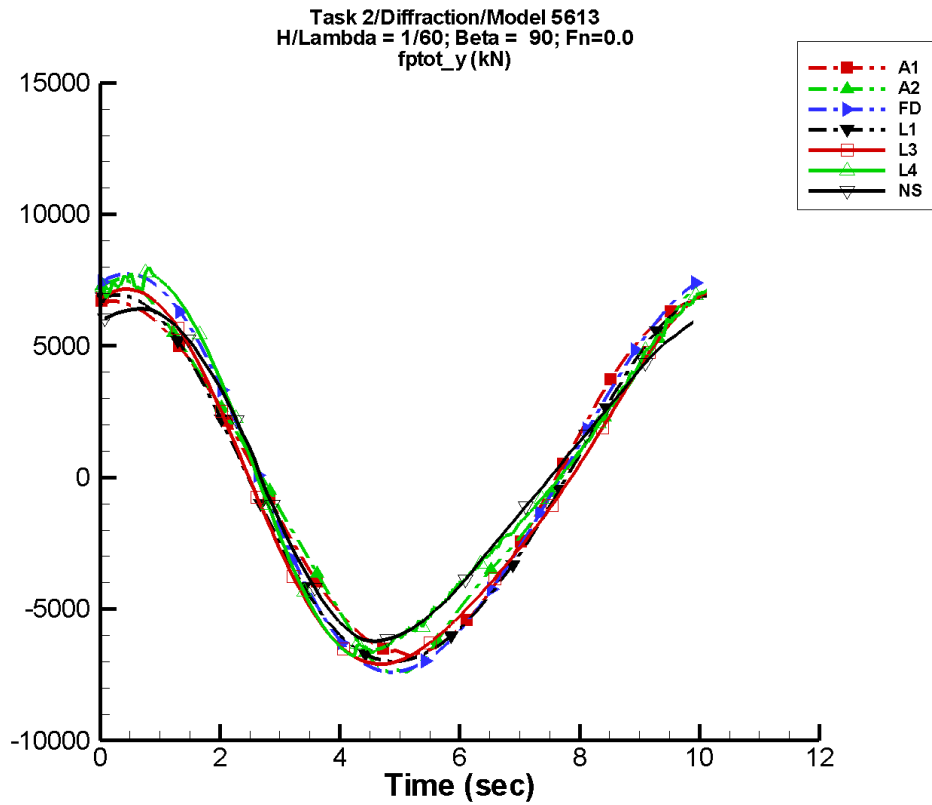
Table G-175. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -19.7         | 1.56E+04      | 70                | 10.8          | -12               |
| A2   | 465.          | 1.65E+04      | 74                | 1.02E+03      | 117               |
| FD   | -31.8         | 1.67E+04      | 66                | 580.          | 162               |
| L1   | -7.22E+03     | 1.63E+04      | 73                | 4.00E+03      | 72                |
| L3   | -7.22E+03     | 1.48E+04      | 73                | 3.94E+03      | 79                |
| L4   | 3.57E+03      | 1.88E+04      | 76                | 5.41E+03      | 37                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-176. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.56E+04       | 1.56E+04        | -1.55E+04       | 1.55E+04        |
| A2   | -1.78E+04       | 2.67E+04        | -1.58E+04       | 1.72E+04        |
| FD   | -1.67E+04       | 1.63E+04        | -1.65E+04       | 1.63E+04        |
| L1   | -2.04E+04       | 1.30E+04        | -2.03E+04       | 1.29E+04        |
| L3   | -1.95E+04       | 1.14E+04        | -1.94E+04       | 1.14E+04        |
| L4   | -1.40E+04       | 2.78E+04        | -1.28E+04       | 2.63E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-89. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–177. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

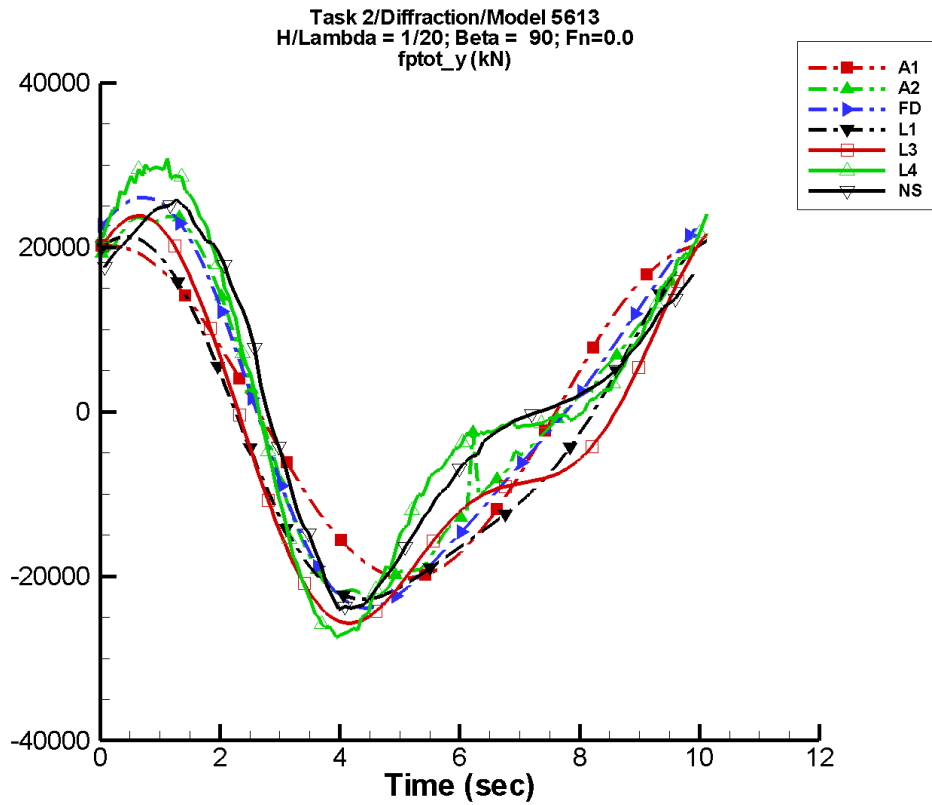
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.68         | 6.74E+03      | 80                | 6.57          | -4                |
| A2   | -8.22         | 6.75E+03      | 78                | 483.          | -4                |
| FD   | -3.12         | 7.48E+03      | 75                | 660.          | -15               |
| L1   | -383.         | 6.92E+03      | 81                | 529.          | 25                |
| L3   | -382.         | 6.90E+03      | 80                | 978.          | 9                 |
| L4   | 252.          | 6.72E+03      | 80                | 1.42E+03      | -5                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 204.          | 6.09E+03      | 84                | 977.          | -18               |

Table G–178. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.75E+03       | 6.73E+03        | -6.64E+03       | 6.74E+03        |
| A2   | -7.41E+03       | 7.57E+03        | -7.27E+03       | 7.43E+03        |
| FD   | -7.40E+03       | 7.73E+03        | -7.33E+03       | 7.64E+03        |
| L1   | -6.99E+03       | 6.94E+03        | -6.97E+03       | 6.92E+03        |
| L3   | -7.09E+03       | 7.16E+03        | -7.07E+03       | 7.12E+03        |
| L4   | -6.81E+03       | 7.99E+03        | -6.57E+03       | 7.57E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.22E+03       | 6.42E+03        | -6.14E+03       | 6.33E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-90. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

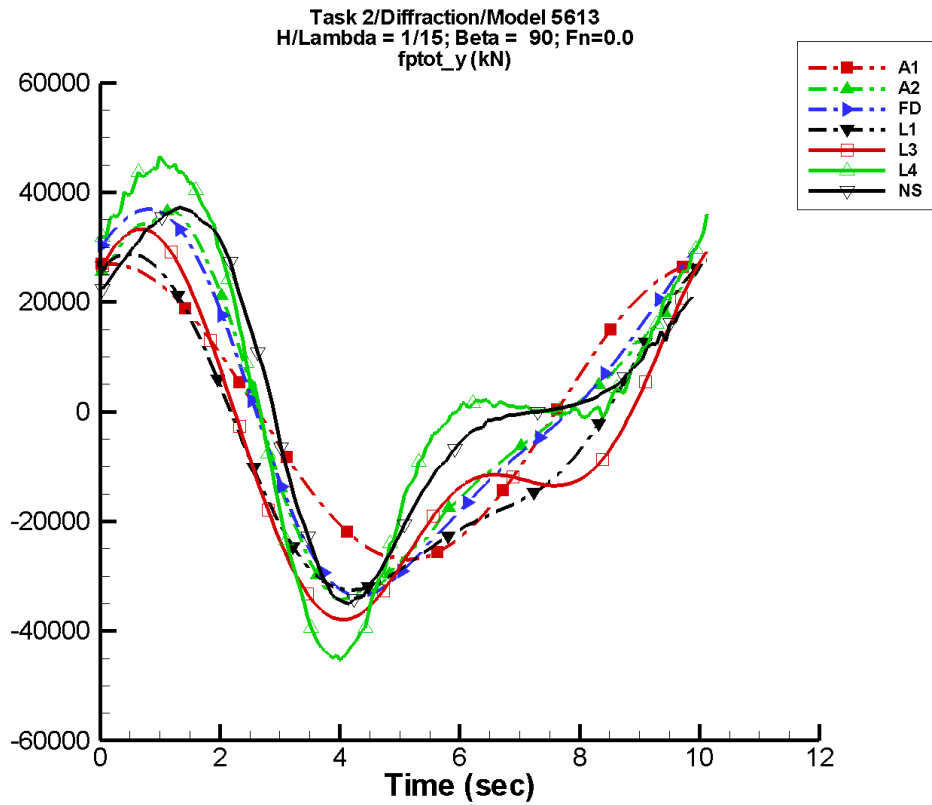
Table G–179. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -17.1         | 2.03E+04      | 80                | 19.8          | -4                |
| A2   | 69.4          | 2.09E+04      | 78                | 6.45E+03      | -18               |
| FD   | -22.2         | 2.30E+04      | 75                | 5.42E+03      | -15               |
| L1   | -3.43E+03     | 2.08E+04      | 81                | 4.75E+03      | 25                |
| L3   | -3.42E+03     | 2.04E+04      | 80                | 8.44E+03      | 10                |
| L4   | 1.81E+03      | 2.06E+04      | 81                | 1.16E+04      | -7                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.71E+03      | 1.88E+04      | 80                | 8.93E+03      | -20               |

Table G–180. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.03E+04       | 2.02E+04        | -2.00E+04       | 2.03E+04        |
| A2   | -2.27E+04       | 2.37E+04        | -2.22E+04       | 2.36E+04        |
| FD   | -2.39E+04       | 2.61E+04        | -2.36E+04       | 2.56E+04        |
| L1   | -2.28E+04       | 2.13E+04        | -2.27E+04       | 2.11E+04        |
| L3   | -2.57E+04       | 2.38E+04        | -2.56E+04       | 2.36E+04        |
| L4   | -2.75E+04       | 3.08E+04        | -2.69E+04       | 2.96E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.41E+04       | 2.58E+04        | -2.32E+04       | 2.47E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-91. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

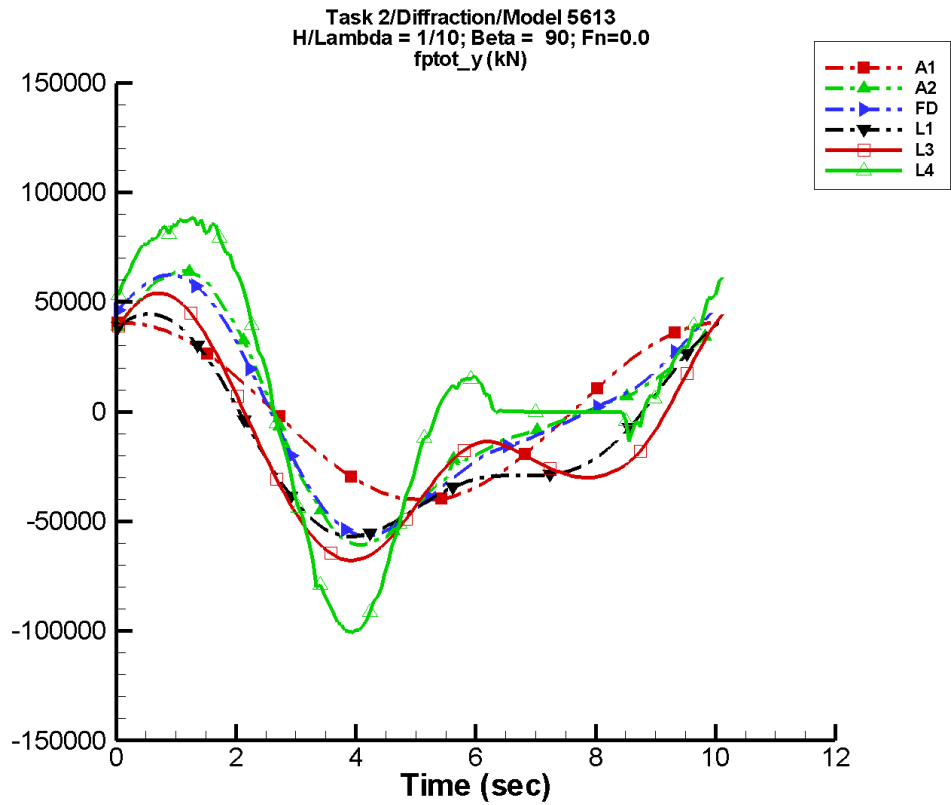
Table G–181. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -22.8         | 2.71E+04      | 80                | 26.4          | -4                |
| A2   | 5.36          | 2.94E+04      | 78                | 1.14E+04      | -18               |
| FD   | -35.7         | 3.11E+04      | 75                | 9.47E+03      | -15               |
| L1   | -6.10E+03     | 2.77E+04      | 81                | 8.43E+03      | 25                |
| L3   | -6.08E+03     | 2.68E+04      | 80                | 1.47E+04      | 10                |
| L4   | 3.31E+03      | 2.86E+04      | 83                | 2.12E+04      | -9                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.94E+03      | 2.49E+04      | 78                | 1.51E+04      | -21               |

Table G–182. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.71E+04       | 2.70E+04        | -2.67E+04       | 2.71E+04        |
| A2   | -3.44E+04       | 3.67E+04        | -3.34E+04       | 3.56E+04        |
| FD   | -3.37E+04       | 3.70E+04        | -3.31E+04       | 3.63E+04        |
| L1   | -3.26E+04       | 2.88E+04        | -3.24E+04       | 2.86E+04        |
| L3   | -3.80E+04       | 3.33E+04        | -3.77E+04       | 3.30E+04        |
| L4   | -4.54E+04       | 4.66E+04        | -4.44E+04       | 4.49E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.51E+04       | 3.73E+04        | -3.42E+04       | 3.65E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-92. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

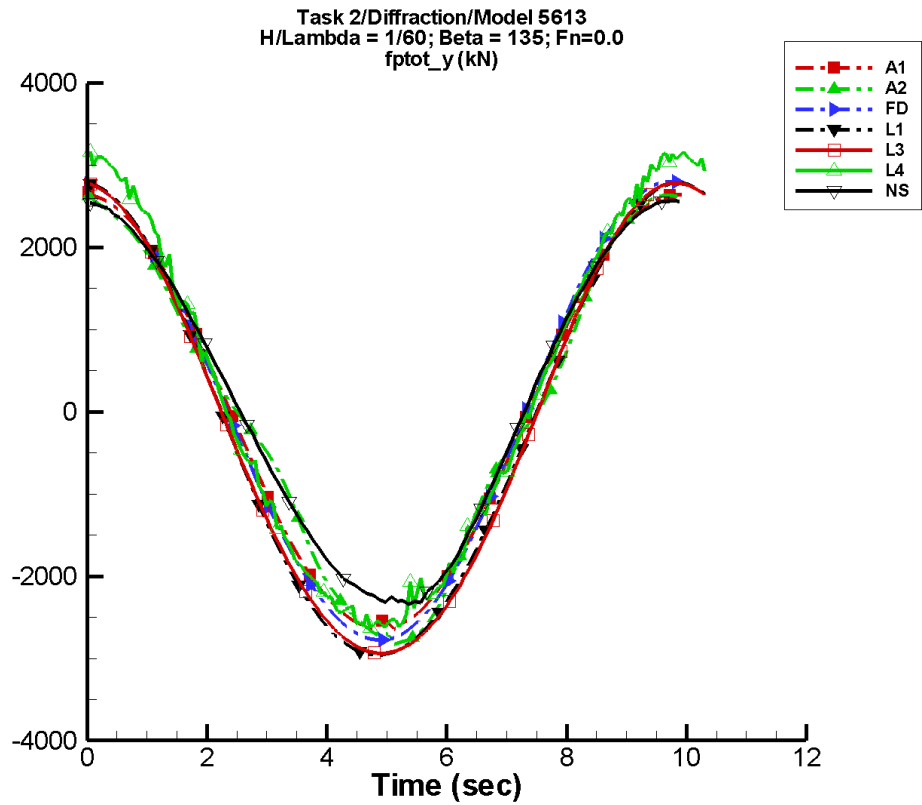
Table G–183. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -34.2         | 4.06E+04      | 80                | 39.6          | -4                |
| A2   | 68.1          | 4.67E+04      | 78                | 2.40E+04      | -17               |
| FD   | -108.         | 4.83E+04      | 75                | 2.01E+04      | -14               |
| L1   | -1.37E+04     | 4.15E+04      | 81                | 1.90E+04      | 25                |
| L3   | -1.36E+04     | 3.95E+04      | 80                | 3.08E+04      | 12                |
| L4   | 5.63E+03      | 5.07E+04      | 82                | 4.83E+04      | -10               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–184. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.06E+04       | 4.05E+04        | -4.00E+04       | 4.06E+04        |
| A2   | -6.08E+04       | 6.42E+04        | -5.94E+04       | 6.27E+04        |
| FD   | -5.68E+04       | 6.25E+04        | -5.55E+04       | 6.11E+04        |
| L1   | -5.69E+04       | 4.46E+04        | -5.66E+04       | 4.42E+04        |
| L3   | -6.78E+04       | 5.41E+04        | -6.74E+04       | 5.35E+04        |
| L4   | -1.01E+05       | 8.98E+04        | -9.87E+04       | 8.71E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-93. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–185. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

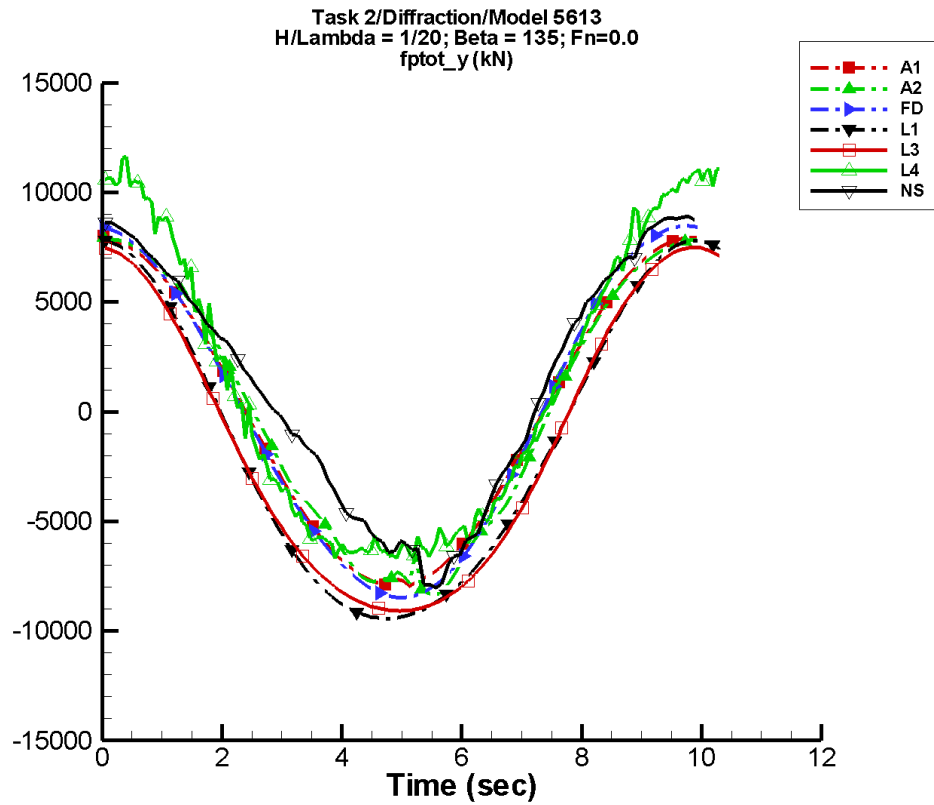
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.903        | 2.65E+03      | 89                | 3.99          | 23                |
| A2   | -7.35         | 2.57E+03      | 87                | 146.          | -172              |
| FD   | -0.972        | 2.79E+03      | 87                | 42.2          | 159               |
| L1   | -181.         | 2.87E+03      | 89                | 93.7          | 74                |
| L3   | -181.         | 2.86E+03      | 89                | 107.          | 102               |
| L4   | 103.          | 2.80E+03      | 90                | 174.          | 74                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 141.          | 2.45E+03      | 91                | 111.          | -165              |

Table G–186. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.64E+03       | 2.67E+03        | -2.60E+03       | 2.65E+03        |
| A2   | -2.83E+03       | 2.63E+03        | -2.75E+03       | 2.59E+03        |
| FD   | -2.78E+03       | 2.80E+03        | -2.75E+03       | 2.77E+03        |
| L1   | -2.96E+03       | 2.78E+03        | -2.95E+03       | 2.77E+03        |
| L3   | -2.94E+03       | 2.78E+03        | -2.93E+03       | 2.77E+03        |
| L4   | -2.63E+03       | 3.17E+03        | -2.59E+03       | 3.12E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.34E+03       | 2.57E+03        | -2.30E+03       | 2.54E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-94. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

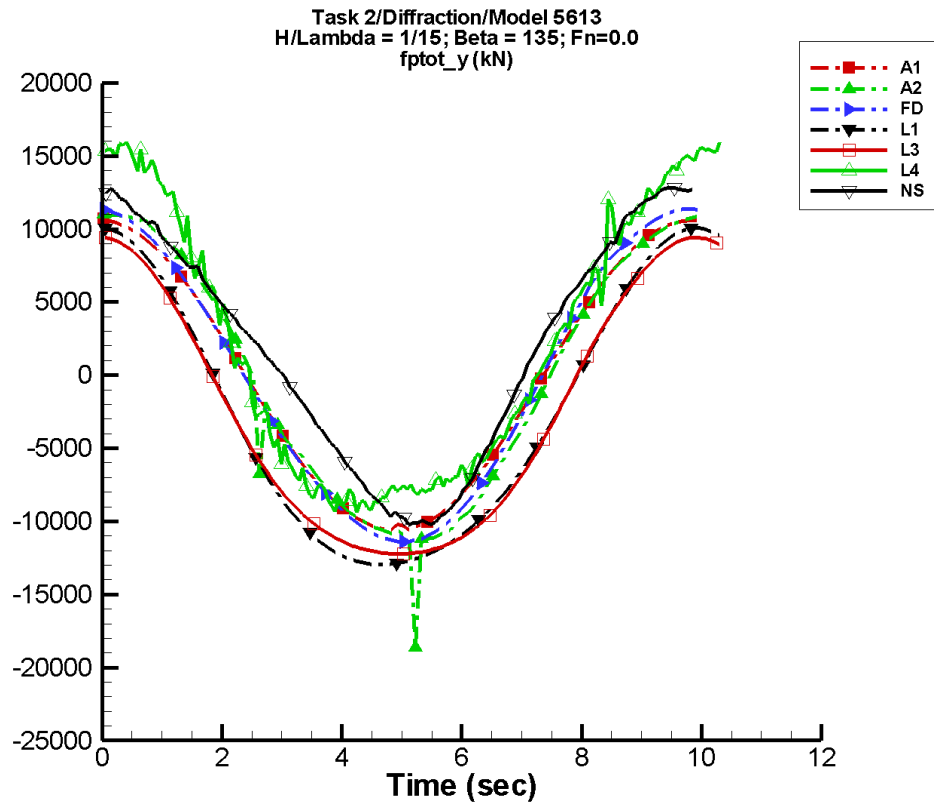
Table G–187. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.72         | 7.98E+03      | 89                | 12.0          | 23                |
| A2   | 8.89          | 8.08E+03      | 84                | 213.          | -171              |
| FD   | -1.26         | 8.53E+03      | 86                | 301.          | 164               |
| L1   | -1.61E+03     | 8.60E+03      | 89                | 832.          | 73                |
| L3   | -1.61E+03     | 8.36E+03      | 89                | 846.          | 94                |
| L4   | 917.          | 8.83E+03      | 89                | 1.35E+03      | 72                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.18E+03      | 7.66E+03      | 88                | 993.          | -168              |

Table G–188. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.95E+03       | 8.02E+03        | -7.82E+03       | 7.97E+03        |
| A2   | -8.35E+03       | 7.95E+03        | -7.85E+03       | 7.95E+03        |
| FD   | -8.48E+03       | 8.48E+03        | -8.40E+03       | 8.39E+03        |
| L1   | -9.43E+03       | 7.81E+03        | -9.41E+03       | 7.76E+03        |
| L3   | -9.08E+03       | 7.49E+03        | -9.07E+03       | 7.45E+03        |
| L4   | -6.70E+03       | 1.16E+04        | -6.41E+03       | 1.09E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -8.03E+03       | 8.90E+03        | -7.25E+03       | 8.79E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-95. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

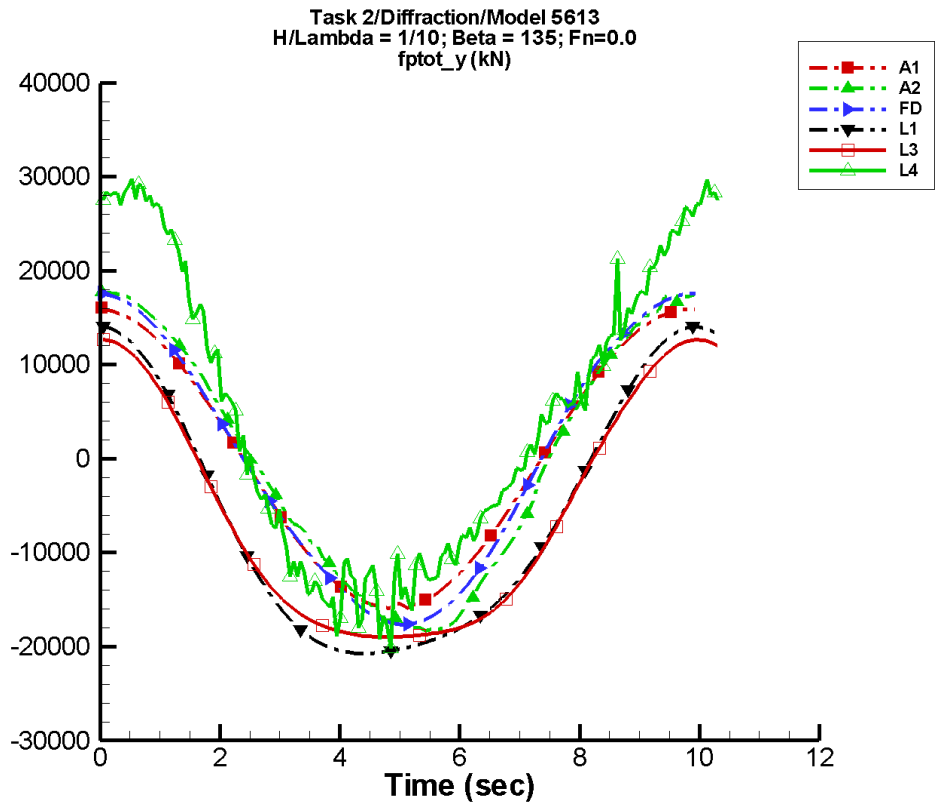
Table G–189. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.63         | 1.07E+04      | 89                | 16.0          | 23                |
| A2   | -134.         | 1.15E+04      | 84                | 158.          | -110              |
| FD   | 3.31          | 1.14E+04      | 86                | 429.          | 165               |
| L1   | -2.86E+03     | 1.15E+04      | 89                | 1.48E+03      | 73                |
| L3   | -2.86E+03     | 1.09E+04      | 88                | 1.46E+03      | 88                |
| L4   | 1.82E+03      | 1.22E+04      | 89                | 1.92E+03      | 56                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.05E+03      | 1.09E+04      | 90                | 1.30E+03      | -151              |

Table G–190. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.06E+04       | 1.07E+04        | -1.04E+04       | 1.06E+04        |
| A2   | -1.86E+04       | 1.10E+04        | -1.21E+04       | 1.10E+04        |
| FD   | -1.14E+04       | 1.14E+04        | -1.13E+04       | 1.12E+04        |
| L1   | -1.30E+04       | 1.01E+04        | -1.29E+04       | 1.00E+04        |
| L3   | -1.22E+04       | 9.41E+03        | -1.22E+04       | 9.35E+03        |
| L4   | -9.39E+03       | 1.60E+04        | -8.75E+03       | 1.55E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.02E+04       | 1.28E+04        | -1.00E+04       | 1.27E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-96. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

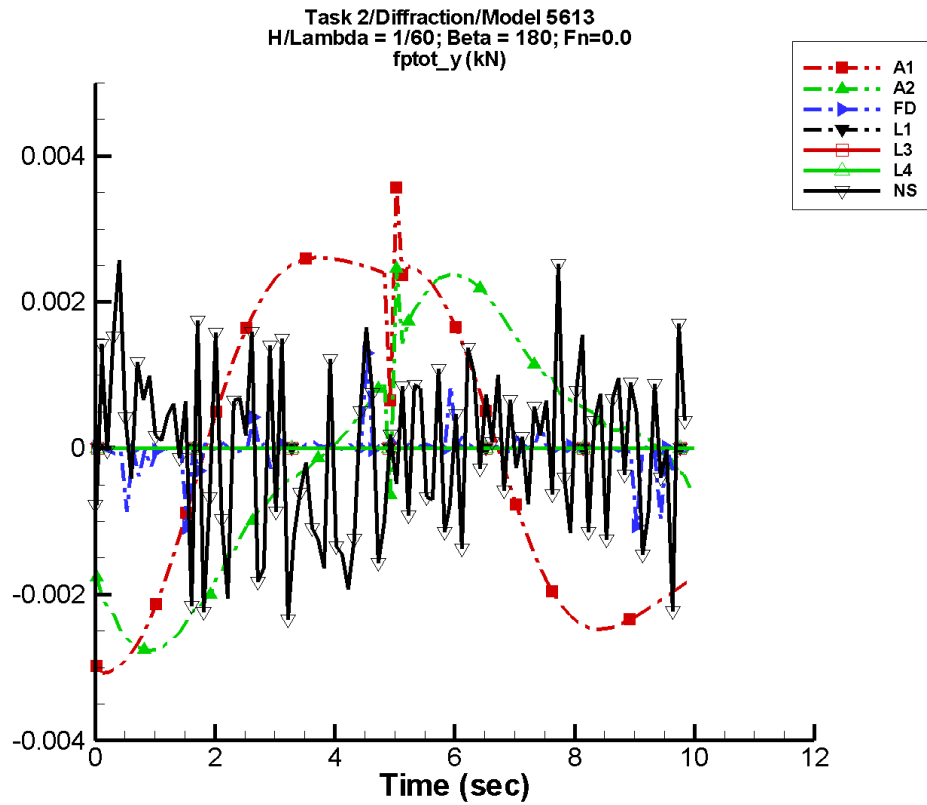
Table G–191. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.44         | 1.60E+04      | 89                | 24.0          | 23                |
| A2   | -69.1         | 1.78E+04      | 82                | 978.          | 166               |
| FD   | 22.2          | 1.76E+04      | 84                | 674.          | 164               |
| L1   | -6.43E+03     | 1.72E+04      | 89                | 3.32E+03      | 73                |
| L3   | -6.43E+03     | 1.59E+04      | 88                | 3.28E+03      | 82                |
| L4   | 3.83E+03      | 2.08E+04      | 88                | 4.52E+03      | 25                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–192. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.59E+04       | 1.61E+04        | -1.57E+04       | 1.60E+04        |
| A2   | -1.83E+04       | 1.78E+04        | -1.81E+04       | 1.78E+04        |
| FD   | -1.76E+04       | 1.76E+04        | -1.74E+04       | 1.75E+04        |
| L1   | -2.07E+04       | 1.40E+04        | -2.07E+04       | 1.39E+04        |
| L3   | -1.90E+04       | 1.26E+04        | -1.90E+04       | 1.26E+04        |
| L4   | -2.02E+04       | 2.98E+04        | -1.60E+04       | 2.85E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-97. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–193. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

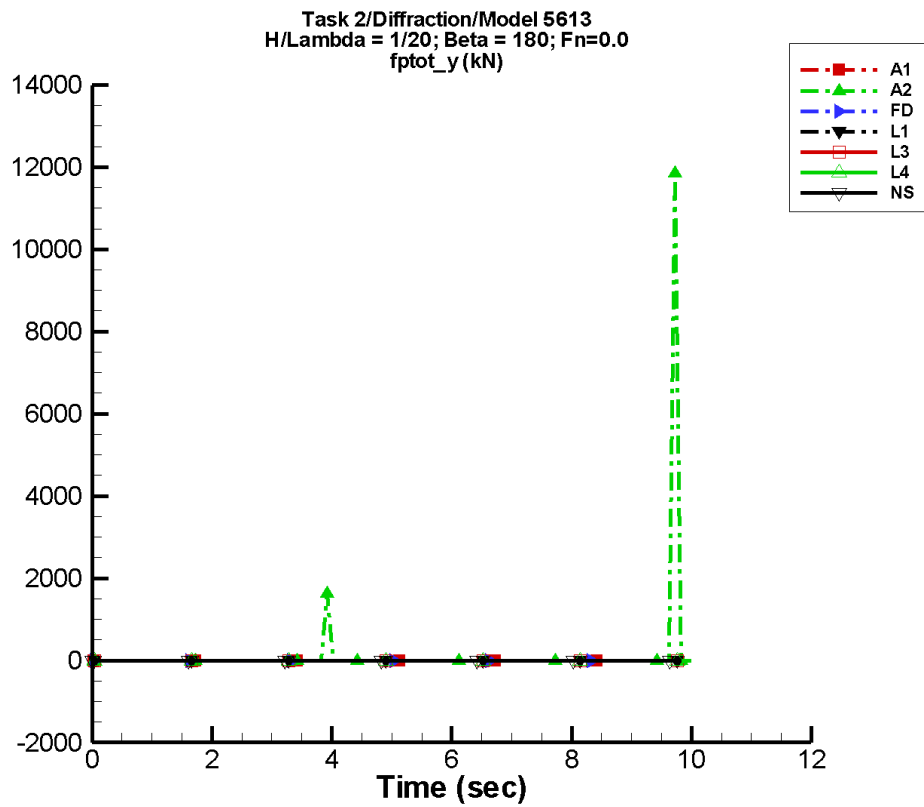
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.90E-05      | 2.82E-03      | -68               | 8.69E-05      | 158               |
| A2   | 4.03E-05      | 1.95E-03      | -142              | 8.91E-05      | 146               |
| FD   | -1.05E-05     | 1.30E-04      | -97               | 2.39E-05      | 179               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.12E-05     | 3.59E-04      | 136               | 2.61E-04      | 4                 |

Table G–194. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.08E-03       | 3.56E-03        | -3.05E-03       | 2.60E-03        |
| A2   | -2.76E-03       | 2.45E-03        | -2.71E-03       | 2.33E-03        |
| FD   | -1.08E-03       | 1.31E-03        | -2.69E-04       | 2.27E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.35E-03       | 2.58E-03        | -9.03E-04       | 8.32E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-98. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

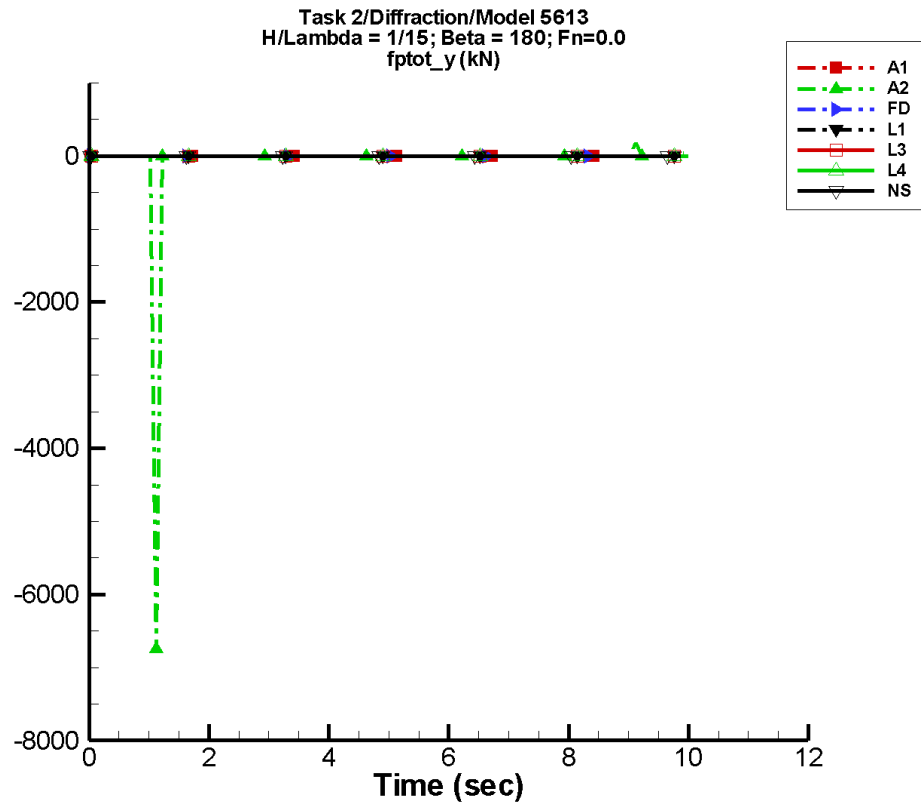
Table G–195. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.73E-05      | 8.49E-03      | -68               | 2.61E-04      | 158               |
| A2   | 113.          | 153.          | 89                | 199.          | 116               |
| FD   | -2.43E-05     | 4.28E-04      | -89               | 8.71E-05      | 179               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -7.65E-05     | 6.93E-04      | 127               | 1.23E-03      | -28               |

Table G–196. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -9.25E-03       | 1.07E-02        | -9.16E-03       | 7.83E-03        |
| A2   | -8.45E-03       | 1.18E+04        | -143.           | 1.58E+03        |
| FD   | -3.19E-03       | 3.79E-03        | -7.94E-04       | 8.90E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.22E-02       | 1.01E-02        | -4.09E-03       | 3.77E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-99. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

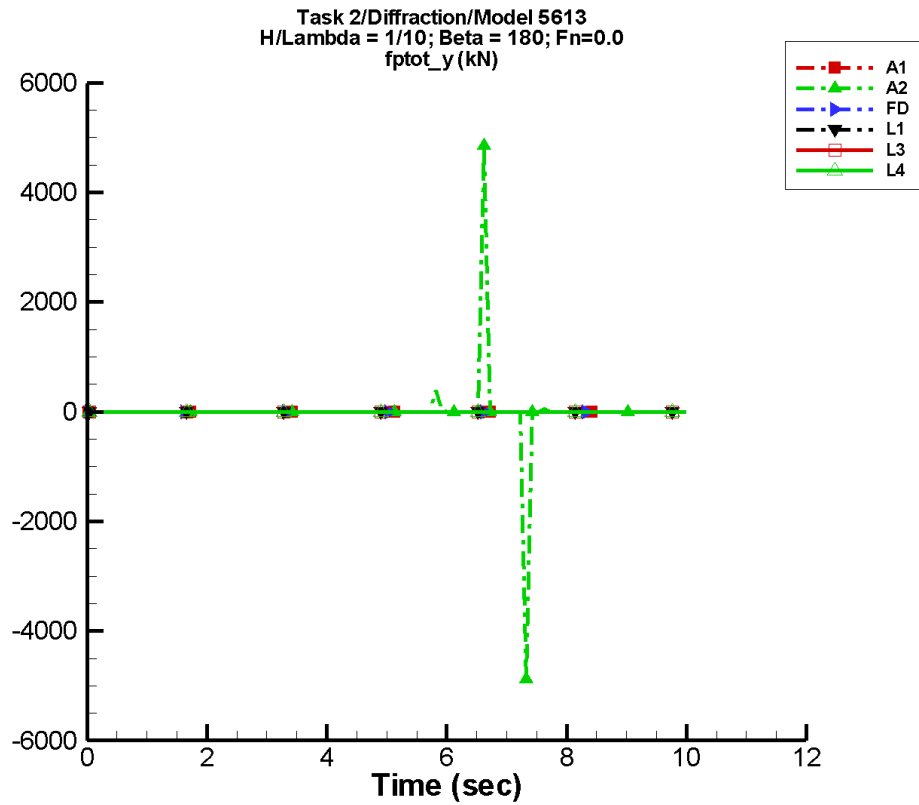
Table G–197. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.17E-04      | 1.13E-02      | -68               | 3.49E-04      | 158               |
| A2   | -31.4         | 70.1          | -139              | 86.9          | 177               |
| FD   | -3.64E-05     | 5.83E-04      | -86               | 1.38E-04      | 169               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.30E-04     | 1.51E-03      | 156               | 1.17E-03      | -145              |

Table G–198. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.24E-02       | 1.43E-02        | -1.22E-02       | 1.05E-02        |
| A2   | -6.75E+03       | 182.            | -900.           | 76.9            |
| FD   | -4.24E-03       | 4.99E-03        | -1.07E-03       | 1.33E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -7.08E-02       | 7.54E-02        | -3.49E-03       | 4.84E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-100. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

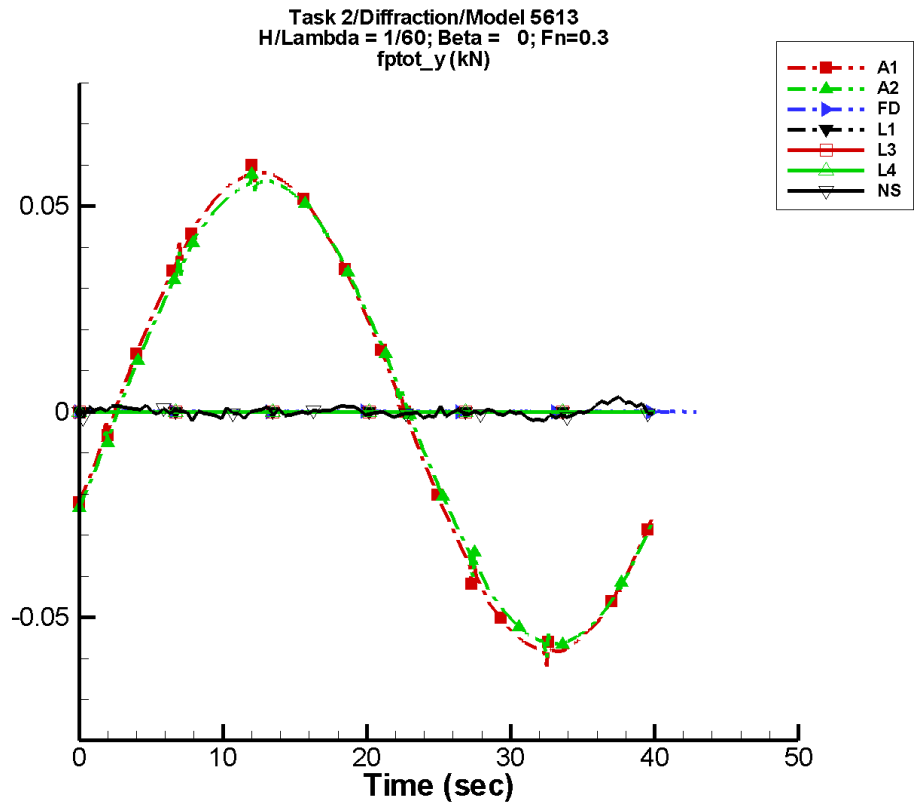
Table G–199. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.75E-04      | 1.70E-02      | -68               | 5.24E-04      | 158               |
| A2   | 9.49          | 37.7          | -78               | 106.          | 29                |
| FD   | -4.74E-05     | 8.44E-04      | -83               | 2.71E-04      | 170               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–200. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.85E-02       | 2.15E-02        | -1.84E-02       | 1.57E-02        |
| A2   | -4.88E+03       | 4.85E+03        | -657.           | 660.            |
| FD   | -6.30E-03       | 7.61E-03        | -1.60E-03       | 2.00E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-101. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–201. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

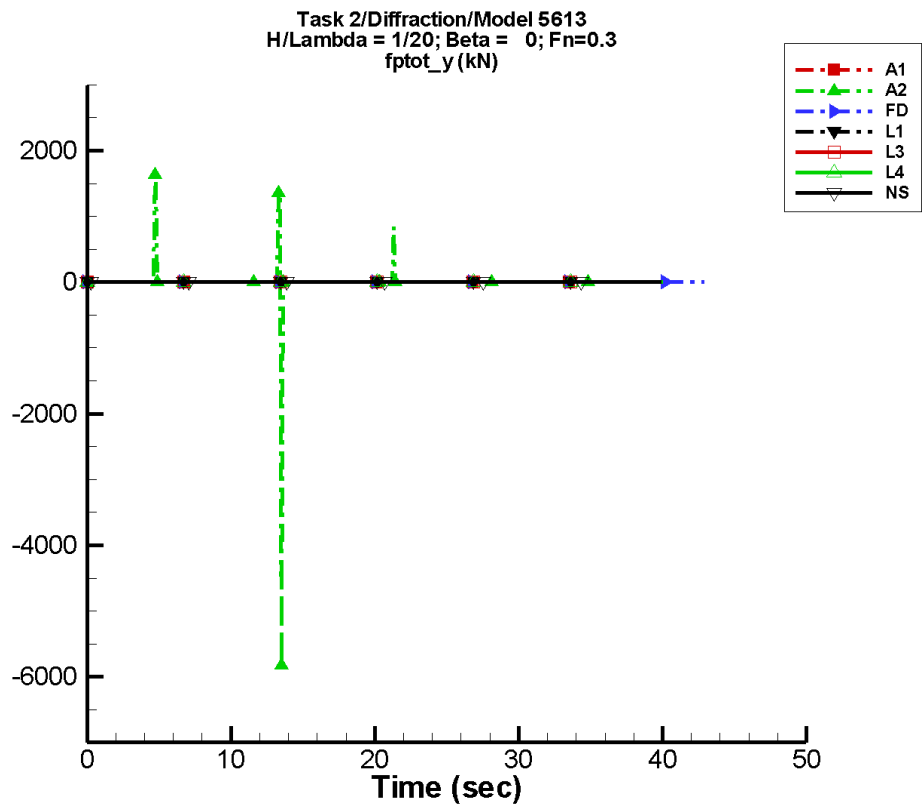
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.35E-05     | 5.84E-02      | -24               | 5.92E-04      | -35               |
| A2   | -5.39E-05     | 5.64E-02      | -26               | 5.85E-04      | -34               |
| FD   | -2.30E-07     | 2.08E-06      | -77               | 5.41E-06      | 44                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -8.62E-05     | 3.49E-04      | -2                | 3.88E-04      | -165              |

Table G–202. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.20E-02       | 6.12E-02        | -5.86E-02       | 5.82E-02        |
| A2   | -5.99E-02       | 5.90E-02        | -5.65E-02       | 5.60E-02        |
| FD   | -1.35E-04       | 1.23E-04        | -3.67E-05       | 3.30E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -4.76E-03       | 4.96E-03        | -3.73E-03       | 2.63E-03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-102. Time history of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

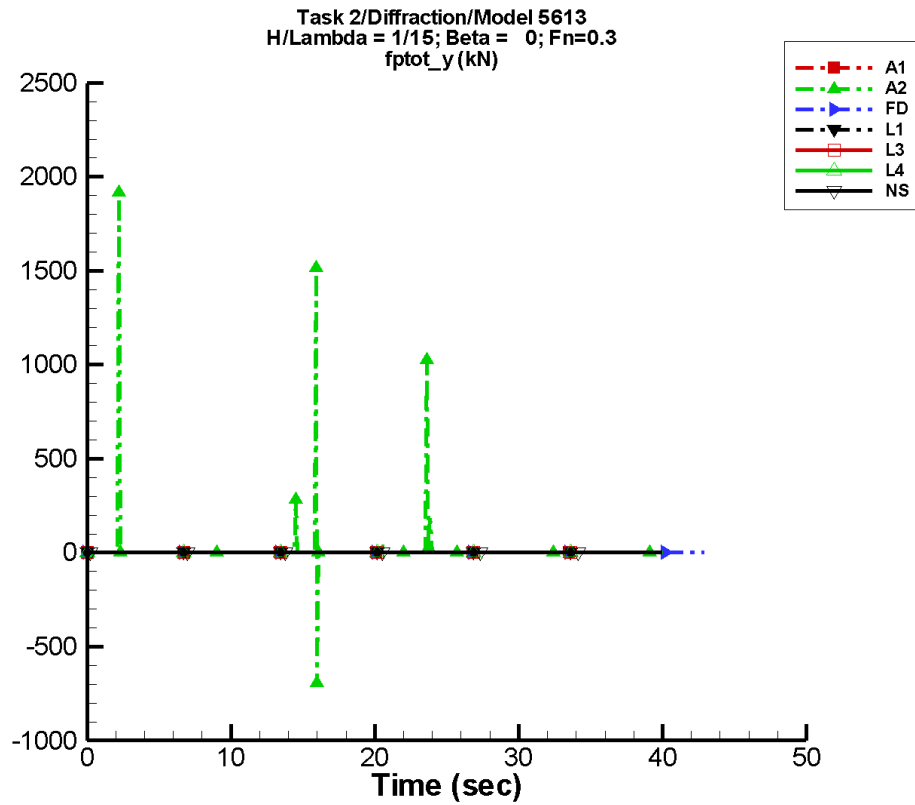
Table G–203. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.91E-04     | 0.176         | -24               | 1.78E-03      | -35               |
| A2   | 2.05          | 15.3          | 95                | 36.9          | 14                |
| FD   | 4.36E-06      | 7.03E-06      | 143               | 3.73E-06      | 164               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.02E-04     | 2.39E-04      | -108              | 2.31E-03      | -125              |

Table G–204. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.186          | 0.184           | -0.176          | 0.175           |
| A2   | -5.82E+03       | 1.64E+03        | -470.           | 426.            |
| FD   | -1.69E-04       | 1.41E-04        | -4.56E-05       | 4.80E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -4.99E-02       | 4.84E-02        | -6.55E-03       | 3.87E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-103. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

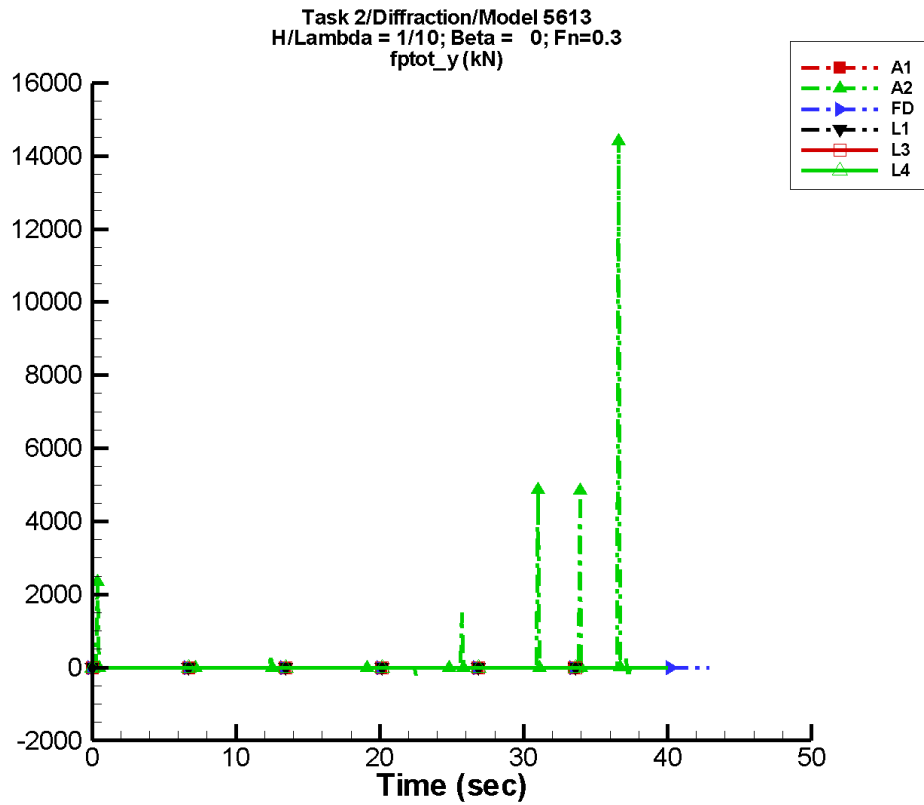
Table G–205. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.55E-04     | 0.234         | -24               | 2.38E-03      | -35               |
| A2   | 11.6          | 2.26          | 3                 | 17.0          | 64                |
| FD   | 6.54E-07      | 6.19E-07      | -156              | 8.66E-06      | -42               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.40E-04     | 1.16E-03      | -62               | 1.82E-03      | 31                |

Table G–206. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.249          | 0.246           | -0.235          | 0.234           |
| A2   | -691.           | 1.93E+03        | -22.0           | 257.            |
| FD   | -2.37E-04       | 2.13E-04        | -5.65E-05       | 6.26E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.30E-02       | 1.33E-02        | -9.23E-03       | 7.69E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-104. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

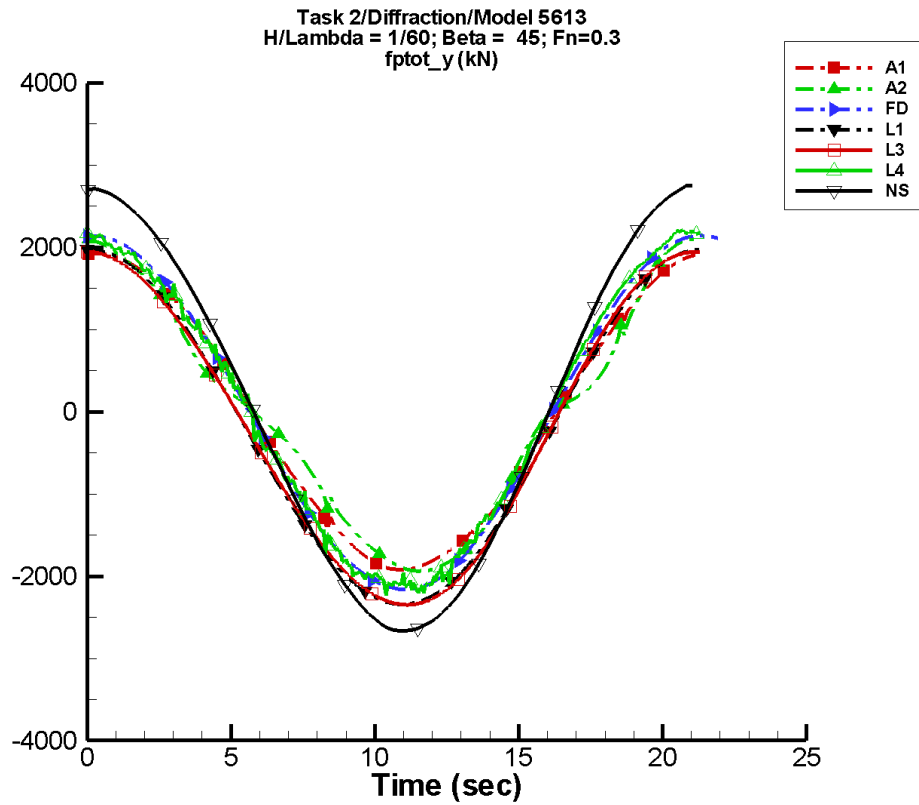
Table G–207. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.82E-04     | 0.352         | -24               | 3.56E-03      | -35               |
| A2   | 66.9          | 110.          | 136               | 85.4          | -177              |
| FD   | -1.39E-06     | 6.98E-06      | -135              | 7.47E-06      | 83                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–208. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.373          | 0.369           | -0.353          | 0.350           |
| A2   | -271.           | 1.44E+04        | -193.           | 1.93E+03        |
| FD   | -2.27E-04       | 2.08E-04        | -6.53E-05       | 5.79E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-105. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–209. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

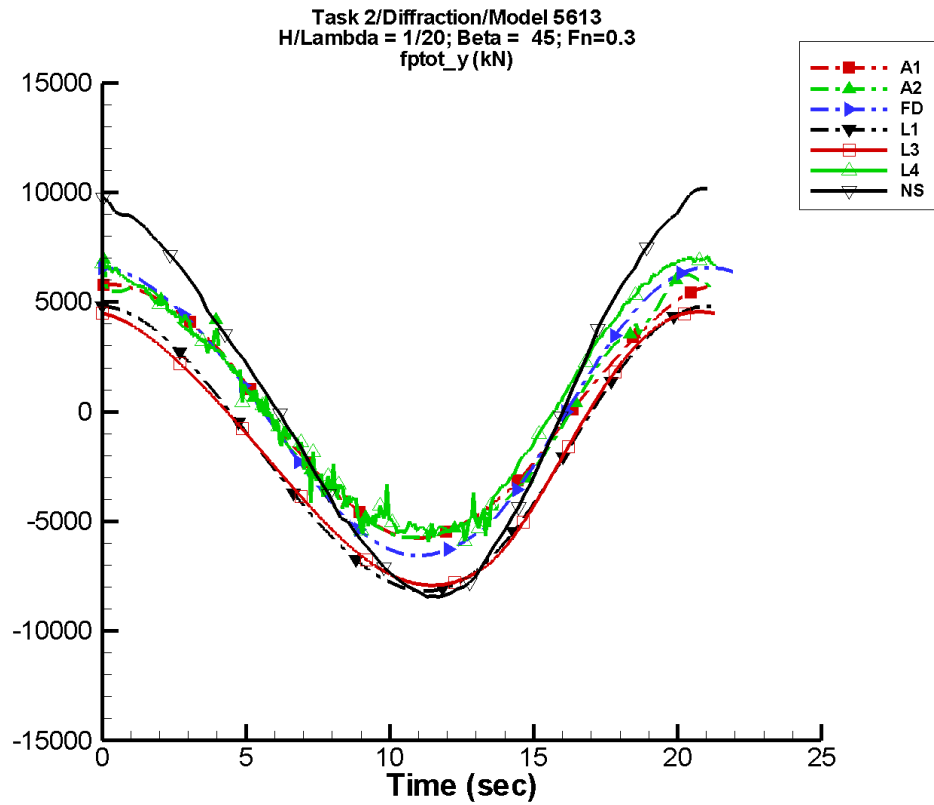
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.890         | 1.91E+03      | 84                | 1.08          | -128              |
| A2   | -3.44         | 1.85E+03      | 84                | 174.          | 138               |
| FD   | 0.142         | 2.15E+03      | 90                | 41.4          | -163              |
| L1   | -195.         | 2.15E+03      | 87                | 40.7          | 160               |
| L3   | -195.         | 2.14E+03      | 87                | 87.2          | 178               |
| L4   | 25.8          | 2.13E+03      | 87                | 84.1          | -158              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 78.4          | 2.68E+03      | 85                | 107.          | -161              |

Table G–210. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.92E+03       | 1.93E+03        | -1.92E+03       | 1.93E+03        |
| A2   | -1.94E+03       | 2.10E+03        | -1.93E+03       | 2.09E+03        |
| FD   | -2.16E+03       | 2.14E+03        | -2.16E+03       | 2.15E+03        |
| L1   | -2.34E+03       | 1.97E+03        | -2.34E+03       | 1.97E+03        |
| L3   | -2.35E+03       | 1.95E+03        | -2.35E+03       | 1.95E+03        |
| L4   | -2.23E+03       | 2.21E+03        | -2.15E+03       | 2.19E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.66E+03       | 2.75E+03        | -2.64E+03       | 2.71E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-106. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

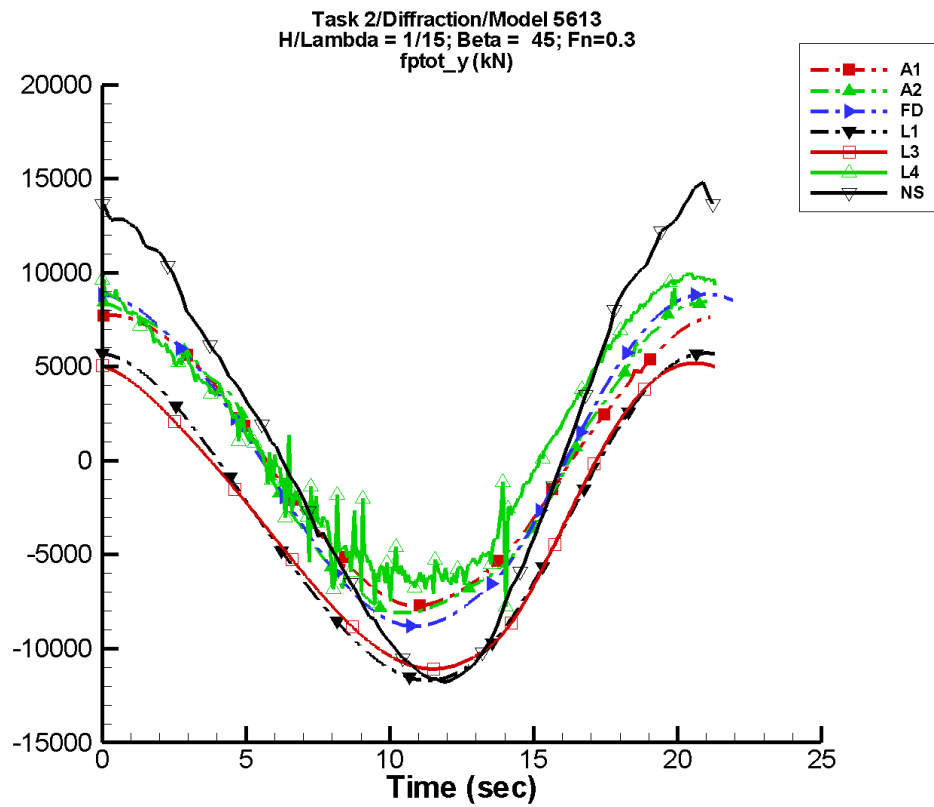
Table G–211. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.68          | 5.74E+03      | 84                | 3.24          | -128              |
| A2   | 39.0          | 5.93E+03      | 85                | 196.          | 157               |
| FD   | -0.545        | 6.60E+03      | 91                | 297.          | -170              |
| L1   | -1.76E+03     | 6.46E+03      | 87                | 364.          | 160               |
| L3   | -1.76E+03     | 6.20E+03      | 87                | 639.          | 172               |
| L4   | 556.          | 6.12E+03      | 90                | 567.          | 179               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 699.          | 8.77E+03      | 84                | 871.          | 174               |

Table G–212. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.78E+03       | 5.80E+03        | -5.76E+03       | 5.80E+03        |
| A2   | -5.74E+03       | 1.05E+04        | -5.73E+03       | 6.35E+03        |
| FD   | -6.56E+03       | 6.58E+03        | -6.55E+03       | 6.57E+03        |
| L1   | -8.18E+03       | 4.82E+03        | -8.18E+03       | 4.83E+03        |
| L3   | -7.92E+03       | 4.56E+03        | -7.91E+03       | 4.55E+03        |
| L4   | -5.94E+03       | 7.06E+03        | -5.46E+03       | 6.97E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -8.43E+03       | 1.02E+04        | -8.31E+03       | 9.77E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-107. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

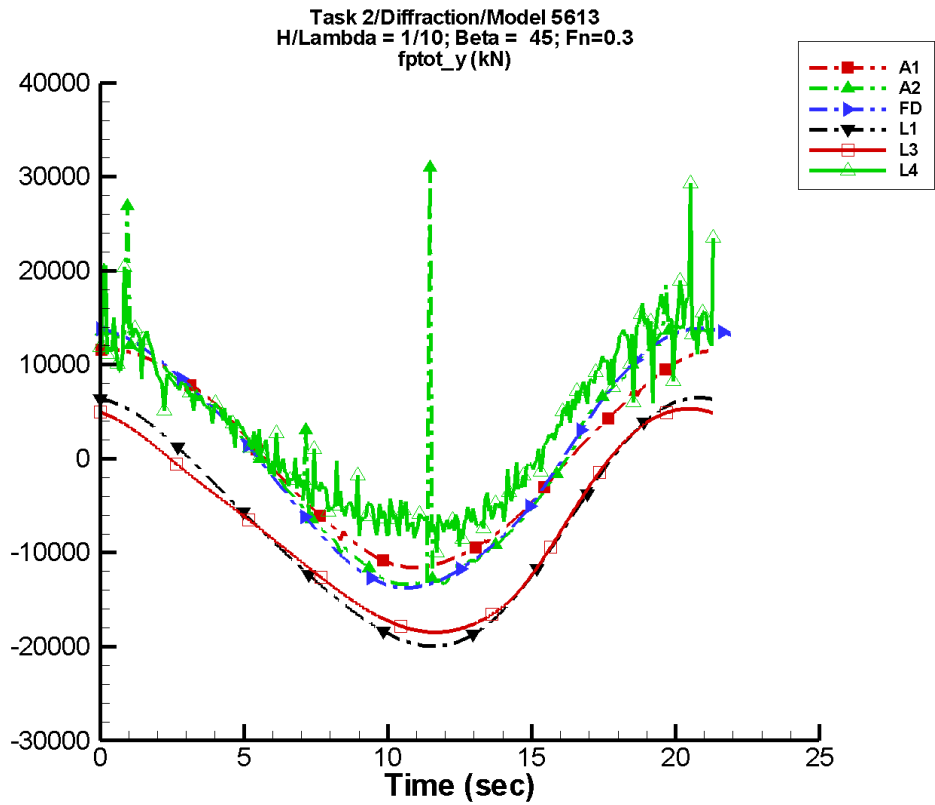
Table G–213. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.57          | 7.66E+03      | 84                | 4.32          | -128              |
| A2   | 43.4          | 8.36E+03      | 86                | 95.0          | 168               |
| FD   | -0.797        | 8.86E+03      | 92                | 420.          | -170              |
| L1   | -3.13E+03     | 8.62E+03      | 87                | 646.          | 160               |
| L3   | -3.13E+03     | 8.04E+03      | 87                | 1.00E+03      | 169               |
| L4   | 1.29E+03      | 7.83E+03      | 94                | 825.          | -179              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.17E+03      | 1.22E+04      | 84                | 1.61E+03      | 172               |

Table G–214. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.71E+03       | 7.74E+03        | -7.69E+03       | 7.74E+03        |
| A2   | -8.09E+03       | 9.58E+03        | -8.08E+03       | 8.41E+03        |
| FD   | -8.81E+03       | 8.86E+03        | -8.79E+03       | 8.84E+03        |
| L1   | -1.17E+04       | 5.72E+03        | -1.17E+04       | 5.71E+03        |
| L3   | -1.11E+04       | 5.19E+03        | -1.11E+04       | 5.18E+03        |
| L4   | -7.75E+03       | 1.00E+04        | -6.42E+03       | 9.85E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.18E+04       | 1.48E+04        | -1.16E+04       | 1.40E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-108. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

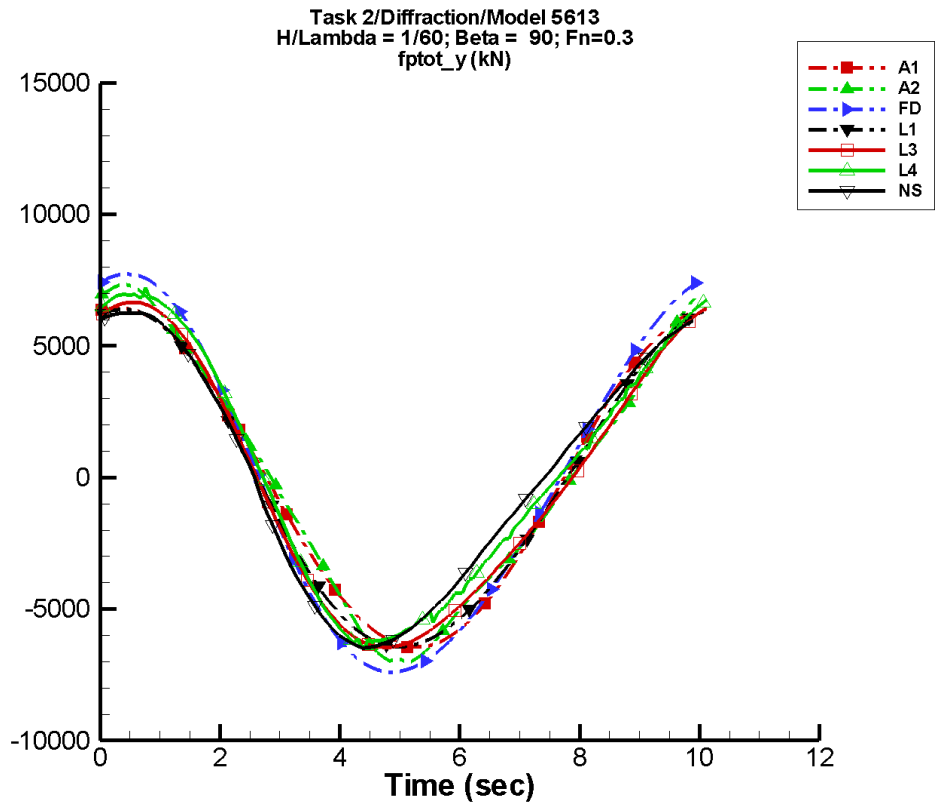
Table G–215. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 5.36          | 1.15E+04      | 84                | 6.49          | -128              |
| A2   | 379.          | 1.30E+04      | 89                | 1.07E+03      | 157               |
| FD   | 2.61          | 1.37E+04      | 94                | 662.          | -168              |
| L1   | -7.04E+03     | 1.29E+04      | 87                | 1.45E+03      | 160               |
| L3   | -7.04E+03     | 1.15E+04      | 88                | 1.91E+03      | 167               |
| L4   | 3.02E+03      | 1.09E+04      | 95                | 1.84E+03      | 159               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–216. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.16E+04        |
| A2   | -1.34E+04       | 3.10E+04        | -1.38E+04       | 1.45E+04        |
| FD   | -1.37E+04       | 1.39E+04        | -1.37E+04       | 1.38E+04        |
| L1   | -2.00E+04       | 6.49E+03        | -1.99E+04       | 6.47E+03        |
| L3   | -1.85E+04       | 5.31E+03        | -1.85E+04       | 5.30E+03        |
| L4   | -9.96E+03       | 2.93E+04        | -7.46E+03       | 1.75E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-109. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–217. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

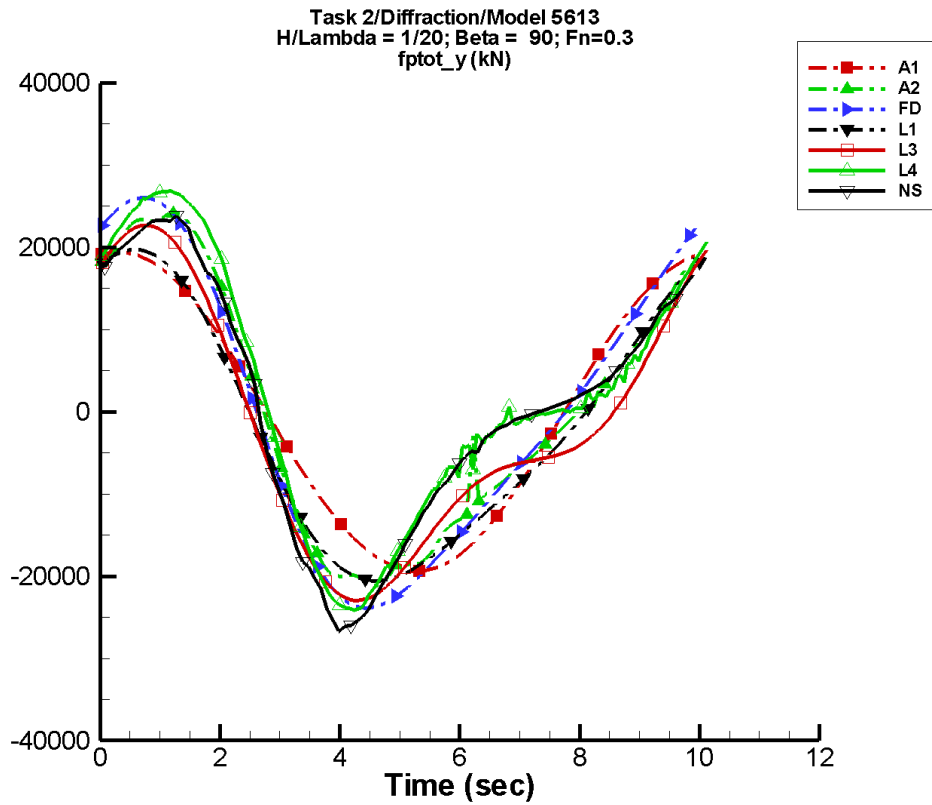
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.80         | 6.44E+03      | 75                | 10.4          | 10                |
| A2   | -6.35         | 6.47E+03      | 73                | 486.          | -3                |
| FD   | -3.12         | 7.48E+03      | 75                | 660.          | -15               |
| L1   | -214.         | 6.37E+03      | 78                | 411.          | 4                 |
| L3   | -214.         | 6.34E+03      | 77                | 896.          | -2                |
| L4   | 202.          | 6.31E+03      | 78                | 1.09E+03      | -14               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 79.3          | 6.12E+03      | 89                | 998.          | -10               |

Table G–218. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.45E+03       | 6.50E+03        | -6.36E+03       | 6.43E+03        |
| A2   | -7.08E+03       | 7.33E+03        | -6.90E+03       | 7.17E+03        |
| FD   | -7.40E+03       | 7.73E+03        | -7.33E+03       | 7.64E+03        |
| L1   | -6.43E+03       | 6.39E+03        | -6.41E+03       | 6.36E+03        |
| L3   | -6.46E+03       | 6.66E+03        | -6.43E+03       | 6.62E+03        |
| L4   | -6.46E+03       | 7.21E+03        | -6.26E+03       | 6.95E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.49E+03       | 6.26E+03        | -6.37E+03       | 6.21E+03        |



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Data identically zero, insufficient, or not available from NFA.

Figure G-110. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

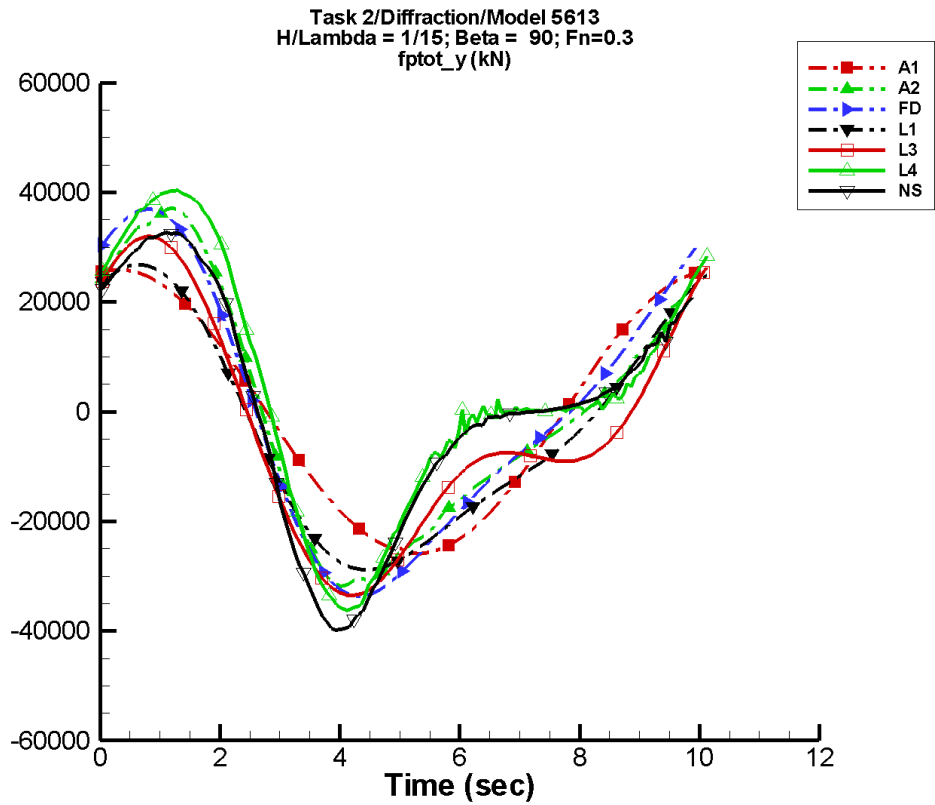
Table G–219. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -11.4         | 1.94E+04      | 75                | 31.2          | 10                |
| A2   | 75.1          | 2.01E+04      | 73                | 6.46E+03      | -18               |
| FD   | -22.2         | 2.30E+04      | 75                | 5.42E+03      | -15               |
| L1   | -1.92E+03     | 1.91E+04      | 78                | 3.68E+03      | 4                 |
| L3   | -1.91E+03     | 1.87E+04      | 77                | 7.68E+03      | -2                |
| L4   | 1.92E+03      | 1.90E+04      | 76                | 9.87E+03      | -19               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 464.          | 1.87E+04      | 87                | 9.10E+03      | -12               |

Table G–220. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.94E+04       | 1.95E+04        | -1.91E+04       | 1.93E+04        |
| A2   | -2.11E+04       | 2.42E+04        | -2.04E+04       | 2.37E+04        |
| FD   | -2.39E+04       | 2.61E+04        | -2.36E+04       | 2.56E+04        |
| L1   | -2.06E+04       | 1.97E+04        | -2.05E+04       | 1.96E+04        |
| L3   | -2.30E+04       | 2.27E+04        | -2.28E+04       | 2.25E+04        |
| L4   | -2.41E+04       | 2.69E+04        | -2.38E+04       | 2.66E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.68E+04       | 2.38E+04        | -2.51E+04       | 2.31E+04        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-111. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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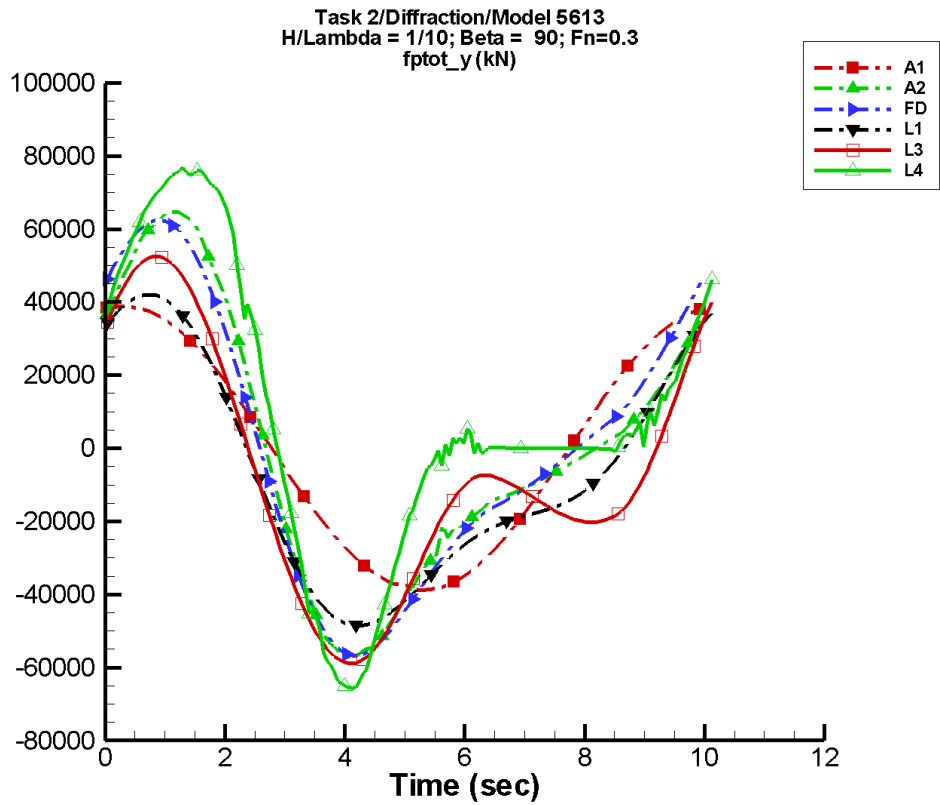
Table G–221. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -15.2         | 2.59E+04      | 75                | 41.7          | 10                |
| A2   | 17.3          | 2.83E+04      | 73                | 1.14E+04      | -18               |
| FD   | -35.7         | 3.11E+04      | 75                | 9.47E+03      | -15               |
| L1   | -3.41E+03     | 2.55E+04      | 78                | 6.54E+03      | 4                 |
| L3   | -3.38E+03     | 2.46E+04      | 77                | 1.33E+04      | -2                |
| L4   | 3.65E+03      | 2.55E+04      | 75                | 1.70E+04      | -20               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 265.          | 2.47E+04      | 89                | 1.54E+04      | -10               |

Table G–222. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.59E+04       | 2.61E+04        | -2.55E+04       | 2.58E+04        |
| A2   | -3.18E+04       | 3.72E+04        | -3.10E+04       | 3.59E+04        |
| FD   | -3.37E+04       | 3.70E+04        | -3.31E+04       | 3.63E+04        |
| L1   | -2.88E+04       | 2.68E+04        | -2.87E+04       | 2.67E+04        |
| L3   | -3.35E+04       | 3.20E+04        | -3.33E+04       | 3.17E+04        |
| L4   | -3.63E+04       | 4.04E+04        | -3.56E+04       | 4.00E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.98E+04       | 3.27E+04        | -3.89E+04       | 3.23E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-112. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

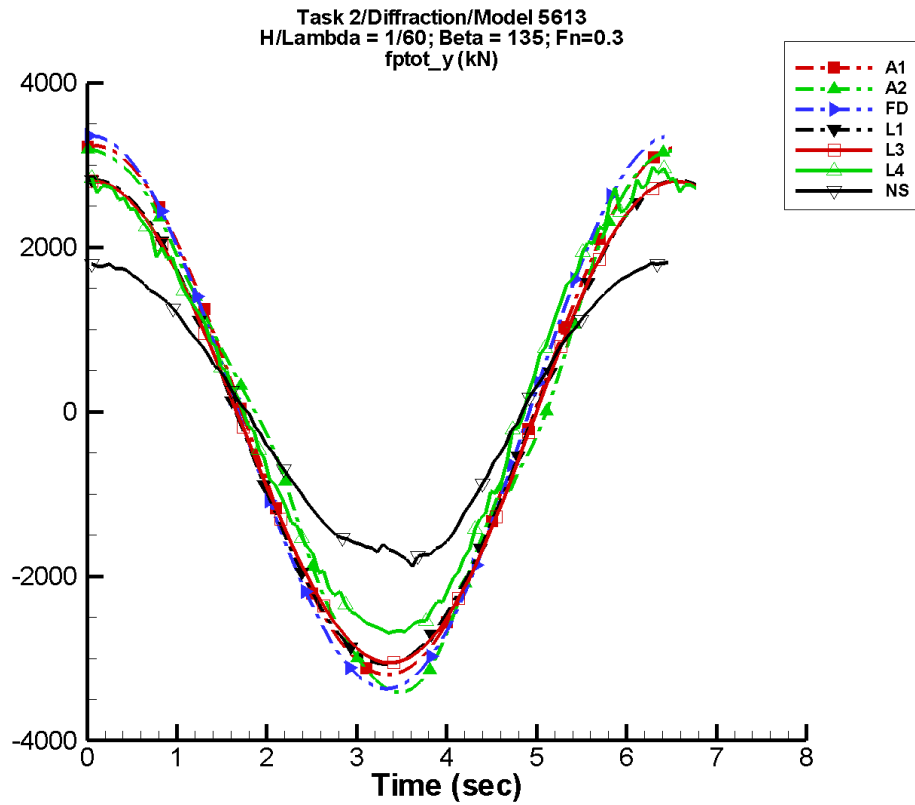
Table G–223. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -22.9         | 3.88E+04      | 75                | 62.5          | 10                |
| A2   | 79.4          | 4.50E+04      | 74                | 2.40E+04      | -17               |
| FD   | -108.         | 4.83E+04      | 75                | 2.01E+04      | -14               |
| L1   | -7.66E+03     | 3.82E+04      | 78                | 1.47E+04      | 4                 |
| L3   | -7.58E+03     | 3.61E+04      | 77                | 2.76E+04      | -1                |
| L4   | 8.23E+03      | 4.09E+04      | 70                | 3.49E+04      | -20               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–224. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.89E+04       | 3.91E+04        | -3.83E+04       | 3.87E+04        |
| A2   | -5.71E+04       | 6.48E+04        | -5.57E+04       | 6.32E+04        |
| FD   | -5.68E+04       | 6.24E+04        | -5.55E+04       | 6.11E+04        |
| L1   | -4.86E+04       | 4.20E+04        | -4.83E+04       | 4.17E+04        |
| L3   | -5.89E+04       | 5.26E+04        | -5.84E+04       | 5.20E+04        |
| L4   | -6.57E+04       | 7.71E+04        | -6.45E+04       | 7.56E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

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Data identically zero, insufficient, or not available from NFA.

Figure G-113. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–225. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

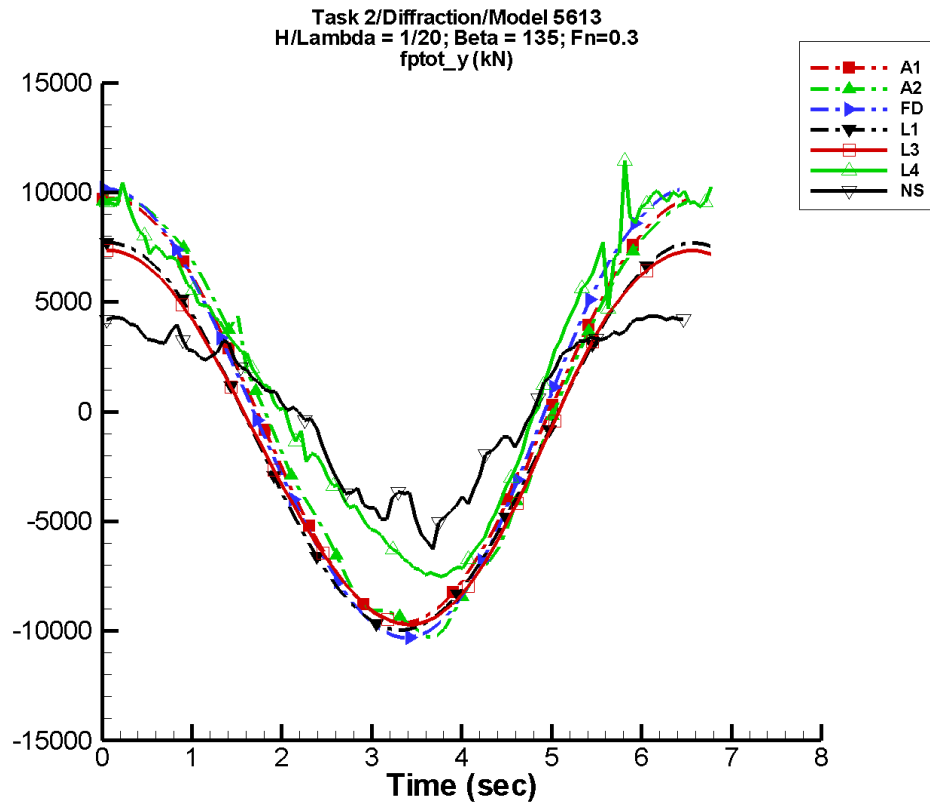
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.336        | 3.21E+03      | 81                | 14.0          | 31                |
| A2   | -6.64         | 3.15E+03      | 78                | 137.          | -176              |
| FD   | 0.207         | 3.36E+03      | 88                | 40.6          | 178               |
| L1   | -124.         | 2.94E+03      | 83                | 2.60          | -43               |
| L3   | -124.         | 2.93E+03      | 82                | 47.1          | 165               |
| L4   | 131.          | 2.77E+03      | 85                | 166.          | -168              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 73.9          | 1.82E+03      | 86                | 98.1          | -145              |

Table G–226. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.20E+03       | 3.23E+03        | -3.13E+03       | 3.25E+03        |
| A2   | -3.41E+03       | 3.19E+03        | -3.30E+03       | 3.19E+03        |
| FD   | -3.37E+03       | 3.36E+03        | -3.29E+03       | 3.35E+03        |
| L1   | -3.07E+03       | 2.82E+03        | -3.04E+03       | 2.84E+03        |
| L3   | -3.05E+03       | 2.80E+03        | -3.03E+03       | 2.82E+03        |
| L4   | -2.70E+03       | 2.98E+03        | -2.65E+03       | 2.84E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.88E+03       | 1.81E+03        | -1.76E+03       | 1.80E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-114. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

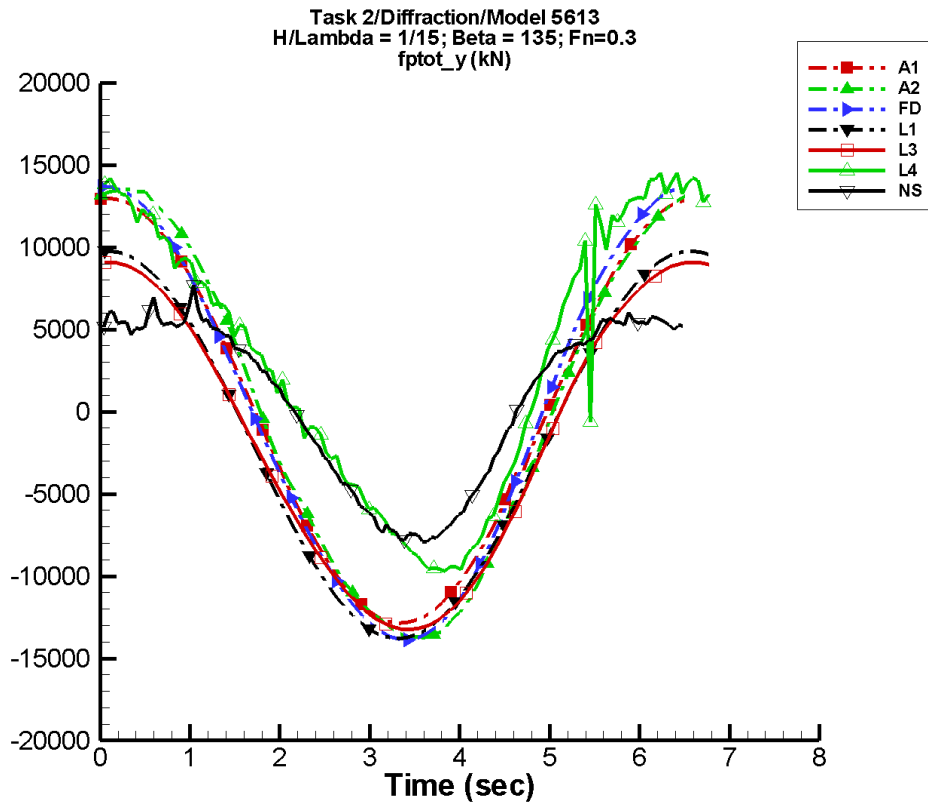
Table G–227. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.01         | 9.65E+03      | 81                | 42.2          | 31                |
| A2   | 6.09          | 9.88E+03      | 76                | 212.          | -163              |
| FD   | 4.94          | 1.03E+04      | 87                | 288.          | -175              |
| L1   | -1.12E+03     | 8.83E+03      | 83                | 22.1          | -42               |
| L3   | -1.12E+03     | 8.58E+03      | 82                | 258.          | 174               |
| L4   | 1.43E+03      | 8.31E+03      | 81                | 1.34E+03      | 168               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 465.          | 4.48E+03      | 83                | 1.11E+03      | -130              |

Table G–228. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -9.63E+03       | 9.72E+03        | -9.40E+03       | 9.77E+03        |
| A2   | -1.03E+04       | 9.74E+03        | -9.74E+03       | 9.75E+03        |
| FD   | -1.03E+04       | 1.02E+04        | -1.01E+04       | 1.02E+04        |
| L1   | -9.96E+03       | 7.70E+03        | -9.88E+03       | 7.78E+03        |
| L3   | -9.72E+03       | 7.34E+03        | -9.64E+03       | 7.41E+03        |
| L4   | -7.52E+03       | 1.15E+04        | -7.36E+03       | 9.83E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.26E+03       | 4.37E+03        | -5.10E+03       | 4.30E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-115. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

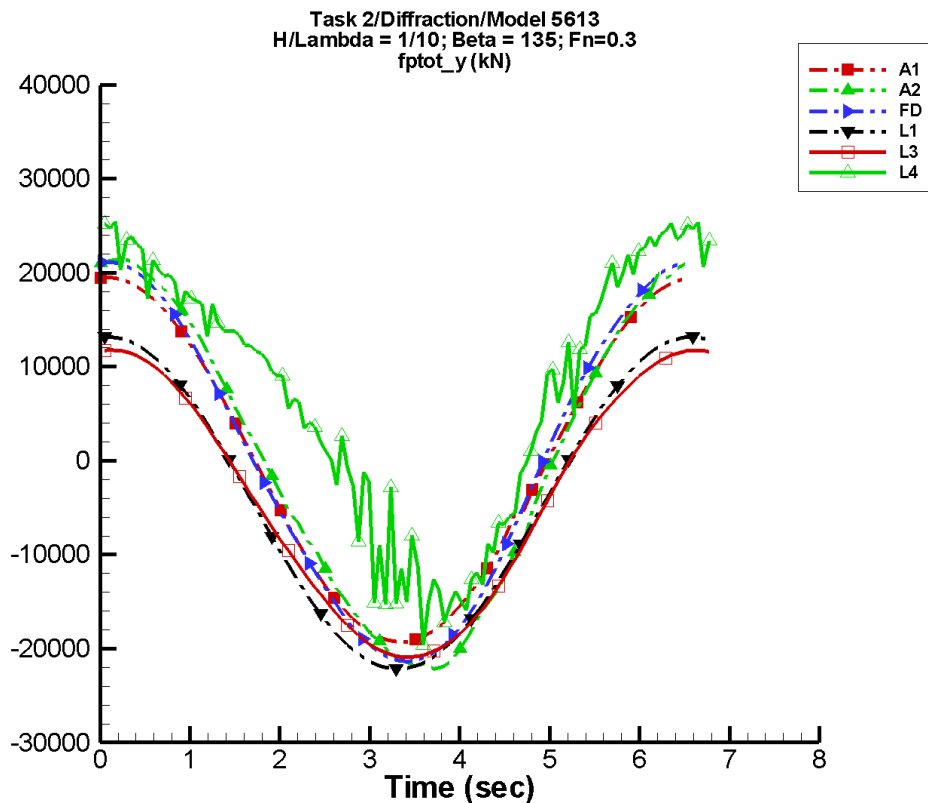
Table G–229. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.35         | 1.29E+04      | 81                | 56.3          | 31                |
| A2   | -18.0         | 1.37E+04      | 76                | 84.0          | -83               |
| FD   | 10.5          | 1.38E+04      | 87                | 398.          | -174              |
| L1   | -1.99E+03     | 1.18E+04      | 83                | 38.9          | -42               |
| L3   | -1.99E+03     | 1.12E+04      | 81                | 322.          | 175               |
| L4   | 2.85E+03      | 1.11E+04      | 78                | 2.07E+03      | 168               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 836.          | 6.64E+03      | 80                | 2.05E+03      | -112              |

Table G–230. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.29E+04       | 1.30E+04        | -1.25E+04       | 1.30E+04        |
| A2   | -1.37E+04       | 1.35E+04        | -1.34E+04       | 1.35E+04        |
| FD   | -1.39E+04       | 1.37E+04        | -1.35E+04       | 1.37E+04        |
| L1   | -1.38E+04       | 9.77E+03        | -1.37E+04       | 9.87E+03        |
| L3   | -1.32E+04       | 9.09E+03        | -1.32E+04       | 9.18E+03        |
| L4   | -9.69E+03       | 1.45E+04        | -9.47E+03       | 1.39E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -7.91E+03       | 7.67E+03        | -7.66E+03       | 5.90E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-116. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

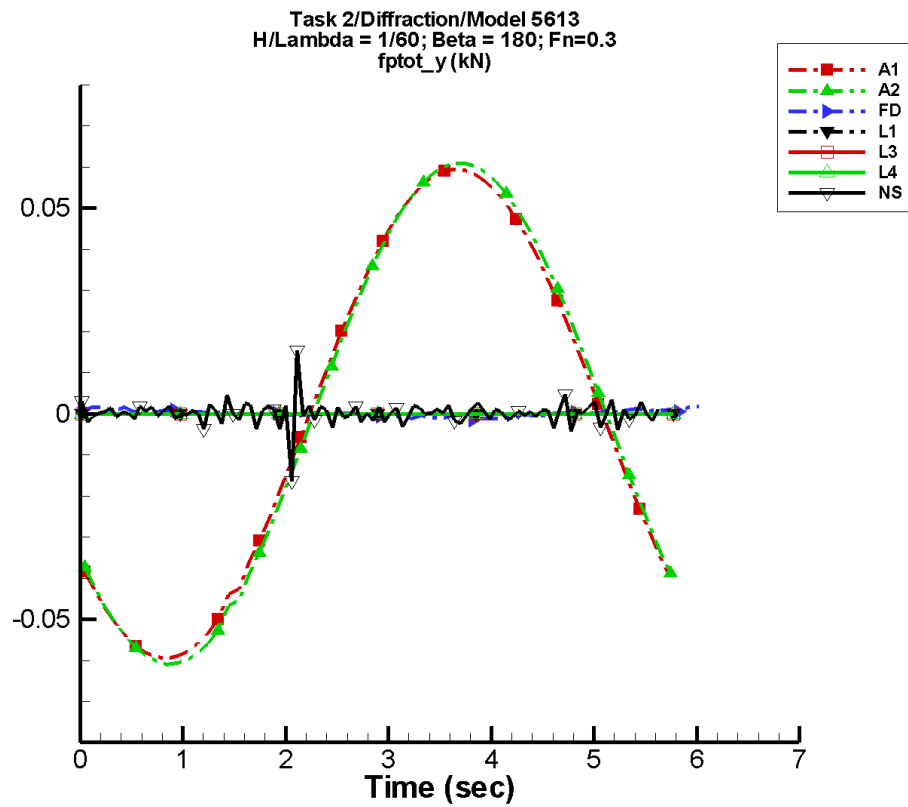
Table G–231. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.02         | 1.93E+04      | 81                | 84.5          | 31                |
| A2   | -46.3         | 2.14E+04      | 75                | 968.          | 158               |
| FD   | 21.5          | 2.11E+04      | 86                | 590.          | -178              |
| L1   | -4.47E+03     | 1.77E+04      | 83                | 86.8          | -42               |
| L3   | -4.47E+03     | 1.64E+04      | 80                | 387.          | 174               |
| L4   | 6.80E+03      | 1.82E+04      | 70                | 4.09E+03      | 177               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–232. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.93E+04       | 1.95E+04        | -1.88E+04       | 1.96E+04        |
| A2   | -2.22E+04       | 2.14E+04        | -2.14E+04       | 2.14E+04        |
| FD   | -2.14E+04       | 2.11E+04        | -2.09E+04       | 2.11E+04        |
| L1   | -2.22E+04       | 1.32E+04        | -2.20E+04       | 1.33E+04        |
| L3   | -2.09E+04       | 1.18E+04        | -2.08E+04       | 1.19E+04        |
| L4   | -1.96E+04       | 2.54E+04        | -1.50E+04       | 2.48E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-117. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–233. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

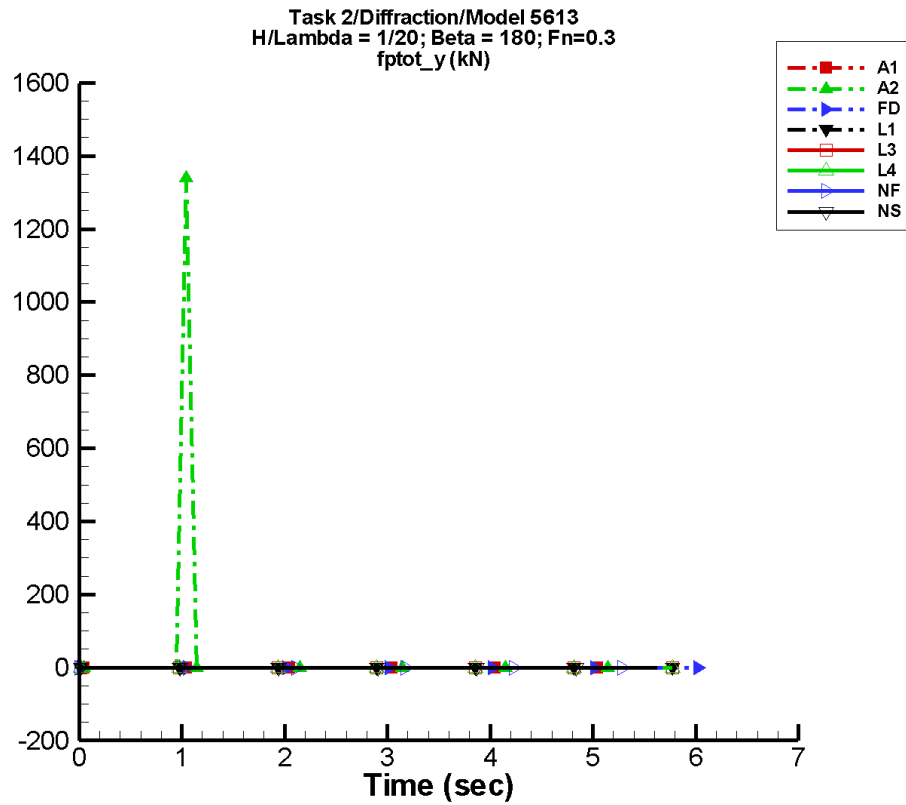
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.95E-04      | 5.95E-02      | -150              | 3.04E-04      | 119               |
| A2   | 2.03E-04      | 6.09E-02      | -152              | 3.16E-04      | 116               |
| FD   | 1.65E-05      | 8.61E-04      | 23                | 3.15E-04      | 30                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.28E-05      | 3.64E-05      | -19               | 1.79E-04      | -86               |

Table G–234. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.97E-02       | 5.95E-02        | -5.76E-02       | 5.76E-02        |
| A2   | -6.12E-02       | 6.08E-02        | -5.90E-02       | 5.89E-02        |
| FD   | -1.52E-03       | 1.71E-03        | -9.05E-04       | 1.43E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.63E-02       | 1.54E-02        | -6.98E-04       | 1.69E-03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3 and LAMP-4.

Figure G-118. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

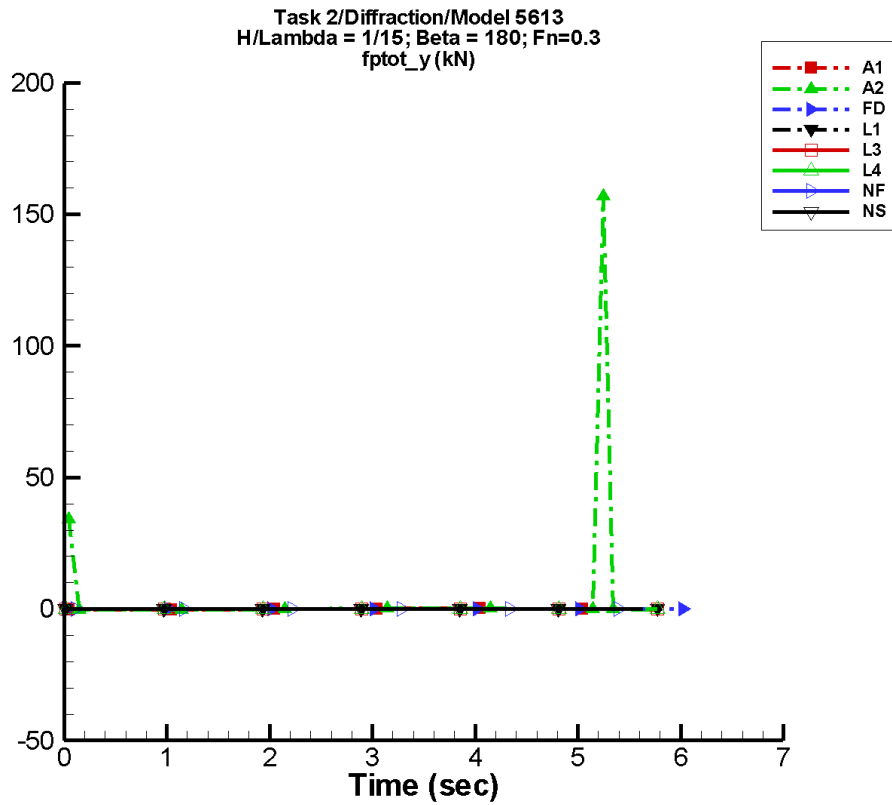
Table G–235. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 5.85E-04      | 0.179         | -150              | 9.14E-04      | 119               |
| A2   | 10.5          | 23.2          | 14                | 29.8          | -60               |
| FD   | -4.09E-05     | 2.24E-03      | 27                | 1.24E-03      | 28                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | -3.04E-12     | 4.34E-12      | 175               | 6.22E-12      | 12                |
| NS   | -1.98E-04     | 6.66E-04      | 156               | 7.81E-05      | 1                 |

Table G–236. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.180          | 0.179           | -0.173          | 0.173           |
| A2   | -0.184          | 1.34E+03        | -15.5           | 178.            |
| FD   | -4.40E-03       | 4.90E-03        | -2.66E-03       | 4.13E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | -2.42E-11       | 1.41E-11        | -1.51E-11       | 4.27E-12        |
| NS   | -1.43E-02       | 1.36E-02        | -4.77E-03       | 2.20E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3 and LAMP-4.

Figure G-119. Time history of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

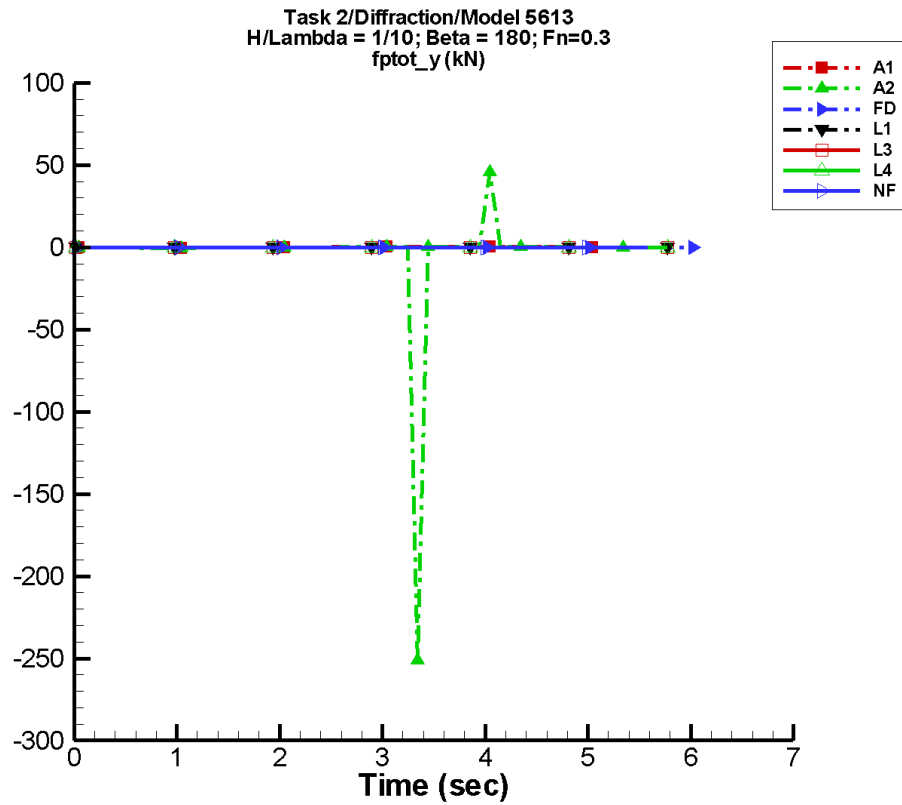
Table G–237. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 7.81E-04      | 0.239         | -150              | 1.22E-03      | 119               |
| A2   | 2.99          | 5.38          | 109               | 5.55          | 133               |
| FD   | -3.46E-05     | 2.96E-03      | 28                | 1.65E-03      | 26                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | -3.26E-12     | 9.15E-12      | -55               | 2.64E-12      | 83                |
| NS   | 4.07E-04      | 7.85E-04      | 11                | 1.17E-03      | -132              |

Table G–238. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.240          | 0.239           | -0.231          | 0.231           |
| A2   | -0.247          | 157.            | -2.00           | 20.9            |
| FD   | -5.96E-03       | 6.70E-03        | -3.47E-03       | 5.61E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | -2.15E-11       | 1.50E-11        | -1.79E-11       | 8.05E-12        |
| NS   | -3.71E-02       | 3.76E-02        | -1.55E-03       | 7.86E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NSHIPMO.

Figure G-120. Time history of  $F_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

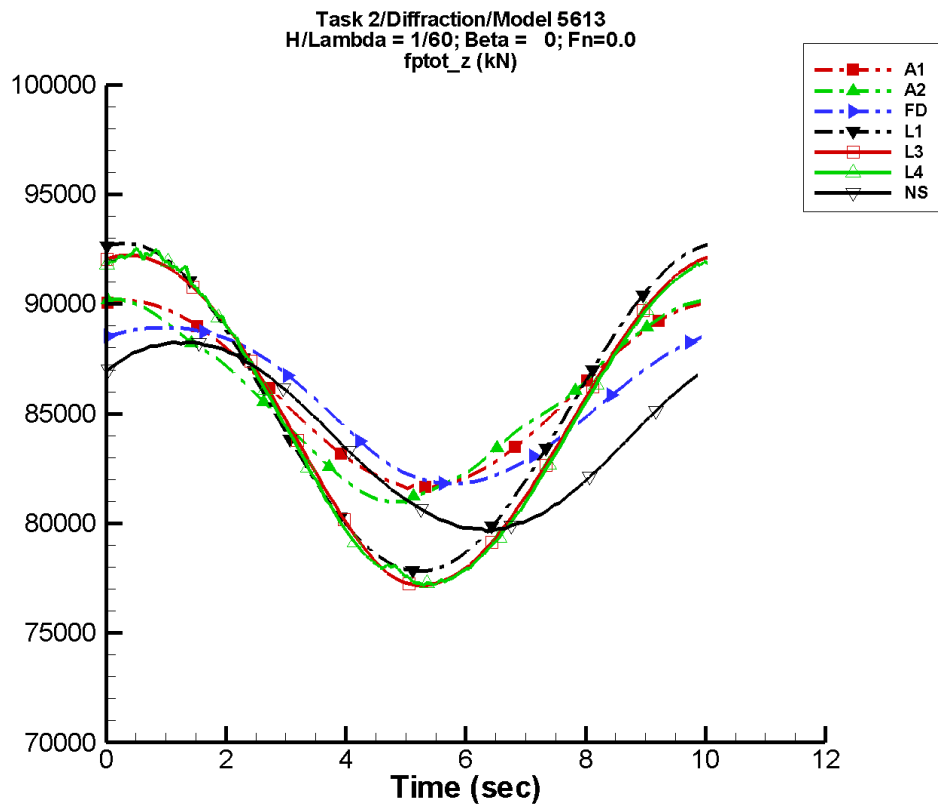
Table G–239. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.17E-03      | 0.358         | -150              | 1.83E-03      | 119               |
| A2   | -3.61         | 8.04          | 64                | 7.90          | -163              |
| FD   | 1.76E-04      | 4.37E-03      | 25                | 2.73E-03      | 38                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | 9.98E-12      | 1.35E-11      | -168              | 5.24E-12      | 141               |
| NS   | —             | —             | —                 | —             | —                 |

Table G–240. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.359          | 0.358           | -0.347          | 0.347           |
| A2   | -251.           | 45.9            | -33.1           | 8.34            |
| FD   | -8.91E-03       | 1.11E-02        | -5.77E-03       | 8.33E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | -5.13E-11       | 6.81E-11        | -5.13E-11       | 4.91E-11        |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-121. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–241. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

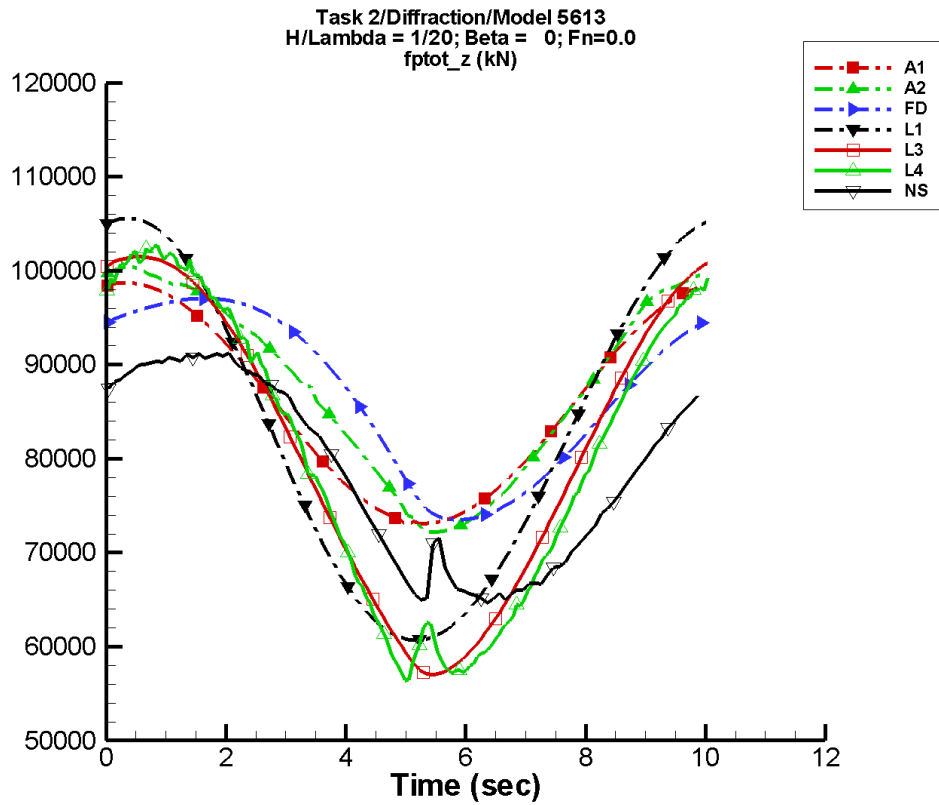
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 4.24E+03      | 73                | 5.59          | 32                |
| A2   | 8.56E+04      | 4.33E+03      | 84                | 150.          | -3                |
| FD   | 8.56E+04      | 3.61E+03      | 48                | 235.          | -148              |
| L1   | 8.53E+04      | 7.47E+03      | 75                | 64.4          | -12               |
| L3   | 8.49E+04      | 7.50E+03      | 71                | 240.          | -110              |
| L4   | 8.48E+04      | 7.55E+03      | 71                | 163.          | -54               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.40E+04      | 4.29E+03      | 42                | 52.9          | 94                |

Table G–242. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.16E+04        | 9.03E+04        | 8.17E+04        | 9.01E+04        |
| A2   | 8.10E+04        | 9.03E+04        | 8.11E+04        | 9.02E+04        |
| FD   | 8.18E+04        | 8.89E+04        | 8.19E+04        | 8.89E+04        |
| L1   | 7.78E+04        | 9.28E+04        | 7.78E+04        | 9.27E+04        |
| L3   | 7.72E+04        | 9.22E+04        | 7.72E+04        | 9.22E+04        |
| L4   | 7.72E+04        | 9.26E+04        | 7.73E+04        | 9.23E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.96E+04        | 8.82E+04        | 7.97E+04        | 8.82E+04        |



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Data identically zero, insufficient, or not available from NFA.

Figure G-122. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

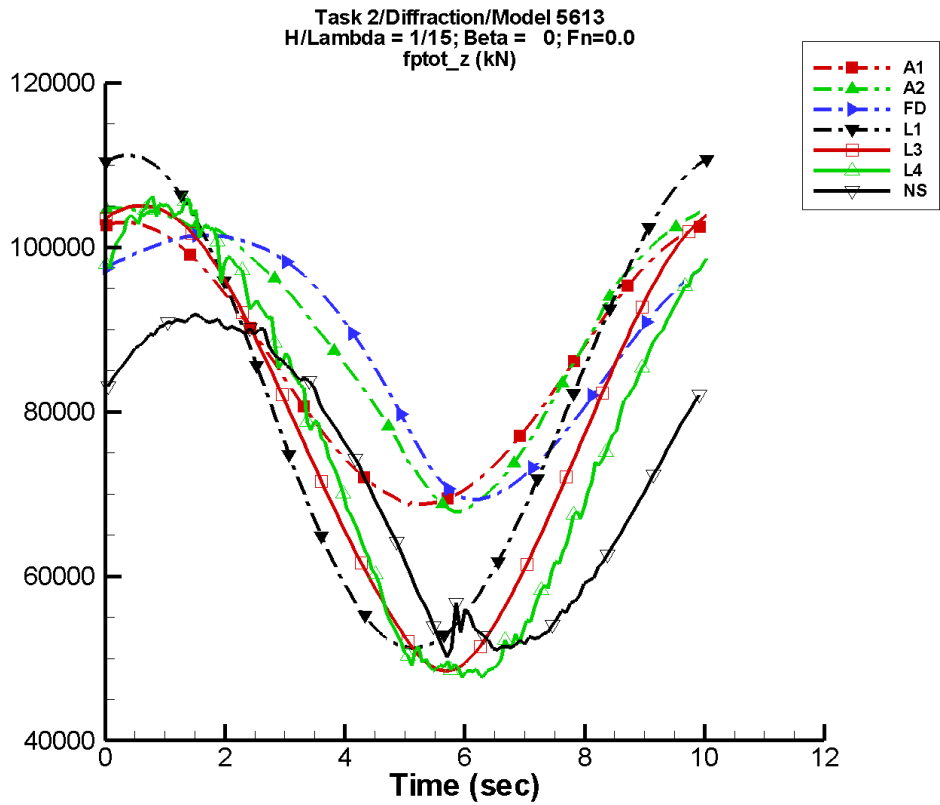
Table G–243. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.27E+04      | 73                | 16.8          | 32                |
| A2   | 8.76E+04      | 1.33E+04      | 62                | 1.57E+03      | -179              |
| FD   | 8.69E+04      | 1.17E+04      | 34                | 1.94E+03      | -176              |
| L1   | 8.30E+04      | 2.24E+04      | 75                | 590.          | -16               |
| L3   | 8.09E+04      | 2.16E+04      | 64                | 1.26E+03      | -146              |
| L4   | 8.02E+04      | 2.19E+04      | 59                | 835.          | -119              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.84E+04      | 1.33E+04      | 39                | 436.          | -150              |

Table G–244. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.29E+04        | 9.90E+04        | 7.32E+04        | 9.86E+04        |
| A2   | 7.22E+04        | 1.00E+05        | 7.25E+04        | 1.00E+05        |
| FD   | 7.35E+04        | 9.71E+04        | 7.36E+04        | 9.70E+04        |
| L1   | 6.07E+04        | 1.06E+05        | 6.08E+04        | 1.05E+05        |
| L3   | 5.70E+04        | 1.02E+05        | 5.72E+04        | 1.01E+05        |
| L4   | 5.64E+04        | 1.03E+05        | 5.75E+04        | 1.02E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 6.46E+04        | 9.12E+04        | 6.52E+04        | 9.09E+04        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-123. Time history of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

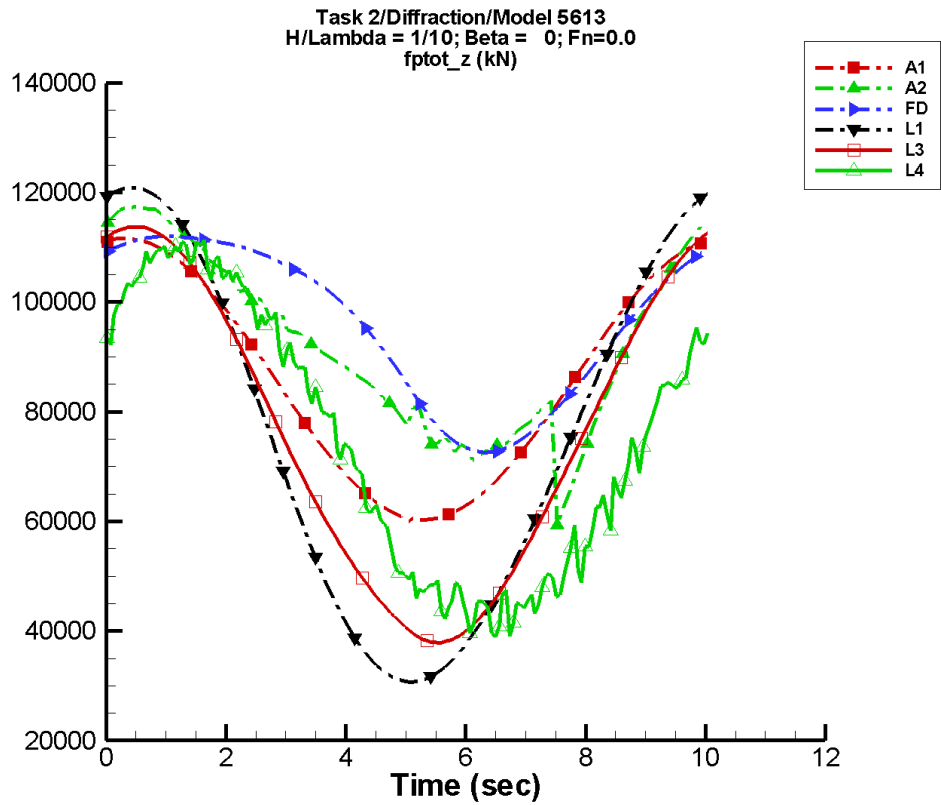
Table G–245. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 1.70E+04      | 73                | 22.5          | 32                |
| A2   | 8.96E+04      | 1.74E+04      | 54                | 3.21E+03      | 175               |
| FD   | 8.80E+04      | 1.57E+04      | 28                | 2.78E+03      | 163               |
| L1   | 8.10E+04      | 2.99E+04      | 75                | 1.05E+03      | -16               |
| L3   | 7.83E+04      | 2.76E+04      | 62                | 1.22E+03      | -173              |
| L4   | 7.67E+04      | 2.84E+04      | 49                | 858.          | -147              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.21E+04      | 2.04E+04      | 28                | 881.          | 153               |

Table G–246. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 6.85E+04        | 1.03E+05        | 6.89E+04        | 1.03E+05        |
| A2   | 6.78E+04        | 1.05E+05        | 6.85E+04        | 1.05E+05        |
| FD   | 6.93E+04        | 1.01E+05        | 6.96E+04        | 1.01E+05        |
| L1   | 5.13E+04        | 1.11E+05        | 5.14E+04        | 1.11E+05        |
| L3   | 4.85E+04        | 1.05E+05        | 4.87E+04        | 1.05E+05        |
| L4   | 4.76E+04        | 1.06E+05        | 4.83E+04        | 1.05E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 5.01E+04        | 9.18E+04        | 5.15E+04        | 9.13E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-124. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

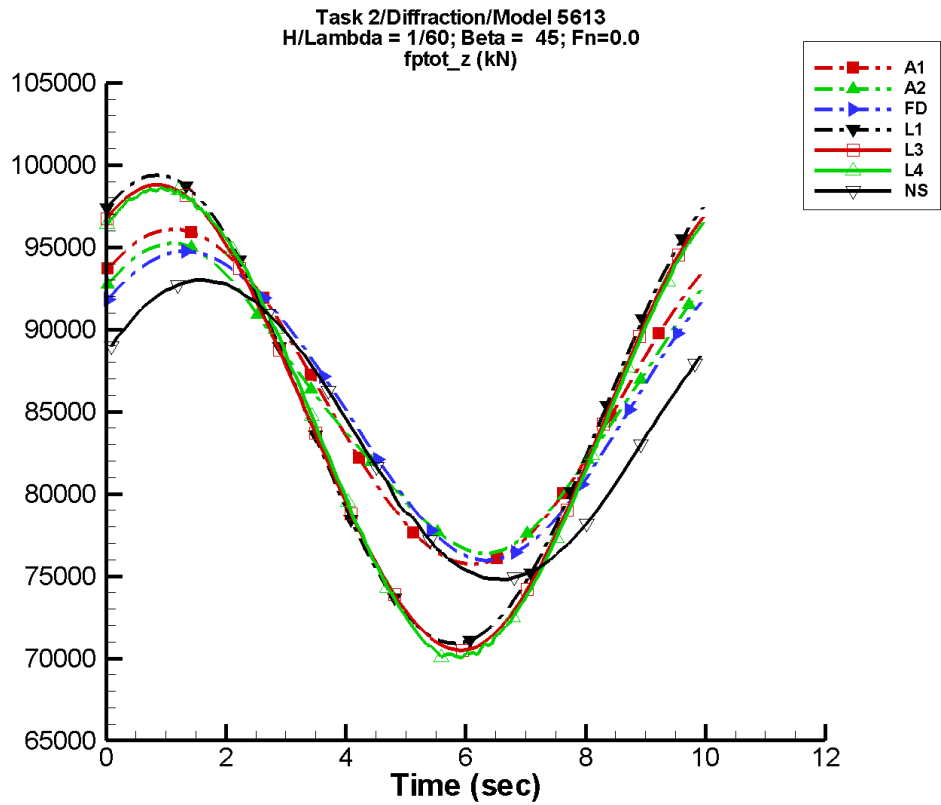
Table G–247. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 2.55E+04      | 73                | 33.7          | 32                |
| A2   | 9.17E+04      | 2.08E+04      | 44                | 5.78E+03      | 64                |
| FD   | 9.58E+04      | 1.93E+04      | 30                | 3.74E+03      | 141               |
| L1   | 7.53E+04      | 4.48E+04      | 75                | 2.37E+03      | -17               |
| L3   | 7.57E+04      | 3.73E+04      | 68                | 505.          | 86                |
| L4   | 7.46E+04      | 3.34E+04      | 35                | 1.29E+03      | -10               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–248. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 5.98E+04        | 1.12E+05        | 6.05E+04        | 1.11E+05        |
| A2   | 5.93E+04        | 1.17E+05        | 7.04E+04        | 1.17E+05        |
| FD   | 7.26E+04        | 1.12E+05        | 7.29E+04        | 1.12E+05        |
| L1   | 3.07E+04        | 1.21E+05        | 3.09E+04        | 1.21E+05        |
| L3   | 3.79E+04        | 1.14E+05        | 3.80E+04        | 1.14E+05        |
| L4   | 3.90E+04        | 1.12E+05        | 4.27E+04        | 1.10E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-125. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–249. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

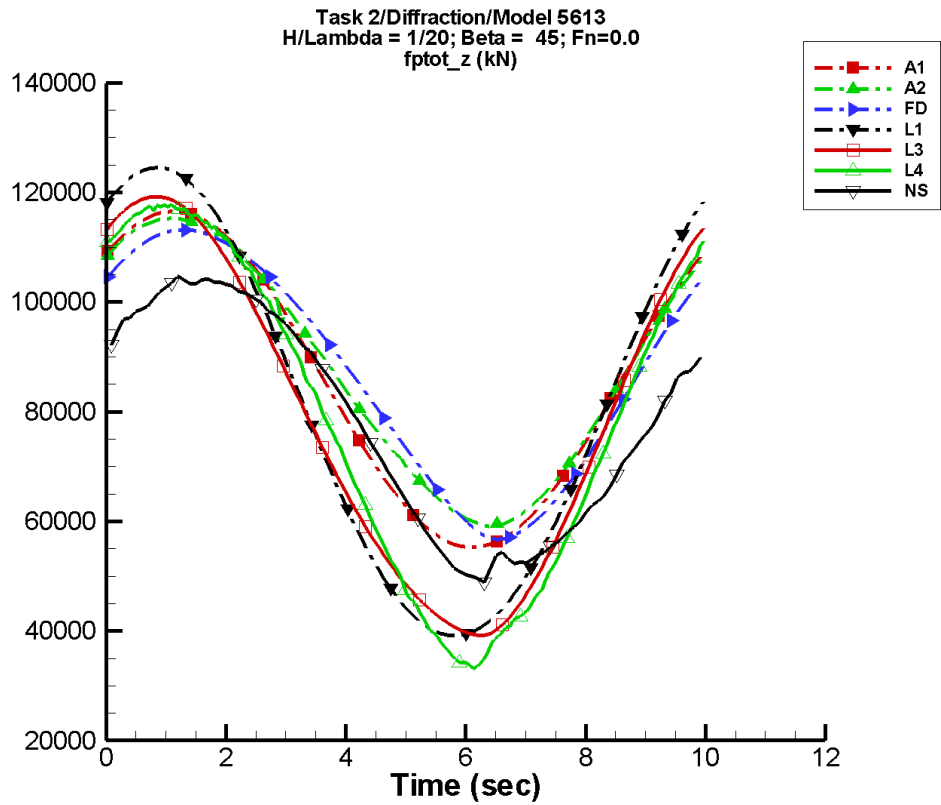
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.01E+04      | 44                | 17.8          | 21                |
| A2   | 8.56E+04      | 9.07E+03      | 43                | 514.          | 50                |
| FD   | 8.56E+04      | 9.32E+03      | 32                | 275.          | 121               |
| L1   | 8.50E+04      | 1.42E+04      | 55                | 97.1          | 17                |
| L3   | 8.47E+04      | 1.41E+04      | 54                | 236.          | 113               |
| L4   | 8.46E+04      | 1.42E+04      | 52                | 289.          | -172              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.39E+04      | 9.11E+03      | 31                | 6.17          | -130              |

Table G–250. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.57E+04        | 9.61E+04        | 7.58E+04        | 9.60E+04        |
| A2   | 7.64E+04        | 9.52E+04        | 7.65E+04        | 9.51E+04        |
| FD   | 7.60E+04        | 9.47E+04        | 7.61E+04        | 9.47E+04        |
| L1   | 7.09E+04        | 9.94E+04        | 7.10E+04        | 9.93E+04        |
| L3   | 7.05E+04        | 9.88E+04        | 7.05E+04        | 9.87E+04        |
| L4   | 7.00E+04        | 9.87E+04        | 7.01E+04        | 9.85E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.48E+04        | 9.30E+04        | 7.49E+04        | 9.29E+04        |



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Data identically zero, insufficient, or not available from NFA.

Figure G-126. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

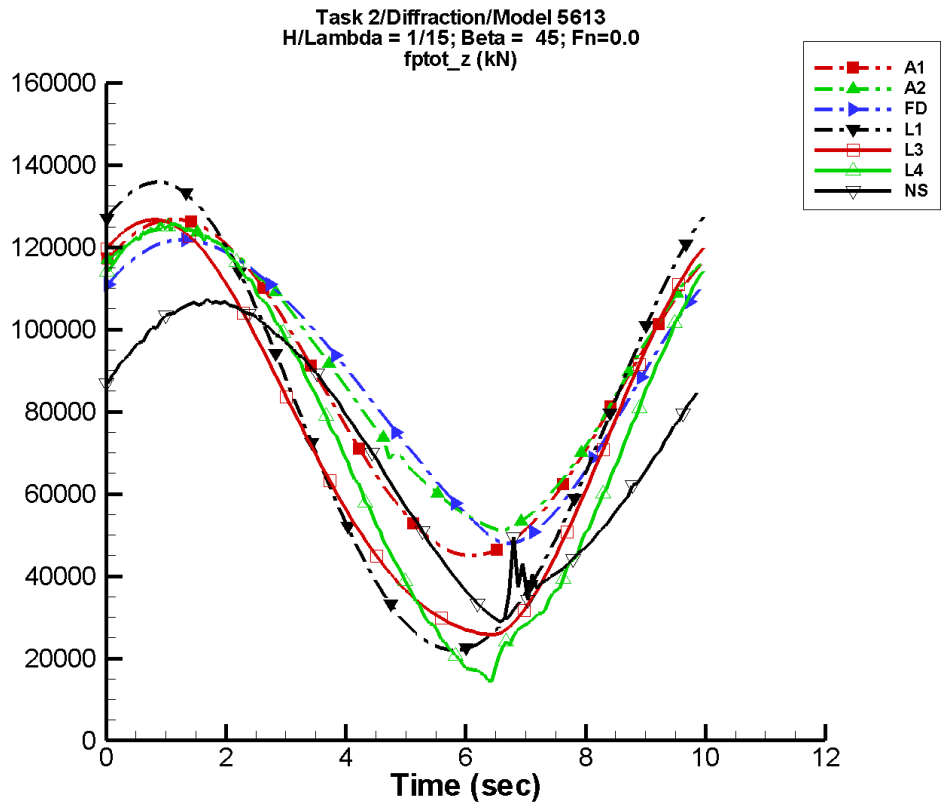
Table G–251. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 3.05E+04      | 44                | 53.5          | 21                |
| A2   | 8.76E+04      | 2.74E+04      | 40                | 1.53E+03      | 87                |
| FD   | 8.69E+04      | 2.73E+04      | 27                | 2.31E+03      | 101               |
| L1   | 8.09E+04      | 4.27E+04      | 55                | 877.          | 14                |
| L3   | 7.88E+04      | 3.94E+04      | 52                | 2.24E+03      | 85                |
| L4   | 7.84E+04      | 4.08E+04      | 45                | 2.15E+03      | 155               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.79E+04      | 2.67E+04      | 30                | 682.          | -175              |

Table G–252. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 5.53E+04        | 1.17E+05        | 5.56E+04        | 1.16E+05        |
| A2   | 5.90E+04        | 1.15E+05        | 5.96E+04        | 1.15E+05        |
| FD   | 5.67E+04        | 1.13E+05        | 5.73E+04        | 1.13E+05        |
| L1   | 3.91E+04        | 1.25E+05        | 3.93E+04        | 1.24E+05        |
| L3   | 3.91E+04        | 1.19E+05        | 3.93E+04        | 1.19E+05        |
| L4   | 3.28E+04        | 1.18E+05        | 3.40E+04        | 1.17E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 4.89E+04        | 1.05E+05        | 5.08E+04        | 1.04E+05        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-127. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

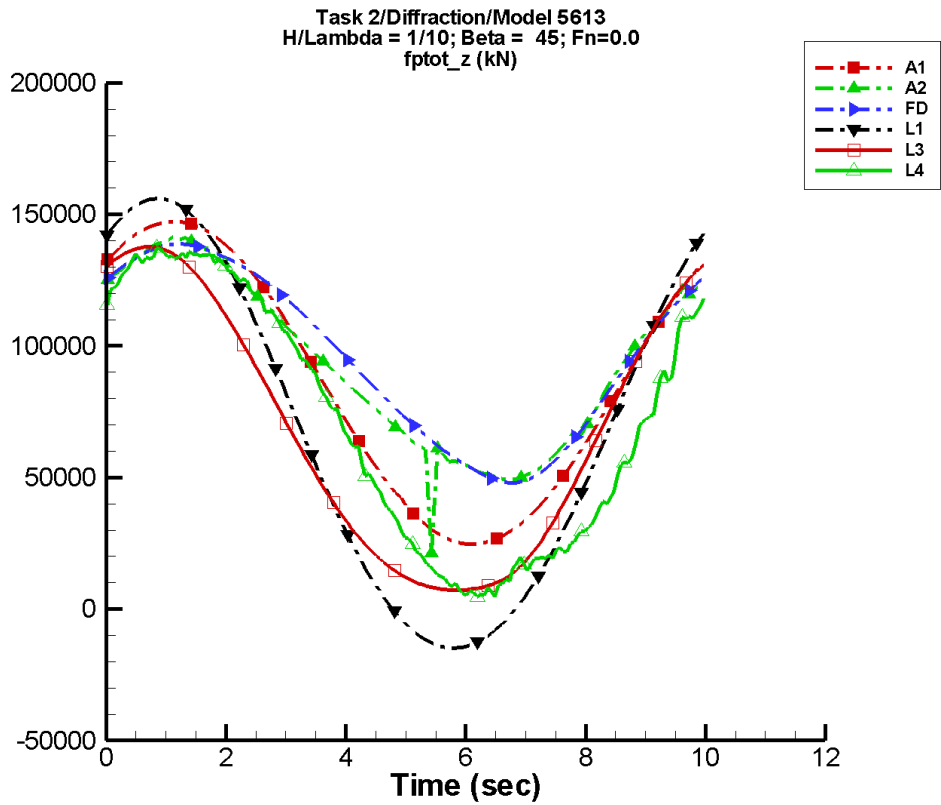
Table G–253. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 4.07E+04      | 44                | 71.5          | 21                |
| A2   | 8.95E+04      | 3.59E+04      | 38                | 2.48E+03      | 100               |
| FD   | 8.79E+04      | 3.54E+04      | 25                | 3.84E+03      | 89                |
| L1   | 7.74E+04      | 5.69E+04      | 55                | 1.56E+03      | 14                |
| L3   | 7.46E+04      | 5.00E+04      | 52                | 3.80E+03      | 72                |
| L4   | 7.41E+04      | 5.31E+04      | 40                | 2.73E+03      | 130               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.14E+04      | 3.59E+04      | 25                | 1.02E+03      | 169               |

Table G–254. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 4.50E+04        | 1.27E+05        | 4.55E+04        | 1.26E+05        |
| A2   | 5.09E+04        | 1.25E+05        | 5.21E+04        | 1.24E+05        |
| FD   | 4.80E+04        | 1.22E+05        | 4.89E+04        | 1.22E+05        |
| L1   | 2.20E+04        | 1.36E+05        | 2.22E+04        | 1.36E+05        |
| L3   | 2.58E+04        | 1.27E+05        | 2.60E+04        | 1.27E+05        |
| L4   | 1.43E+04        | 1.26E+05        | 1.63E+04        | 1.25E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 2.90E+04        | 1.07E+05        | 3.21E+04        | 1.07E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-128. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

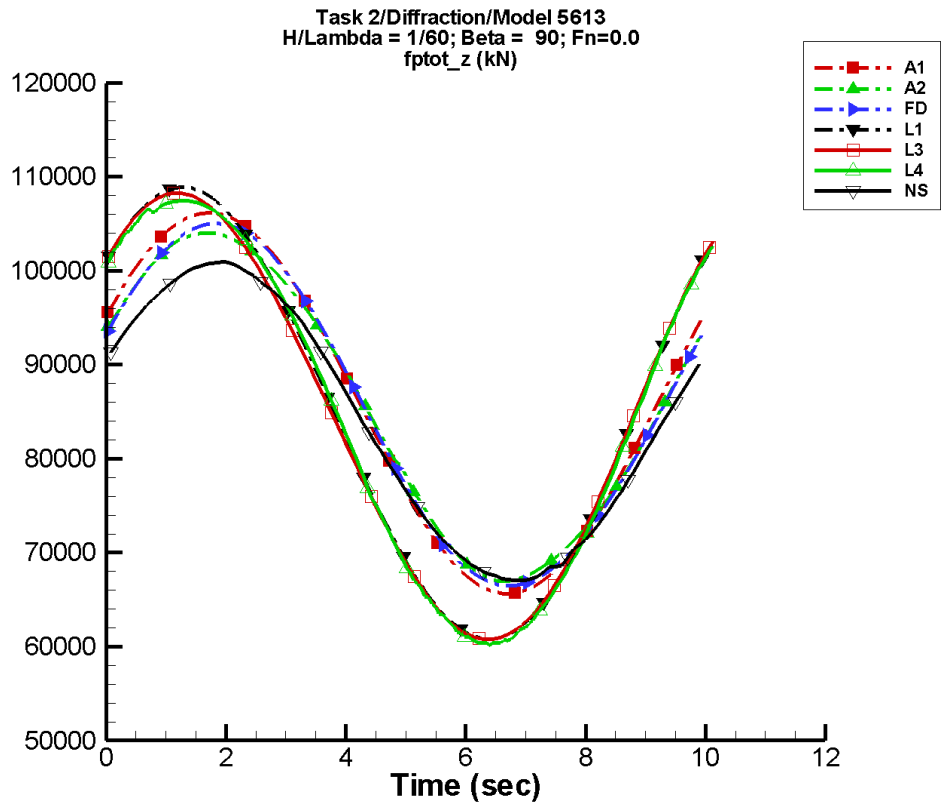
Table G–255. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.57E+04      | 6.11E+04      | 44                | 107.          | 21                |
| A2   | 9.31E+04      | 4.40E+04      | 41                | 2.89E+03      | 60                |
| FD   | 9.57E+04      | 4.40E+04      | 29                | 4.17E+03      | 88                |
| L1   | 6.71E+04      | 8.54E+04      | 55                | 3.51E+03      | 13                |
| L3   | 6.74E+04      | 6.62E+04      | 60                | 4.98E+03      | 51                |
| L4   | 7.07E+04      | 6.60E+04      | 35                | 2.03E+03      | 40                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–256. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 2.46E+04        | 1.47E+05        | 2.52E+04        | 1.47E+05        |
| A2   | 2.14E+04        | 1.41E+05        | 5.00E+04        | 1.40E+05        |
| FD   | 4.79E+04        | 1.39E+05        | 4.87E+04        | 1.38E+05        |
| L1   | -1.48E+04       | 1.56E+05        | -1.45E+04       | 1.56E+05        |
| L3   | 7.19E+03        | 1.38E+05        | 7.29E+03        | 1.37E+05        |
| L4   | 1.26E+03        | 1.38E+05        | 5.25E+03        | 1.35E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-129. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–257. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

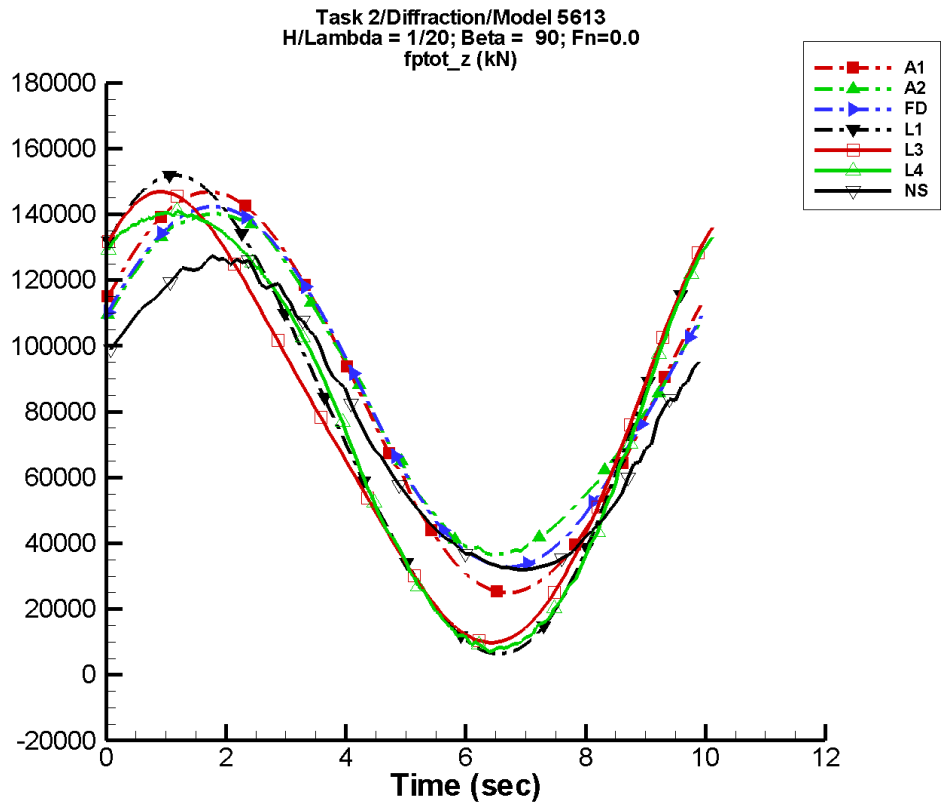
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 2.02E+04      | 23                | 39.0          | 14                |
| A2   | 8.56E+04      | 1.84E+04      | 20                | 162.          | 54                |
| FD   | 8.56E+04      | 1.93E+04      | 16                | 264.          | -108              |
| L1   | 8.47E+04      | 2.40E+04      | 37                | 595.          | 59                |
| L3   | 8.43E+04      | 2.36E+04      | 38                | 883.          | 65                |
| L4   | 8.43E+04      | 2.38E+04      | 36                | 676.          | 108               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.38E+04      | 1.69E+04      | 23                | 127.          | -80               |

Table G–258. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 6.56E+04        | 1.06E+05        | 6.58E+04        | 1.06E+05        |
| A2   | 6.70E+04        | 1.04E+05        | 6.72E+04        | 1.04E+05        |
| FD   | 6.65E+04        | 1.05E+05        | 6.67E+04        | 1.05E+05        |
| L1   | 6.08E+04        | 1.09E+05        | 6.09E+04        | 1.09E+05        |
| L3   | 6.08E+04        | 1.08E+05        | 6.08E+04        | 1.08E+05        |
| L4   | 6.02E+04        | 1.07E+05        | 6.04E+04        | 1.07E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 6.70E+04        | 1.01E+05        | 6.72E+04        | 1.01E+05        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-130. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

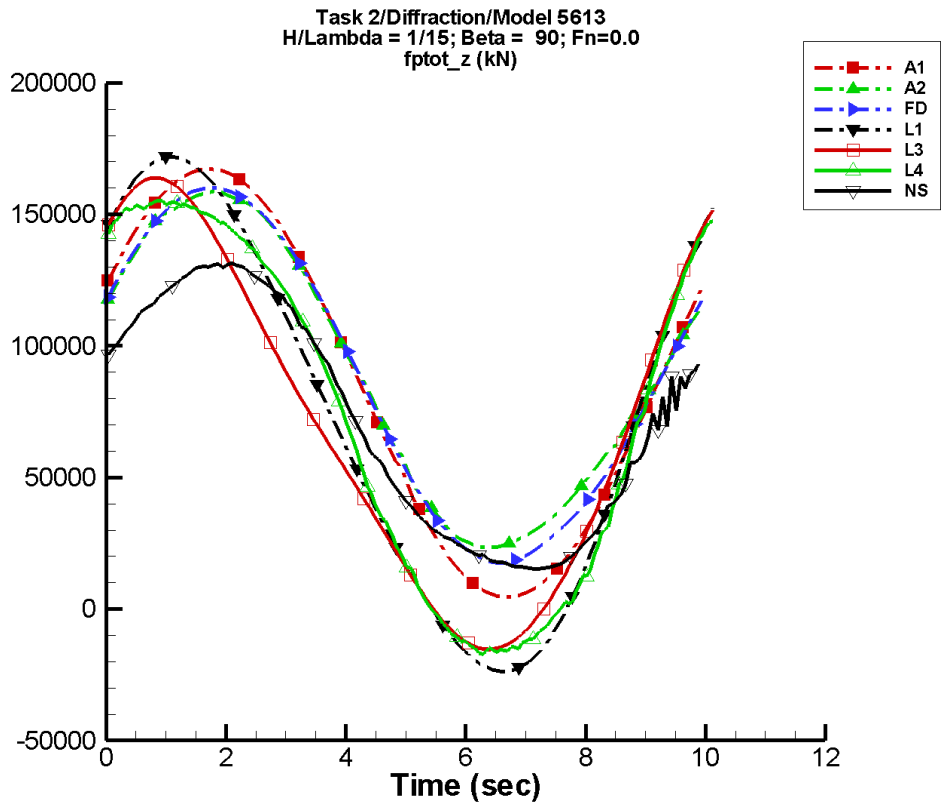
Table G-259. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 6.08E+04      | 23                | 117.          | 14                |
| A2   | 8.77E+04      | 5.17E+04      | 22                | 2.33E+03      | -102              |
| FD   | 8.69E+04      | 5.50E+04      | 18                | 984.          | -106              |
| L1   | 7.79E+04      | 7.21E+04      | 37                | 5.37E+03      | 60                |
| L3   | 7.58E+04      | 6.65E+04      | 42                | 7.33E+03      | 65                |
| L4   | 7.62E+04      | 6.82E+04      | 35                | 4.86E+03      | 102               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.73E+04      | 4.76E+04      | 23                | 1.36E+03      | -57               |

Table G-260. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 2.49E+04        | 1.47E+05        | 2.56E+04        | 1.46E+05        |
| A2   | 3.65E+04        | 1.40E+05        | 3.72E+04        | 1.40E+05        |
| FD   | 3.27E+04        | 1.42E+05        | 3.32E+04        | 1.42E+05        |
| L1   | 6.35E+03        | 1.52E+05        | 6.61E+03        | 1.52E+05        |
| L3   | 9.78E+03        | 1.47E+05        | 1.00E+04        | 1.47E+05        |
| L4   | 7.00E+03        | 1.41E+05        | 7.99E+03        | 1.40E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 3.19E+04        | 1.27E+05        | 3.24E+04        | 1.26E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-131. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

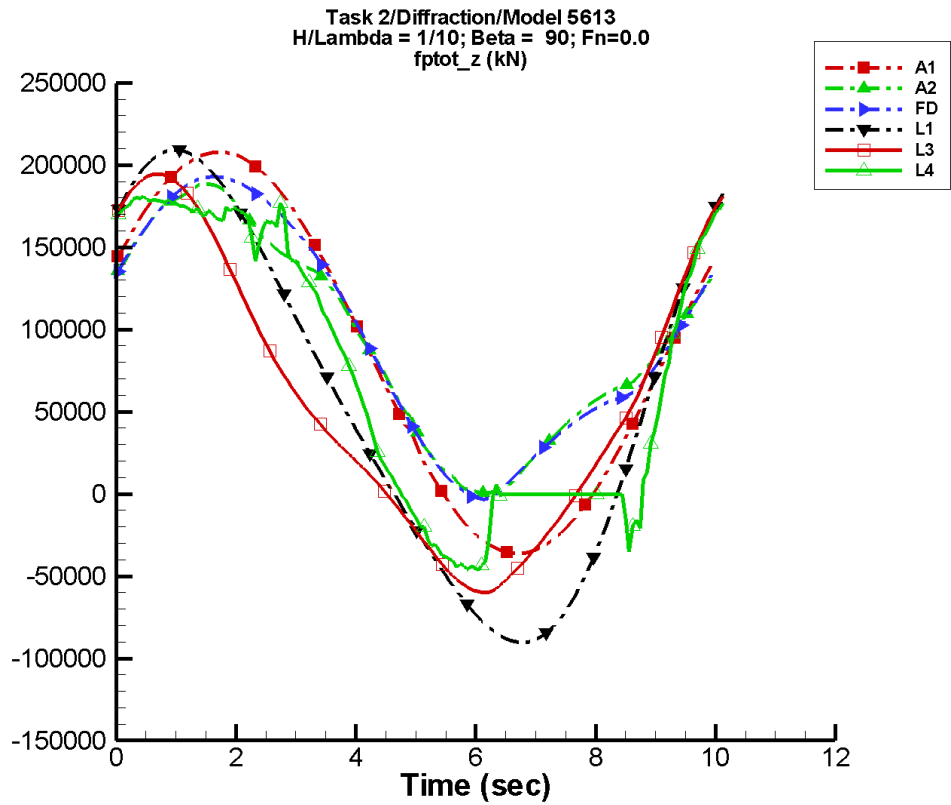
Table G–261. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 8.12E+04      | 23                | 157.          | 14                |
| A2   | 8.96E+04      | 6.71E+04      | 23                | 3.78E+03      | -102              |
| FD   | 8.81E+04      | 7.11E+04      | 19                | 1.93E+03      | -109              |
| L1   | 7.19E+04      | 9.61E+04      | 37                | 9.54E+03      | 60                |
| L3   | 6.92E+04      | 8.52E+04      | 44                | 1.20E+04      | 63                |
| L4   | 7.15E+04      | 8.93E+04      | 34                | 7.40E+03      | 96                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.08E+04      | 5.85E+04      | 24                | 1.77E+03      | -56               |

Table G–262. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 4.52E+03        | 1.67E+05        | 5.34E+03        | 1.66E+05        |
| A2   | 2.35E+04        | 1.59E+05        | 2.41E+04        | 1.58E+05        |
| FD   | 1.75E+04        | 1.60E+05        | 1.83E+04        | 1.59E+05        |
| L1   | -2.37E+04       | 1.72E+05        | -2.34E+04       | 1.71E+05        |
| L3   | -1.53E+04       | 1.64E+05        | -1.50E+04       | 1.63E+05        |
| L4   | -1.71E+04       | 1.55E+05        | -1.59E+04       | 1.54E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 1.51E+04        | 1.31E+05        | 1.56E+04        | 1.31E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-132. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

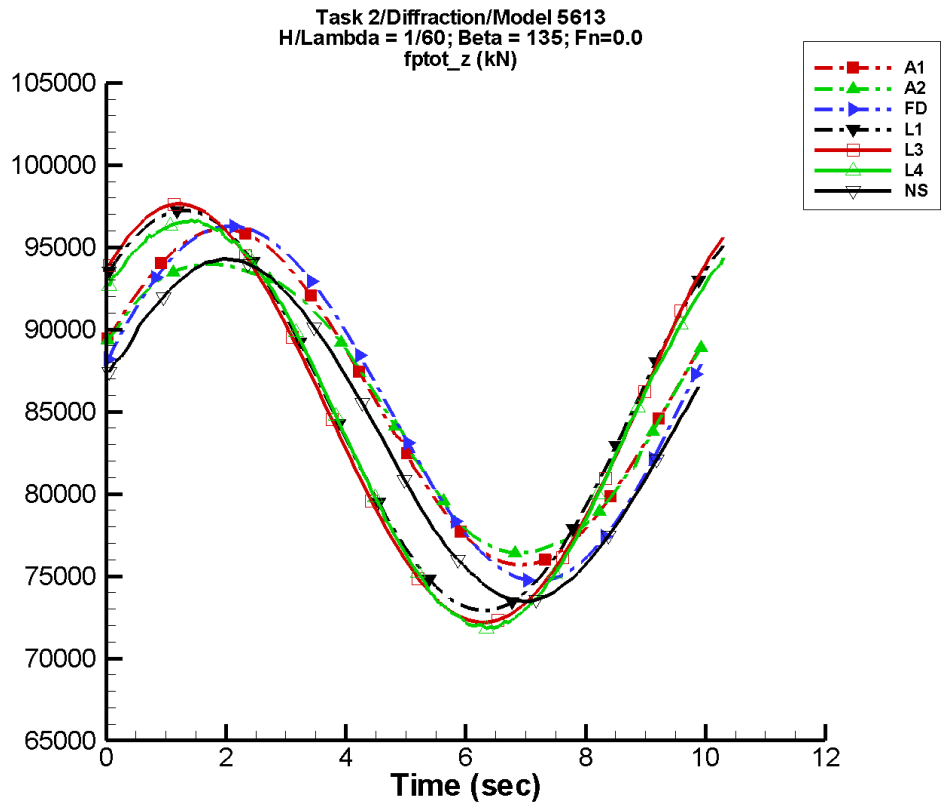
Table G-263. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.57E+04      | 1.22E+05      | 23                | 235.          | 14                |
| A2   | 9.39E+04      | 8.59E+04      | 30                | 6.12E+03      | -95               |
| FD   | 9.64E+04      | 9.16E+04      | 24                | 1.08E+04      | -111              |
| L1   | 5.49E+04      | 1.44E+05      | 37                | 2.15E+04      | 60                |
| L3   | 5.54E+04      | 1.15E+05      | 53                | 2.05E+04      | 56                |
| L4   | 7.06E+04      | 1.10E+05      | 33                | 9.10E+03      | -22               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-264. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.62E+04       | 2.08E+05        | -3.49E+04       | 2.07E+05        |
| A2   | -824.           | 1.89E+05        | 1.75E+03        | 1.86E+05        |
| FD   | -3.19E+03       | 1.93E+05        | -286.           | 1.92E+05        |
| L1   | -9.03E+04       | 2.09E+05        | -8.97E+04       | 2.08E+05        |
| L3   | -5.99E+04       | 1.95E+05        | -5.90E+04       | 1.94E+05        |
| L4   | -4.65E+04       | 1.82E+05        | -4.48E+04       | 1.79E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-133. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–265. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

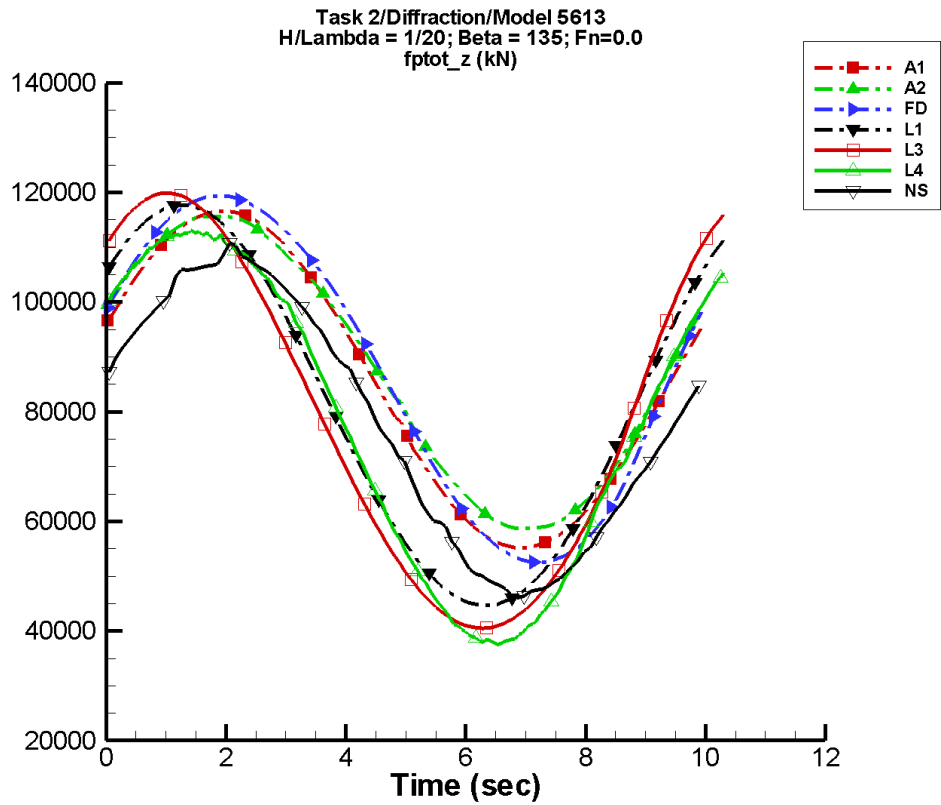
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.02E+04      | 14                | 24.7          | 10                |
| A2   | 8.56E+04      | 9.05E+03      | 14                | 550.          | 89                |
| FD   | 8.56E+04      | 1.09E+04      | 4                 | 261.          | 30                |
| L1   | 8.50E+04      | 1.22E+04      | 38                | 108.          | 23                |
| L3   | 8.46E+04      | 1.27E+04      | 39                | 355.          | 25                |
| L4   | 8.45E+04      | 1.24E+04      | 36                | 241.          | 168               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.39E+04      | 1.03E+04      | 16                | 30.0          | -177              |

Table G–266. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.57E+04        | 9.61E+04        | 7.58E+04        | 9.61E+04        |
| A2   | 7.64E+04        | 9.40E+04        | 7.65E+04        | 9.39E+04        |
| FD   | 7.47E+04        | 9.63E+04        | 7.48E+04        | 9.62E+04        |
| L1   | 7.29E+04        | 9.72E+04        | 7.29E+04        | 9.72E+04        |
| L3   | 7.22E+04        | 9.76E+04        | 7.22E+04        | 9.76E+04        |
| L4   | 7.18E+04        | 9.67E+04        | 7.19E+04        | 9.66E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.35E+04        | 9.43E+04        | 7.36E+04        | 9.42E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-134. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

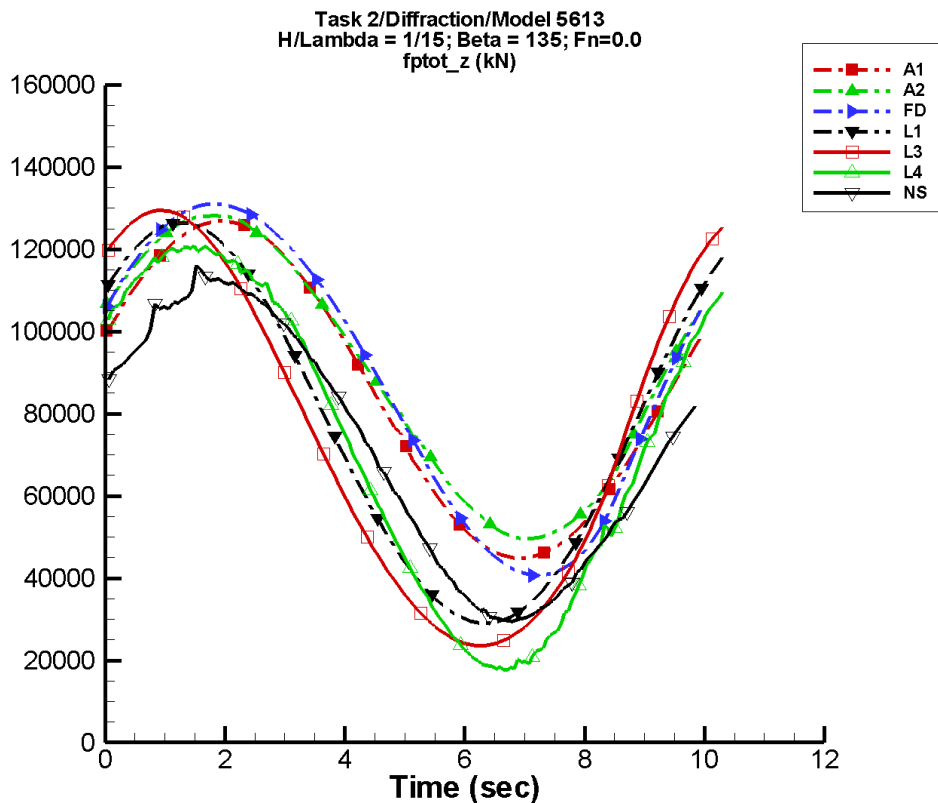
Table G–267. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 3.07E+04      | 14                | 74.3          | 10                |
| A2   | 8.77E+04      | 2.87E+04      | 14                | 1.54E+03      | 55                |
| FD   | 8.70E+04      | 3.37E+04      | 7                 | 2.14E+03      | 48                |
| L1   | 8.05E+04      | 3.65E+04      | 38                | 885.          | 23                |
| L3   | 7.84E+04      | 3.97E+04      | 43                | 2.82E+03      | 43                |
| L4   | 7.68E+04      | 3.75E+04      | 32                | 1.41E+03      | 156               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.79E+04      | 3.03E+04      | 16                | 571.          | -171              |

Table G–268. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 5.51E+04        | 1.17E+05        | 5.55E+04        | 1.17E+05        |
| A2   | 5.87E+04        | 1.16E+05        | 5.89E+04        | 1.16E+05        |
| FD   | 5.25E+04        | 1.19E+05        | 5.28E+04        | 1.19E+05        |
| L1   | 4.47E+04        | 1.18E+05        | 4.48E+04        | 1.18E+05        |
| L3   | 4.05E+04        | 1.20E+05        | 4.06E+04        | 1.20E+05        |
| L4   | 3.75E+04        | 1.13E+05        | 3.79E+04        | 1.13E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 4.61E+04        | 1.11E+05        | 4.71E+04        | 1.09E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-135. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

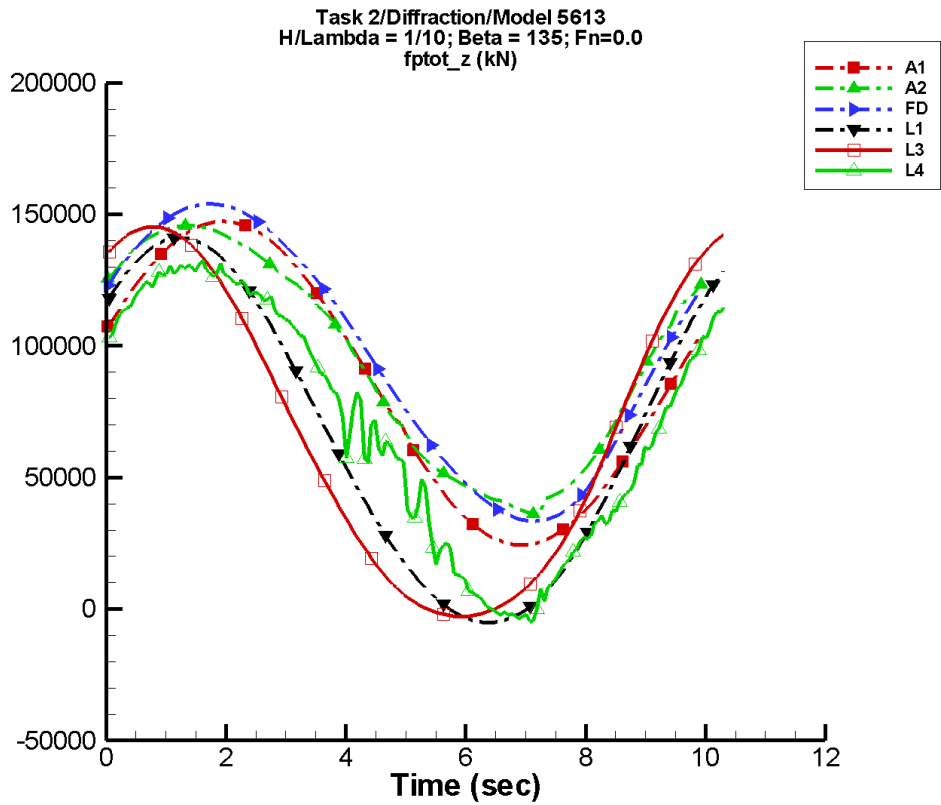
Table G–269. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 4.10E+04      | 14                | 99.1          | 10                |
| A2   | 8.95E+04      | 3.91E+04      | 15                | 2.57E+03      | 48                |
| FD   | 8.80E+04      | 4.52E+04      | 9                 | 3.62E+03      | 58                |
| L1   | 7.65E+04      | 4.87E+04      | 38                | 1.55E+03      | 23                |
| L3   | 7.38E+04      | 5.31E+04      | 45                | 4.50E+03      | 51                |
| L4   | 7.14E+04      | 5.13E+04      | 28                | 2.10E+03      | 116               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.15E+04      | 4.03E+04      | 21                | 586.          | -157              |

Table G–270. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 4.48E+04        | 1.27E+05        | 4.52E+04        | 1.27E+05        |
| A2   | 4.96E+04        | 1.28E+05        | 5.00E+04        | 1.28E+05        |
| FD   | 4.07E+04        | 1.31E+05        | 4.11E+04        | 1.31E+05        |
| L1   | 2.90E+04        | 1.26E+05        | 2.92E+04        | 1.26E+05        |
| L3   | 2.36E+04        | 1.29E+05        | 2.37E+04        | 1.29E+05        |
| L4   | 1.76E+04        | 1.21E+05        | 1.82E+04        | 1.20E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 2.95E+04        | 1.16E+05        | 3.00E+04        | 1.13E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-136. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

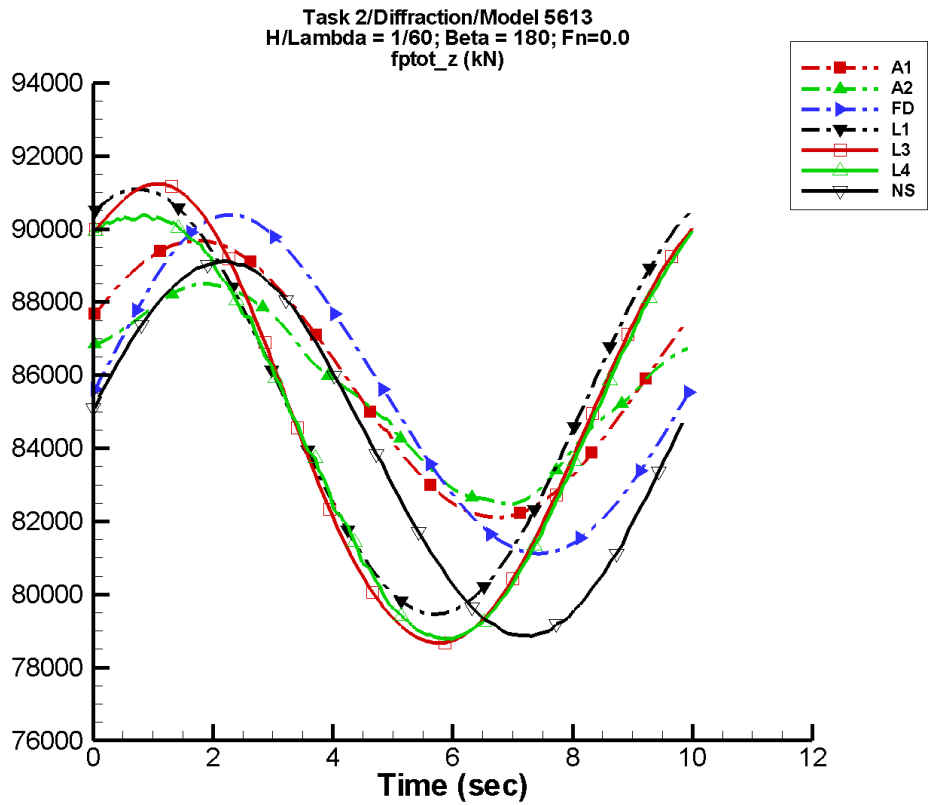
Table G–271. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 6.15E+04      | 14                | 149.          | 10                |
| A2   | 9.34E+04      | 5.40E+04      | 26                | 3.97E+03      | 84                |
| FD   | 9.57E+04      | 5.99E+04      | 14                | 4.04E+03      | 56                |
| L1   | 6.52E+04      | 7.30E+04      | 38                | 3.45E+03      | 23                |
| L3   | 6.56E+04      | 7.49E+04      | 54                | 6.21E+03      | 43                |
| L4   | 6.83E+04      | 6.38E+04      | 23                | 4.89E+03      | 81                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–272. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 2.43E+04        | 1.47E+05        | 2.49E+04        | 1.48E+05        |
| A2   | 3.57E+04        | 1.46E+05        | 3.85E+04        | 1.45E+05        |
| FD   | 3.34E+04        | 1.54E+05        | 3.41E+04        | 1.53E+05        |
| L1   | -5.14E+03       | 1.41E+05        | -4.91E+03       | 1.41E+05        |
| L3   | -2.82E+03       | 1.45E+05        | -2.66E+03       | 1.45E+05        |
| L4   | -4.88E+03       | 1.33E+05        | -2.85E+03       | 1.30E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-137. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-273. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

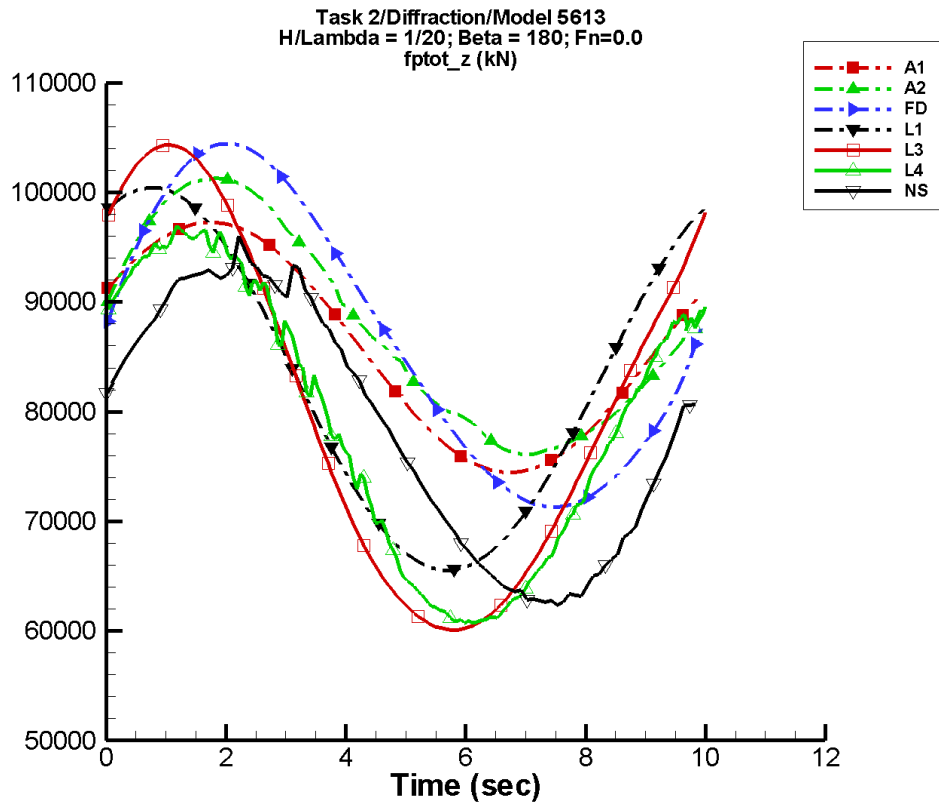
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 3.79E+03      | 22                | 14.1          | 11                |
| A2   | 8.56E+04      | 2.80E+03      | 22                | 165.          | -178              |
| FD   | 8.56E+04      | 4.59E+03      | -5                | 236.          | -59               |
| L1   | 8.52E+04      | 5.82E+03      | 59                | 31.2          | 10                |
| L3   | 8.49E+04      | 6.27E+03      | 54                | 265.          | -62               |
| L4   | 8.47E+04      | 5.82E+03      | 54                | 127.          | 164               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.40E+04      | 5.12E+03      | 10                | 66.5          | 42                |

Table G-274. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.21E+04        | 8.97E+04        | 8.21E+04        | 8.97E+04        |
| A2   | 8.25E+04        | 8.85E+04        | 8.25E+04        | 8.85E+04        |
| FD   | 8.11E+04        | 9.04E+04        | 8.11E+04        | 9.03E+04        |
| L1   | 7.95E+04        | 9.11E+04        | 7.95E+04        | 9.11E+04        |
| L3   | 7.87E+04        | 9.12E+04        | 7.87E+04        | 9.12E+04        |
| L4   | 7.88E+04        | 9.04E+04        | 7.88E+04        | 9.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.89E+04        | 8.91E+04        | 7.89E+04        | 8.91E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-138. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

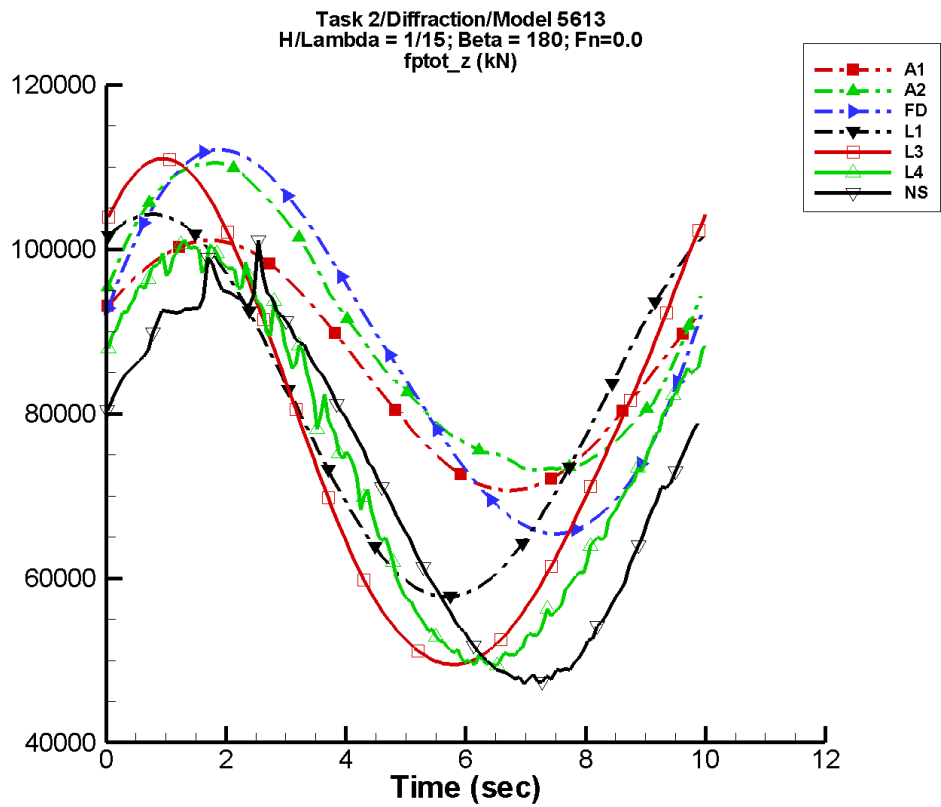
Table G-275. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.14E+04      | 22                | 42.4          | 11                |
| A2   | 8.77E+04      | 1.23E+04      | 13                | 1.64E+03      | -32               |
| FD   | 8.69E+04      | 1.65E+04      | -1                | 1.85E+03      | -32               |
| L1   | 8.27E+04      | 1.75E+04      | 59                | 276.          | 3                 |
| L3   | 8.07E+04      | 2.17E+04      | 52                | 1.83E+03      | -27               |
| L4   | 7.89E+04      | 1.74E+04      | 42                | 1.02E+03      | -137              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.84E+04      | 1.56E+04      | 9                 | 562.          | 59                |

Table G-276. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.45E+04        | 9.73E+04        | 7.46E+04        | 9.72E+04        |
| A2   | 7.61E+04        | 1.01E+05        | 7.63E+04        | 1.01E+05        |
| FD   | 7.13E+04        | 1.04E+05        | 7.13E+04        | 1.04E+05        |
| L1   | 6.55E+04        | 1.00E+05        | 6.56E+04        | 1.00E+05        |
| L3   | 6.01E+04        | 1.04E+05        | 6.02E+04        | 1.04E+05        |
| L4   | 6.06E+04        | 9.70E+04        | 6.08E+04        | 9.62E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.24E+04        | 9.60E+04        | 6.28E+04        | 9.45E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-139. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

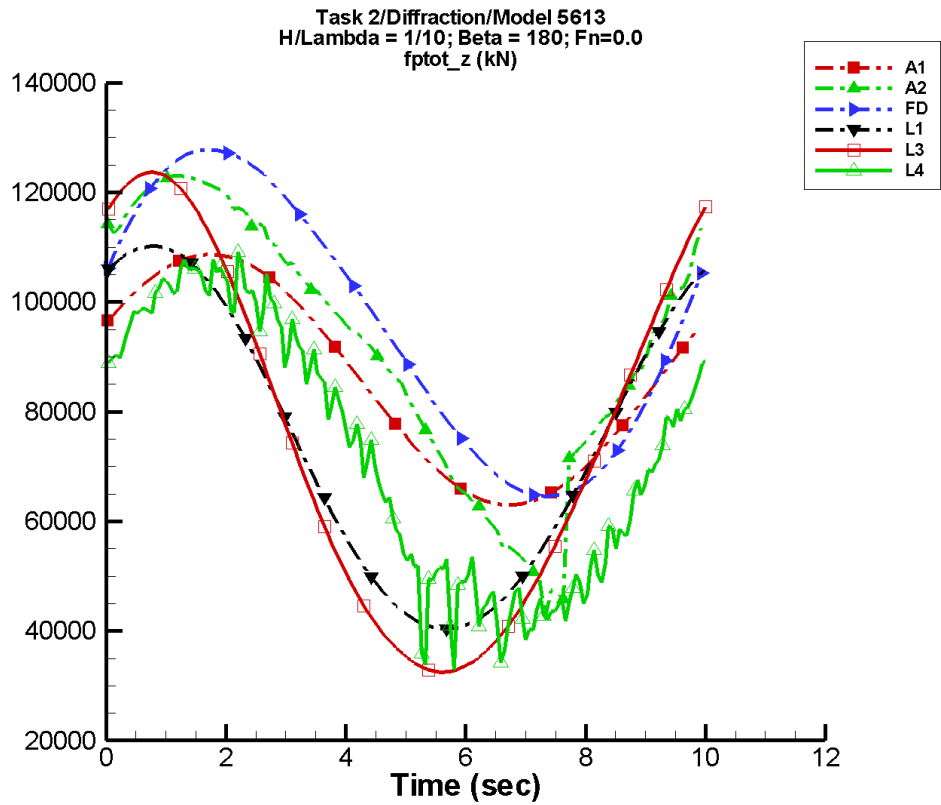
Table G–277. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.52E+04      | 22                | 56.7          | 11                |
| A2   | 8.96E+04      | 1.87E+04      | 14                | 3.29E+03      | -23               |
| FD   | 8.80E+04      | 2.33E+04      | 2                 | 2.66E+03      | -12               |
| L1   | 8.05E+04      | 2.33E+04      | 59                | 490.          | 3                 |
| L3   | 7.79E+04      | 3.03E+04      | 53                | 2.56E+03      | -8                |
| L4   | 7.46E+04      | 2.48E+04      | 32                | 750.          | -111              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.21E+04      | 2.40E+04      | 16                | 807.          | 89                |

Table G–278. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.07E+04        | 1.01E+05        | 7.08E+04        | 1.01E+05        |
| A2   | 7.31E+04        | 1.11E+05        | 7.33E+04        | 1.10E+05        |
| FD   | 6.54E+04        | 1.12E+05        | 6.54E+04        | 1.12E+05        |
| L1   | 5.77E+04        | 1.04E+05        | 5.78E+04        | 1.04E+05        |
| L3   | 4.95E+04        | 1.11E+05        | 4.96E+04        | 1.11E+05        |
| L4   | 4.94E+04        | 1.01E+05        | 4.98E+04        | 9.99E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 4.71E+04        | 1.01E+05        | 4.77E+04        | 9.55E+04        |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-140. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

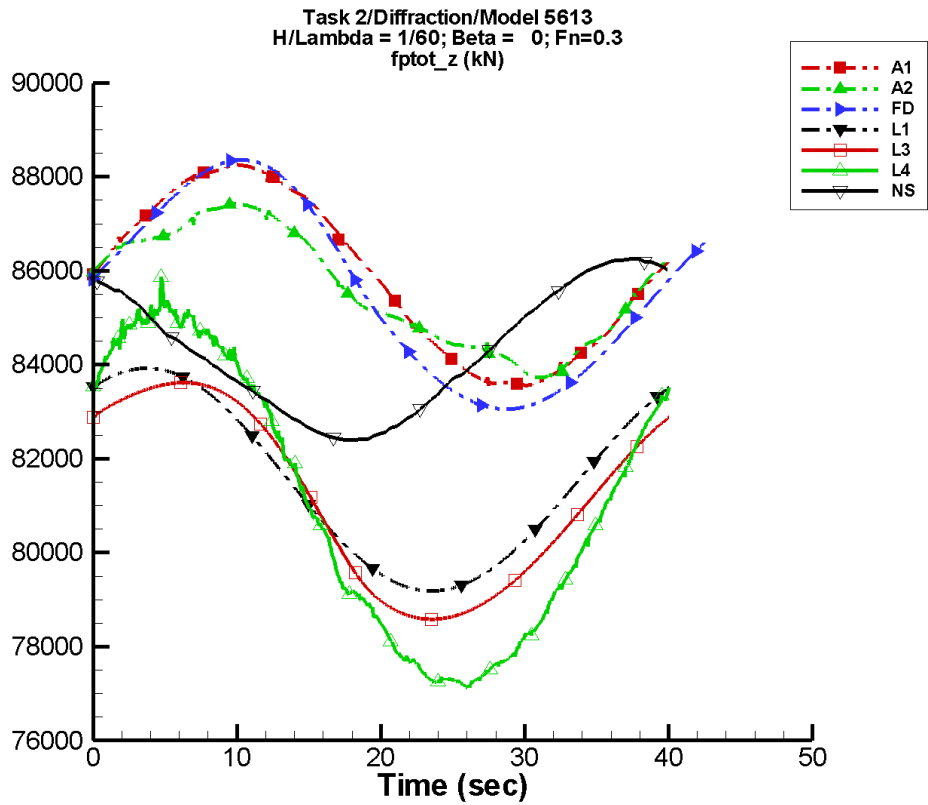
Table G–279. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 2.28E+04      | 22                | 85.0          | 11                |
| A2   | 9.16E+04      | 3.21E+04      | 24                | 5.71E+03      | 84                |
| FD   | 9.59E+04      | 3.15E+04      | 6                 | 3.59E+03      | 10                |
| L1   | 7.43E+04      | 3.49E+04      | 59                | 1.10E+03      | 2                 |
| L3   | 7.47E+04      | 4.49E+04      | 60                | 3.46E+03      | 10                |
| L4   | 7.27E+04      | 3.25E+04      | 23                | 952.          | -27               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–280. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 6.30E+04        | 1.09E+05        | 6.33E+04        | 1.09E+05        |
| A2   | 4.25E+04        | 1.23E+05        | 4.98E+04        | 1.23E+05        |
| FD   | 6.46E+04        | 1.28E+05        | 6.48E+04        | 1.27E+05        |
| L1   | 4.04E+04        | 1.10E+05        | 4.05E+04        | 1.10E+05        |
| L3   | 3.25E+04        | 1.24E+05        | 3.26E+04        | 1.23E+05        |
| L4   | 2.91E+04        | 1.10E+05        | 4.15E+04        | 1.05E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-141. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–281. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

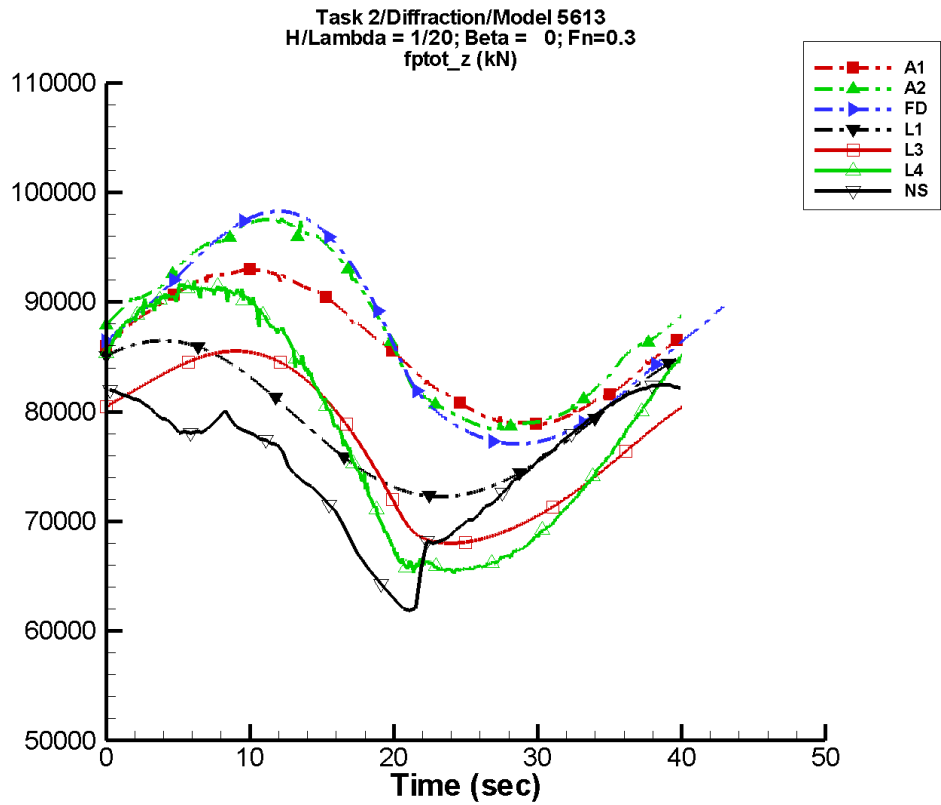
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 2.31E+03      | 5                 | 71.0          | 164               |
| A2   | 8.56E+04      | 1.64E+03      | 12                | 79.6          | 15                |
| FD   | 8.56E+04      | 2.61E+03      | 5                 | 246.          | -138              |
| L1   | 8.15E+04      | 2.37E+03      | 55                | 27.7          | -27               |
| L3   | 8.12E+04      | 2.55E+03      | 45                | 267.          | -111              |
| L4   | 8.10E+04      | 3.95E+03      | 40                | 179.          | -16               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.43E+04      | 1.83E+03      | 115               | 114.          | 179               |

Table G–282. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.36E+04        | 8.83E+04        | 8.36E+04        | 8.83E+04        |
| A2   | 8.37E+04        | 8.74E+04        | 8.37E+04        | 8.74E+04        |
| FD   | 8.31E+04        | 8.84E+04        | 8.31E+04        | 8.84E+04        |
| L1   | 7.92E+04        | 8.39E+04        | 7.92E+04        | 8.39E+04        |
| L3   | 7.86E+04        | 8.36E+04        | 7.86E+04        | 8.36E+04        |
| L4   | 7.71E+04        | 8.59E+04        | 7.72E+04        | 8.54E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.24E+04        | 8.63E+04        | 8.24E+04        | 8.62E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-142. Time history of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

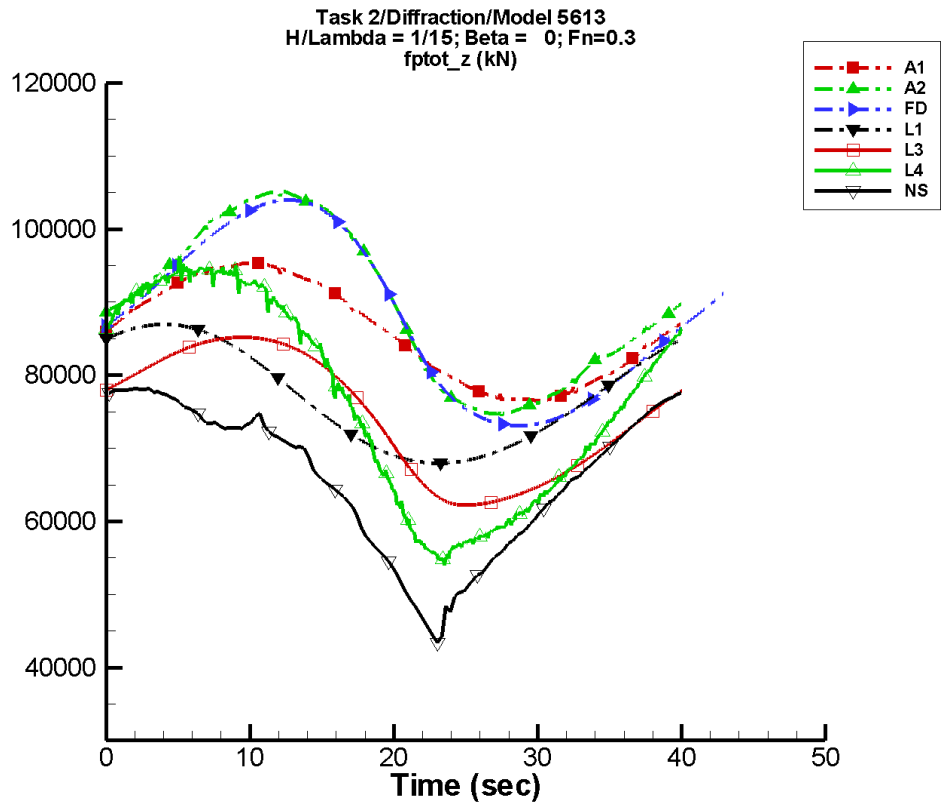
Table G–283. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 6.93E+03      | 5                 | 213.          | 164               |
| A2   | 8.77E+04      | 9.18E+03      | 7                 | 1.74E+03      | -169              |
| FD   | 8.69E+04      | 1.04E+04      | -3                | 1.89E+03      | -168              |
| L1   | 7.92E+04      | 7.11E+03      | 55                | 256.          | -29               |
| L3   | 7.72E+04      | 8.59E+03      | 25                | 1.60E+03      | -146              |
| L4   | 7.83E+04      | 1.33E+04      | 35                | 1.28E+03      | -106              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.50E+04      | 7.68E+03      | 85                | 2.07E+03      | -125              |

Table G–284. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.89E+04        | 9.30E+04        | 7.89E+04        | 9.30E+04        |
| A2   | 7.83E+04        | 9.76E+04        | 7.85E+04        | 9.75E+04        |
| FD   | 7.71E+04        | 9.83E+04        | 7.71E+04        | 9.83E+04        |
| L1   | 7.23E+04        | 8.65E+04        | 7.23E+04        | 8.65E+04        |
| L3   | 6.80E+04        | 8.55E+04        | 6.80E+04        | 8.55E+04        |
| L4   | 6.52E+04        | 9.19E+04        | 6.55E+04        | 9.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.19E+04        | 8.25E+04        | 6.33E+04        | 8.23E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-143. Time history of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

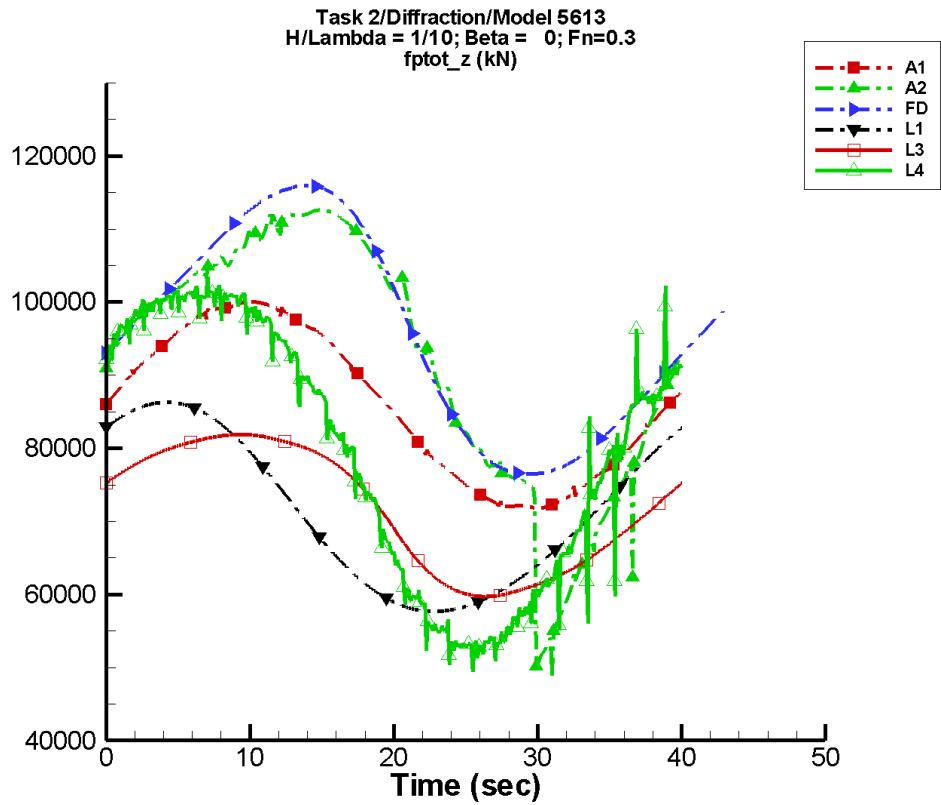
Table G–285. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{plot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 9.26E+03      | 5                 | 285.          | 164               |
| A2   | 8.97E+04      | 1.42E+04      | 0                 | 3.48E+03      | -173              |
| FD   | 8.80E+04      | 1.52E+04      | -8                | 2.71E+03      | 172               |
| L1   | 7.72E+04      | 9.48E+03      | 55                | 456.          | -29               |
| L3   | 7.45E+04      | 1.13E+04      | 18                | 1.88E+03      | -169              |
| L4   | 7.66E+04      | 1.90E+04      | 34                | 2.13E+03      | -144              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 6.57E+04      | 1.35E+04      | 60                | 2.97E+03      | -169              |

Table G–286. Minimum and maximum of  $F_z^{\text{plot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.65E+04        | 9.54E+04        | 7.65E+04        | 9.53E+04        |
| A2   | 7.45E+04        | 1.05E+05        | 7.47E+04        | 1.05E+05        |
| FD   | 7.31E+04        | 1.04E+05        | 7.31E+04        | 1.04E+05        |
| L1   | 6.80E+04        | 8.70E+04        | 6.80E+04        | 8.70E+04        |
| L3   | 6.22E+04        | 8.52E+04        | 6.22E+04        | 8.52E+04        |
| L4   | 5.40E+04        | 9.61E+04        | 5.47E+04        | 9.47E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 4.34E+04        | 7.82E+04        | 4.59E+04        | 7.81E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-144. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

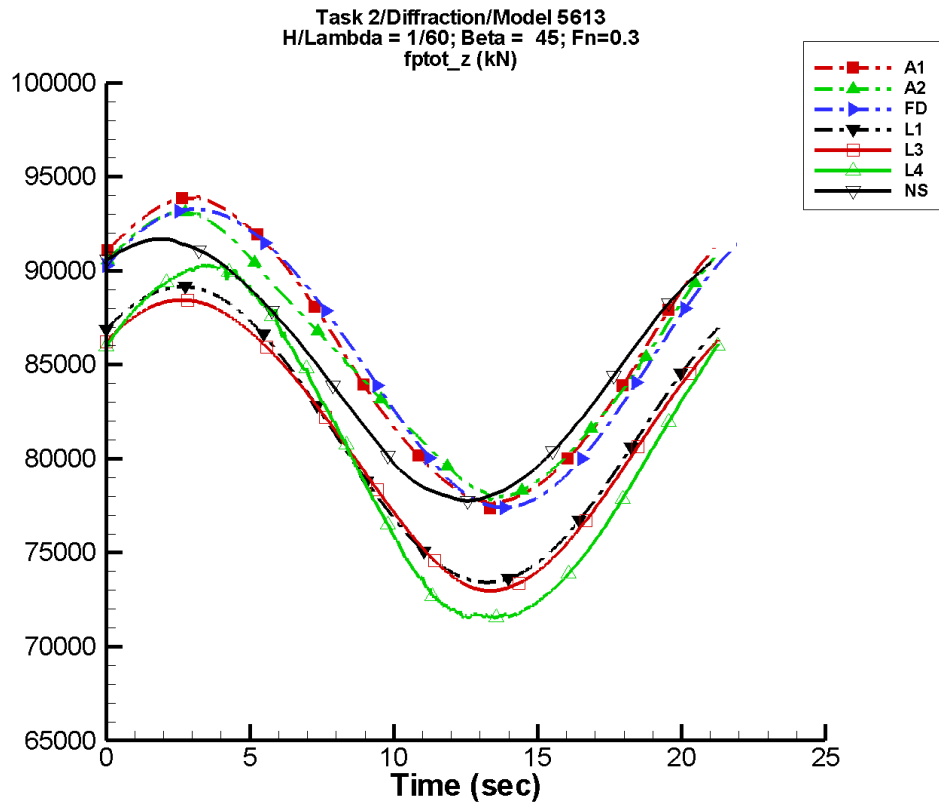
Table G–287. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.60E+04      | 1.39E+04      | 5                 | 427.          | 164               |
| A2   | 9.18E+04      | 2.27E+04      | -17               | 5.78E+03      | 81                |
| FD   | 9.58E+04      | 1.92E+04      | -15               | 3.70E+03      | 150               |
| L1   | 7.13E+04      | 1.42E+04      | 55                | 1.03E+03      | -29               |
| L3   | 7.18E+04      | 1.12E+04      | 14                | 1.54E+03      | 166               |
| L4   | 7.94E+04      | 2.43E+04      | 34                | 2.62E+03      | 175               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–288. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.18E+04        | 1.00E+05        | 7.18E+04        | 1.00E+05        |
| A2   | 4.84E+04        | 1.13E+05        | 5.16E+04        | 1.13E+05        |
| FD   | 7.65E+04        | 1.16E+05        | 7.65E+04        | 1.16E+05        |
| L1   | 5.77E+04        | 8.63E+04        | 5.77E+04        | 8.63E+04        |
| L3   | 5.97E+04        | 8.19E+04        | 5.97E+04        | 8.19E+04        |
| L4   | 4.93E+04        | 1.03E+05        | 5.19E+04        | 1.02E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-145. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–289. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

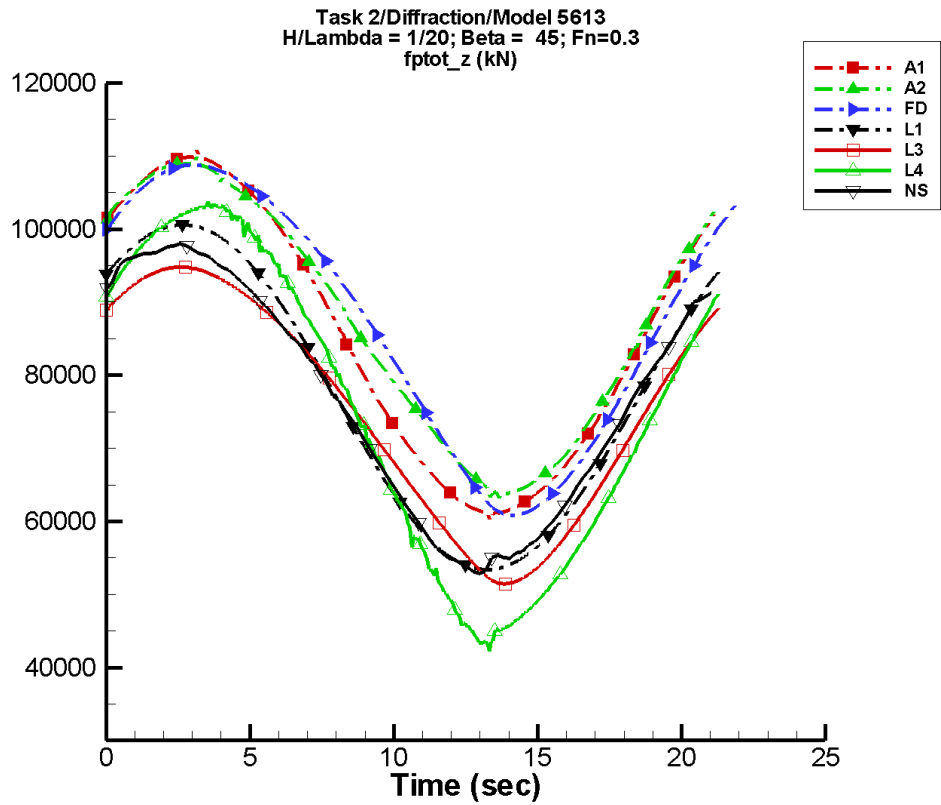
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 8.17E+03      | 43                | 2.14          | 121               |
| A2   | 8.56E+04      | 7.30E+03      | 43                | 508.          | 67                |
| FD   | 8.56E+04      | 7.89E+03      | 40                | 266.          | 144               |
| L1   | 8.13E+04      | 7.86E+03      | 46                | 23.4          | -162              |
| L3   | 8.10E+04      | 7.64E+03      | 43                | 258.          | 149               |
| L4   | 8.06E+04      | 9.38E+03      | 38                | 478.          | -84               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.49E+04      | 6.98E+03      | 57                | 113.          | -174              |

Table G–290. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.73E+04        | 9.46E+04        | 7.76E+04        | 9.44E+04        |
| A2   | 7.77E+04        | 9.40E+04        | 7.80E+04        | 9.37E+04        |
| FD   | 7.74E+04        | 9.33E+04        | 7.74E+04        | 9.33E+04        |
| L1   | 7.34E+04        | 8.92E+04        | 7.34E+04        | 8.91E+04        |
| L3   | 7.30E+04        | 8.84E+04        | 7.30E+04        | 8.84E+04        |
| L4   | 7.15E+04        | 9.03E+04        | 7.16E+04        | 9.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.78E+04        | 9.20E+04        | 7.79E+04        | 9.19E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-146. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

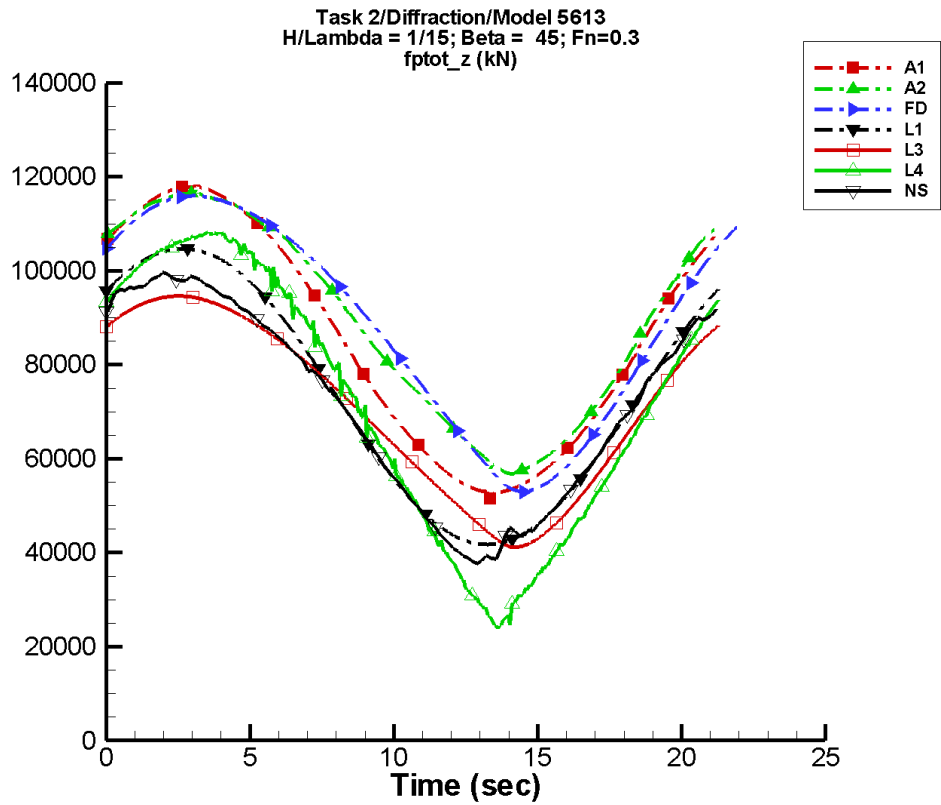
Table G–291. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 2.46E+04      | 43                | 6.39          | 121               |
| A2   | 8.77E+04      | 2.23E+04      | 39                | 1.50E+03      | 107               |
| FD   | 8.69E+04      | 2.31E+04      | 35                | 2.22E+03      | 127               |
| L1   | 7.72E+04      | 2.36E+04      | 46                | 198.          | -161              |
| L3   | 7.51E+04      | 2.06E+04      | 38                | 2.03E+03      | 127               |
| L4   | 7.51E+04      | 2.84E+04      | 36                | 1.35E+03      | -151              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.67E+04      | 2.17E+04      | 48                | 990.          | 162               |

Table G–292. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 6.01E+04        | 1.12E+05        | 6.11E+04        | 1.11E+05        |
| A2   | 6.32E+04        | 1.11E+05        | 6.38E+04        | 1.11E+05        |
| FD   | 6.08E+04        | 1.09E+05        | 6.09E+04        | 1.09E+05        |
| L1   | 5.34E+04        | 1.01E+05        | 5.34E+04        | 1.01E+05        |
| L3   | 5.15E+04        | 9.48E+04        | 5.15E+04        | 9.48E+04        |
| L4   | 4.22E+04        | 1.04E+05        | 4.33E+04        | 1.03E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 5.28E+04        | 9.85E+04        | 5.39E+04        | 9.79E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-147. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

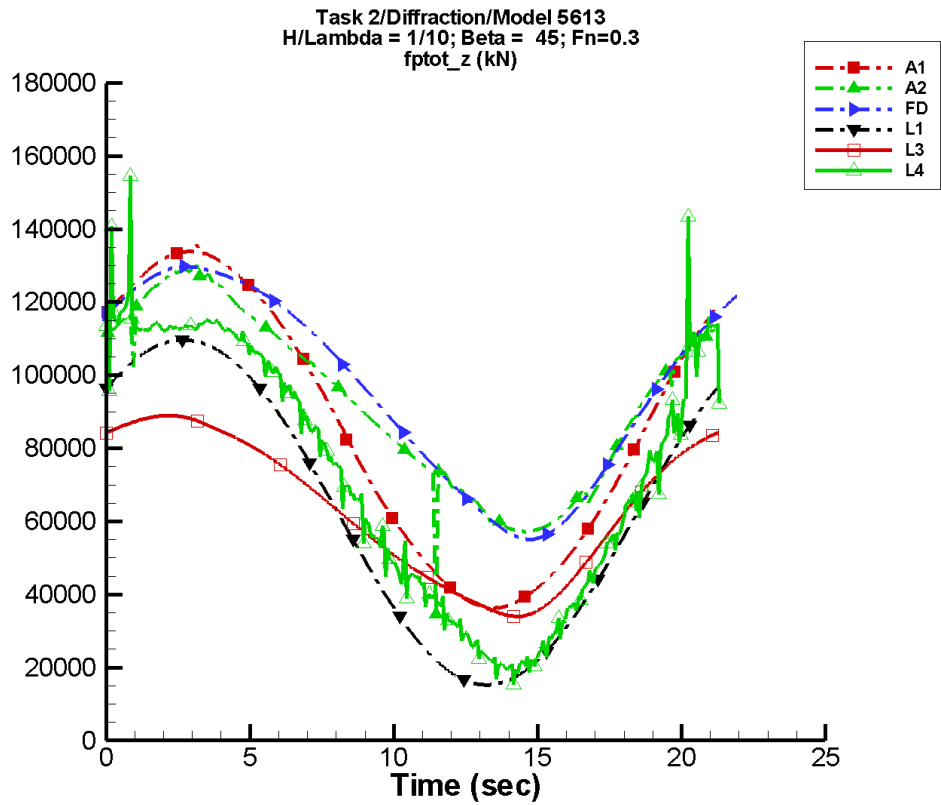
Table G–293. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 3.28E+04      | 43                | 8.53          | 121               |
| A2   | 8.96E+04      | 2.92E+04      | 37                | 2.50E+03      | 117               |
| FD   | 8.80E+04      | 3.00E+04      | 32                | 3.70E+03      | 116               |
| L1   | 7.35E+04      | 3.14E+04      | 46                | 348.          | -161              |
| L3   | 7.08E+04      | 2.51E+04      | 37                | 3.15E+03      | 116               |
| L4   | 7.14E+04      | 3.81E+04      | 36                | 2.78E+03      | 176               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.14E+04      | 2.90E+04      | 47                | 1.97E+03      | 164               |

Table G–294. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 5.15E+04        | 1.21E+05        | 5.28E+04        | 1.20E+05        |
| A2   | 5.67E+04        | 1.20E+05        | 5.71E+04        | 1.19E+05        |
| FD   | 5.30E+04        | 1.16E+05        | 5.31E+04        | 1.16E+05        |
| L1   | 4.18E+04        | 1.05E+05        | 4.18E+04        | 1.05E+05        |
| L3   | 4.12E+04        | 9.46E+04        | 4.12E+04        | 9.46E+04        |
| L4   | 2.39E+04        | 1.08E+05        | 2.48E+04        | 1.08E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 3.77E+04        | 1.01E+05        | 3.88E+04        | 9.95E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-148. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

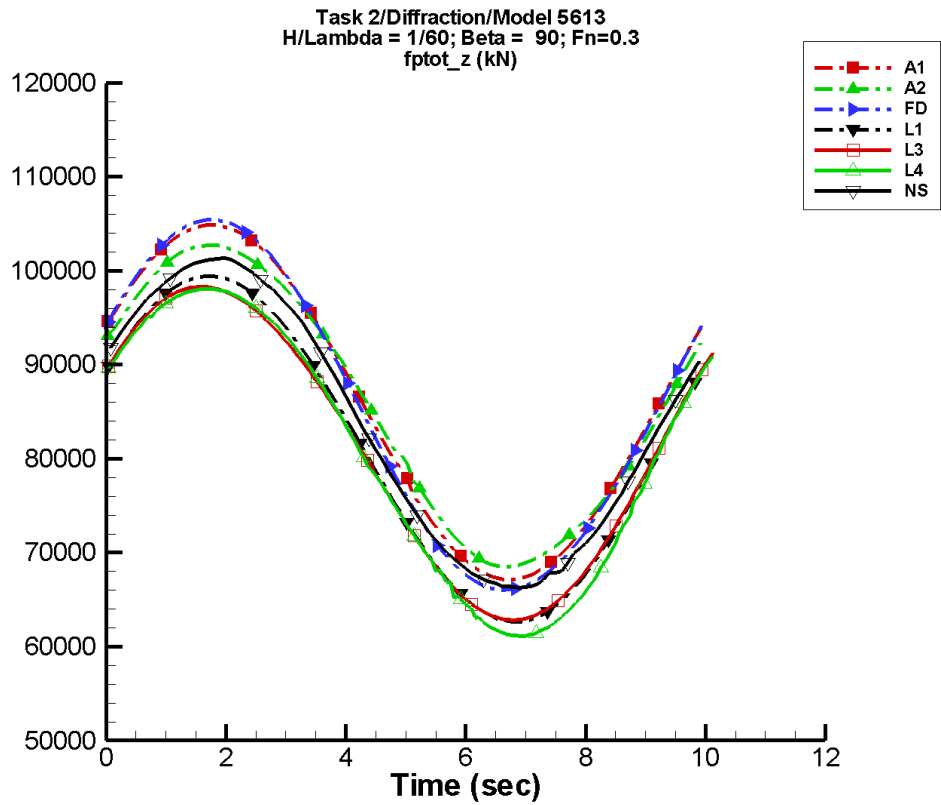
Table G–295. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 4.92E+04      | 43                | 12.8          | 121               |
| A2   | 9.33E+04      | 3.33E+04      | 38                | 3.16E+03      | 74                |
| FD   | 9.58E+04      | 3.56E+04      | 35                | 4.01E+03      | 117               |
| L1   | 6.32E+04      | 4.72E+04      | 46                | 777.          | -160              |
| L3   | 6.35E+04      | 2.63E+04      | 47                | 3.14E+03      | 125               |
| L4   | 7.22E+04      | 4.79E+04      | 43                | 5.34E+03      | 118               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–296. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 3.43E+04        | 1.38E+05        | 3.62E+04        | 1.37E+05        |
| A2   | 3.46E+04        | 1.34E+05        | 5.74E+04        | 1.32E+05        |
| FD   | 5.51E+04        | 1.30E+05        | 5.52E+04        | 1.30E+05        |
| L1   | 1.53E+04        | 1.10E+05        | 1.53E+04        | 1.10E+05        |
| L3   | 3.40E+04        | 8.90E+04        | 3.40E+04        | 8.90E+04        |
| L4   | 1.54E+04        | 1.55E+05        | 1.94E+04        | 1.22E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-149. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–297. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

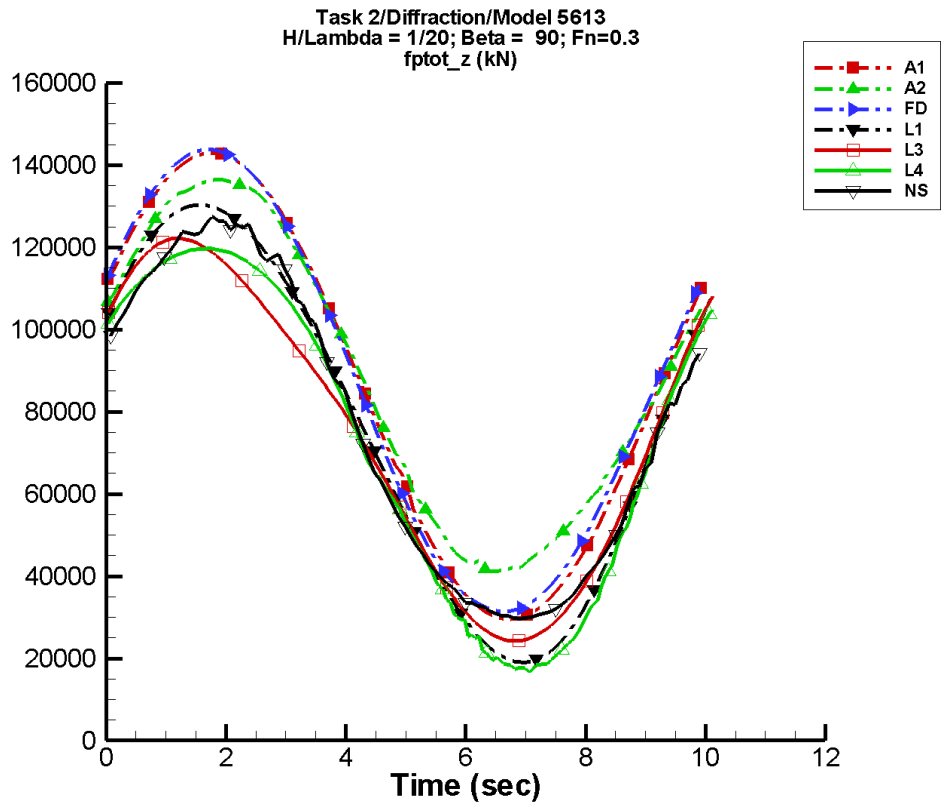
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.60E+04      | 1.88E+04      | 21                | 20.2          | 10                |
| A2   | 8.57E+04      | 1.70E+04      | 19                | 147.          | 58                |
| FD   | 8.56E+04      | 1.97E+04      | 19                | 263.          | -108              |
| L1   | 8.11E+04      | 1.84E+04      | 21                | 437.          | 54                |
| L3   | 8.08E+04      | 1.77E+04      | 23                | 720.          | 64                |
| L4   | 8.02E+04      | 1.85E+04      | 21                | 1.00E+03      | 76                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.36E+04      | 1.75E+04      | 24                | 116.          | -69               |

Table G–298. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 6.71E+04        | 1.05E+05        | 6.73E+04        | 1.05E+05        |
| A2   | 6.85E+04        | 1.03E+05        | 6.87E+04        | 1.03E+05        |
| FD   | 6.60E+04        | 1.05E+05        | 6.62E+04        | 1.05E+05        |
| L1   | 6.26E+04        | 9.94E+04        | 6.27E+04        | 9.94E+04        |
| L3   | 6.28E+04        | 9.83E+04        | 6.29E+04        | 9.82E+04        |
| L4   | 6.11E+04        | 9.81E+04        | 6.12E+04        | 9.80E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.63E+04        | 1.01E+05        | 6.65E+04        | 1.01E+05        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-150. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

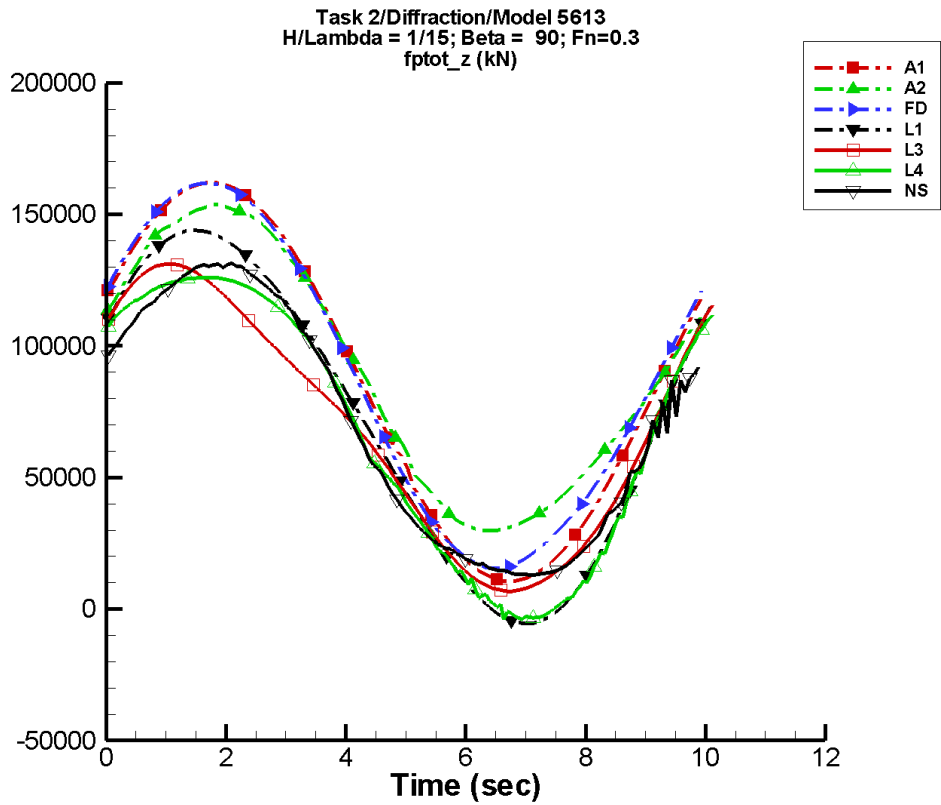
Table G–299. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.62E+04      | 5.66E+04      | 21                | 60.8          | 10                |
| A2   | 8.81E+04      | 4.74E+04      | 21                | 2.36E+03      | -103              |
| FD   | 8.69E+04      | 5.63E+04      | 20                | 983.          | -106              |
| L1   | 7.56E+04      | 5.51E+04      | 21                | 3.93E+03      | 56                |
| L3   | 7.35E+04      | 4.77E+04      | 26                | 5.87E+03      | 63                |
| L4   | 7.17E+04      | 5.19E+04      | 21                | 4.43E+03      | 87                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.55E+04      | 4.88E+04      | 24                | 1.80E+03      | -52               |

Table G–300. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 2.95E+04        | 1.43E+05        | 3.01E+04        | 1.42E+05        |
| A2   | 4.12E+04        | 1.36E+05        | 4.19E+04        | 1.36E+05        |
| FD   | 3.13E+04        | 1.44E+05        | 3.19E+04        | 1.43E+05        |
| L1   | 1.90E+04        | 1.30E+05        | 1.93E+04        | 1.30E+05        |
| L3   | 2.42E+04        | 1.22E+05        | 2.44E+04        | 1.22E+05        |
| L4   | 1.67E+04        | 1.20E+05        | 1.76E+04        | 1.20E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 2.96E+04        | 1.28E+05        | 3.02E+04        | 1.26E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-151. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

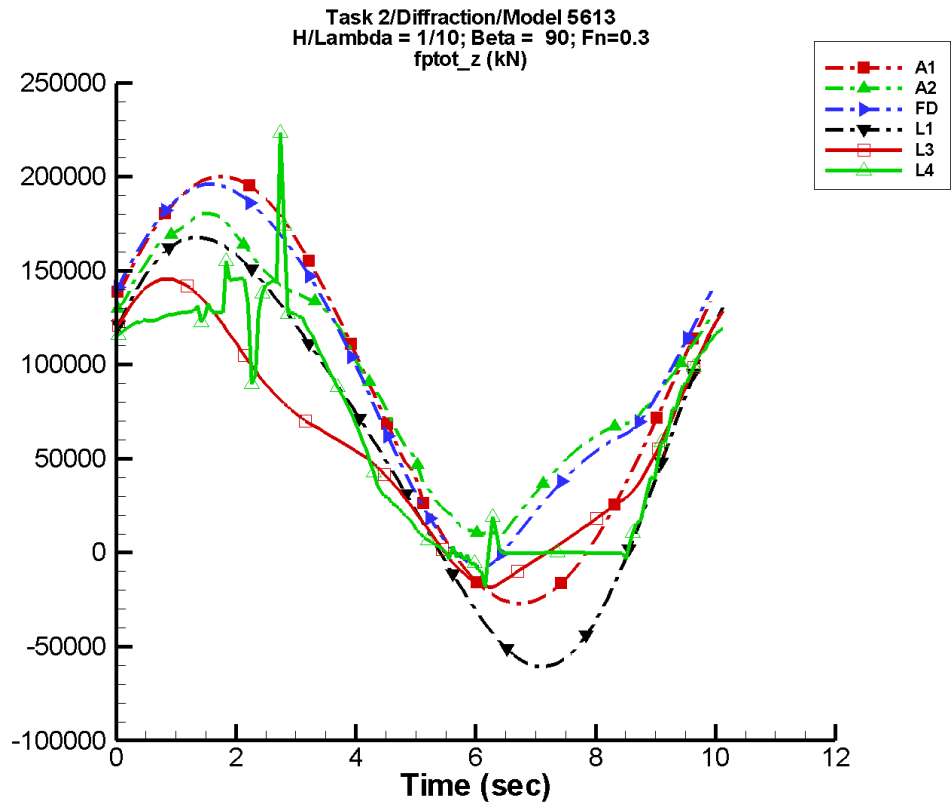
Table G–301. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.63E+04      | 7.56E+04      | 21                | 81.2          | 10                |
| A2   | 9.01E+04      | 6.14E+04      | 22                | 3.83E+03      | -103              |
| FD   | 8.81E+04      | 7.29E+04      | 21                | 1.92E+03      | -109              |
| L1   | 7.07E+04      | 7.35E+04      | 21                | 6.99E+03      | 56                |
| L3   | 6.80E+04      | 5.93E+04      | 29                | 9.45E+03      | 61                |
| L4   | 6.62E+04      | 6.62E+04      | 22                | 6.51E+03      | 86                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 6.87E+04      | 6.00E+04      | 25                | 2.43E+03      | -53               |

Table G–302. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 1.06E+04        | 1.62E+05        | 1.13E+04        | 1.61E+05        |
| A2   | 2.98E+04        | 1.54E+05        | 3.04E+04        | 1.53E+05        |
| FD   | 1.54E+04        | 1.62E+05        | 1.63E+04        | 1.61E+05        |
| L1   | -5.54E+03       | 1.44E+05        | -5.23E+03       | 1.44E+05        |
| L3   | 6.78E+03        | 1.31E+05        | 7.04E+03        | 1.31E+05        |
| L4   | -3.94E+03       | 1.26E+05        | -3.18E+03       | 1.26E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 1.29E+04        | 1.31E+05        | 1.33E+04        | 1.31E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-152. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

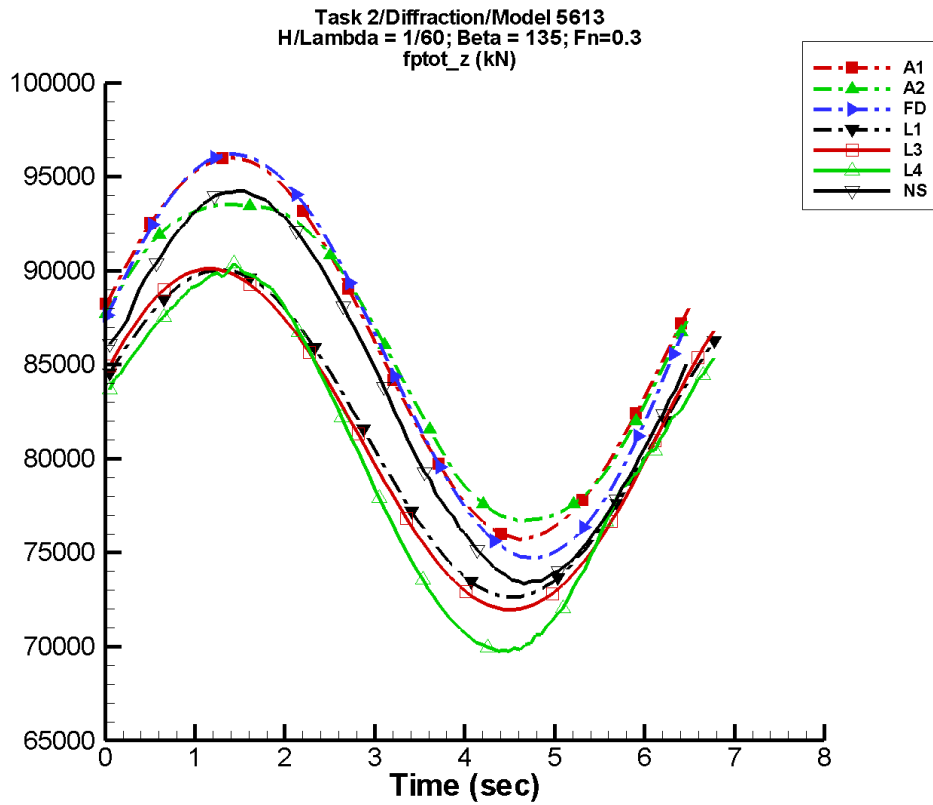
Table G-303. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.65E+04      | 1.13E+05      | 21                | 122.          | 10                |
| A2   | 9.48E+04      | 7.71E+04      | 29                | 6.17E+03      | -96               |
| FD   | 9.64E+04      | 9.48E+04      | 27                | 1.08E+04      | -111              |
| L1   | 5.69E+04      | 1.10E+05      | 21                | 1.57E+04      | 56                |
| L3   | 5.73E+04      | 7.15E+04      | 39                | 1.49E+04      | 50                |
| L4   | 6.28E+04      | 7.87E+04      | 23                | 3.52E+03      | -75               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-304. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.71E+04       | 2.00E+05        | -2.59E+04       | 1.99E+05        |
| A2   | 8.63E+03        | 1.81E+05        | 1.12E+04        | 1.78E+05        |
| FD   | -7.54E+03       | 1.96E+05        | -4.77E+03       | 1.95E+05        |
| L1   | -6.06E+04       | 1.68E+05        | -6.01E+04       | 1.67E+05        |
| L3   | -1.83E+04       | 1.46E+05        | -1.72E+04       | 1.45E+05        |
| L4   | -1.82E+04       | 2.24E+05        | -5.01E+03       | 1.54E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-153. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–305. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

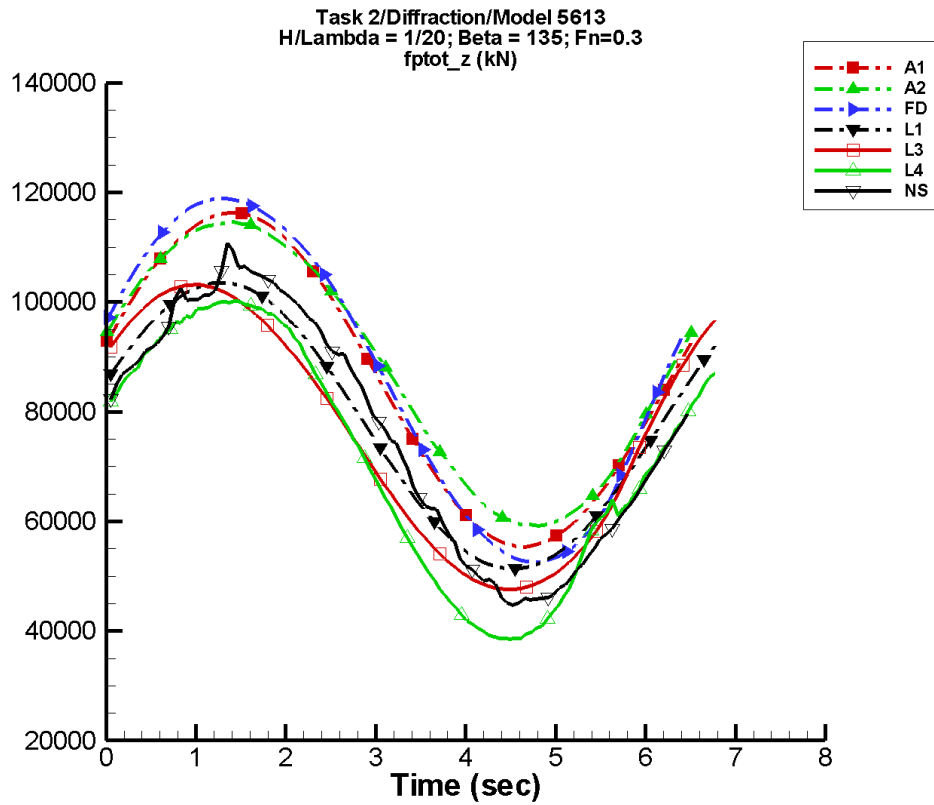
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.01E+04      | 9                 | 11.0          | 158               |
| A2   | 8.56E+04      | 8.77E+03      | 5                 | 571.          | 91                |
| FD   | 8.56E+04      | 1.08E+04      | 9                 | 272.          | 46                |
| L1   | 8.13E+04      | 8.71E+03      | 16                | 22.3          | -62               |
| L3   | 8.10E+04      | 9.12E+03      | 19                | 257.          | 26                |
| L4   | 8.01E+04      | 9.88E+03      | 20                | 777.          | -158              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.38E+04      | 1.03E+04      | 8                 | 38.4          | -103              |

Table G–306. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.57E+04        | 9.61E+04        | 7.60E+04        | 9.60E+04        |
| A2   | 7.67E+04        | 9.37E+04        | 7.69E+04        | 9.36E+04        |
| FD   | 7.47E+04        | 9.62E+04        | 7.50E+04        | 9.60E+04        |
| L1   | 7.26E+04        | 9.00E+04        | 7.27E+04        | 9.00E+04        |
| L3   | 7.20E+04        | 9.01E+04        | 7.20E+04        | 9.00E+04        |
| L4   | 6.98E+04        | 9.04E+04        | 6.99E+04        | 8.99E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.33E+04        | 9.42E+04        | 7.35E+04        | 9.42E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-154. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

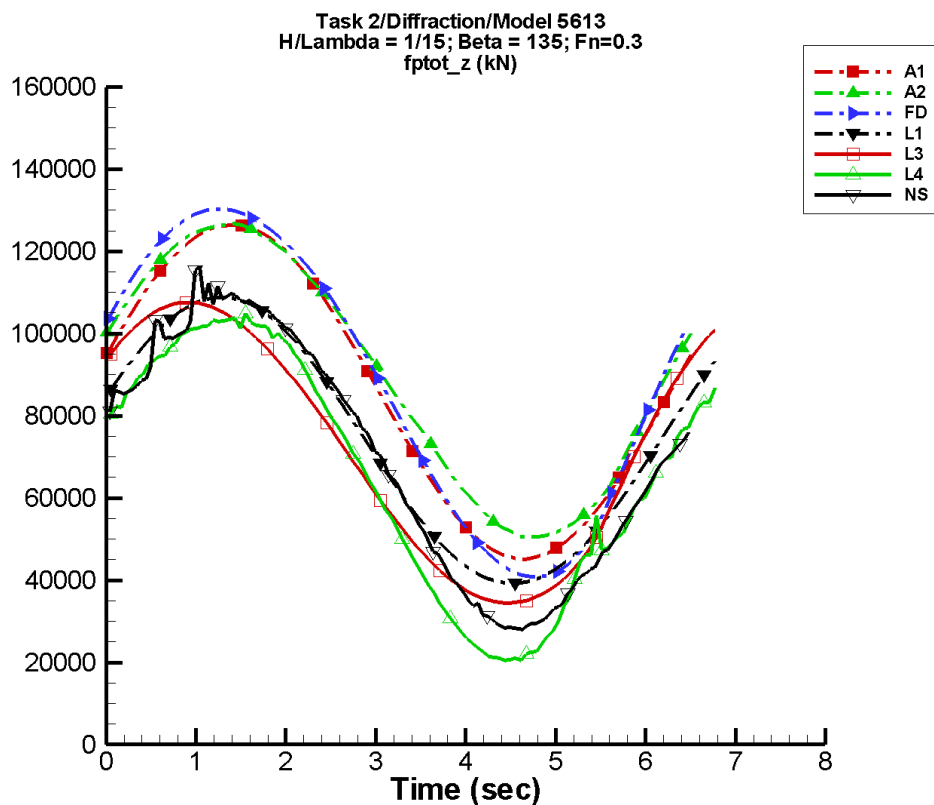
Table G–307. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 3.05E+04      | 9                 | 33.1          | 158               |
| A2   | 8.78E+04      | 2.79E+04      | 6                 | 1.50E+03      | 57                |
| FD   | 8.69E+04      | 3.35E+04      | 13                | 2.27E+03      | 66                |
| L1   | 7.72E+04      | 2.61E+04      | 16                | 191.          | -62               |
| L3   | 7.52E+04      | 2.81E+04      | 25                | 1.95E+03      | 51                |
| L4   | 7.08E+04      | 3.00E+04      | 18                | 2.26E+03      | -173              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.61E+04      | 2.95E+04      | 8                 | 954.          | 168               |

Table G–308. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 5.52E+04        | 1.17E+05        | 5.61E+04        | 1.16E+05        |
| A2   | 5.92E+04        | 1.15E+05        | 5.99E+04        | 1.14E+05        |
| FD   | 5.26E+04        | 1.19E+05        | 5.33E+04        | 1.19E+05        |
| L1   | 5.13E+04        | 1.04E+05        | 5.15E+04        | 1.03E+05        |
| L3   | 4.76E+04        | 1.03E+05        | 4.78E+04        | 1.03E+05        |
| L4   | 3.85E+04        | 1.00E+05        | 3.89E+04        | 9.98E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 4.47E+04        | 1.11E+05        | 4.56E+04        | 1.06E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-155. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

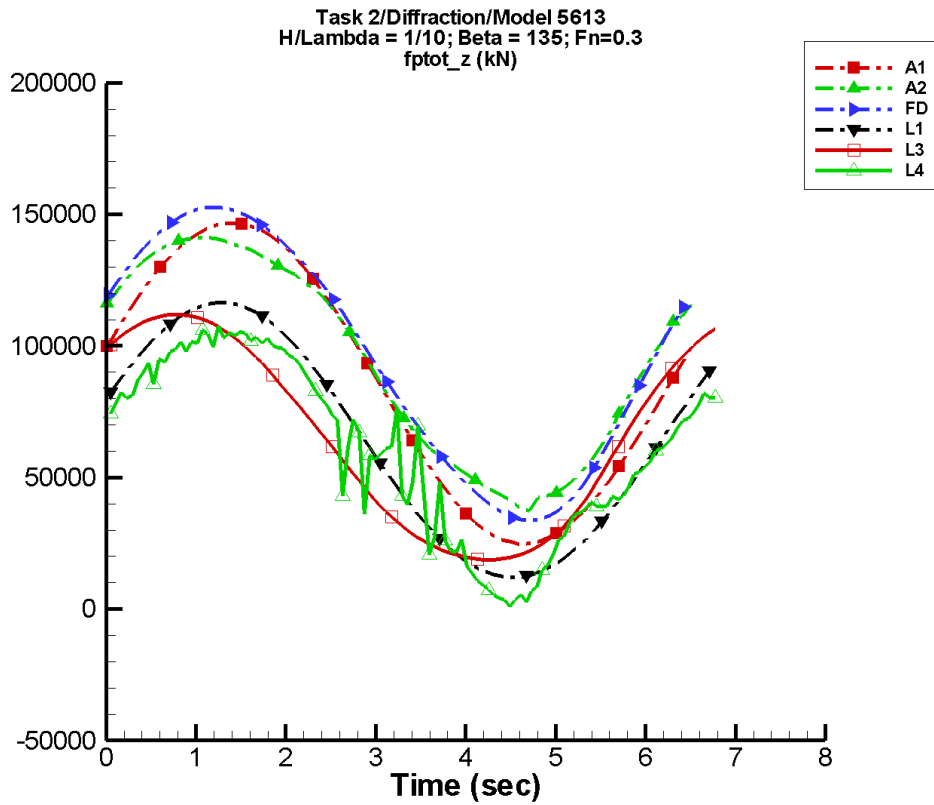
Table G–309. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.60E+04      | 4.08E+04      | 9                 | 44.2          | 158               |
| A2   | 8.97E+04      | 3.79E+04      | 8                 | 2.44E+03      | 49                |
| FD   | 8.79E+04      | 4.48E+04      | 15                | 3.76E+03      | 78                |
| L1   | 7.37E+04      | 3.48E+04      | 16                | 336.          | -62               |
| L3   | 7.09E+04      | 3.69E+04      | 28                | 2.96E+03      | 62                |
| L4   | 6.48E+04      | 4.01E+04      | 18                | 3.08E+03      | 177               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 6.98E+04      | 3.93E+04      | 13                | 990.          | 169               |

Table G–310. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 4.49E+04        | 1.27E+05        | 4.61E+04        | 1.26E+05        |
| A2   | 5.05E+04        | 1.27E+05        | 5.14E+04        | 1.26E+05        |
| FD   | 4.07E+04        | 1.30E+05        | 4.18E+04        | 1.30E+05        |
| L1   | 3.92E+04        | 1.09E+05        | 3.95E+04        | 1.09E+05        |
| L3   | 3.44E+04        | 1.08E+05        | 3.47E+04        | 1.07E+05        |
| L4   | 2.05E+04        | 1.05E+05        | 2.11E+04        | 1.03E+05        |
| NF   | —               | —               | —               | —               |
| NS   | 2.80E+04        | 1.16E+05        | 2.86E+04        | 1.10E+05        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-156. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

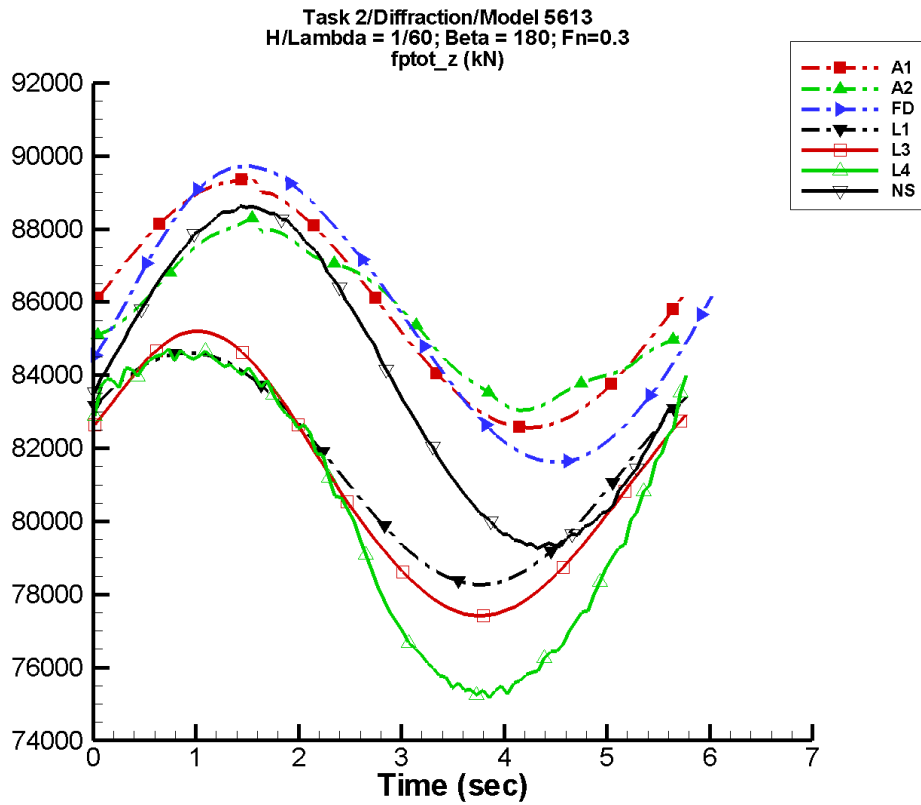
Table G–311. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.60E+04      | 6.11E+04      | 9                 | 66.3          | 158               |
| A2   | 9.35E+04      | 5.09E+04      | 18                | 3.96E+03      | 85                |
| FD   | 9.57E+04      | 5.89E+04      | 19                | 4.08E+03      | 77                |
| L1   | 6.35E+04      | 5.22E+04      | 16                | 752.          | -63               |
| L3   | 6.39E+04      | 4.75E+04      | 39                | 2.64E+03      | 55                |
| L4   | 6.00E+04      | 4.54E+04      | 16                | 2.25E+03      | 152               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–312. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 2.44E+04        | 1.47E+05        | 2.62E+04        | 1.46E+05        |
| A2   | 3.73E+04        | 1.42E+05        | 4.17E+04        | 1.40E+05        |
| FD   | 3.37E+04        | 1.53E+05        | 3.54E+04        | 1.53E+05        |
| L1   | 1.20E+04        | 1.16E+05        | 1.24E+04        | 1.16E+05        |
| L3   | 1.87E+04        | 1.12E+05        | 1.90E+04        | 1.12E+05        |
| L4   | 1.03E+03        | 1.08E+05        | 3.90E+03        | 1.04E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-157. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–313. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 3.34E+03      | -6                | 49.9          | -69               |
| A2   | 8.56E+04      | 2.36E+03      | -20               | 163.          | -172              |
| FD   | 8.56E+04      | 4.04E+03      | -49               | 239.          | -121              |
| L1   | 8.15E+04      | 3.17E+03      | 17                | 31.9          | 108               |
| L3   | 8.11E+04      | 3.81E+03      | 14                | 224.          | -96               |
| L4   | 8.02E+04      | 4.86E+03      | 13                | 255.          | 95                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.39E+04      | 4.63E+03      | -7                | 66.4          | -70               |

Table G–314. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.26E+04        | 8.94E+04        | 8.27E+04        | 8.92E+04        |
| A2   | 8.30E+04        | 8.83E+04        | 8.33E+04        | 8.81E+04        |
| FD   | 8.16E+04        | 8.97E+04        | 8.17E+04        | 8.96E+04        |
| L1   | 7.83E+04        | 8.46E+04        | 7.83E+04        | 8.46E+04        |
| L3   | 7.74E+04        | 8.52E+04        | 7.75E+04        | 8.51E+04        |
| L4   | 7.52E+04        | 8.47E+04        | 7.53E+04        | 8.46E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.93E+04        | 8.86E+04        | 7.94E+04        | 8.85E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613

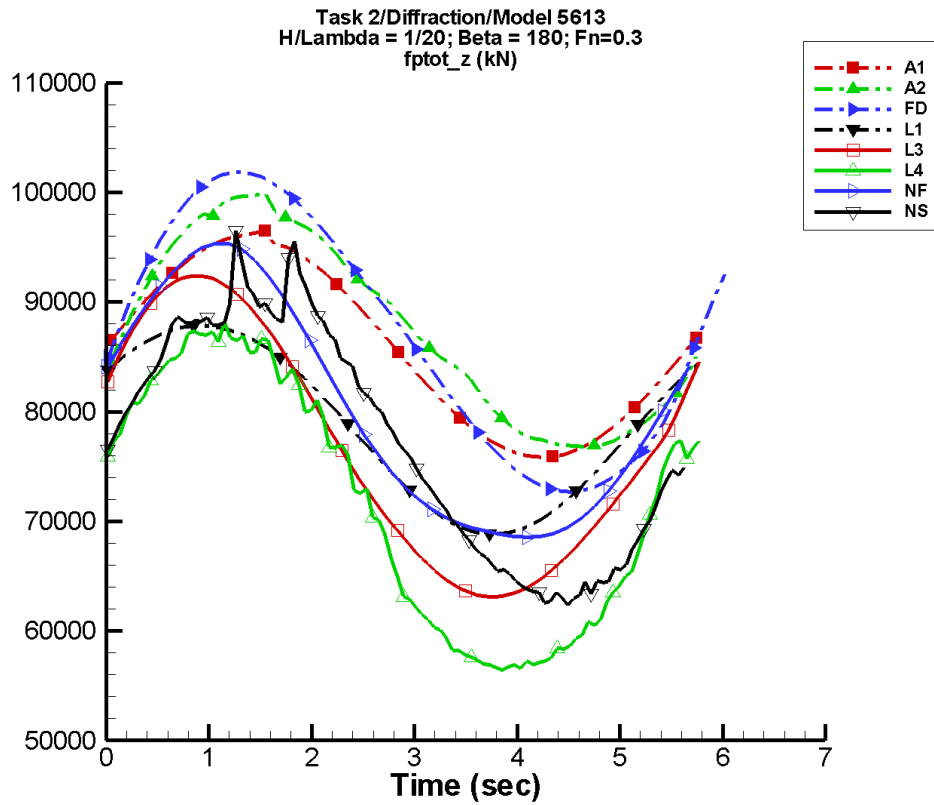


Figure G-158. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–315. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 1.01E+04      | -6                | 150.          | -69               |
| A2   | 8.76E+04      | 1.13E+04      | -18               | 1.74E+03      | -47               |
| FD   | 8.69E+04      | 1.46E+04      | -42               | 1.92E+03      | -91               |
| L1   | 7.86E+04      | 9.52E+03      | 17                | 289.          | 116               |
| L3   | 7.66E+04      | 1.44E+04      | 16                | 1.29E+03      | -54               |
| L4   | 7.15E+04      | 1.57E+04      | 5                 | 255.          | -108              |
| NF   | 8.01E+04      | 1.33E+04      | 103               | 1.84E+03      | 117               |
| NS   | 7.71E+04      | 1.42E+04      | -4                | 290.          | -10               |

Table G–316. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.58E+04        | 9.65E+04        | 7.61E+04        | 9.58E+04        |
| A2   | 7.68E+04        | 1.00E+05        | 7.70E+04        | 9.91E+04        |
| FD   | 7.27E+04        | 1.02E+05        | 7.31E+04        | 1.01E+05        |
| L1   | 6.88E+04        | 8.78E+04        | 6.89E+04        | 8.77E+04        |
| L3   | 6.31E+04        | 9.24E+04        | 6.32E+04        | 9.22E+04        |
| L4   | 5.65E+04        | 8.87E+04        | 5.68E+04        | 8.70E+04        |
| NF   | 6.85E+04        | 9.54E+04        | 6.89E+04        | 9.42E+04        |
| NS   | 6.23E+04        | 9.65E+04        | 6.31E+04        | 9.26E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613

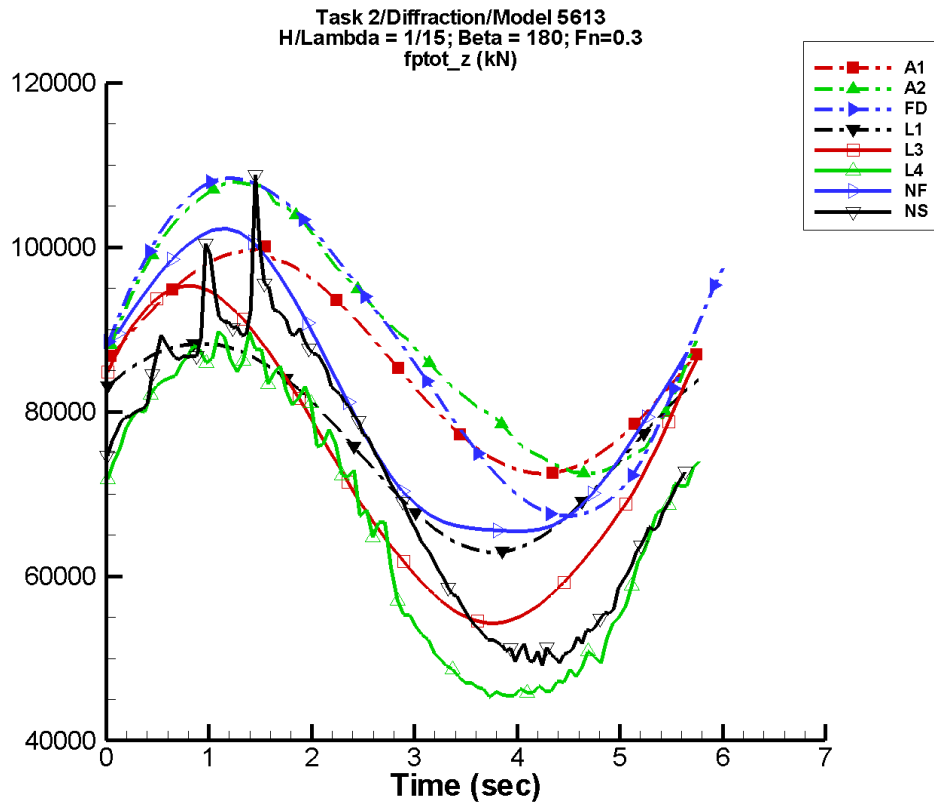


Figure G-159. Time history of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

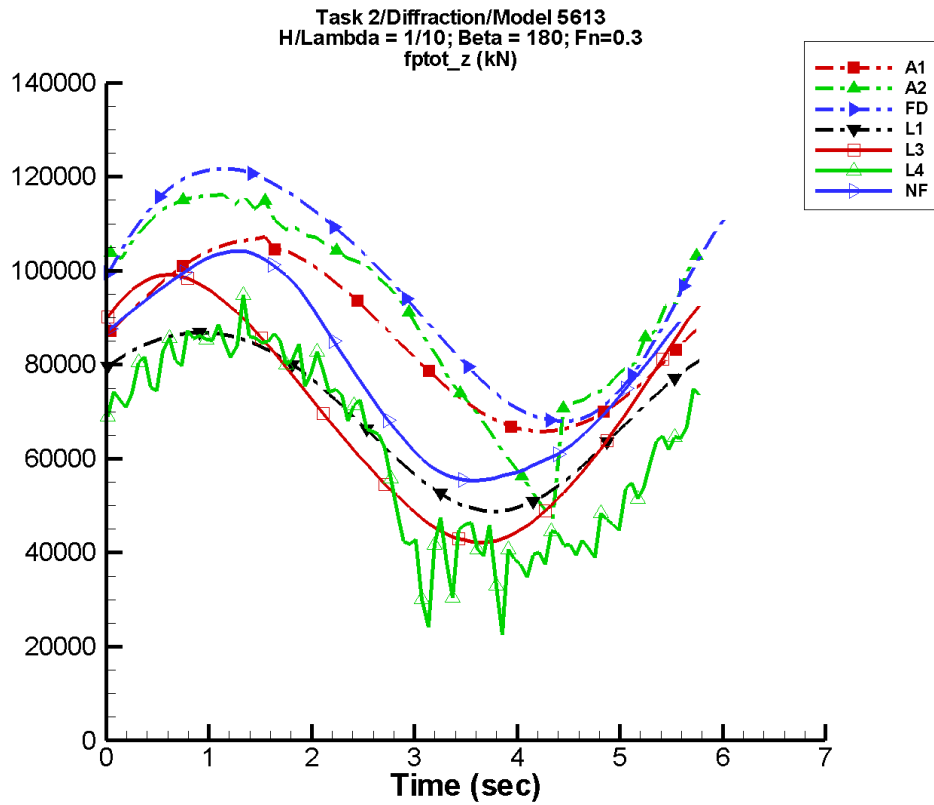
Table G–317. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.58E+04      | 1.34E+04      | -6                | 200.          | -69               |
| A2   | 8.95E+04      | 1.69E+04      | -13               | 3.42E+03      | -38               |
| FD   | 8.80E+04      | 2.05E+04      | -38               | 2.79E+03      | -70               |
| L1   | 7.61E+04      | 1.27E+04      | 17                | 516.          | 117               |
| L3   | 7.34E+04      | 2.03E+04      | 19                | 1.66E+03      | -25               |
| L4   | 6.62E+04      | 2.20E+04      | 3                 | 160.          | -117              |
| NF   | 8.13E+04      | 1.87E+04      | 106               | 2.40E+03      | 101               |
| NS   | 7.17E+04      | 2.17E+04      | 4                 | 166.          | 134               |

Table G–318. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 7.25E+04        | 1.00E+05        | 7.29E+04        | 9.91E+04        |
| A2   | 7.25E+04        | 1.08E+05        | 7.30E+04        | 1.07E+05        |
| FD   | 6.73E+04        | 1.08E+05        | 6.79E+04        | 1.08E+05        |
| L1   | 6.29E+04        | 8.83E+04        | 6.31E+04        | 8.82E+04        |
| L3   | 5.43E+04        | 9.53E+04        | 5.45E+04        | 9.50E+04        |
| L4   | 4.48E+04        | 8.98E+04        | 4.55E+04        | 8.75E+04        |
| NF   | 6.54E+04        | 1.02E+05        | 6.56E+04        | 1.01E+05        |
| NS   | 4.92E+04        | 1.09E+05        | 5.02E+04        | 9.56E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NSHIPMO.

Figure G-160. Time history of  $F_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

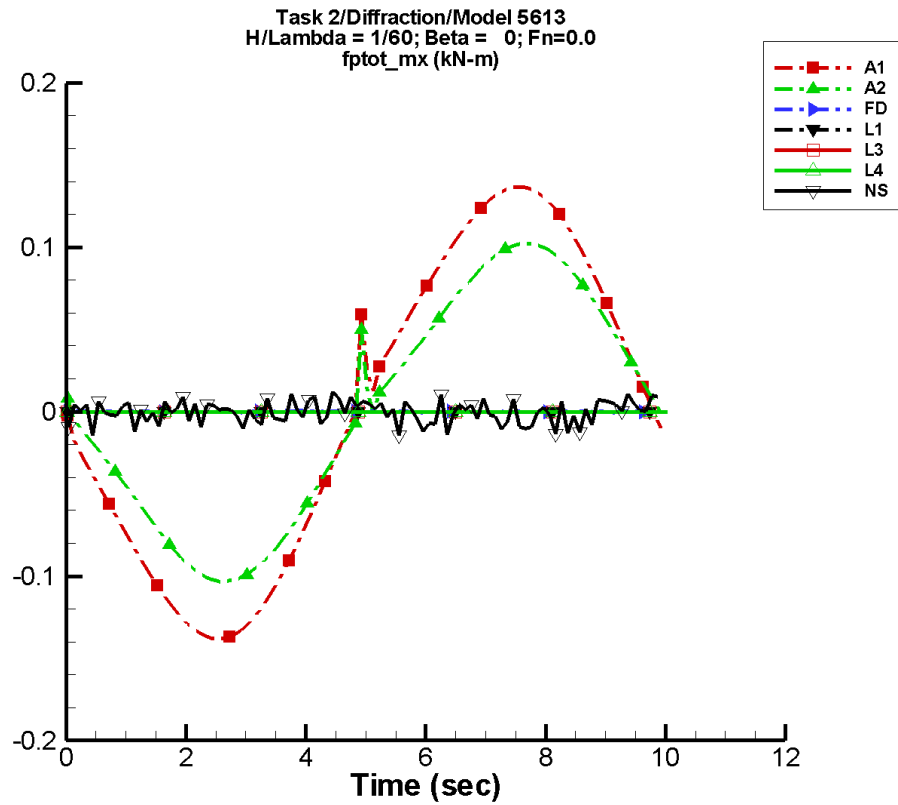
Table G–319. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.57E+04      | 2.01E+04      | -6                | 301.          | -69               |
| A2   | 9.17E+04      | 2.73E+04      | 1                 | 5.11E+03      | 71                |
| FD   | 9.58E+04      | 2.68E+04      | -34               | 3.74E+03      | -49               |
| L1   | 6.90E+04      | 1.90E+04      | 17                | 1.16E+03      | 118               |
| L3   | 6.94E+04      | 2.79E+04      | 29                | 1.94E+03      | 19                |
| L4   | 6.15E+04      | 2.62E+04      | 2                 | 1.91E+03      | -165              |
| NF   | 8.00E+04      | 2.57E+04      | 86                | 3.11E+03      | 9                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–320. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 6.57E+04        | 1.07E+05        | 6.64E+04        | 1.06E+05        |
| A2   | 4.74E+04        | 1.16E+05        | 5.86E+04        | 1.15E+05        |
| FD   | 6.80E+04        | 1.22E+05        | 6.88E+04        | 1.21E+05        |
| L1   | 4.88E+04        | 8.68E+04        | 4.91E+04        | 8.67E+04        |
| L3   | 4.22E+04        | 9.91E+04        | 4.25E+04        | 9.87E+04        |
| L4   | 2.25E+04        | 9.49E+04        | 3.64E+04        | 8.65E+04        |
| NF   | 5.53E+04        | 1.10E+05        | 5.56E+04        | 1.10E+05        |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-161. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–321. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

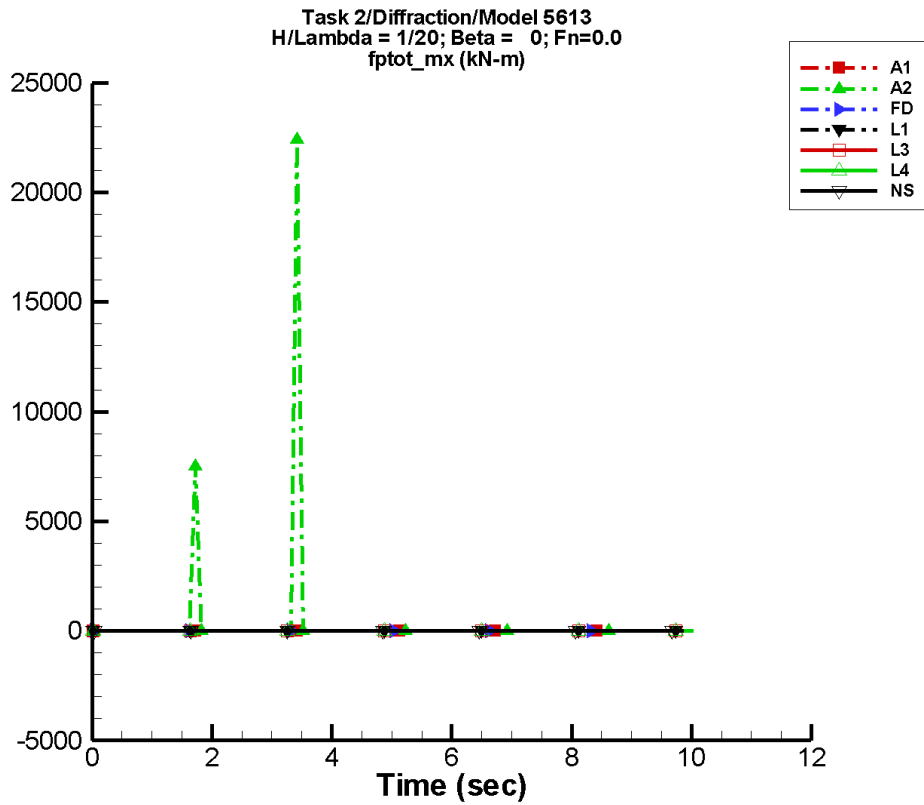
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.12E-04        | 0.131           | 178               | 6.72E-04        | 26                |
| A2   | 6.68E-04        | 9.55E-02        | 173               | 6.76E-04        | 17                |
| FD   | -2.22E-05       | 1.42E-05        | 110               | 9.32E-05        | 128               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.44E-04       | 1.26E-03        | -6                | 2.43E-03        | 117               |

Table G–322. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.138            | 0.137             | -0.136            | 0.135             |
| A2   | -0.104            | 0.102             | -0.102            | 0.101             |
| FD   | -7.35E-04         | 6.45E-04          | -2.09E-04         | 2.55E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.74E-02         | 1.88E-02          | -5.16E-03         | 5.44E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-162. Time history of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

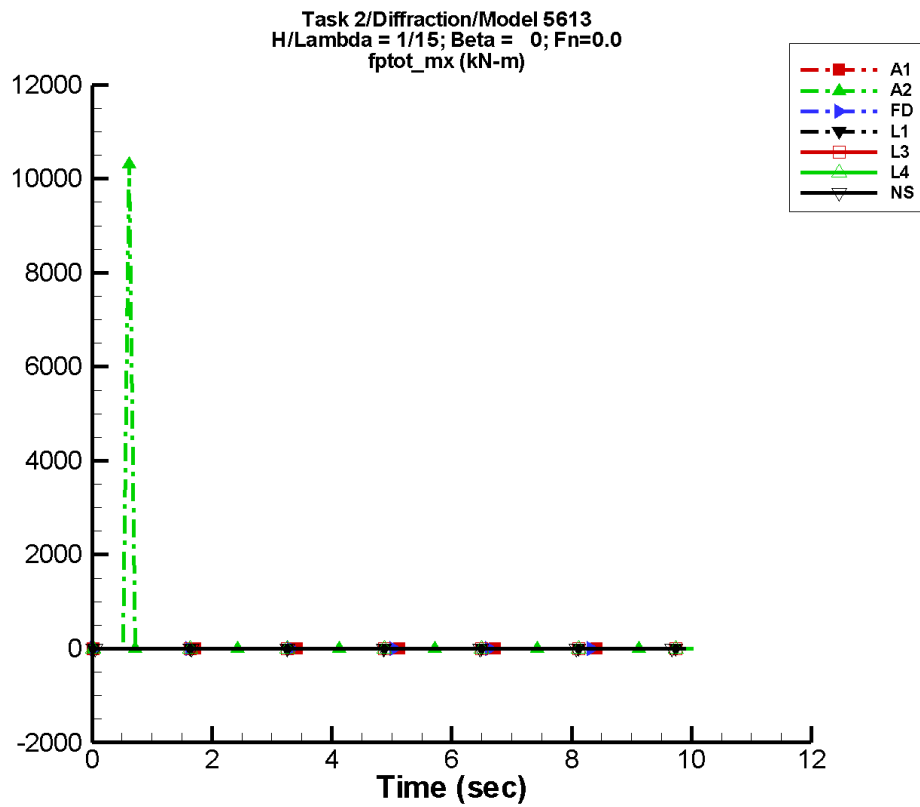
Table G–323. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.14E-03        | 0.393           | 178               | 2.02E-03        | 26                |
| A2   | 318.            | 536.            | -19               | 313.            | -147              |
| FD   | 9.23E-06        | 3.12E-05        | 88                | 3.10E-05        | -11               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 5.21E-04        | 2.03E-03        | 68                | 6.85E-03        | 63                |

Table G–324. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.415            | 0.411             | -0.410            | 0.405             |
| A2   | -0.313            | 2.24E+04          | -315.             | 2.99E+03          |
| FD   | -8.14E-04         | 1.09E-03          | -1.97E-04         | 2.28E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.61E-02         | 5.47E-02          | -1.96E-02         | 3.10E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-163. Time history of  $M_x^{tot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

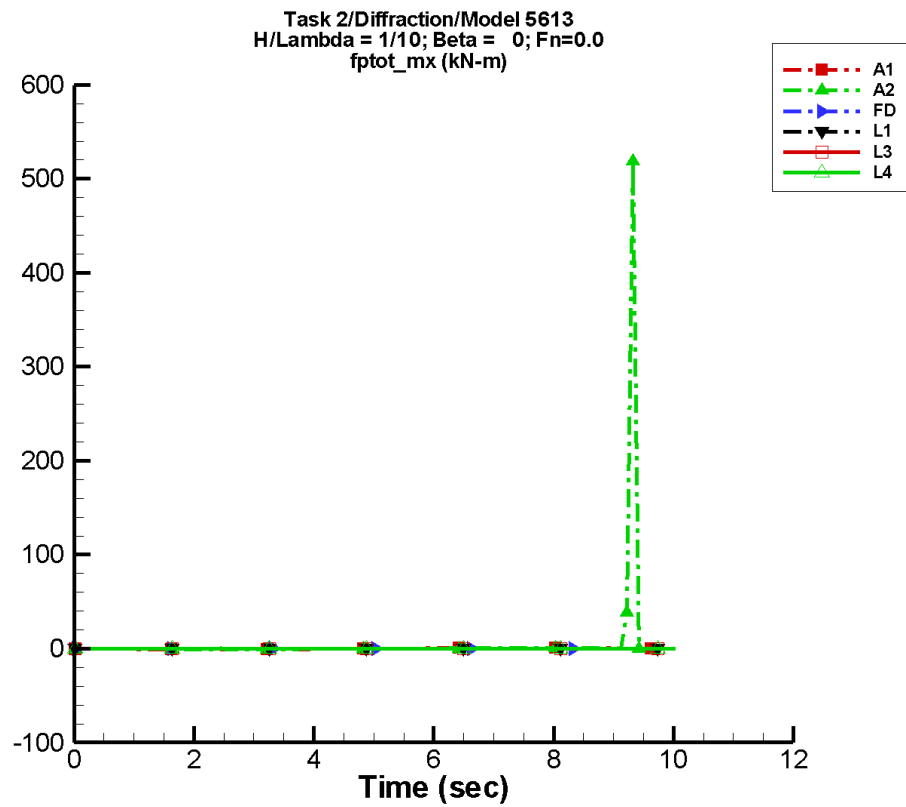
Table G–325. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.86E-03        | 0.525           | 178               | 2.70E-03        | 26                |
| A2   | 54.3            | 116.            | 70                | 135.            | 45                |
| FD   | 1.29E-05        | 7.71E-05        | 36                | 4.87E-05        | -52               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.26E-03        | 9.63E-04        | -112              | 3.96E-03        | -56               |

Table G–326. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.555            | 0.549             | -0.547            | 0.541             |
| A2   | -0.418            | 1.03E+04          | -118.             | 1.38E+03          |
| FD   | -6.59E-04         | 8.22E-04          | -1.95E-04         | 2.99E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.51E-02         | 7.21E-02          | -9.58E-03         | 3.66E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-164. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

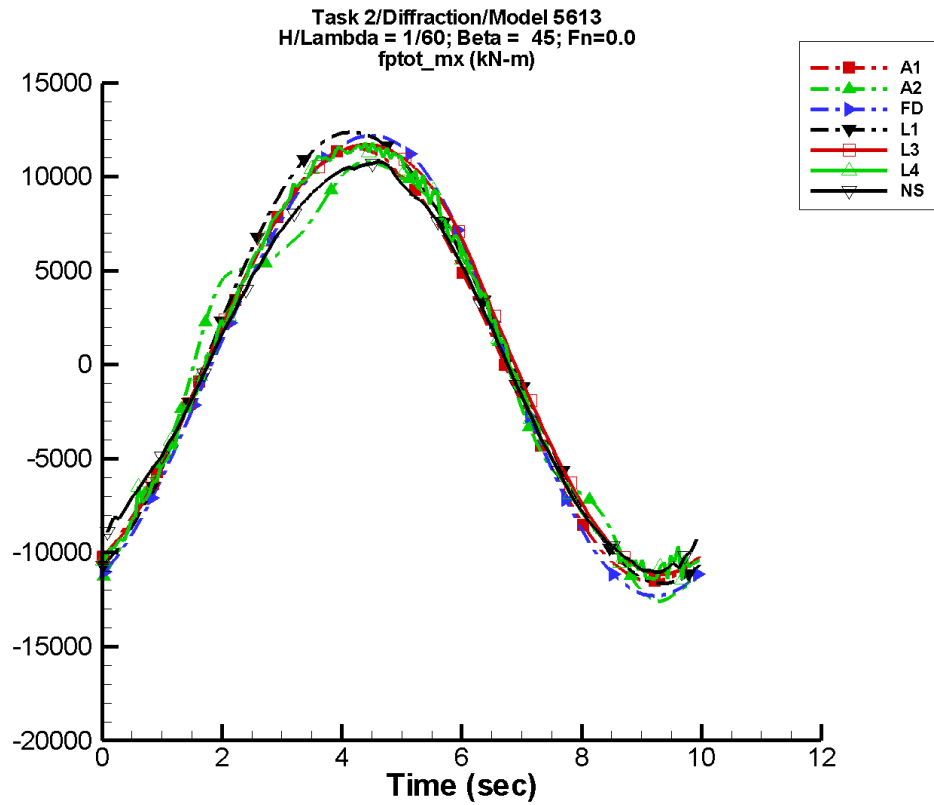
Table G–327. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.29E-03        | 0.788           | 178               | 4.05E-03        | 26                |
| A2   | 3.81            | 8.56            | 126               | 11.0            | 150               |
| FD   | -4.06E-05       | 2.49E-05        | 170               | 4.80E-05        | -31               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–328. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.832            | 0.823             | -0.820            | 0.812             |
| A2   | -199.             | 519.              | -24.3             | 73.4              |
| FD   | -1.08E-03         | 1.08E-03          | -3.05E-04         | 2.44E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-165. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–329. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

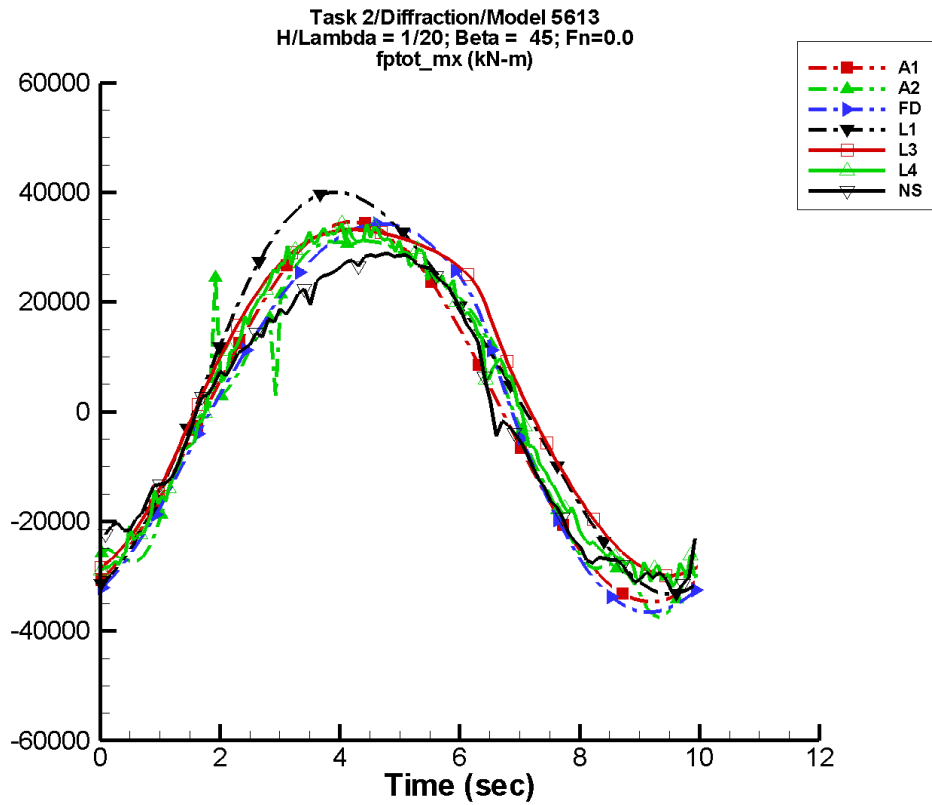
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.92            | 1.15E+04        | -68               | 8.67            | -138              |
| A2   | 26.7            | 1.12E+04        | -69               | 1.15E+03        | -42               |
| FD   | -8.77           | 1.23E+04        | -75               | 467.            | 20                |
| L1   | 544.            | 1.20E+04        | -69               | 436.            | -114              |
| L3   | 538.            | 1.16E+04        | -71               | 310.            | -31               |
| L4   | 357.            | 1.15E+04        | -70               | 110.            | -41               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 79.0            | 1.07E+04        | -65               | 348.            | 33                |

Table G–330. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.15E+04         | 1.15E+04          | -1.14E+04         | 1.14E+04          |
| A2   | -1.26E+04         | 1.08E+04          | -1.23E+04         | 1.06E+04          |
| FD   | -1.23E+04         | 1.22E+04          | -1.22E+04         | 1.21E+04          |
| L1   | -1.16E+04         | 1.24E+04          | -1.16E+04         | 1.23E+04          |
| L3   | -1.12E+04         | 1.17E+04          | -1.11E+04         | 1.17E+04          |
| L4   | -1.14E+04         | 1.18E+04          | -1.10E+04         | 1.15E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.10E+04         | 1.08E+04          | -1.09E+04         | 1.06E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-166. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

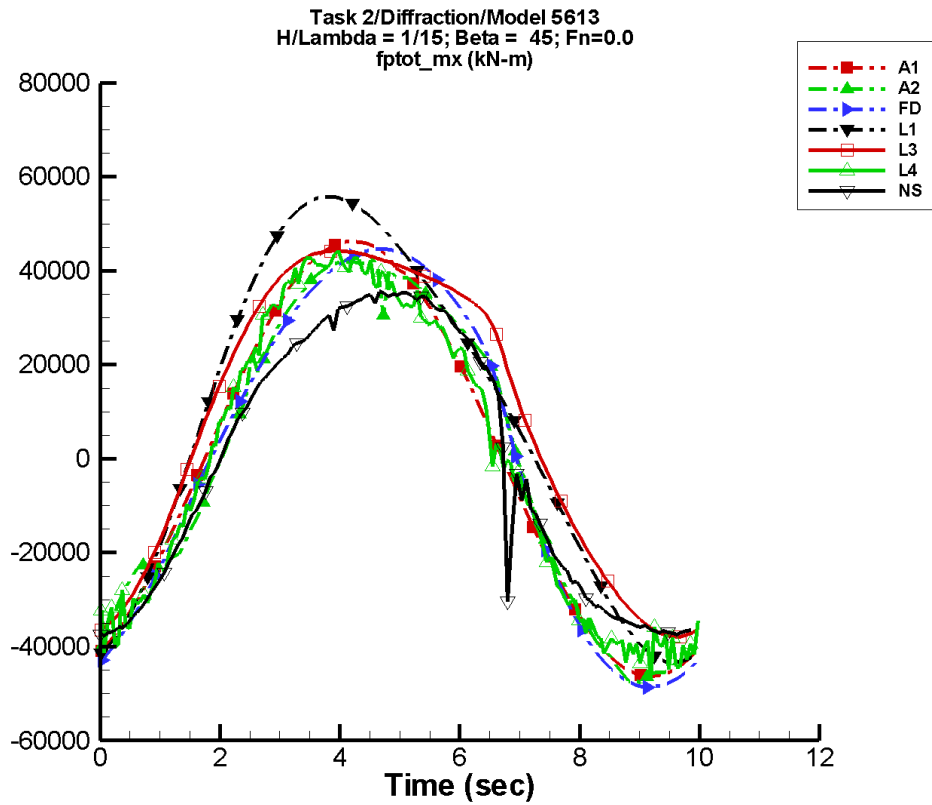
Table G–331. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 8.80            | 3.46E+04        | -68               | 26.1            | -138              |
| A2   | -103.           | 3.35E+04        | -73               | 1.56E+03        | -12               |
| FD   | -78.8           | 3.62E+04        | -77               | 3.44E+03        | 3                 |
| L1   | 4.86E+03        | 3.59E+04        | -69               | 3.95E+03        | -115              |
| L3   | 4.89E+03        | 3.28E+04        | -75               | 3.57E+03        | -63               |
| L4   | 2.15E+03        | 3.28E+04        | -72               | 1.49E+03        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -114.           | 3.00E+04        | -65               | 2.67E+03        | 26                |

Table G–332. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.47E+04         | 3.46E+04          | -3.43E+04         | 3.43E+04          |
| A2   | -3.75E+04         | 3.12E+04          | -3.49E+04         | 3.10E+04          |
| FD   | -3.66E+04         | 3.43E+04          | -3.62E+04         | 3.40E+04          |
| L1   | -3.33E+04         | 4.01E+04          | -3.31E+04         | 3.99E+04          |
| L3   | -2.99E+04         | 3.32E+04          | -2.98E+04         | 3.32E+04          |
| L4   | -3.20E+04         | 3.50E+04          | -2.98E+04         | 3.27E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.29E+04         | 2.89E+04          | -3.08E+04         | 2.84E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-167. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

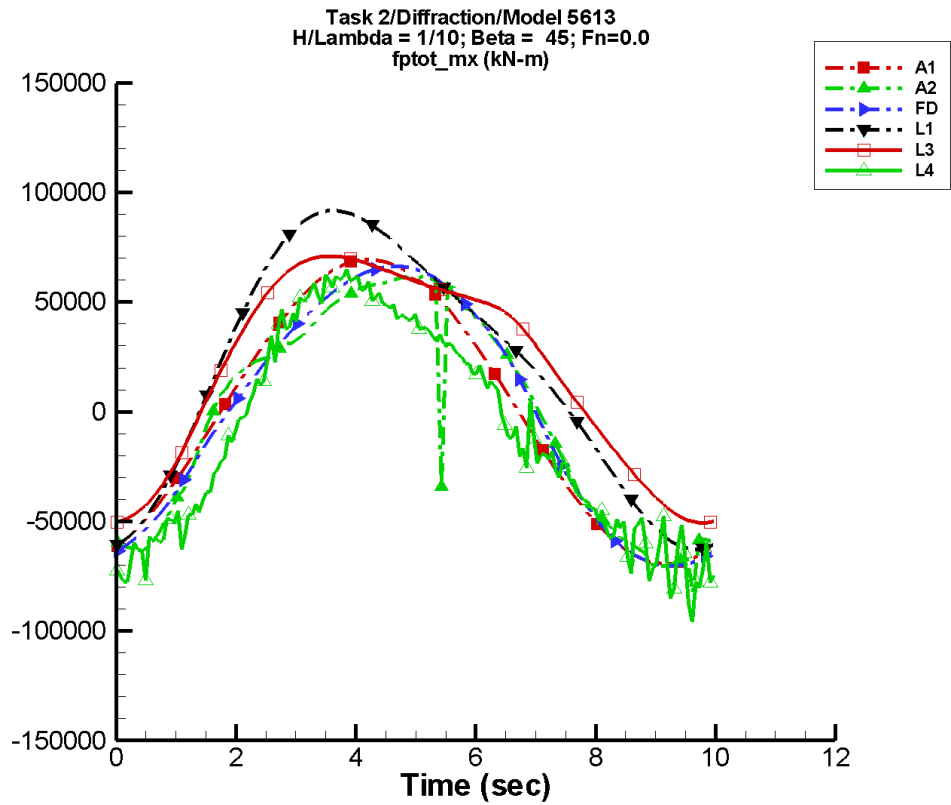
Table G-333. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 11.7            | 4.62E+04        | -68               | 34.8            | -138              |
| A2   | -143.           | 4.41E+04        | -75               | 3.01E+03        | 24                |
| FD   | -82.5           | 4.77E+04        | -78               | 5.03E+03        | -7                |
| L1   | 8.63E+03        | 4.79E+04        | -69               | 7.03E+03        | -115              |
| L3   | 8.71E+03        | 4.23E+04        | -76               | 6.79E+03        | -77               |
| L4   | -134.           | 4.36E+04        | -68               | 1.67E+03        | -126              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.61E+03       | 3.88E+04        | -73               | 1.36E+03        | 33                |

Table G-334. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.63E+04         | 4.63E+04          | -4.58E+04         | 4.58E+04          |
| A2   | -4.77E+04         | 4.27E+04          | -4.62E+04         | 4.15E+04          |
| FD   | -4.86E+04         | 4.46E+04          | -4.82E+04         | 4.43E+04          |
| L1   | -4.34E+04         | 5.58E+04          | -4.32E+04         | 5.56E+04          |
| L3   | -3.79E+04         | 4.43E+04          | -3.77E+04         | 4.42E+04          |
| L4   | -4.70E+04         | 4.44E+04          | -4.14E+04         | 4.21E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.76E+04         | 3.57E+04          | -3.76E+04         | 3.49E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-168. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

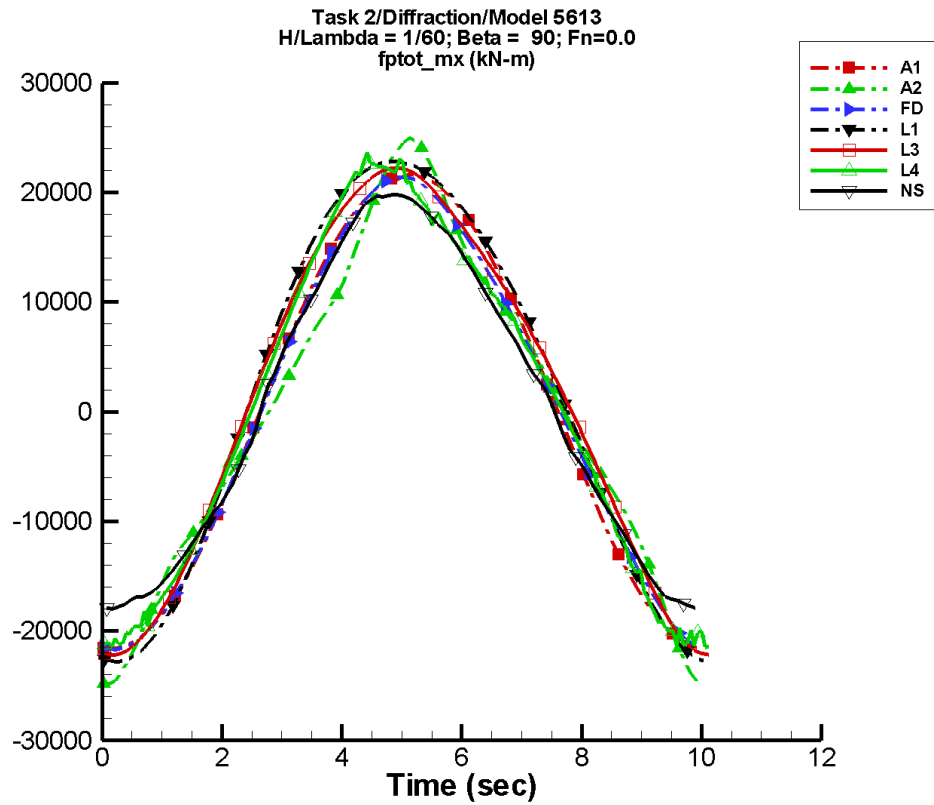
Table G-335. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 17.6            | 6.94E+04        | -68               | 52.2            | -138              |
| A2   | -1.18E+03       | 6.54E+04        | -75               | 7.76E+03        | -52               |
| FD   | -68.8           | 6.93E+04        | -79               | 5.32E+03        | -13               |
| L1   | 1.94E+04        | 7.19E+04        | -69               | 1.58E+04        | -115              |
| L3   | 1.94E+04        | 5.86E+04        | -78               | 1.52E+04        | -99               |
| L4   | -9.42E+03       | 6.40E+04        | -72               | 1.01E+04        | -158              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-336. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.94E+04         | 6.94E+04          | -6.87E+04         | 6.87E+04          |
| A2   | -8.23E+04         | 6.20E+04          | -6.92E+04         | 6.05E+04          |
| FD   | -7.05E+04         | 6.64E+04          | -6.97E+04         | 6.57E+04          |
| L1   | -6.28E+04         | 9.17E+04          | -6.23E+04         | 9.14E+04          |
| L3   | -5.09E+04         | 7.10E+04          | -5.05E+04         | 7.08E+04          |
| L4   | -9.58E+04         | 6.66E+04          | -7.62E+04         | 6.07E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-169. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–337. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

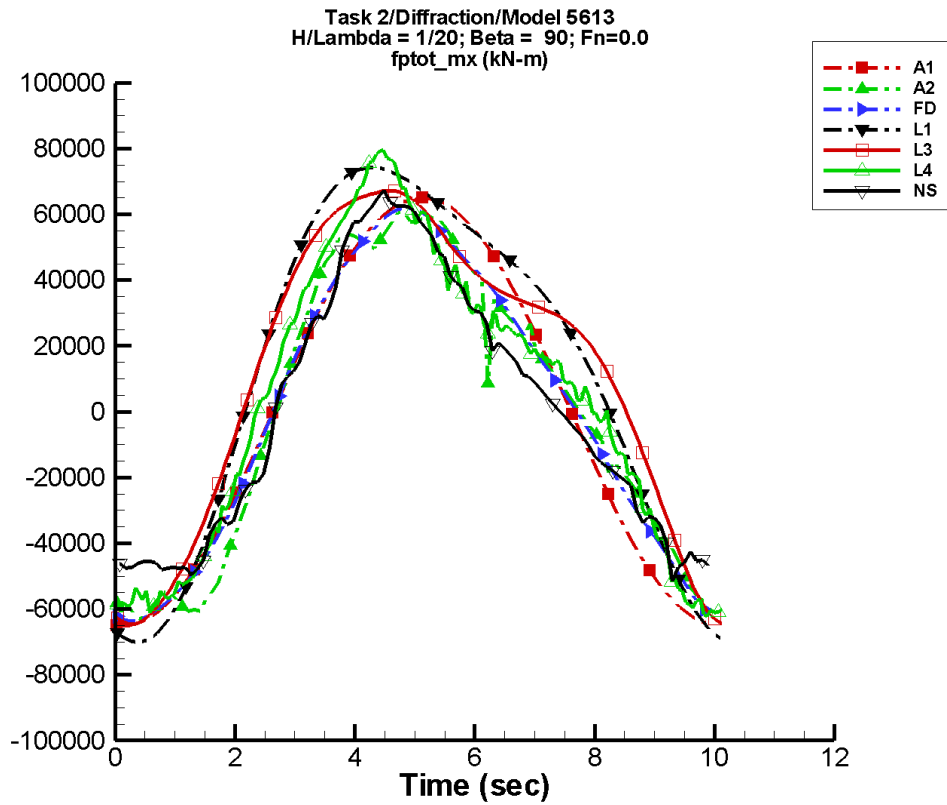
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 17.8            | 2.16E+04        | -100              | 24.1            | -166              |
| A2   | 26.0            | 2.01E+04        | -102              | 646.            | -63               |
| FD   | -17.7           | 2.08E+04        | -104              | 766.            | 161               |
| L1   | 1.39E+03        | 2.27E+04        | -98               | 1.84E+03        | -146              |
| L3   | 1.39E+03        | 2.12E+04        | -98               | 1.92E+03        | -146              |
| L4   | 709.            | 2.07E+04        | -96               | 1.47E+03        | -173              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 87.1            | 1.85E+04        | -94               | 1.17E+03        | 130               |

Table G–338. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.16E+04         | 2.17E+04          | -2.17E+04         | 2.14E+04          |
| A2   | -2.48E+04         | 2.50E+04          | -2.47E+04         | 2.38E+04          |
| FD   | -2.17E+04         | 2.14E+04          | -2.17E+04         | 2.11E+04          |
| L1   | -2.28E+04         | 2.28E+04          | -2.28E+04         | 2.27E+04          |
| L3   | -2.22E+04         | 2.22E+04          | -2.22E+04         | 2.21E+04          |
| L4   | -2.15E+04         | 2.36E+04          | -2.13E+04         | 2.25E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.80E+04         | 1.98E+04          | -1.79E+04         | 1.96E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-170. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

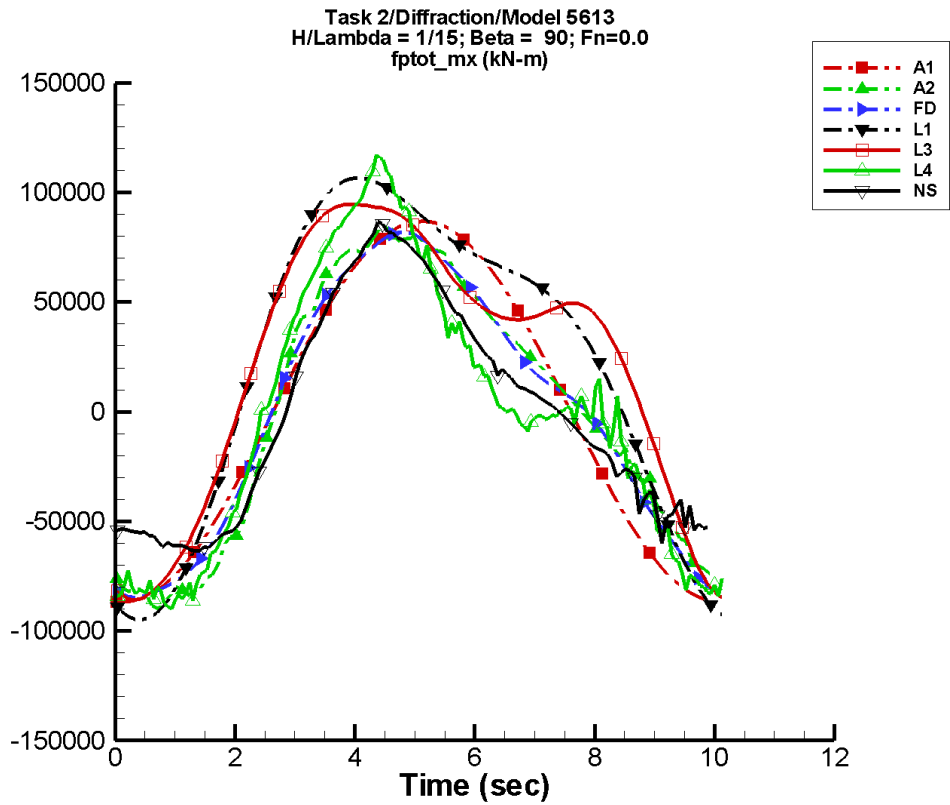
Table G–339. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 53.5            | 6.51E+04        | -100              | 72.5            | -166              |
| A2   | -234.           | 5.89E+04        | -103              | 1.15E+04        | 161               |
| FD   | -48.3           | 5.92E+04        | -104              | 6.12E+03        | 164               |
| L1   | 1.25E+04        | 6.80E+04        | -98               | 1.66E+04        | -146              |
| L3   | 1.25E+04        | 5.80E+04        | -99               | 1.82E+04        | -149              |
| L4   | 4.47E+03        | 5.88E+04        | -96               | 1.38E+04        | -180              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -224.           | 5.20E+04        | -93               | 1.13E+04        | 141               |

Table G–340. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.50E+04         | 6.52E+04          | -6.52E+04         | 6.43E+04          |
| A2   | -6.33E+04         | 6.06E+04          | -5.95E+04         | 5.88E+04          |
| FD   | -6.36E+04         | 6.20E+04          | -6.31E+04         | 6.07E+04          |
| L1   | -7.01E+04         | 7.42E+04          | -6.96E+04         | 7.40E+04          |
| L3   | -6.46E+04         | 6.72E+04          | -6.40E+04         | 6.69E+04          |
| L4   | -6.22E+04         | 7.96E+04          | -6.02E+04         | 7.70E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.14E+04         | 6.75E+04          | -4.75E+04         | 6.36E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-171. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

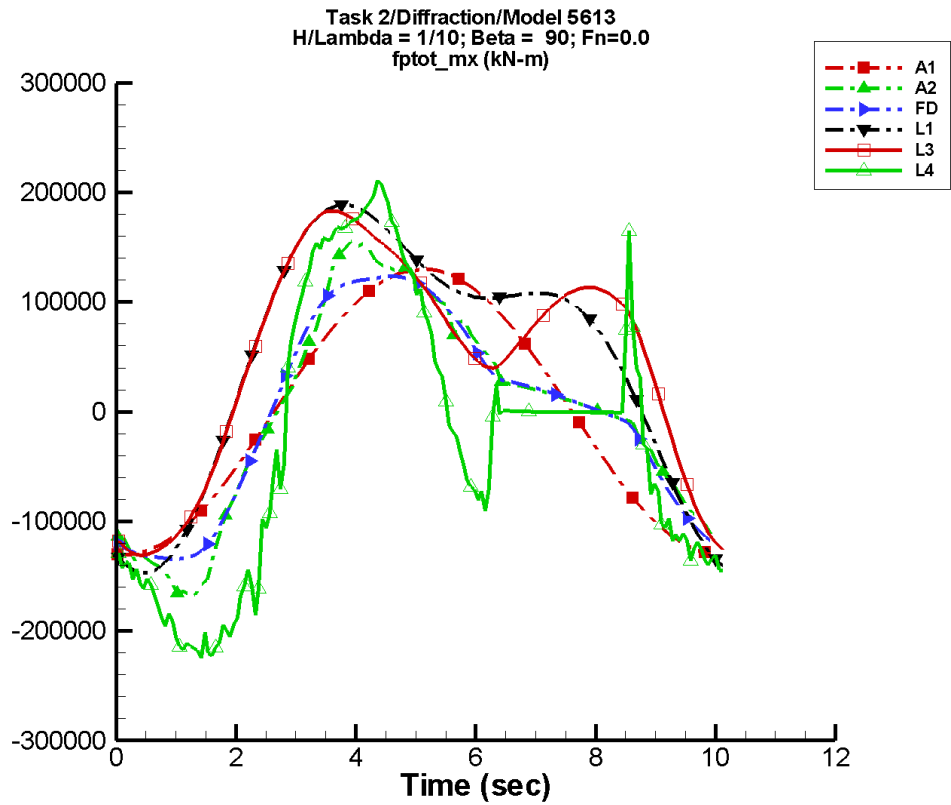
Table G–341. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 71.4            | 8.69E+04        | -100              | 96.9            | -166              |
| A2   | 197.            | 7.93E+04        | -103              | 1.97E+04        | 162               |
| FD   | -78.4           | 7.78E+04        | -104              | 1.35E+04        | 163               |
| L1   | 2.22E+04        | 9.07E+04        | -98               | 2.94E+04        | -146              |
| L3   | 2.22E+04        | 7.43E+04        | -99               | 3.45E+04        | -152              |
| L4   | -502.           | 7.69E+04        | -91               | 3.19E+04        | 166               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.97E+03       | 6.36E+04        | -95               | 2.00E+04        | 138               |

Table G–342. Minimum and maximum of of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.68E+04         | 8.70E+04          | -8.71E+04         | 8.58E+04          |
| A2   | -8.98E+04         | 8.42E+04          | -8.48E+04         | 8.01E+04          |
| FD   | -8.47E+04         | 8.19E+04          | -8.34E+04         | 8.02E+04          |
| L1   | -9.48E+04         | 1.07E+05          | -9.41E+04         | 1.06E+05          |
| L3   | -8.59E+04         | 9.46E+04          | -8.49E+04         | 9.44E+04          |
| L4   | -8.98E+04         | 1.17E+05          | -8.56E+04         | 1.10E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.35E+04         | 8.65E+04          | -6.22E+04         | 8.15E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-172. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

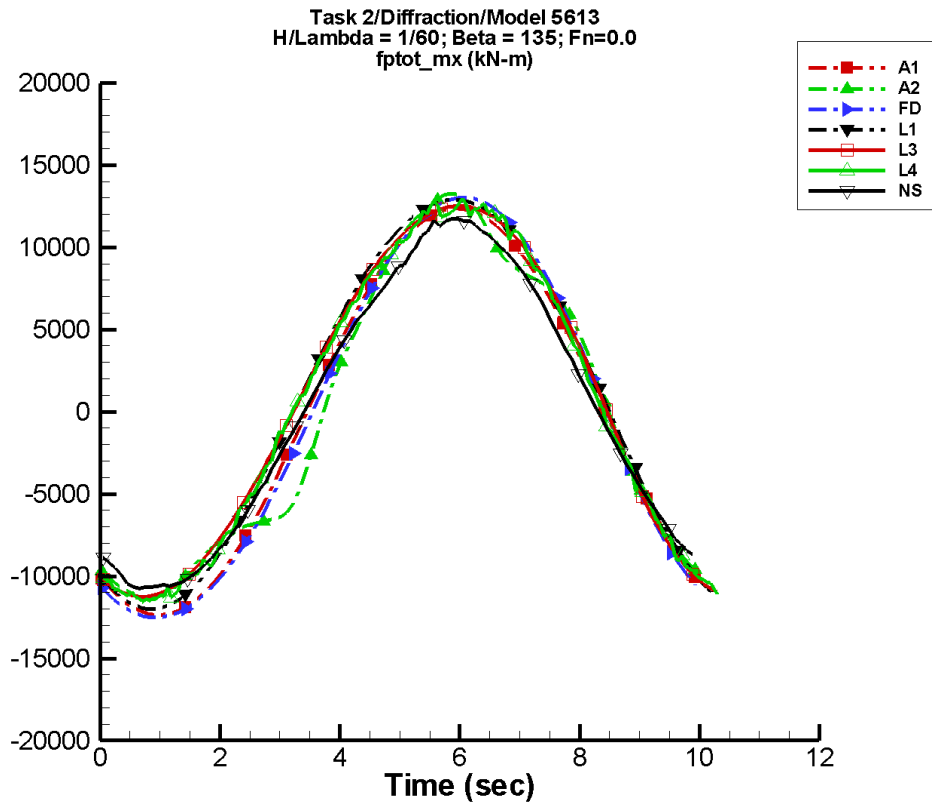
Table G-343. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 107.            | 1.30E+05        | -100              | 145.            | -166              |
| A2   | 161.            | 1.21E+05        | -103              | 5.21E+04        | 164               |
| FD   | 109.            | 1.15E+05        | -104              | 4.20E+04        | 163               |
| L1   | 5.00E+04        | 1.36E+05        | -98               | 6.62E+04        | -146              |
| L3   | 5.00E+04        | 1.04E+05        | -99               | 8.53E+04        | -156              |
| L4   | -2.35E+04       | 1.26E+05        | -105              | 1.06E+05        | 161               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-344. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.30E+05         | 1.31E+05          | -1.31E+05         | 1.29E+05          |
| A2   | -1.71E+05         | 1.55E+05          | -1.59E+05         | 1.46E+05          |
| FD   | -1.34E+05         | 1.24E+05          | -1.33E+05         | 1.22E+05          |
| L1   | -1.47E+05         | 1.89E+05          | -1.45E+05         | 1.88E+05          |
| L3   | -1.31E+05         | 1.83E+05          | -1.30E+05         | 1.82E+05          |
| L4   | -2.32E+05         | 2.11E+05          | -2.20E+05         | 1.95E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-173. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–345. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

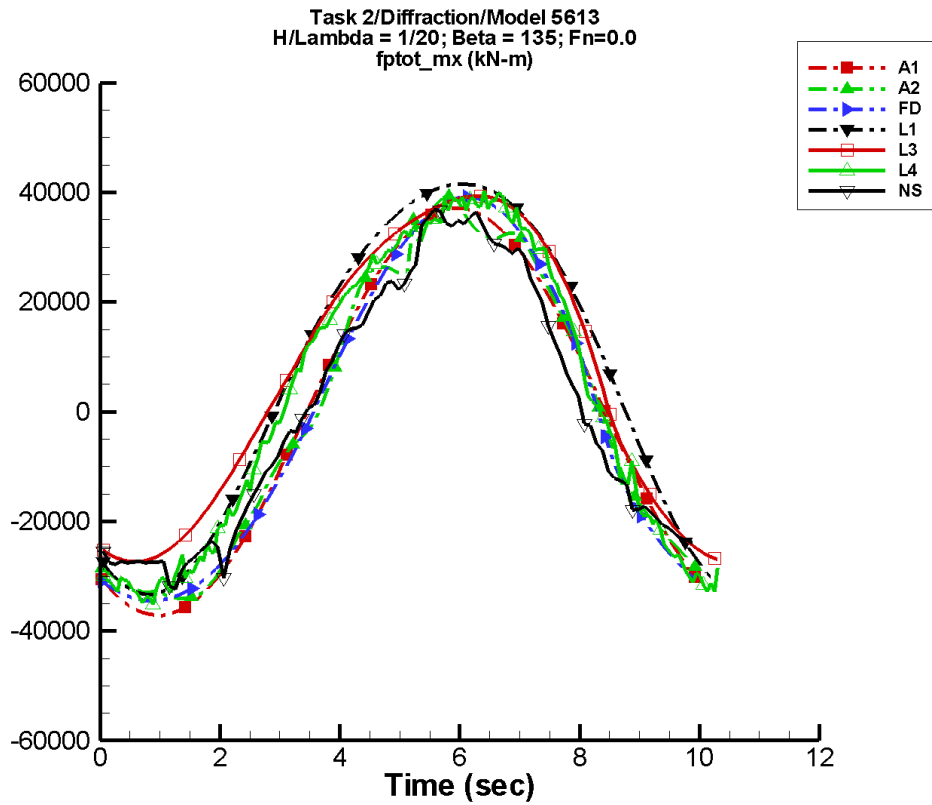
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 14.4            | 1.24E+04        | -130              | 14.6            | 169               |
| A2   | 29.7            | 1.18E+04        | -133              | 1.03E+03        | -10               |
| FD   | 8.40            | 1.29E+04        | -135              | 426.            | -52               |
| L1   | 840.            | 1.24E+04        | -127              | 428.            | -141              |
| L3   | 843.            | 1.20E+04        | -126              | 638.            | -91               |
| L4   | 695.            | 1.20E+04        | -126              | 529.            | -85               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 71.7            | 1.10E+04        | -124              | 326.            | -6                |

Table G–346. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.24E+04         | 1.24E+04          | -1.23E+04         | 1.22E+04          |
| A2   | -1.14E+04         | 1.33E+04          | -1.12E+04         | 1.29E+04          |
| FD   | -1.25E+04         | 1.30E+04          | -1.24E+04         | 1.29E+04          |
| L1   | -1.20E+04         | 1.29E+04          | -1.19E+04         | 1.28E+04          |
| L3   | -1.13E+04         | 1.25E+04          | -1.12E+04         | 1.25E+04          |
| L4   | -1.16E+04         | 1.30E+04          | -1.14E+04         | 1.24E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.08E+04         | 1.17E+04          | -1.06E+04         | 1.15E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-174. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

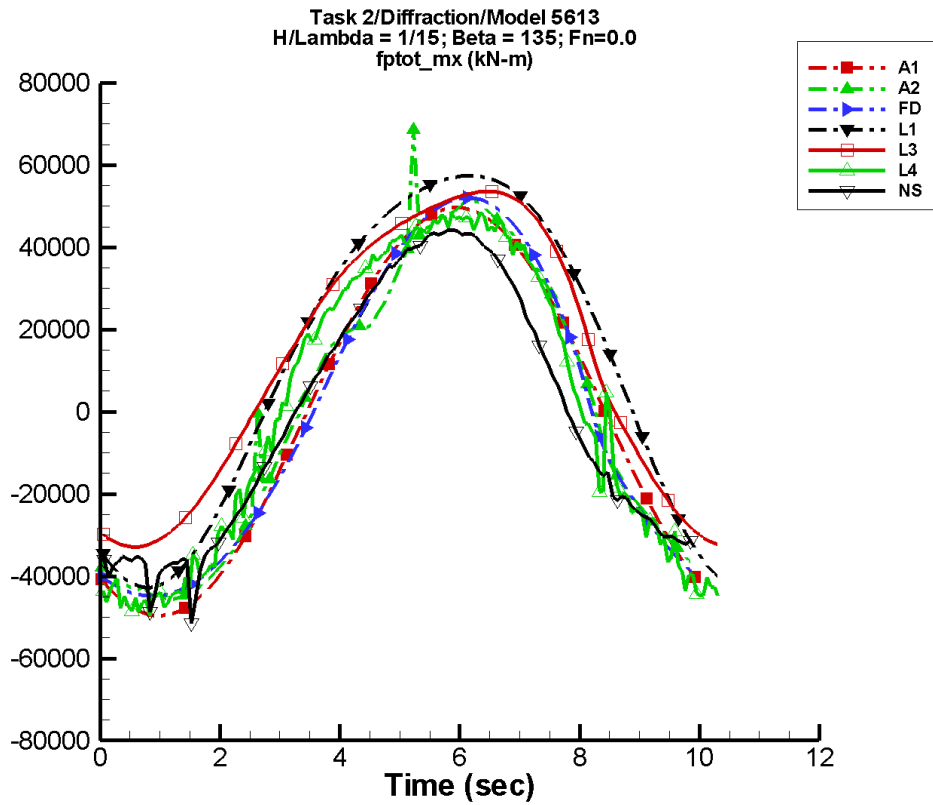
Table G-347. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 43.2            | 3.72E+04        | -130              | 44.0            | 169               |
| A2   | 178.            | 3.59E+04        | -130              | 1.44E+03        | -8                |
| FD   | 108.            | 3.74E+04        | -134              | 3.09E+03        | -37               |
| L1   | 7.50E+03        | 3.73E+04        | -127              | 3.77E+03        | -141              |
| L3   | 7.48E+03        | 3.38E+04        | -123              | 4.07E+03        | -92               |
| L4   | 3.60E+03        | 3.65E+04        | -123              | 3.28E+03        | -92               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -144.           | 3.21E+04        | -122              | 3.34E+03        | 13                |

Table G-348. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.72E+04         | 3.72E+04          | -3.68E+04         | 3.68E+04          |
| A2   | -3.42E+04         | 3.93E+04          | -3.37E+04         | 3.72E+04          |
| FD   | -3.45E+04         | 3.92E+04          | -3.42E+04         | 3.87E+04          |
| L1   | -3.34E+04         | 4.15E+04          | -3.32E+04         | 4.14E+04          |
| L3   | -2.74E+04         | 3.93E+04          | -2.72E+04         | 3.92E+04          |
| L4   | -3.52E+04         | 4.06E+04          | -3.34E+04         | 3.86E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.24E+04         | 3.69E+04          | -2.86E+04         | 3.53E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-175. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

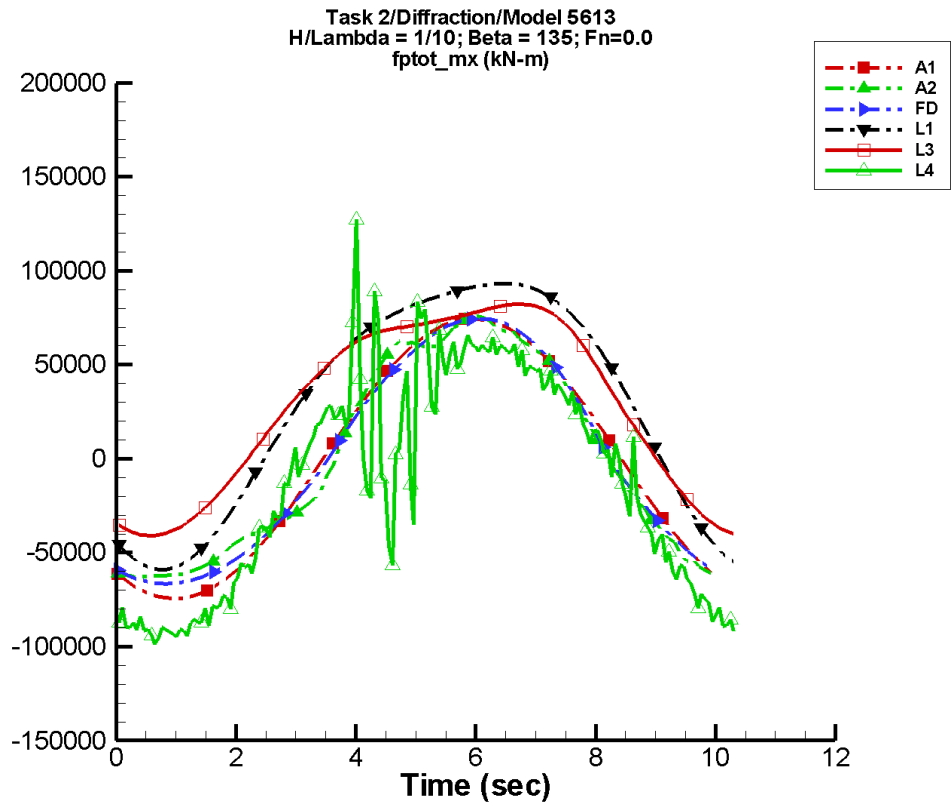
Table G-349. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 57.7            | 4.97E+04        | -130              | 58.8            | 169               |
| A2   | 582.            | 4.77E+04        | -128              | 2.54E+03        | -35               |
| FD   | 173.            | 4.92E+04        | -133              | 4.57E+03        | -29               |
| L1   | 1.33E+04        | 4.97E+04        | -127              | 6.69E+03        | -141              |
| L3   | 1.33E+04        | 4.35E+04        | -122              | 6.03E+03        | -100              |
| L4   | 1.80E+03        | 4.84E+04        | -119              | 2.20E+03        | -108              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.66E+03       | 4.19E+04        | -115              | 4.18E+03        | 49                |

Table G-350. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.97E+04         | 4.96E+04          | -4.92E+04         | 4.91E+04          |
| A2   | -4.56E+04         | 6.87E+04          | -4.50E+04         | 4.95E+04          |
| FD   | -4.49E+04         | 5.21E+04          | -4.45E+04         | 5.15E+04          |
| L1   | -4.28E+04         | 5.74E+04          | -4.25E+04         | 5.73E+04          |
| L3   | -3.29E+04         | 5.36E+04          | -3.27E+04         | 5.35E+04          |
| L4   | -5.02E+04         | 4.85E+04          | -4.74E+04         | 4.69E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.14E+04         | 4.42E+04          | -3.96E+04         | 4.36E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-176. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

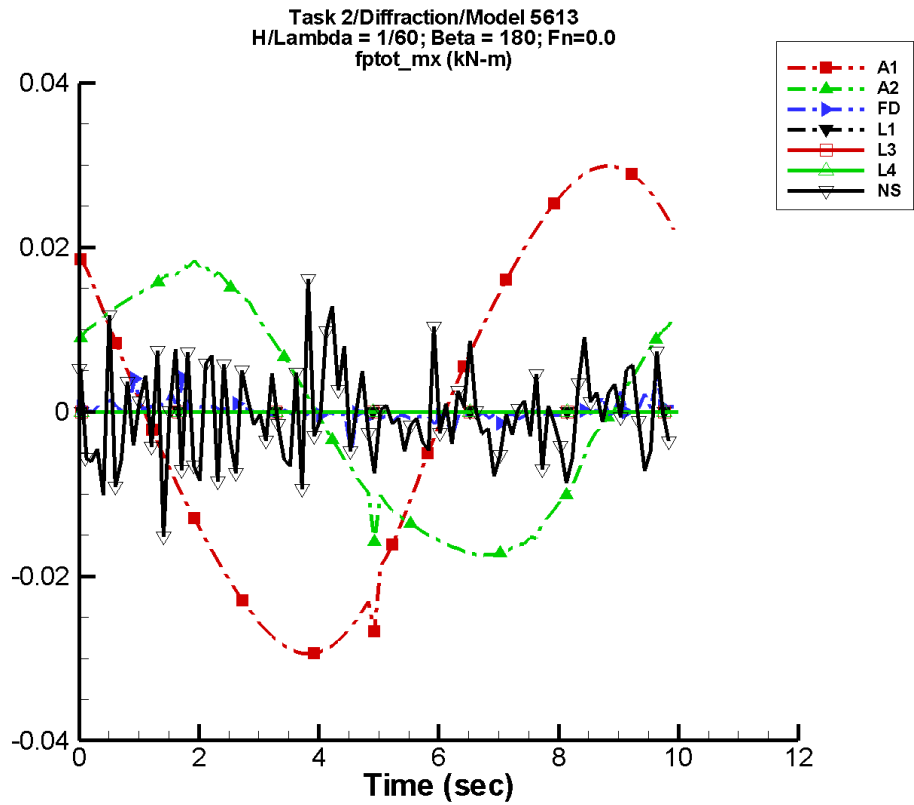
Table G–351. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 86.5            | 7.46E+04        | -130              | 88.2            | 169               |
| A2   | 324.            | 6.97E+04        | -127              | 7.33E+03        | -8                |
| FD   | 147.            | 7.14E+04        | -132              | 4.92E+03        | -23               |
| L1   | 2.99E+04        | 7.46E+04        | -127              | 1.50E+04        | -141              |
| L3   | 2.99E+04        | 6.02E+04        | -122              | 1.31E+04        | -125              |
| L4   | -1.08E+04       | 7.25E+04        | -124              | 1.39E+04        | -130              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–352. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.45E+04         | 7.45E+04          | -7.38E+04         | 7.37E+04          |
| A2   | -6.30E+04         | 7.57E+04          | -6.25E+04         | 7.29E+04          |
| FD   | -6.65E+04         | 7.45E+04          | -6.60E+04         | 7.38E+04          |
| L1   | -5.91E+04         | 9.31E+04          | -5.86E+04         | 9.30E+04          |
| L3   | -4.10E+04         | 8.22E+04          | -4.07E+04         | 8.19E+04          |
| L4   | -9.88E+04         | 1.30E+05          | -9.32E+04         | 5.98E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-177. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–353. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

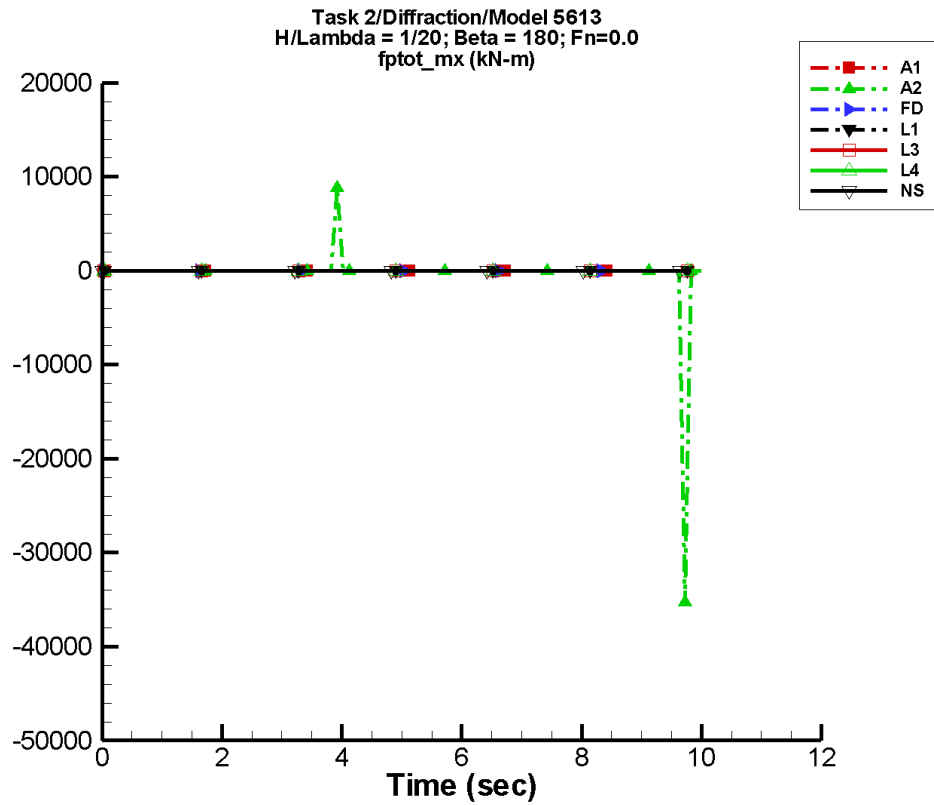
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.38E-05        | 2.94E-02        | 132               | 2.52E-04        | 177               |
| A2   | -1.98E-05       | 1.77E-02        | 31                | 2.98E-04        | -150              |
| FD   | 2.10E-05        | 8.39E-04        | 59                | 9.52E-05        | 14                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.77E-04       | 3.62E-04        | -28               | 1.15E-03        | 138               |

Table G–354. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.94E-02         | 2.99E-02          | -2.91E-02         | 2.96E-02          |
| A2   | -1.74E-02         | 1.86E-02          | -1.72E-02         | 1.83E-02          |
| FD   | -5.03E-03         | 4.25E-03          | -1.00E-03         | 1.26E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.52E-02         | 1.61E-02          | -2.57E-03         | 4.31E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-178. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

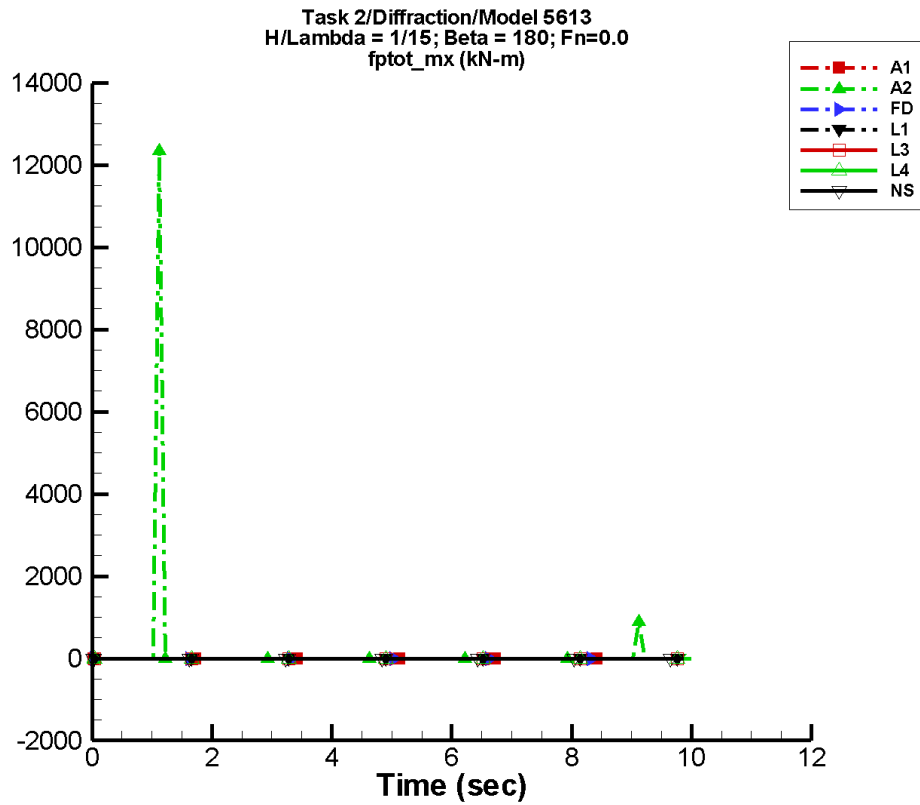
Table G–355. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.15E-05        | 8.83E-02        | 132               | 7.57E-04        | 177               |
| A2   | -121.           | 701.            | -65               | 571.            | -80               |
| FD   | 1.26E-04        | 2.45E-03        | 60                | 2.90E-04        | 45                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.69E-04       | 3.83E-03        | -55               | 2.77E-03        | 123               |

Table G–356. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.86E-02         | 8.99E-02          | -8.75E-02         | 8.89E-02          |
| A2   | -3.53E+04         | 8.83E+03          | -4.73E+03         | 1.18E+03          |
| FD   | -1.36E-02         | 1.31E-02          | -2.82E-03         | 3.37E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.15E-02         | 6.10E-02          | -2.57E-02         | 1.86E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-179. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

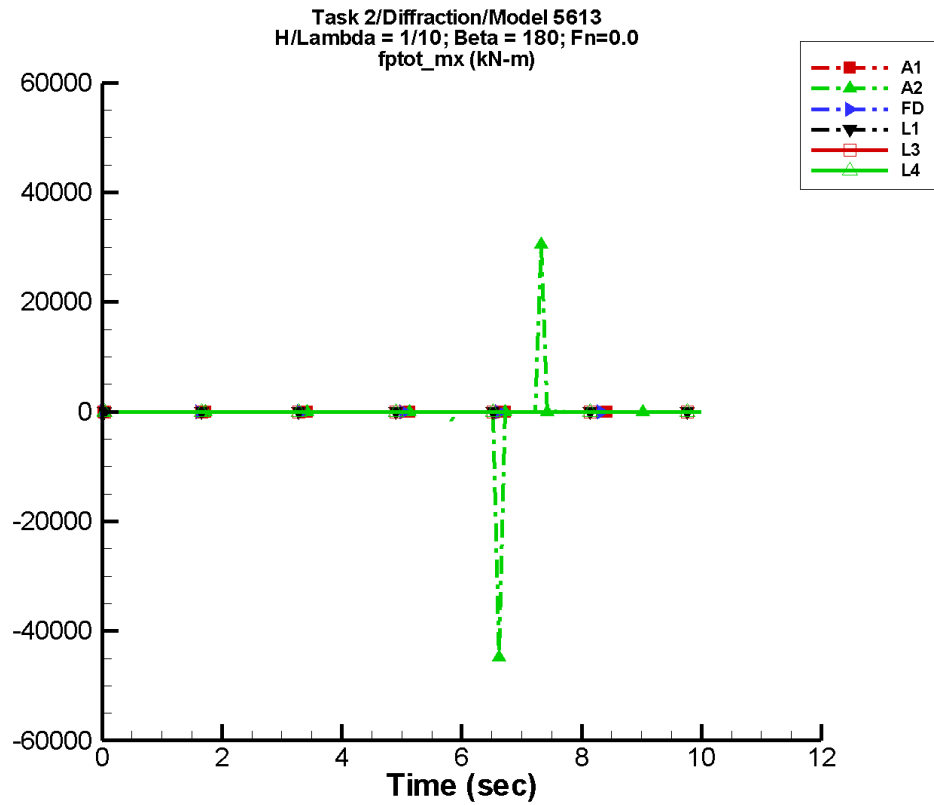
Table G–357. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.55E-05        | 0.118           | 132               | 1.01E-03        | 177               |
| A2   | 70.1            | 137.            | 51                | 139.            | 3                 |
| FD   | 2.86E-04        | 3.34E-03        | 64                | 3.39E-04        | 52                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.12E-04       | 8.25E-03        | -78               | 2.66E-03        | -47               |

Table G–358. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.118            | 0.120             | -0.117            | 0.119             |
| A2   | -7.00E-02         | 1.23E+04          | -141.             | 1.65E+03          |
| FD   | -1.77E-02         | 2.17E-02          | -3.80E-03         | 4.98E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.268            | 0.277             | -1.37E-02         | 9.06E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-180. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

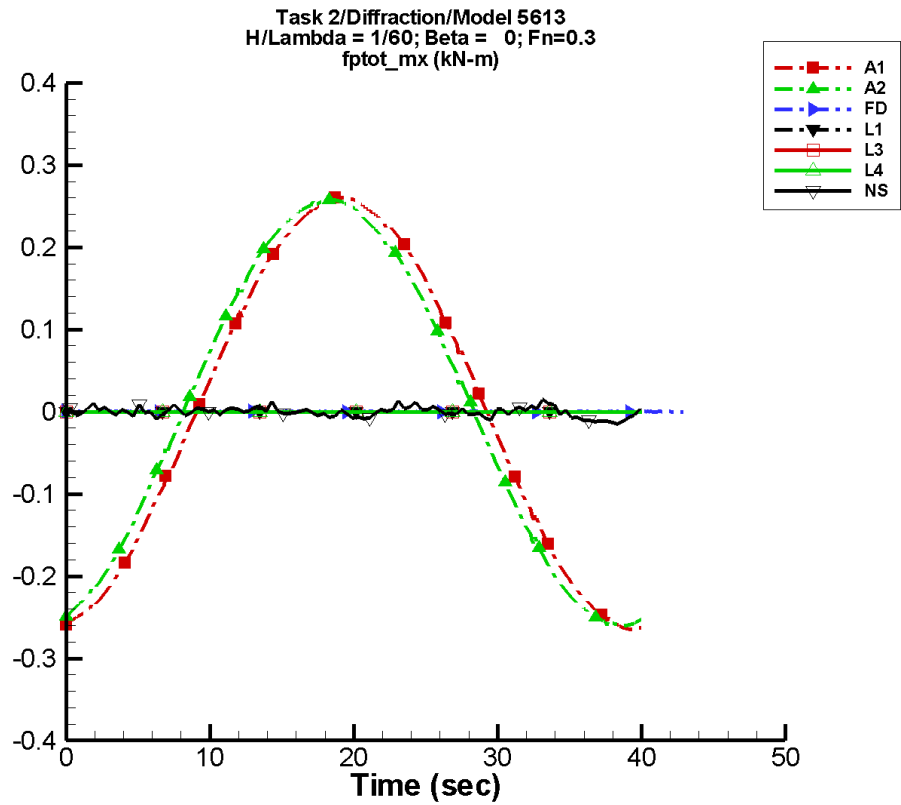
Table G–359. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 8.32E-05        | 0.177           | 132               | 1.52E-03        | 177               |
| A2   | -80.9           | 631.            | 61                | 584.            | 180               |
| FD   | 4.70E-04        | 4.72E-03        | 63                | 8.82E-04        | 22                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–360. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.177            | 0.180             | -0.175            | 0.178             |
| A2   | -4.48E+04         | 3.06E+04          | -6.00E+03         | 4.29E+03          |
| FD   | -2.80E-02         | 3.82E-02          | -5.38E-03         | 8.34E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-181. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-361. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

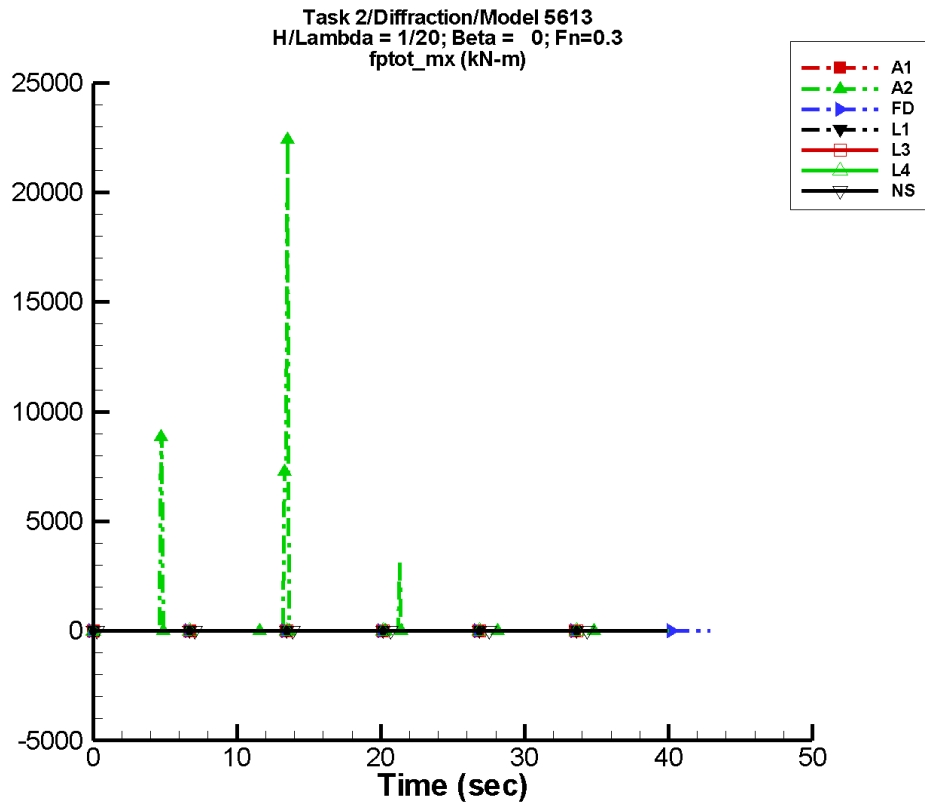
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.45E-04        | 0.260           | -83               | 1.98E-03        | -116              |
| A2   | 2.35E-04        | 0.258           | -75               | 2.04E-03        | -116              |
| FD   | -1.33E-05       | 6.94E-05        | -35               | 1.64E-05        | -32               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.57E-04       | 1.04E-03        | 168               | 2.48E-03        | 41                |

Table G-362. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.264            | 0.260             | -0.264            | 0.260             |
| A2   | -0.260            | 0.258             | -0.260            | 0.257             |
| FD   | -7.80E-04         | 8.37E-04          | -2.82E-04         | 3.00E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.87E-02         | 2.54E-02          | -1.53E-02         | 1.71E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-182. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

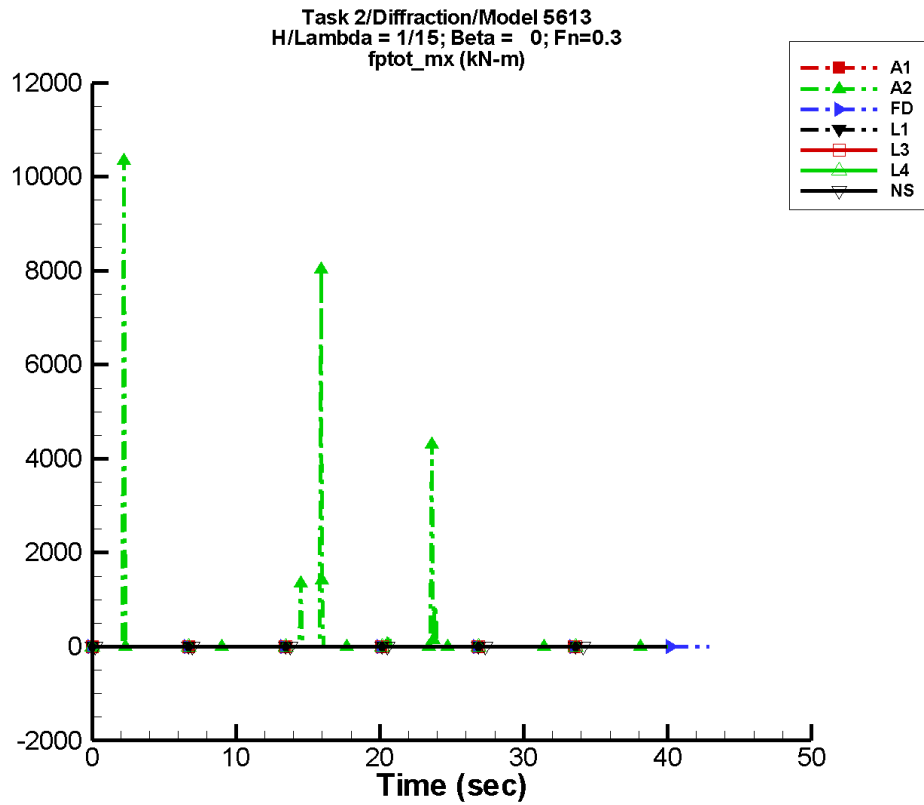
Table G-363. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.37E-04        | 0.783           | -83               | 5.97E-03        | -116              |
| A2   | 137.            | 200.            | -10               | 55.9            | -148              |
| FD   | -2.12E-05       | 2.74E-05        | -94               | 1.28E-05        | -45               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 9.44E-04        | 5.28E-03        | 13                | 7.16E-03        | 46                |

Table G-364. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.795            | 0.783             | -0.794            | 0.783             |
| A2   | -0.783            | 2.24E+04          | -371.             | 4.76E+03          |
| FD   | -8.36E-04         | 1.02E-03          | -2.79E-04         | 3.25E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.283            | 0.298             | -2.79E-02         | 2.45E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-183. Time history of  $M_x^{tot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

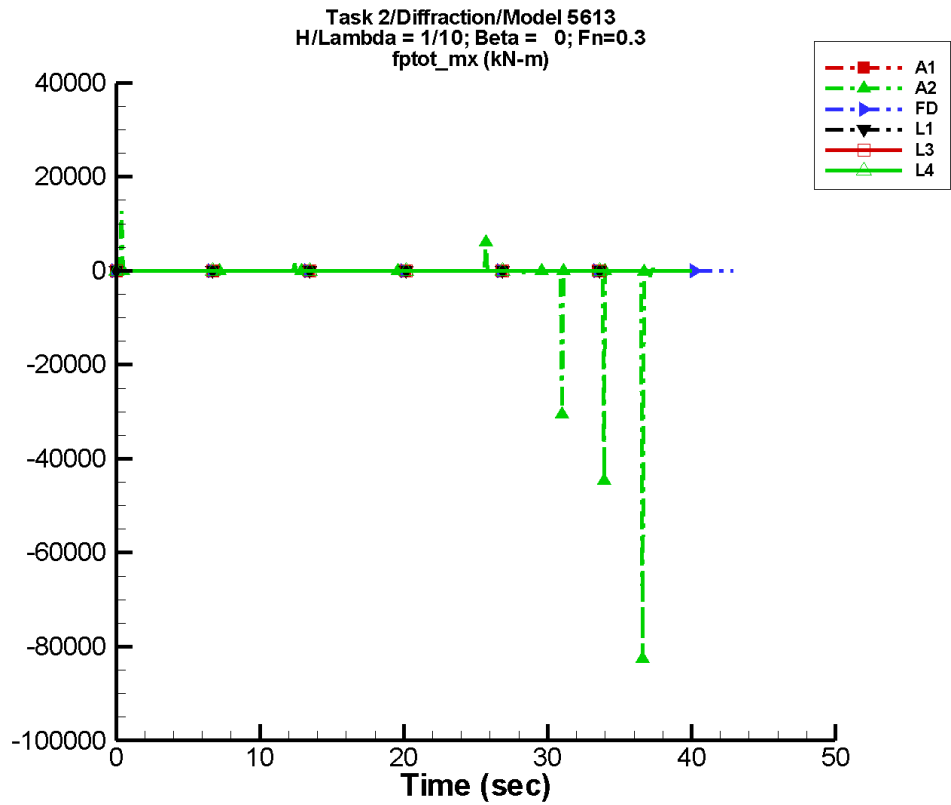
Table G-365. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 9.85E-04        | 1.05            | -83               | 7.97E-03        | -116              |
| A2   | 72.1            | 32.0            | -21               | 89.5            | 82                |
| FD   | 2.54E-05        | 3.71E-05        | 7                 | 5.99E-05        | 105               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.86E-03       | 1.06E-03        | 160               | 6.20E-03        | -135              |

Table G-366. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.06             | 1.05              | -1.06             | 1.04              |
| A2   | -1.05             | 1.04E+04          | -119.             | 1.38E+03          |
| FD   | -9.75E-04         | 1.18E-03          | -2.58E-04         | 3.10E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.68E-02         | 4.63E-02          | -2.38E-02         | 3.13E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-184. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

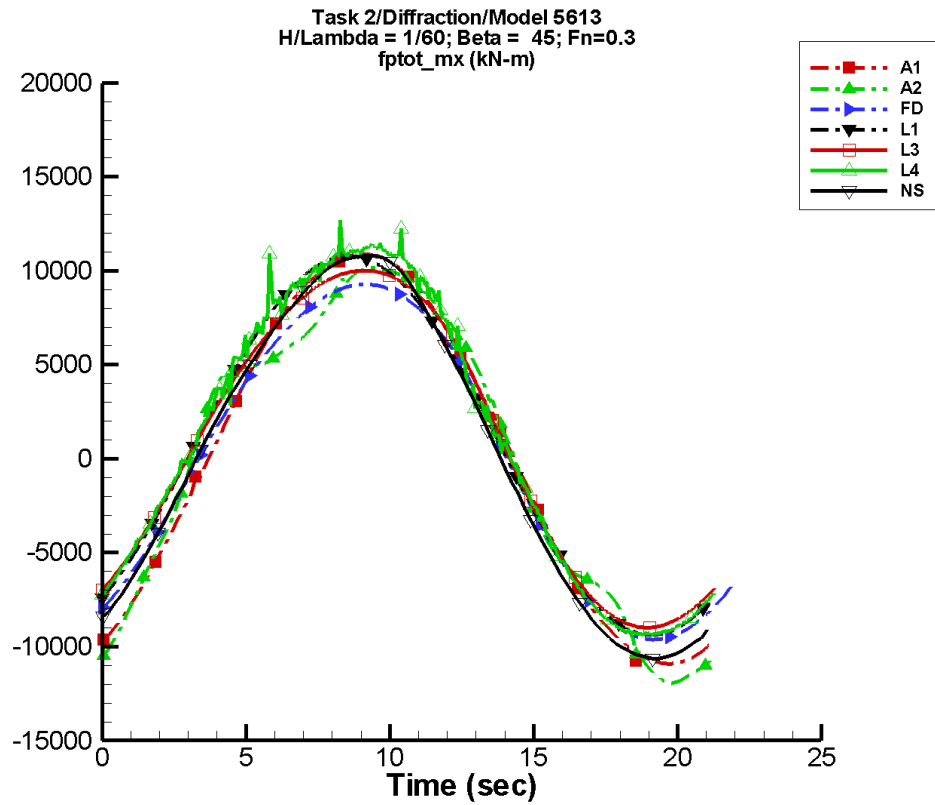
Table G–367. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.48E-03        | 1.57            | -83               | 1.20E-02        | -116              |
| A2   | -361.           | 672.            | -43               | 618.            | 13                |
| FD   | -7.41E-06       | 4.29E-05        | -59               | 3.65E-05        | -52               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–368. Minimum and maximum of of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.59             | 1.57              | -1.59             | 1.57              |
| A2   | -8.25E+04         | 1.26E+04          | -1.11E+04         | 1.68E+03          |
| FD   | -1.31E-03         | 1.47E-03          | -4.63E-04         | 5.87E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-185. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–369. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

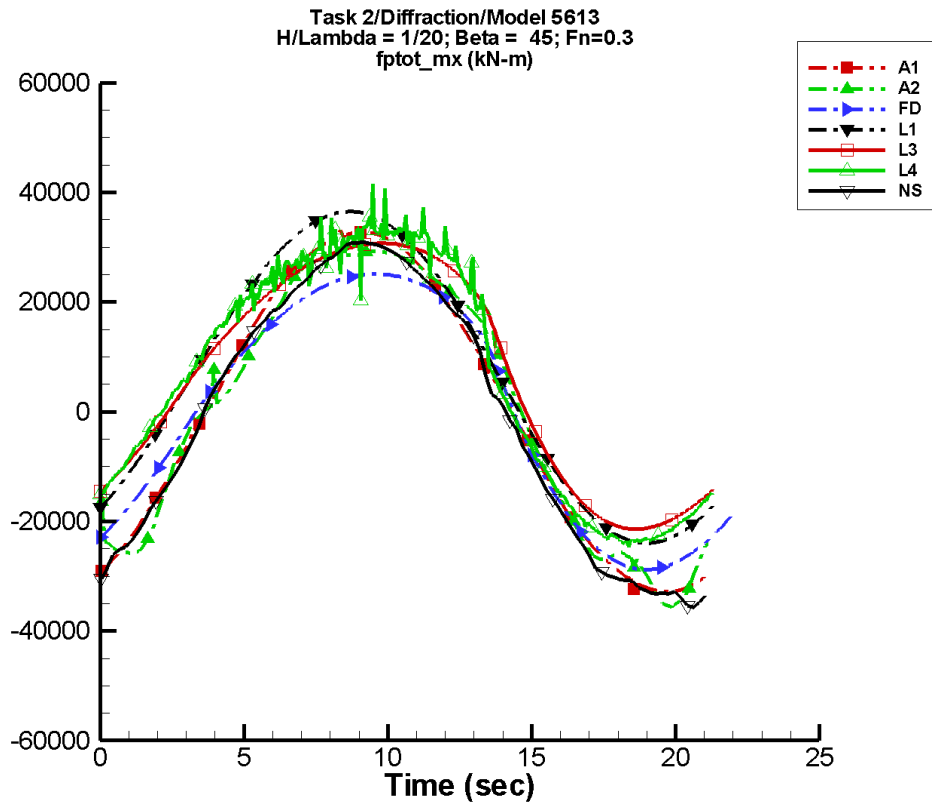
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.46           | 1.09E+04        | -61               | 4.41            | 72                |
| A2   | 36.8            | 1.05E+04        | -61               | 1.16E+03        | -26               |
| FD   | -4.21           | 9.56E+03        | -54               | 429.            | 45                |
| L1   | 723.            | 1.01E+04        | -54               | 81.3            | 52                |
| L3   | 722.            | 9.64E+03        | -56               | 542.            | 43                |
| L4   | 1.01E+03        | 1.04E+04        | -55               | 446.            | 61                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.74           | 1.06E+04        | -56               | 353.            | 73                |

Table G–370. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.09E+04         | 1.10E+04          | -1.09E+04         | 1.08E+04          |
| A2   | -1.20E+04         | 1.01E+04          | -1.19E+04         | 1.01E+04          |
| FD   | -9.62E+03         | 9.27E+03          | -9.60E+03         | 9.26E+03          |
| L1   | -9.38E+03         | 1.08E+04          | -9.37E+03         | 1.08E+04          |
| L3   | -8.99E+03         | 1.00E+04          | -8.98E+03         | 1.00E+04          |
| L4   | -9.41E+03         | 1.27E+04          | -9.32E+03         | 1.13E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.06E+04         | 1.08E+04          | -1.05E+04         | 1.07E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-186. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

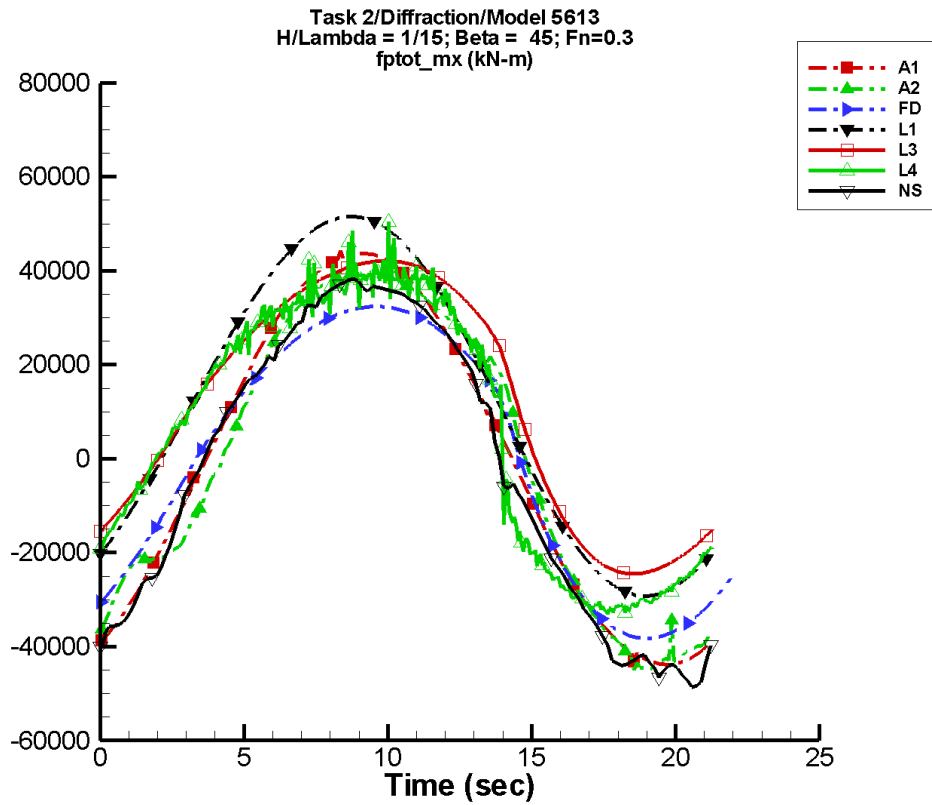
Table G–371. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -7.41           | 3.28E+04        | -61               | 13.3            | 72                |
| A2   | -70.8           | 3.16E+04        | -65               | 1.37E+03        | 10                |
| FD   | -6.05           | 2.77E+04        | -56               | 3.14E+03        | 29                |
| L1   | 6.51E+03        | 3.02E+04        | -54               | 727.            | 52                |
| L3   | 6.48E+03        | 2.67E+04        | -59               | 3.72E+03        | 29                |
| L4   | 6.33E+03        | 2.91E+04        | -55               | 4.26E+03        | 41                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.41E+03       | 3.25E+04        | -61               | 990.            | 10                |

Table G–372. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.28E+04         | 3.32E+04          | -3.27E+04         | 3.26E+04          |
| A2   | -3.56E+04         | 2.99E+04          | -3.51E+04         | 2.92E+04          |
| FD   | -2.88E+04         | 2.51E+04          | -2.87E+04         | 2.51E+04          |
| L1   | -2.40E+04         | 3.65E+04          | -2.40E+04         | 3.65E+04          |
| L3   | -2.14E+04         | 3.07E+04          | -2.14E+04         | 3.07E+04          |
| L4   | -2.47E+04         | 4.15E+04          | -2.38E+04         | 3.46E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.56E+04         | 3.09E+04          | -3.40E+04         | 3.05E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-187. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

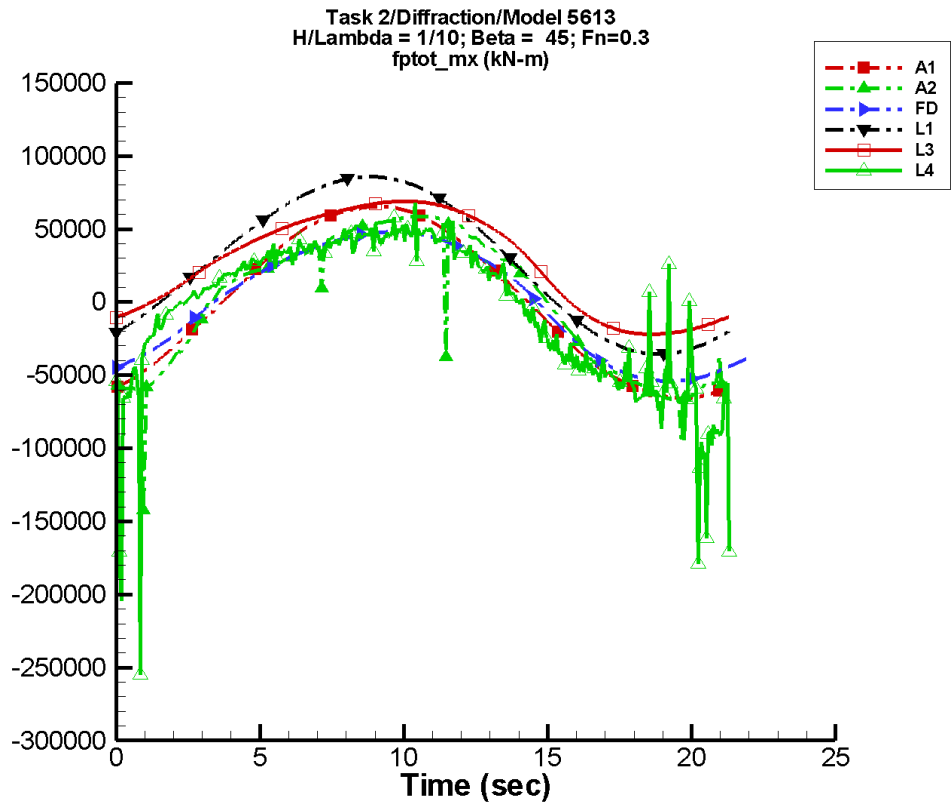
Table G-373. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -9.90           | 4.38E+04        | -61               | 17.7            | 72                |
| A2   | -75.1           | 4.16E+04        | -67               | 3.19E+03        | 45                |
| FD   | -6.76           | 3.62E+04        | -57               | 4.64E+03        | 20                |
| L1   | 1.16E+04        | 4.03E+04        | -54               | 1.29E+03        | 52                |
| L3   | 1.15E+04        | 3.40E+04        | -61               | 5.33E+03        | 23                |
| L4   | 6.15E+03        | 3.74E+04        | -49               | 6.35E+03        | 49                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.80E+03       | 4.24E+04        | -62               | 1.88E+03        | -6                |

Table G-374. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.38E+04         | 4.43E+04          | -4.37E+04         | 4.36E+04          |
| A2   | -4.51E+04         | 4.04E+04          | -4.44E+04         | 3.92E+04          |
| FD   | -3.82E+04         | 3.24E+04          | -3.81E+04         | 3.23E+04          |
| L1   | -2.92E+04         | 5.15E+04          | -2.92E+04         | 5.15E+04          |
| L3   | -2.45E+04         | 4.21E+04          | -2.45E+04         | 4.21E+04          |
| L4   | -3.32E+04         | 5.05E+04          | -3.21E+04         | 4.09E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.86E+04         | 3.83E+04          | -4.62E+04         | 3.72E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-188. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

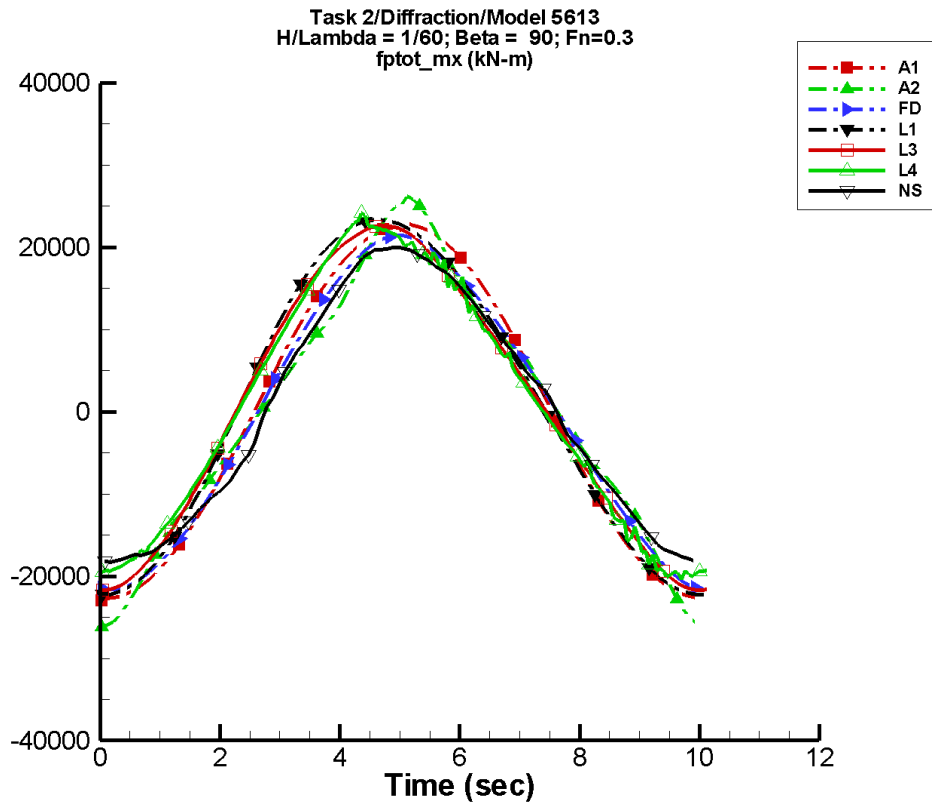
Table G-375. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -14.8           | 6.57E+04        | -61               | 26.6            | 72                |
| A2   | -997.           | 6.25E+04        | -68               | 7.96E+03        | -32               |
| FD   | -41.8           | 5.20E+04        | -58               | 5.01E+03        | 13                |
| L1   | 2.60E+04        | 6.04E+04        | -54               | 2.90E+03        | 52                |
| L3   | 2.60E+04        | 4.61E+04        | -61               | 6.38E+03        | 26                |
| L4   | -4.71E+03       | 6.15E+04        | -56               | 1.23E+04        | -29               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-376. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.57E+04         | 6.64E+04          | -6.56E+04         | 6.54E+04          |
| A2   | -1.42E+05         | 5.87E+04          | -6.99E+04         | 5.97E+04          |
| FD   | -5.41E+04         | 4.81E+04          | -5.39E+04         | 4.80E+04          |
| L1   | -3.56E+04         | 8.58E+04          | -3.56E+04         | 8.57E+04          |
| L3   | -2.20E+04         | 6.90E+04          | -2.19E+04         | 6.90E+04          |
| L4   | -2.55E+05         | 6.77E+04          | -1.13E+05         | 4.91E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-189. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-377. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

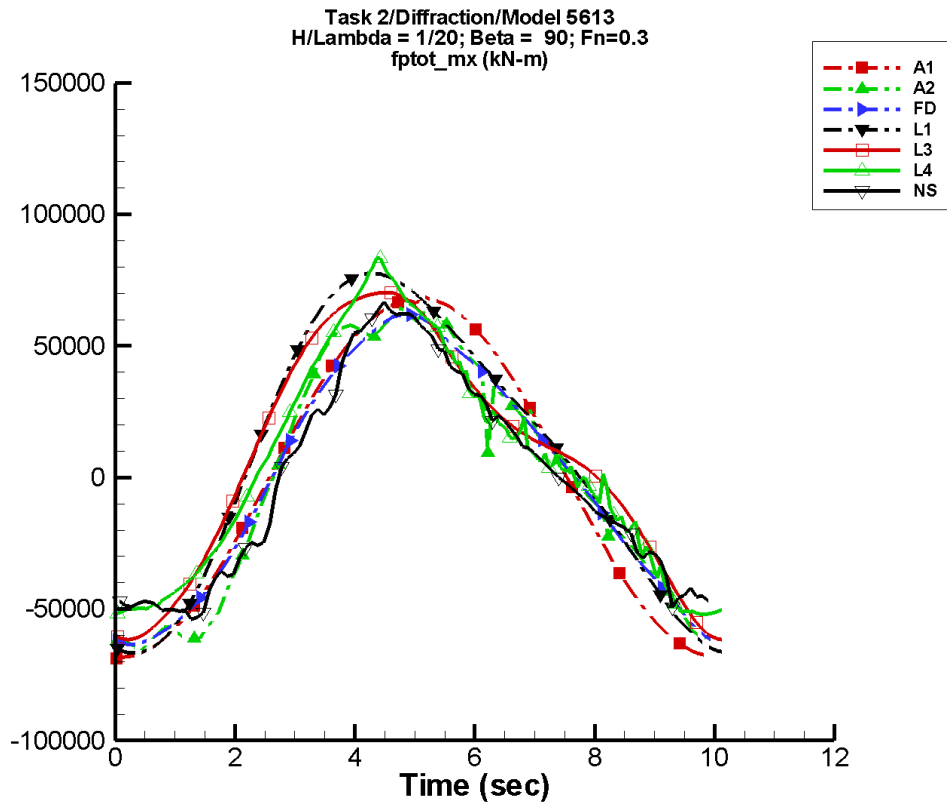
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 11.3            | 2.27E+04        | -98               | 33.7            | -163              |
| A2   | 19.5            | 2.12E+04        | -100              | 645.            | -64               |
| FD   | -17.6           | 2.08E+04        | -103              | 766.            | 161               |
| L1   | 936.            | 2.26E+04        | -90               | 1.48E+03        | -164              |
| L3   | 928.            | 2.12E+04        | -90               | 1.55E+03        | -163              |
| L4   | 1.05E+03        | 2.04E+04        | -89               | 1.04E+03        | 167               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -128.           | 1.88E+04        | -97               | 1.37E+03        | 119               |

Table G-378. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.29E+04         | 2.29E+04          | -2.29E+04         | 2.24E+04          |
| A2   | -2.61E+04         | 2.63E+04          | -2.59E+04         | 2.48E+04          |
| FD   | -2.17E+04         | 2.14E+04          | -2.17E+04         | 2.11E+04          |
| L1   | -2.23E+04         | 2.33E+04          | -2.24E+04         | 2.33E+04          |
| L3   | -2.17E+04         | 2.26E+04          | -2.18E+04         | 2.25E+04          |
| L4   | -2.04E+04         | 2.42E+04          | -1.98E+04         | 2.30E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.83E+04         | 2.00E+04          | -1.82E+04         | 1.97E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-190. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

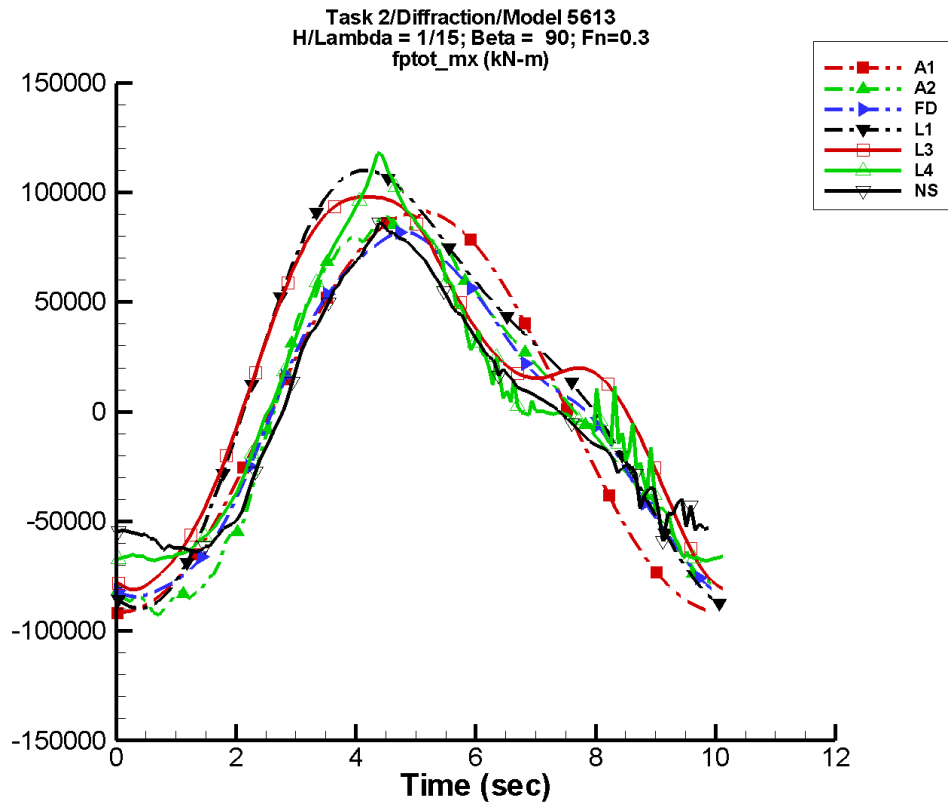
Table G–379. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 33.9            | 6.84E+04        | -98               | 101.            | -163              |
| A2   | -254.           | 6.20E+04        | -100              | 1.15E+04        | 161               |
| FD   | -48.1           | 5.91E+04        | -103              | 6.12E+03        | 164               |
| L1   | 8.39E+03        | 6.78E+04        | -90               | 1.33E+04        | -164              |
| L3   | 8.37E+03        | 5.79E+04        | -89               | 1.51E+04        | -166              |
| L4   | 6.12E+03        | 5.61E+04        | -91               | 1.17E+04        | 160               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.28E+03       | 5.22E+04        | -96               | 1.21E+04        | 138               |

Table G–380. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.90E+04         | 6.90E+04          | -6.89E+04         | 6.73E+04          |
| A2   | -6.61E+04         | 6.42E+04          | -6.31E+04         | 6.19E+04          |
| FD   | -6.35E+04         | 6.20E+04          | -6.30E+04         | 6.08E+04          |
| L1   | -6.67E+04         | 7.76E+04          | -6.63E+04         | 7.73E+04          |
| L3   | -6.16E+04         | 7.03E+04          | -6.15E+04         | 7.00E+04          |
| L4   | -5.21E+04         | 8.34E+04          | -5.17E+04         | 7.92E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.40E+04         | 6.67E+04          | -5.08E+04         | 6.29E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-191. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

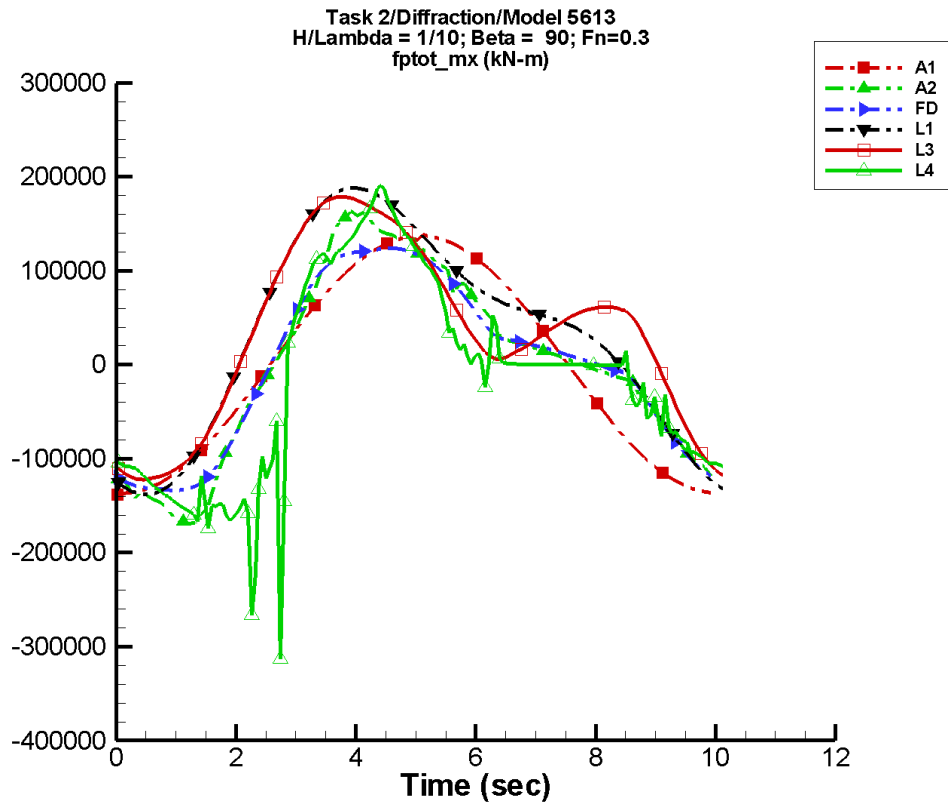
Table G–381. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 45.3            | 9.13E+04        | -98               | 136.            | -163              |
| A2   | 110.            | 8.35E+04        | -101              | 1.97E+04        | 162               |
| FD   | -78.1           | 7.77E+04        | -103              | 1.35E+04        | 163               |
| L1   | 1.49E+04        | 9.04E+04        | -90               | 2.36E+04        | -164              |
| L3   | 1.49E+04        | 7.42E+04        | -89               | 2.95E+04        | -168              |
| L4   | 4.70E+03        | 7.30E+04        | -92               | 2.53E+04        | 151               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.02E+03       | 6.36E+04        | -94               | 1.98E+04        | 143               |

Table G–382. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.21E+04         | 9.22E+04          | -9.20E+04         | 8.98E+04          |
| A2   | -9.29E+04         | 8.92E+04          | -8.77E+04         | 8.48E+04          |
| FD   | -8.45E+04         | 8.19E+04          | -8.33E+04         | 8.03E+04          |
| L1   | -8.97E+04         | 1.10E+05          | -8.91E+04         | 1.10E+05          |
| L3   | -8.10E+04         | 9.80E+04          | -8.02E+04         | 9.78E+04          |
| L4   | -6.82E+04         | 1.18E+05          | -6.73E+04         | 1.11E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.39E+04         | 8.62E+04          | -6.27E+04         | 8.14E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-192. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

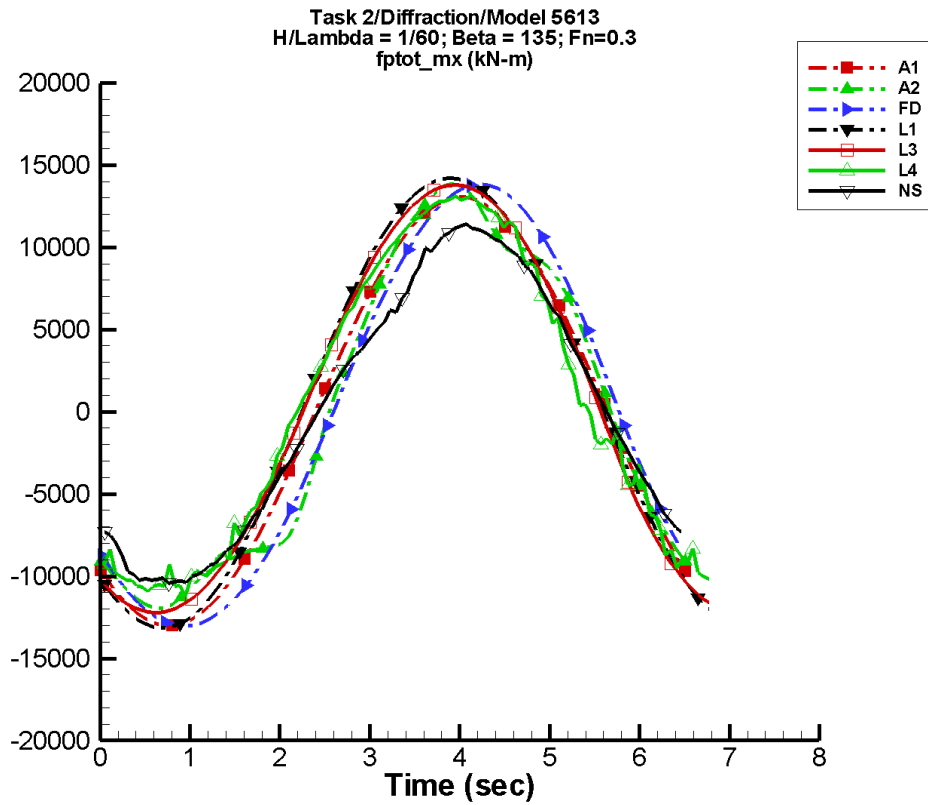
Table G–383. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 67.9            | 1.37E+05        | -98               | 203.            | -163              |
| A2   | 121.            | 1.28E+05        | -100              | 5.21E+04        | 164               |
| FD   | 110.            | 1.15E+05        | -104              | 4.20E+04        | 163               |
| L1   | 3.35E+04        | 1.36E+05        | -90               | 5.30E+04        | -164              |
| L3   | 3.36E+04        | 1.04E+05        | -89               | 7.53E+04        | -171              |
| L4   | -1.62E+04       | 1.16E+05        | -110              | 7.47E+04        | 139               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–384. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.38E+05         | 1.38E+05          | -1.38E+05         | 1.35E+05          |
| A2   | -1.73E+05         | 1.64E+05          | -1.61E+05         | 1.54E+05          |
| FD   | -1.34E+05         | 1.24E+05          | -1.33E+05         | 1.23E+05          |
| L1   | -1.38E+05         | 1.88E+05          | -1.37E+05         | 1.87E+05          |
| L3   | -1.22E+05         | 1.79E+05          | -1.21E+05         | 1.78E+05          |
| L4   | -3.13E+05         | 1.90E+05          | -1.69E+05         | 1.76E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-193. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–385. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

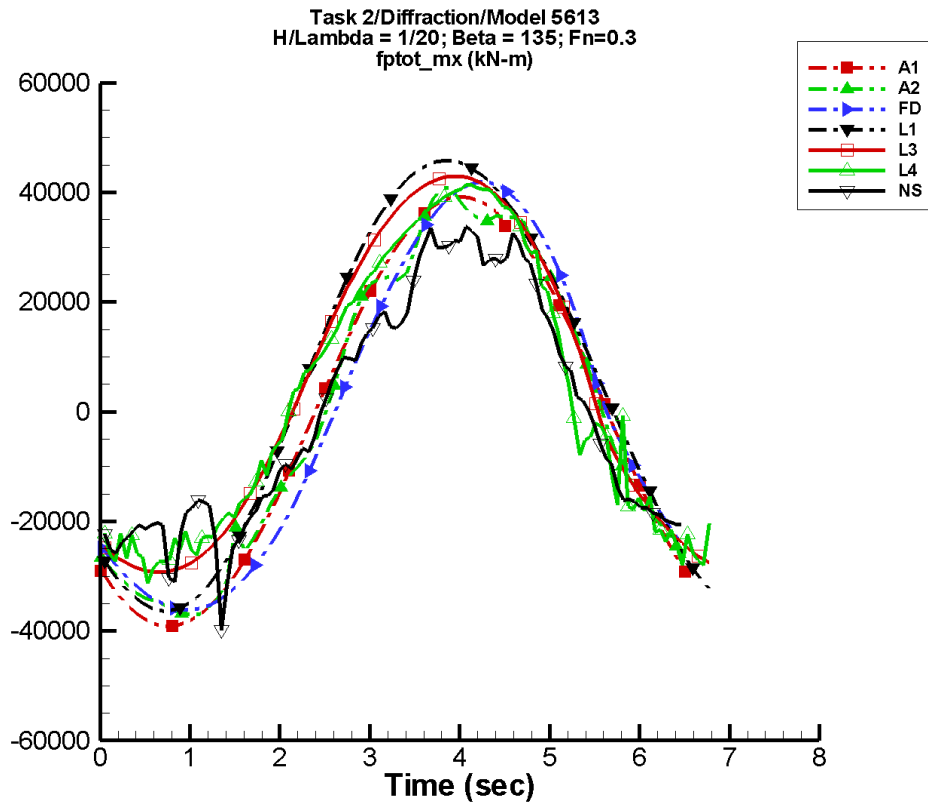
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.42            | 1.30E+04        | -136              | 33.8            | 163               |
| A2   | 43.8            | 1.26E+04        | -140              | 1.00E+03        | -14               |
| FD   | 8.27            | 1.35E+04        | -142              | 456.            | -34               |
| L1   | 618.            | 1.37E+04        | -130              | 169.            | 132               |
| L3   | 619.            | 1.32E+04        | -130              | 330.            | -42               |
| L4   | 678.            | 1.20E+04        | -128              | 475.            | 10                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -12.8           | 1.05E+04        | -136              | 462.            | -56               |

Table G–386. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.31E+04         | 1.30E+04          | -1.28E+04         | 1.27E+04          |
| A2   | -1.20E+04         | 1.38E+04          | -1.15E+04         | 1.31E+04          |
| FD   | -1.30E+04         | 1.38E+04          | -1.28E+04         | 1.35E+04          |
| L1   | -1.31E+04         | 1.42E+04          | -1.30E+04         | 1.41E+04          |
| L3   | -1.22E+04         | 1.38E+04          | -1.21E+04         | 1.37E+04          |
| L4   | -1.12E+04         | 1.32E+04          | -1.06E+04         | 1.29E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.04E+04         | 1.14E+04          | -1.03E+04         | 1.11E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-194. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

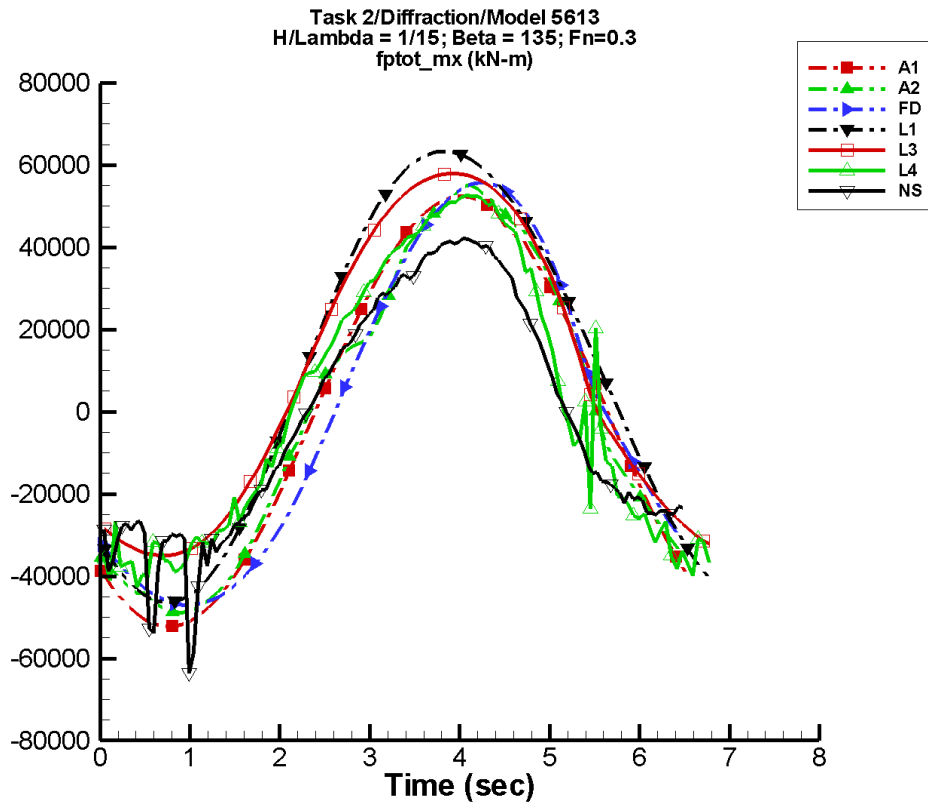
Table G–387. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.29            | 3.92E+04        | -136              | 102.            | 163               |
| A2   | 155.            | 3.77E+04        | -137              | 1.37E+03        | -23               |
| FD   | 41.0            | 3.91E+04        | -141              | 3.28E+03        | -16               |
| L1   | 5.55E+03        | 4.10E+04        | -130              | 1.50E+03        | 132               |
| L3   | 5.59E+03        | 3.71E+04        | -128              | 1.85E+03        | -7                |
| L4   | 3.89E+03        | 3.42E+04        | -125              | 3.59E+03        | -12               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -453.           | 2.83E+04        | -131              | 5.09E+03        | -3                |

Table G–388. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.94E+04         | 3.92E+04          | -3.85E+04         | 3.82E+04          |
| A2   | -3.74E+04         | 4.08E+04          | -3.61E+04         | 3.75E+04          |
| FD   | -3.61E+04         | 4.19E+04          | -3.56E+04         | 4.08E+04          |
| L1   | -3.63E+04         | 4.58E+04          | -3.60E+04         | 4.55E+04          |
| L3   | -2.93E+04         | 4.30E+04          | -2.90E+04         | 4.27E+04          |
| L4   | -3.13E+04         | 4.14E+04          | -2.70E+04         | 4.08E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.00E+04         | 3.39E+04          | -2.62E+04         | 3.16E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-195. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

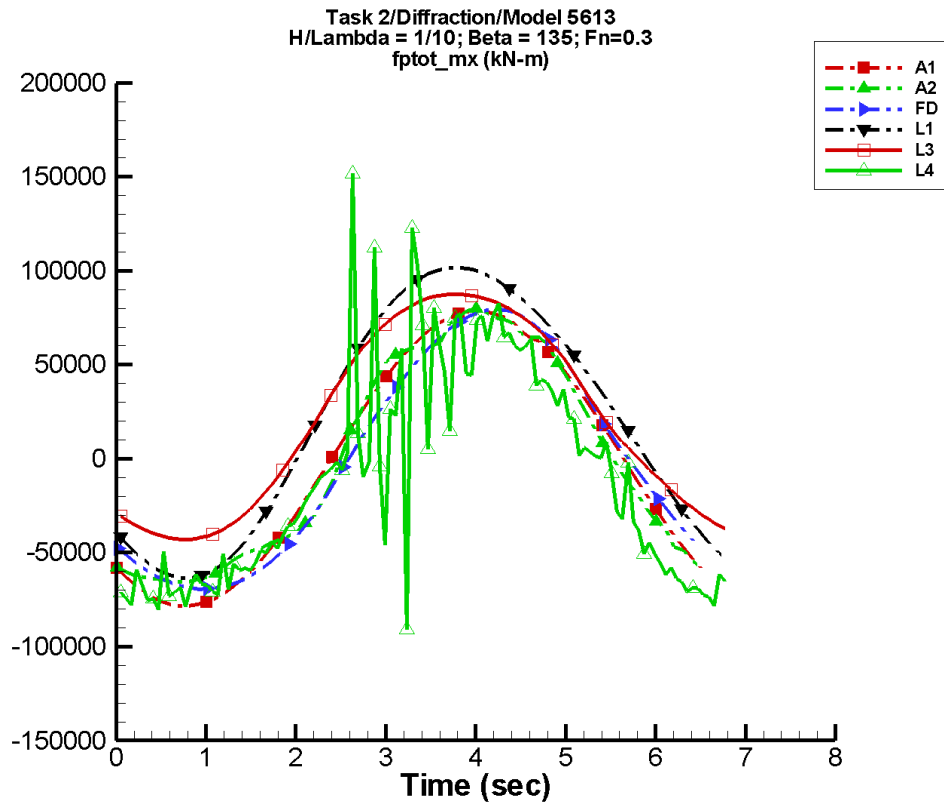
Table G–389. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 9.74            | 5.24E+04        | -136              | 136.            | 163               |
| A2   | 70.9            | 5.01E+04        | -137              | 2.40E+03        | -36               |
| FD   | 25.8            | 5.13E+04        | -140              | 4.82E+03        | -7                |
| L1   | 9.86E+03        | 5.47E+04        | -130              | 2.67E+03        | 132               |
| L3   | 9.91E+03        | 4.79E+04        | -127              | 2.47E+03        | 17                |
| L4   | 2.67E+03        | 4.49E+04        | -123              | 4.69E+03        | -5                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.03E+03       | 3.89E+04        | -123              | 4.99E+03        | 42                |

Table G–390. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.26E+04         | 5.24E+04          | -5.14E+04         | 5.11E+04          |
| A2   | -4.93E+04         | 5.51E+04          | -4.78E+04         | 5.21E+04          |
| FD   | -4.71E+04         | 5.58E+04          | -4.65E+04         | 5.43E+04          |
| L1   | -4.64E+04         | 6.33E+04          | -4.59E+04         | 6.29E+04          |
| L3   | -3.50E+04         | 5.79E+04          | -3.47E+04         | 5.76E+04          |
| L4   | -4.26E+04         | 5.26E+04          | -3.72E+04         | 5.18E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.38E+04         | 4.21E+04          | -4.05E+04         | 4.14E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-196. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

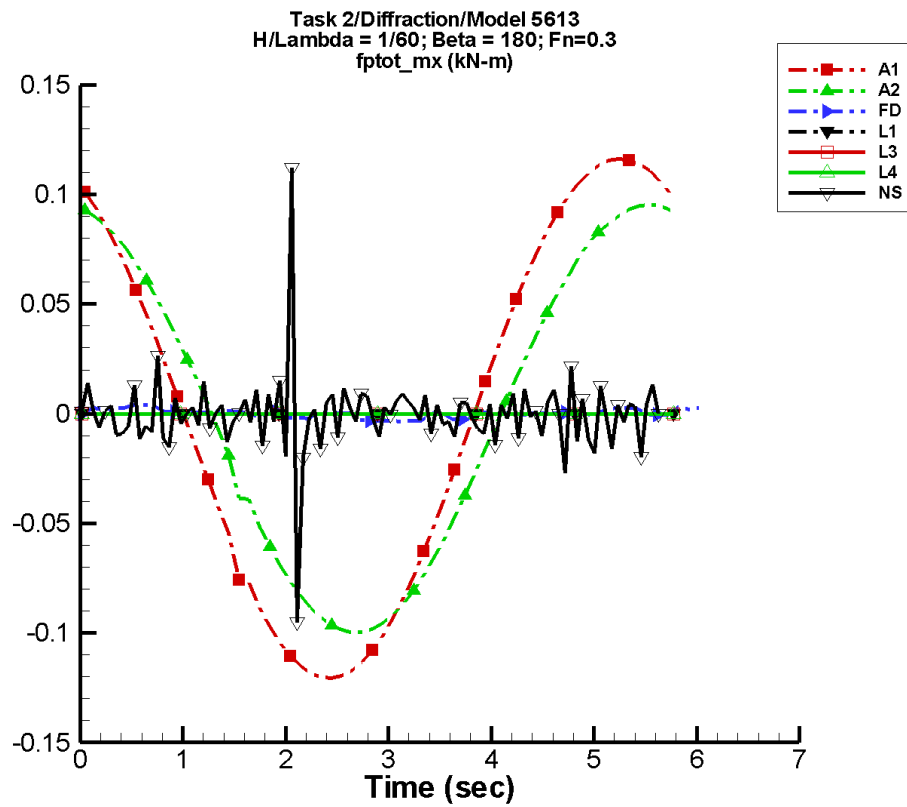
Table G–391. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 14.6            | 7.85E+04        | -136              | 203.            | 163               |
| A2   | 182.            | 7.33E+04        | -135              | 7.25E+03        | -11               |
| FD   | 27.2            | 7.45E+04        | -140              | 5.18E+03        | -2                |
| L1   | 2.22E+04        | 8.20E+04        | -130              | 6.00E+03        | 132               |
| L3   | 2.22E+04        | 6.68E+04        | -127              | 3.67E+03        | 87                |
| L4   | -8.82E+03       | 6.96E+04        | -129              | 6.63E+03        | -34               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–392. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.90E+04         | 7.86E+04          | -7.72E+04         | 7.66E+04          |
| A2   | -6.62E+04         | 8.01E+04          | -6.51E+04         | 7.50E+04          |
| FD   | -6.94E+04         | 7.95E+04          | -6.85E+04         | 7.74E+04          |
| L1   | -6.36E+04         | 1.02E+05          | -6.28E+04         | 1.01E+05          |
| L3   | -4.30E+04         | 8.75E+04          | -4.25E+04         | 8.71E+04          |
| L4   | -9.09E+04         | 1.52E+05          | -7.18E+04         | 6.96E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-197. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–393. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

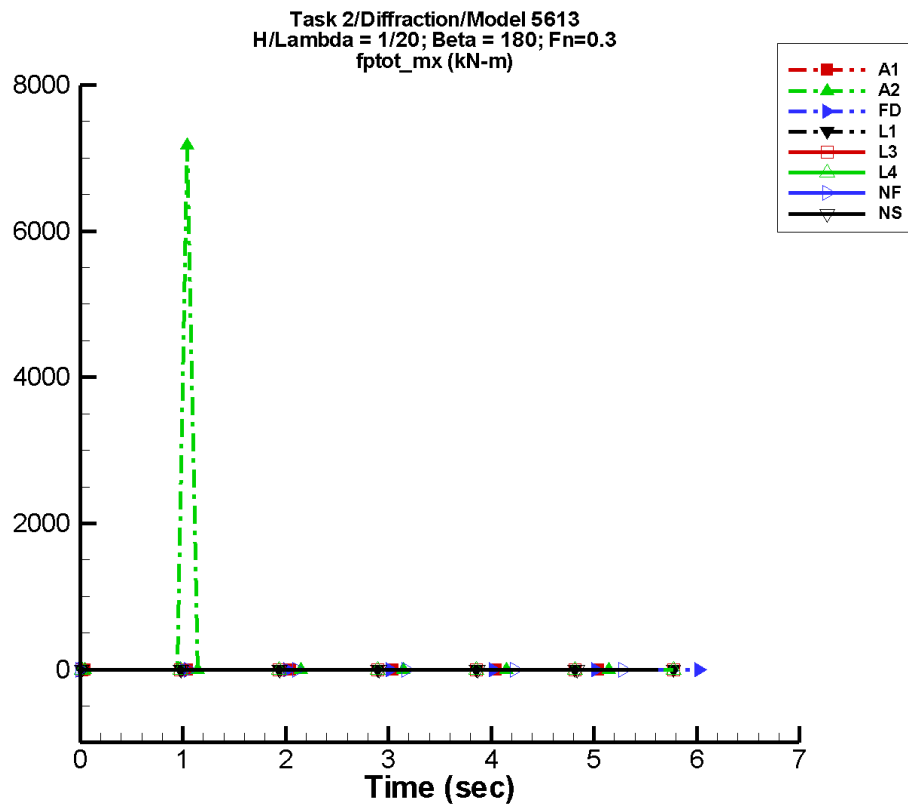
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -8.94E-04       | 0.119           | 108               | 1.71E-03        | -60               |
| A2   | -9.28E-04       | 9.78E-02        | 92                | 1.89E-03        | -64               |
| FD   | 4.54E-05        | 2.04E-03        | 38                | 2.53E-04        | -143              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.03E-04       | 8.80E-04        | -33               | 8.01E-04        | 26                |

Table G–394. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.121            | 0.116             | -0.117            | 0.113             |
| A2   | -9.99E-02         | 9.53E-02          | -9.66E-02         | 9.25E-02          |
| FD   | -3.39E-03         | 3.89E-03          | -2.57E-03         | 2.46E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.51E-02         | 0.112             | -5.11E-03         | 3.27E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3 and LAMP-4.

Figure G-198. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

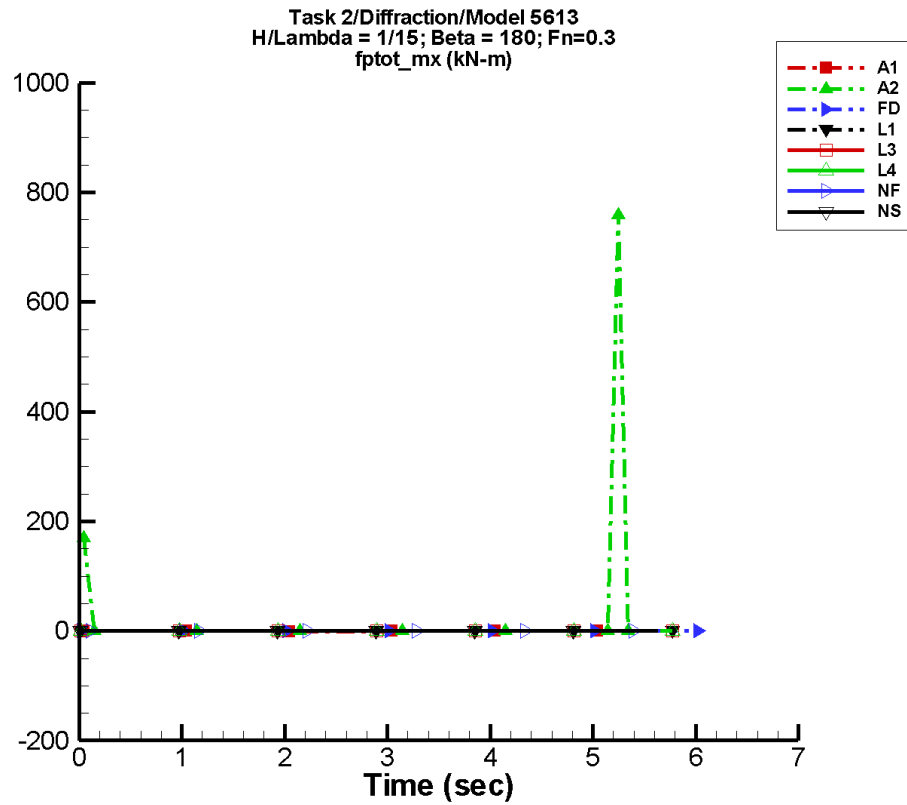
Table G–395. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.69E-03       | 0.357           | 108               | 5.16E-03        | -60               |
| A2   | 56.0            | 125.            | 14                | 160.            | -60               |
| FD   | -9.03E-05       | 6.27E-03        | 41                | 6.36E-04        | -143              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | -5.55E-12       | 3.29E-11        | 56                | 2.79E-11        | -26               |
| NS   | -8.21E-04       | 5.87E-03        | -78               | 5.18E-03        | -124              |

Table G–396. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.363            | 0.349             | -0.352            | 0.339             |
| A2   | -0.300            | 7.17E+03          | -82.2             | 956.              |
| FD   | -1.03E-02         | 1.02E-02          | -7.94E-03         | 6.81E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | -7.42E-11         | 9.10E-11          | -5.49E-11         | 6.55E-11          |
| NS   | -7.19E-02         | 0.111             | -2.84E-02         | 1.22E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3 and LAMP-4.

Figure G-199. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

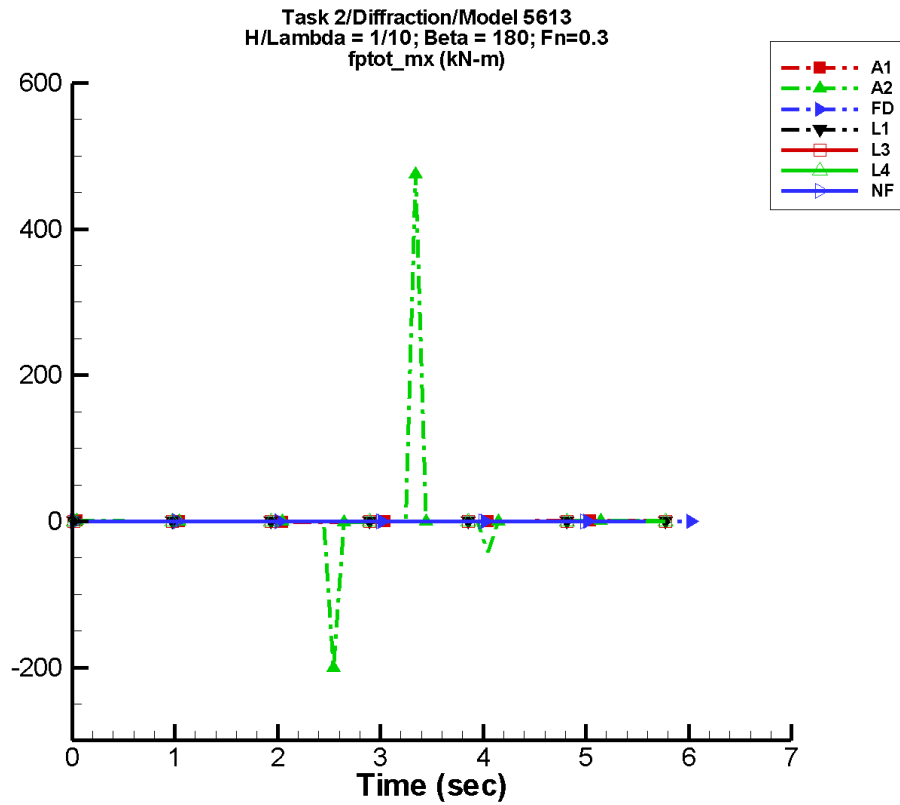
Table G–397. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.59E-03       | 0.477           | 108               | 6.89E-03        | -60               |
| A2   | 14.5            | 26.7            | 106               | 26.9            | 133               |
| FD   | -4.86E-05       | 8.55E-03        | 40                | 1.17E-03        | -120              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | 3.50E-11        | 5.35E-11        | -124              | 3.12E-11        | 84                |
| NS   | -5.26E-04       | 5.13E-03        | -122              | 2.20E-03        | 51                |

Table G–398. Minimum and maximum of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.484            | 0.467             | -0.469            | 0.453             |
| A2   | -0.399            | 759.              | -8.43             | 102.              |
| FD   | -1.35E-02         | 1.57E-02          | -1.04E-02         | 1.04E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | -1.61E-10         | 1.57E-10          | -1.18E-10         | 1.01E-10          |
| NS   | -0.504            | 0.470             | -2.77E-02         | 1.63E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NSHIPMO.

Figure G-200. Time history of  $M_x^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

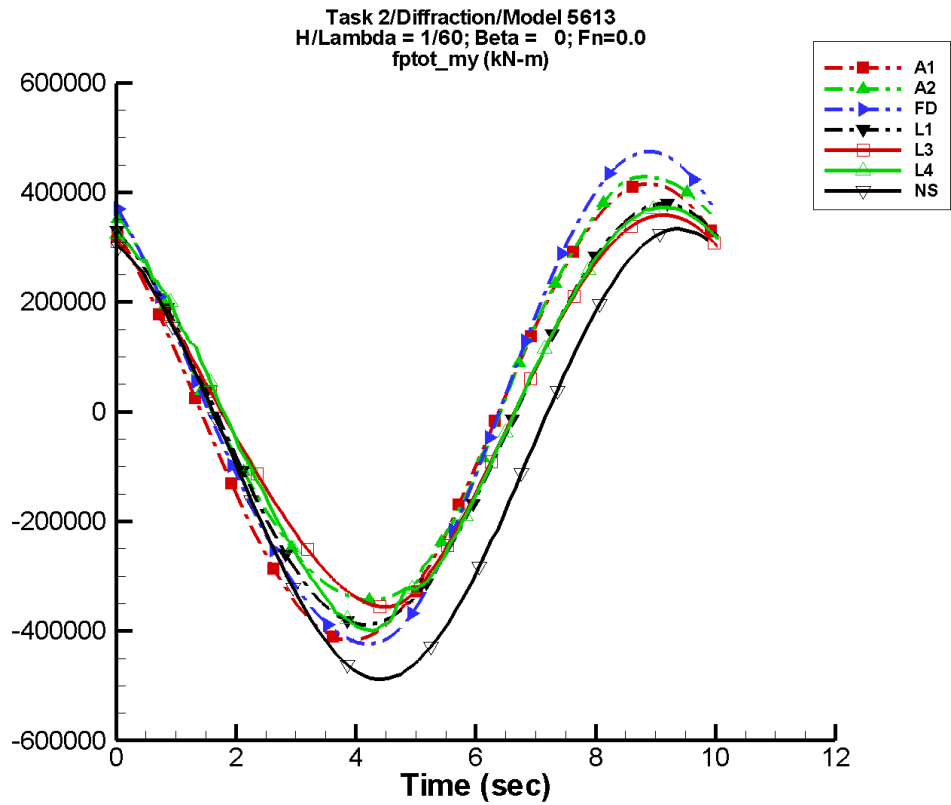
Table G–399. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -5.38E-03       | 0.716           | 108               | 1.03E-02        | -60               |
| A2   | 3.97            | 12.6            | -148              | 16.8            | -11               |
| FD   | 8.97E-04        | 1.15E-02        | 28                | 2.16E-03        | -132              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | 3.73E-11        | 2.71E-11        | -26               | 2.66E-11        | -59               |
| NS   | —               | —               | —                 | —               | —                 |

Table G–400. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.726            | 0.700             | -0.704            | 0.679             |
| A2   | -200.             | 475.              | -31.7             | 64.4              |
| FD   | -2.05E-02         | 2.68E-02          | -1.65E-02         | 1.61E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | -3.78E-10         | 3.04E-10          | -2.82E-10         | 1.99E-10          |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-201. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-401. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

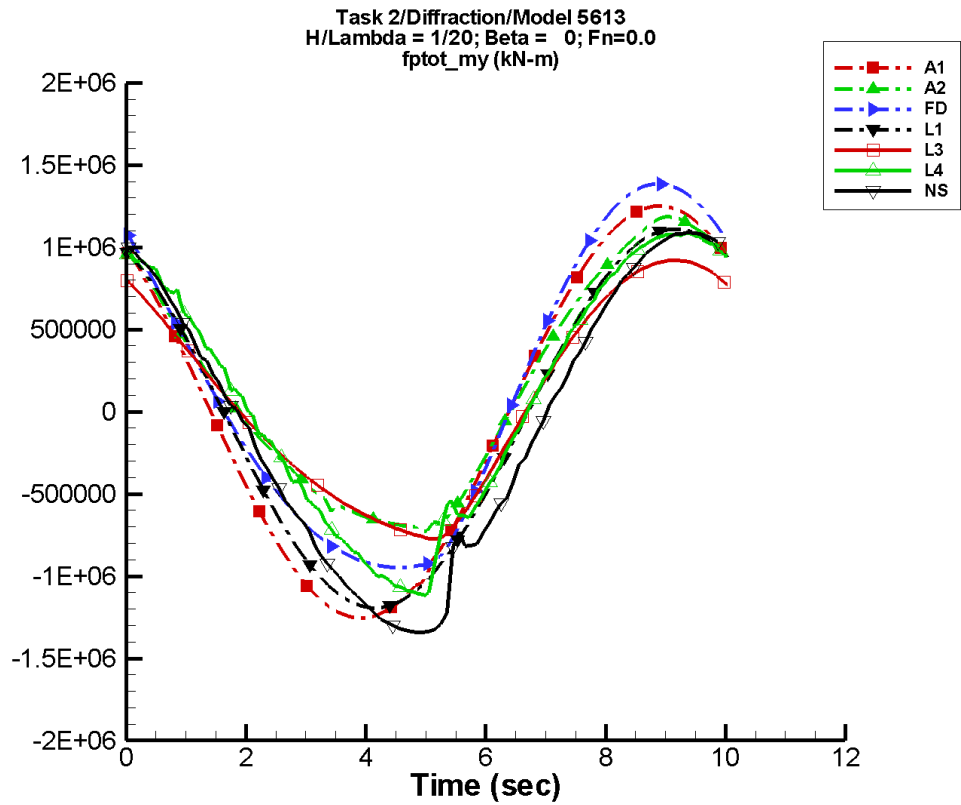
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -668.           | 4.17E+05        | 124               | 444.            | 36                |
| A2   | 3.33E+04        | 3.93E+05        | 119               | 1.71E+04        | -166              |
| FD   | 2.11E+04        | 4.46E+05        | 118               | 1.80E+04        | -142              |
| L1   | -4.94E+03       | 3.84E+05        | 115               | 885.            | 68                |
| L3   | 5.87E+03        | 3.50E+05        | 113               | 1.59E+04        | -124              |
| L4   | 3.14E+03        | 3.76E+05        | 113               | 1.12E+04        | -53               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.84E+04       | 4.08E+05        | 110               | 1.12E+03        | 154               |

Table G-402. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.17E+05         | 4.16E+05          | -4.13E+05         | 4.11E+05          |
| A2   | -3.44E+05         | 4.29E+05          | -3.41E+05         | 4.26E+05          |
| FD   | -4.24E+05         | 4.74E+05          | -4.20E+05         | 4.70E+05          |
| L1   | -3.89E+05         | 3.79E+05          | -3.87E+05         | 3.78E+05          |
| L3   | -3.56E+05         | 3.59E+05          | -3.55E+05         | 3.57E+05          |
| L4   | -4.00E+05         | 3.73E+05          | -3.96E+05         | 3.72E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.88E+05         | 3.33E+05          | -4.83E+05         | 3.29E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-202. Time history of  $M_y^{tot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

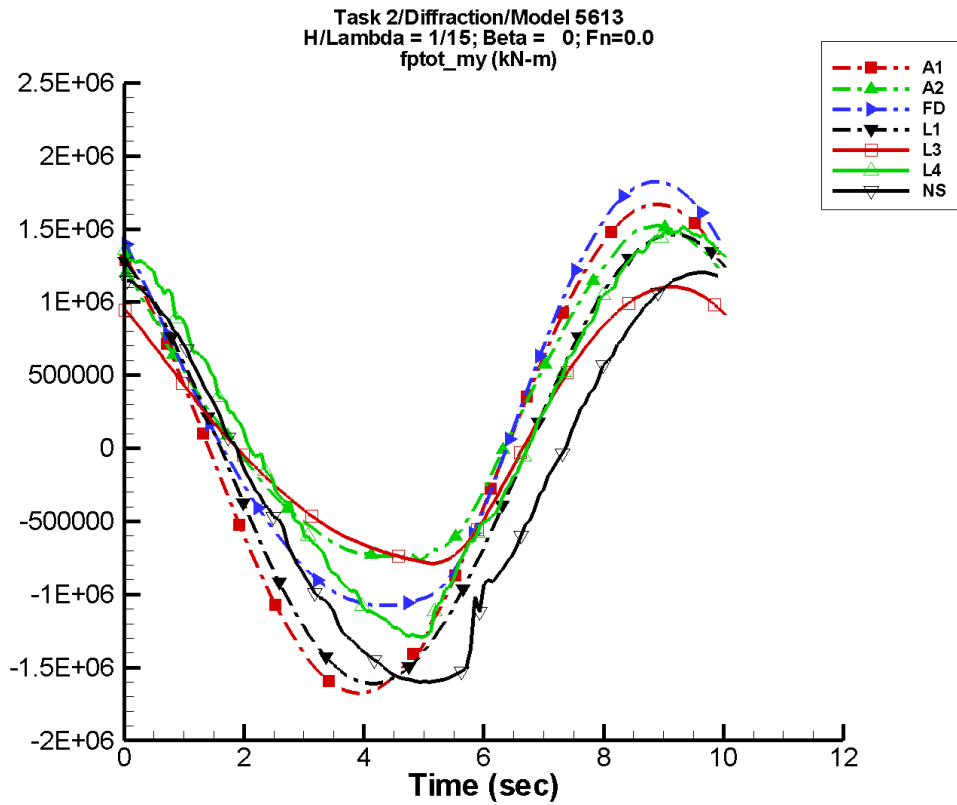
Table G-403. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.01E+03       | 1.25E+06        | 124               | 1.34E+03        | 36                |
| A2   | 1.67E+05        | 9.24E+05        | 115               | 9.39E+04        | -178              |
| FD   | 1.43E+05        | 1.18E+06        | 116               | 1.25E+05        | -167              |
| L1   | -4.22E+04       | 1.15E+06        | 115               | 7.59E+03        | 55                |
| L3   | 6.92E+04        | 8.16E+05        | 109               | 9.87E+04        | -158              |
| L4   | 7.52E+04        | 1.03E+06        | 107               | 5.79E+04        | -101              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.93E+04       | 1.16E+06        | 109               | 3.57E+04        | -128              |

Table G-404. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.26E+06         | 1.25E+06          | -1.24E+06         | 1.24E+06          |
| A2   | -7.34E+05         | 1.19E+06          | -7.00E+05         | 1.16E+06          |
| FD   | -9.48E+05         | 1.38E+06          | -9.44E+05         | 1.37E+06          |
| L1   | -1.19E+06         | 1.11E+06          | -1.19E+06         | 1.11E+06          |
| L3   | -7.75E+05         | 9.20E+05          | -7.66E+05         | 9.17E+05          |
| L4   | -1.11E+06         | 1.09E+06          | -1.10E+06         | 1.08E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.34E+06         | 1.09E+06          | -1.34E+06         | 1.08E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-203. Time history of  $M_y^{pot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

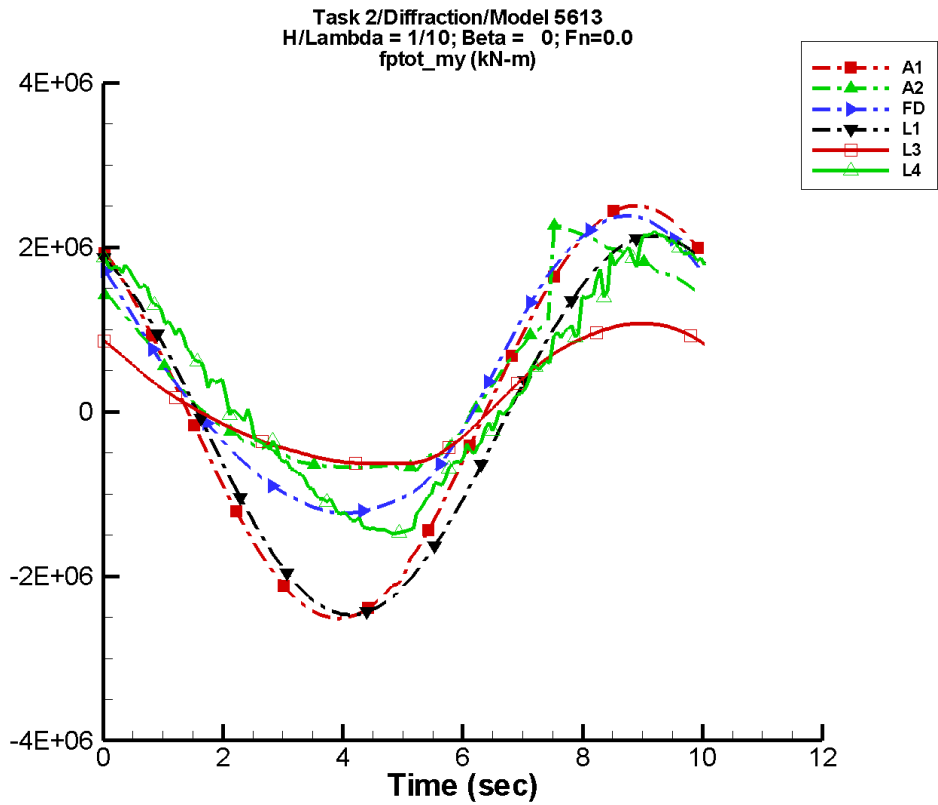
Table G-405. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.68E+03       | 1.67E+06        | 124               | 1.78E+03        | 36                |
| A2   | 2.67E+05        | 1.14E+06        | 118               | 1.47E+05        | -177              |
| FD   | 2.37E+05        | 1.47E+06        | 117               | 1.82E+05        | -178              |
| L1   | -7.45E+04       | 1.54E+06        | 115               | 1.35E+04        | 53                |
| L3   | 1.10E+05        | 9.25E+05        | 110               | 1.35E+05        | -171              |
| L4   | 1.56E+05        | 1.32E+06        | 105               | 6.17E+04        | -135              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.95E+05       | 1.38E+06        | 102               | 3.87E+04        | -167              |

Table G-406. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.68E+06         | 1.67E+06          | -1.66E+06         | 1.65E+06          |
| A2   | -7.71E+05         | 1.52E+06          | -7.41E+05         | 1.50E+06          |
| FD   | -1.08E+06         | 1.82E+06          | -1.07E+06         | 1.81E+06          |
| L1   | -1.61E+06         | 1.46E+06          | -1.60E+06         | 1.46E+06          |
| L3   | -7.90E+05         | 1.10E+06          | -7.82E+05         | 1.10E+06          |
| L4   | -1.29E+06         | 1.52E+06          | -1.28E+06         | 1.49E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.60E+06         | 1.21E+06          | -1.60E+06         | 1.19E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-204. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

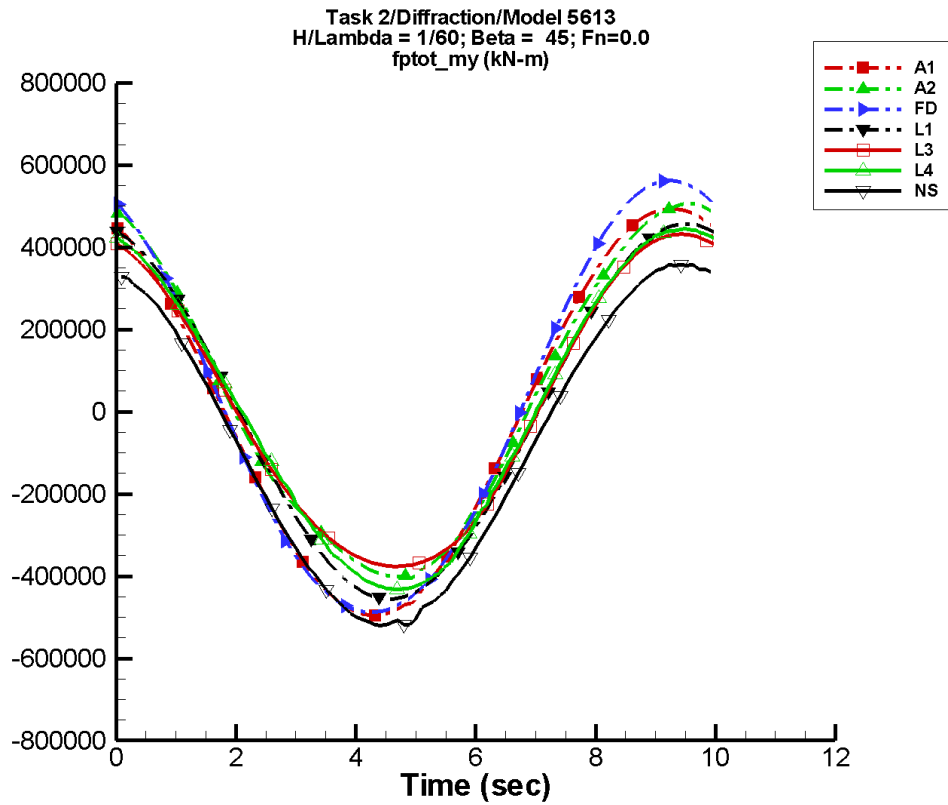
Table G-407. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -4.02E+03       | 2.51E+06        | 124               | 2.67E+03        | 36                |
| A2   | 4.59E+05        | 1.40E+06        | 125               | 2.77E+05        | -168              |
| FD   | 4.01E+05        | 1.82E+06        | 123               | 2.25E+05        | -175              |
| L1   | -1.67E+05       | 2.30E+06        | 115               | 3.02E+04        | 51                |
| L3   | 1.30E+05        | 8.61E+05        | 119               | 1.33E+05        | -171              |
| L4   | 2.95E+05        | 1.66E+06        | 104               | 4.99E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-408. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.51E+06         | 2.50E+06          | -2.49E+06         | 2.48E+06          |
| A2   | -7.20E+05         | 2.27E+06          | -6.73E+05         | 2.15E+06          |
| FD   | -1.24E+06         | 2.38E+06          | -1.22E+06         | 2.36E+06          |
| L1   | -2.47E+06         | 2.14E+06          | -2.46E+06         | 2.13E+06          |
| L3   | -6.32E+05         | 1.07E+06          | -6.30E+05         | 1.07E+06          |
| L4   | -1.48E+06         | 2.20E+06          | -1.46E+06         | 2.13E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-205. Time history of  $M_y^{tot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-409. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

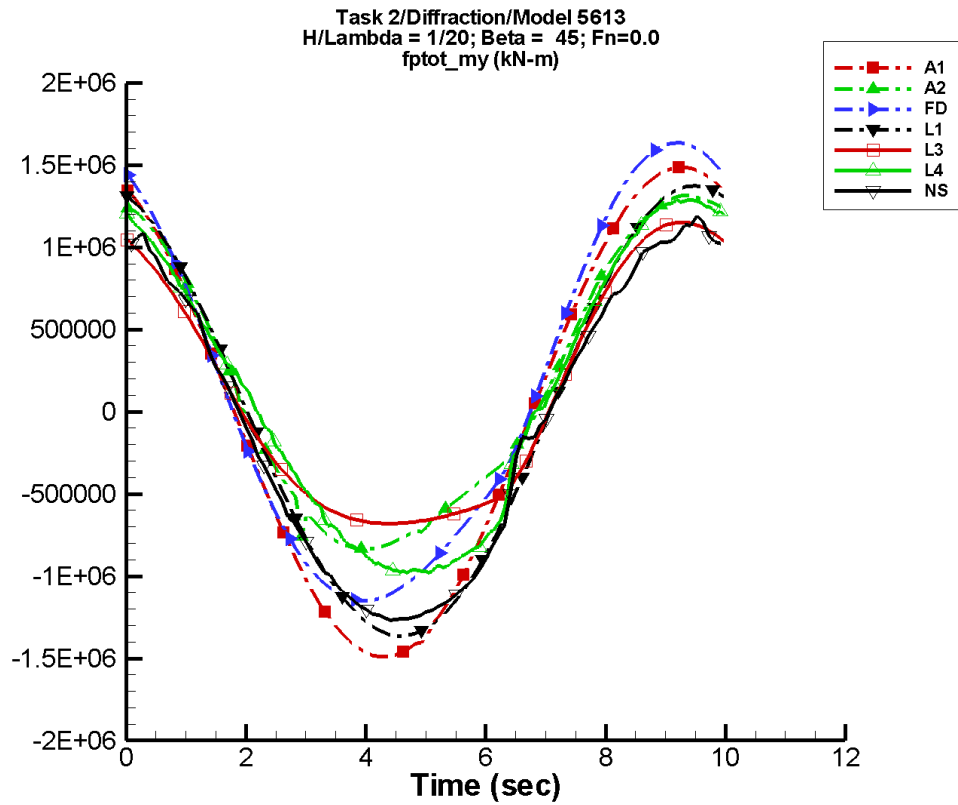
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -711.           | 4.95E+05        | 110               | 673.            | 37                |
| A2   | 3.34E+04        | 4.54E+05        | 104               | 2.34E+04        | 126               |
| FD   | 2.14E+04        | 5.31E+05        | 107               | 1.68E+04        | 121               |
| L1   | -1.93E+03       | 4.56E+05        | 101               | 3.20E+03        | 154               |
| L3   | 9.03E+03        | 4.10E+05        | 101               | 2.35E+04        | 146               |
| L4   | 6.90E+03        | 4.37E+05        | 101               | 1.37E+04        | -151              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.83E+04       | 4.39E+05        | 106               | 3.74E+03        | -3                |

Table G-410. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.96E+05         | 4.94E+05          | -4.91E+05         | 4.89E+05          |
| A2   | -4.05E+05         | 5.06E+05          | -3.97E+05         | 5.00E+05          |
| FD   | -4.88E+05         | 5.62E+05          | -4.83E+05         | 5.57E+05          |
| L1   | -4.56E+05         | 4.57E+05          | -4.54E+05         | 4.55E+05          |
| L3   | -3.76E+05         | 4.32E+05          | -3.75E+05         | 4.30E+05          |
| L4   | -4.33E+05         | 4.45E+05          | -4.30E+05         | 4.42E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.19E+05         | 3.57E+05          | -5.15E+05         | 3.53E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-206. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

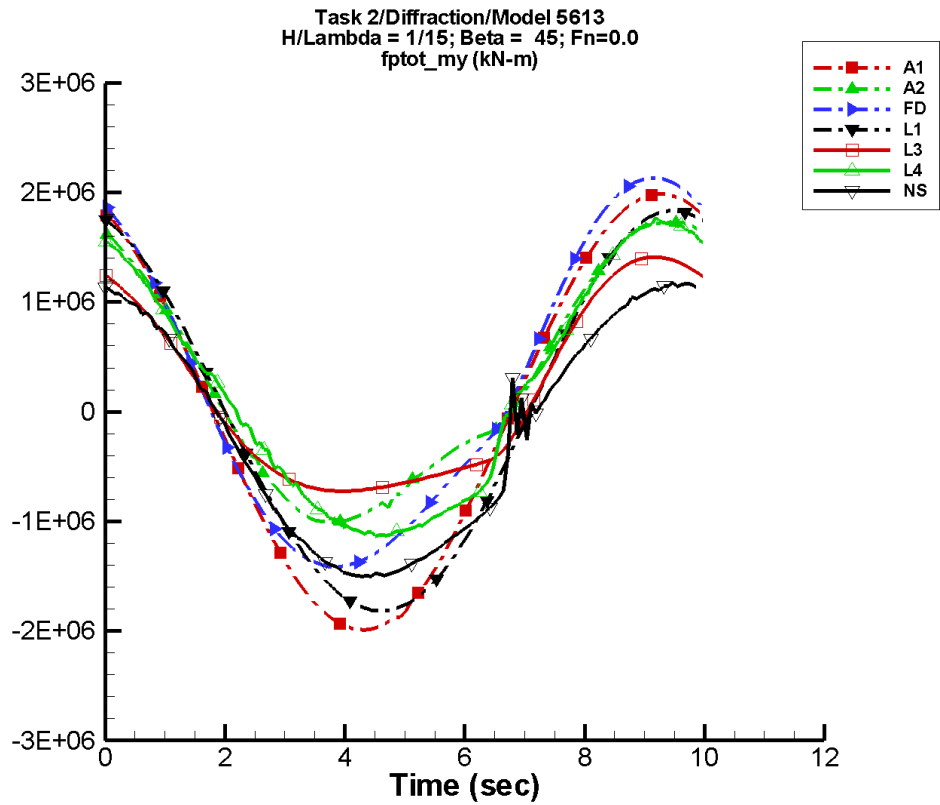
Table G-411. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.14E+03       | 1.49E+06        | 110               | 2.02E+03        | 37                |
| A2   | 1.68E+05        | 1.08E+06        | 106               | 1.12E+05        | 90                |
| FD   | 1.41E+05        | 1.40E+06        | 109               | 1.32E+05        | 109               |
| L1   | -1.60E+04       | 1.37E+06        | 101               | 2.68E+04        | 152               |
| L3   | 9.25E+04        | 9.42E+05        | 103               | 1.58E+05        | 131               |
| L4   | 1.02E+05        | 1.13E+06        | 101               | 9.48E+04        | 177               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.66E+04       | 1.22E+06        | 107               | 4.41E+03        | 78                |

Table G-412. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.49E+06         | 1.49E+06          | -1.48E+06         | 1.47E+06          |
| A2   | -8.35E+05         | 1.32E+06          | -8.23E+05         | 1.30E+06          |
| FD   | -1.15E+06         | 1.63E+06          | -1.14E+06         | 1.62E+06          |
| L1   | -1.36E+06         | 1.37E+06          | -1.36E+06         | 1.37E+06          |
| L3   | -6.81E+05         | 1.15E+06          | -6.79E+05         | 1.15E+06          |
| L4   | -9.85E+05         | 1.29E+06          | -9.70E+05         | 1.28E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.27E+06         | 1.19E+06          | -1.25E+06         | 1.11E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-207. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

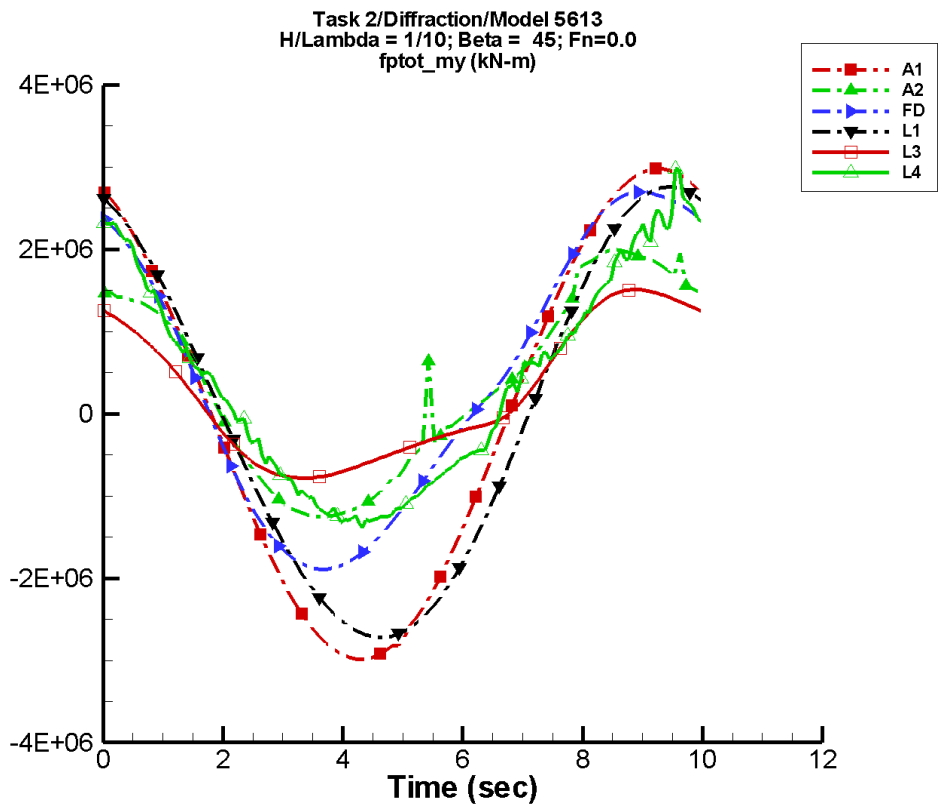
Table G-413. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.86E+03       | 1.99E+06        | 110               | 2.70E+03        | 37                |
| A2   | 2.67E+05        | 1.32E+06        | 110               | 1.85E+05        | 88                |
| FD   | 2.33E+05        | 1.76E+06        | 111               | 1.95E+05        | 98                |
| L1   | -2.81E+04       | 1.82E+06        | 101               | 4.72E+04        | 152               |
| L3   | 1.52E+05        | 1.08E+06        | 106               | 2.17E+05        | 124               |
| L4   | 1.91E+05        | 1.41E+06        | 103               | 1.34E+05        | 160               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.81E+05       | 1.36E+06        | 105               | 2.01E+04        | 30                |

Table G-414. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.99E+06         | 1.98E+06          | -1.97E+06         | 1.96E+06          |
| A2   | -1.01E+06         | 1.73E+06          | -9.92E+05         | 1.72E+06          |
| FD   | -1.41E+06         | 2.13E+06          | -1.40E+06         | 2.11E+06          |
| L1   | -1.82E+06         | 1.83E+06          | -1.81E+06         | 1.83E+06          |
| L3   | -7.24E+05         | 1.41E+06          | -7.22E+05         | 1.40E+06          |
| L4   | -1.14E+06         | 1.77E+06          | -1.12E+06         | 1.73E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.51E+06         | 1.18E+06          | -1.49E+06         | 1.15E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-208. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

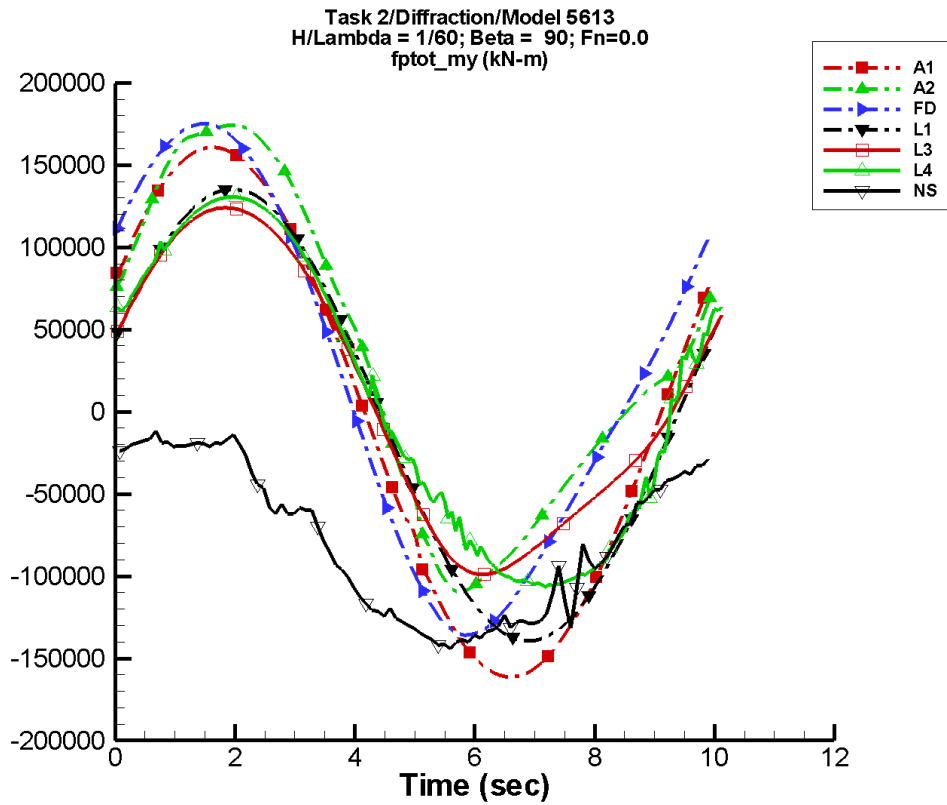
Table G-415. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -4.29E+03       | 2.98E+06        | 110               | 4.06E+03        | 37                |
| A2   | 3.84E+05        | 1.52E+06        | 119               | 1.48E+05        | 40                |
| FD   | 3.95E+05        | 2.25E+06        | 116               | 2.52E+05        | 61                |
| L1   | -6.25E+04       | 2.74E+06        | 101               | 1.05E+05        | 152               |
| L3   | 2.31E+05        | 1.09E+06        | 117               | 2.33E+05        | 108               |
| L4   | 3.81E+05        | 1.77E+06        | 105               | 1.89E+05        | 97                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-416. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.99E+06         | 2.98E+06          | -2.96E+06         | 2.95E+06          |
| A2   | -1.25E+06         | 2.00E+06          | -1.23E+06         | 1.96E+06          |
| FD   | -1.89E+06         | 2.69E+06          | -1.87E+06         | 2.67E+06          |
| L1   | -2.72E+06         | 2.76E+06          | -2.71E+06         | 2.75E+06          |
| L3   | -7.84E+05         | 1.51E+06          | -7.80E+05         | 1.50E+06          |
| L4   | -1.39E+06         | 2.98E+06          | -1.30E+06         | 2.61E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-209. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-417. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

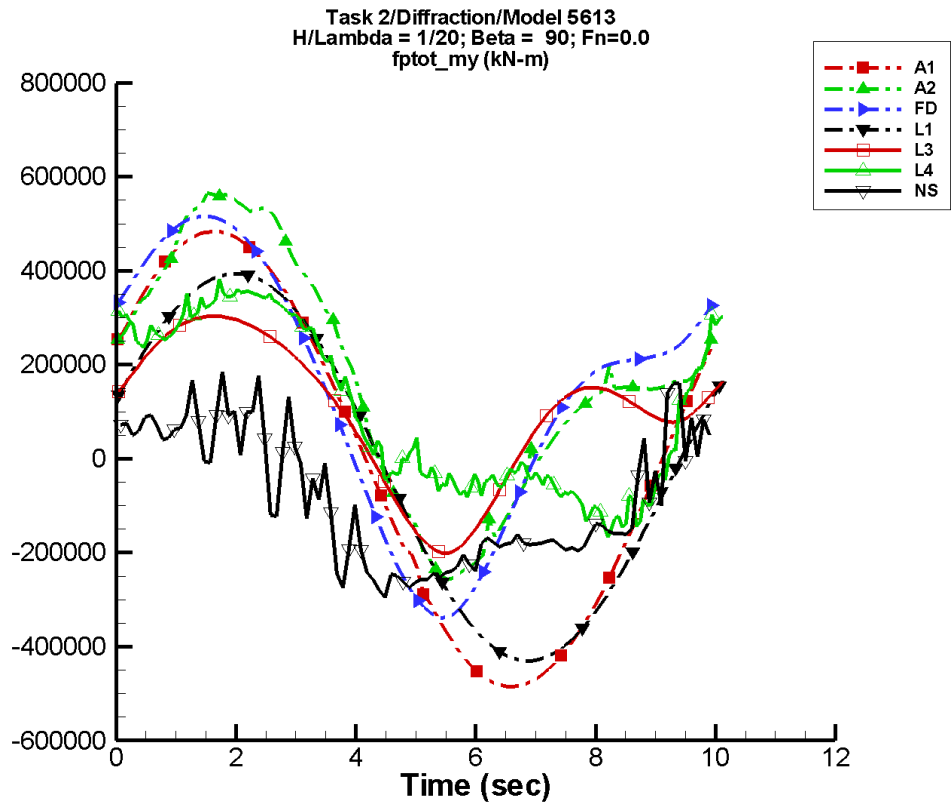
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 203.            | 1.61E+05        | 25                | 271.            | 58                |
| A2   | 3.44E+04        | 1.31E+05        | 27                | 2.47E+04        | -104              |
| FD   | 2.17E+04        | 1.49E+05        | 36                | 1.58E+04        | -108              |
| L1   | -1.49E+03       | 1.37E+05        | 15                | 843.            | 174               |
| L3   | 9.62E+03        | 1.09E+05        | 22                | 1.17E+04        | -99               |
| L4   | 8.01E+03        | 1.20E+05        | 15                | 6.82E+03        | -7                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.78E+04       | 6.25E+04        | 57                | 2.45E+03        | -80               |

Table G-418. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.61E+05         | 1.62E+05          | -1.60E+05         | 1.60E+05          |
| A2   | -1.10E+05         | 1.76E+05          | -1.06E+05         | 1.76E+05          |
| FD   | -1.36E+05         | 1.75E+05          | -1.34E+05         | 1.73E+05          |
| L1   | -1.39E+05         | 1.35E+05          | -1.39E+05         | 1.35E+05          |
| L3   | -9.90E+04         | 1.24E+05          | -9.84E+04         | 1.24E+05          |
| L4   | -1.07E+05         | 1.31E+05          | -1.05E+05         | 1.30E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.44E+05         | -1.18E+04         | -1.40E+05         | -1.79E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-210. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

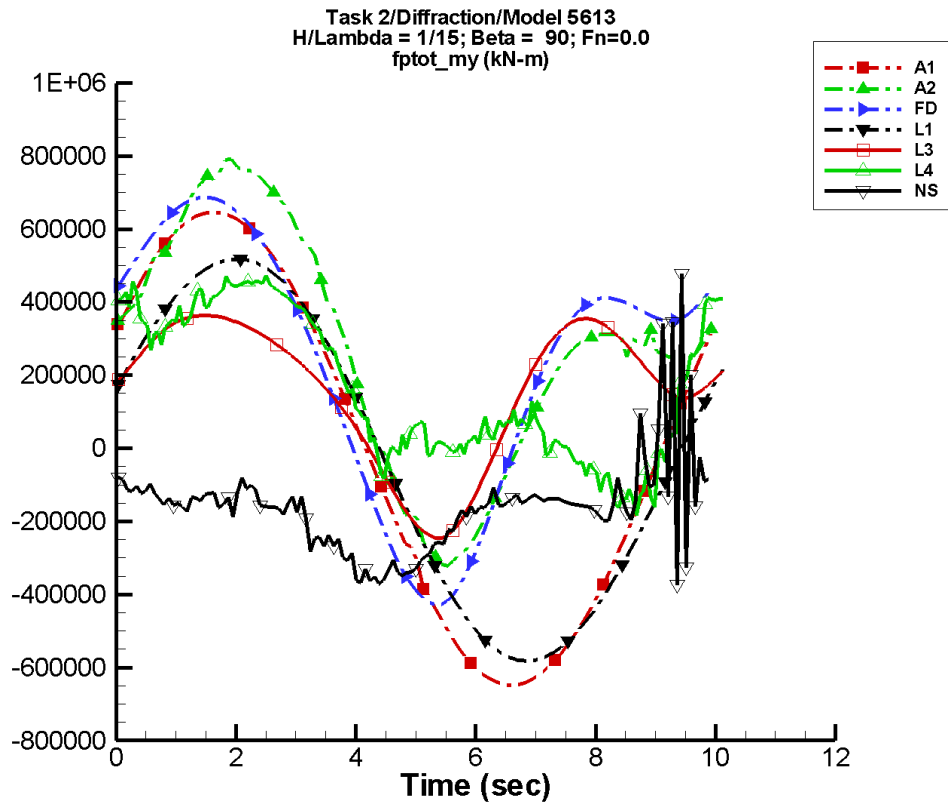
Table G-419. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 610.            | 4.83E+05        | 25                | 814.            | 58                |
| A2   | 1.75E+05        | 3.27E+05        | 35                | 1.31E+05        | -104              |
| FD   | 1.44E+05        | 3.60E+05        | 52                | 1.20E+05        | -107              |
| L1   | -1.30E+04       | 4.12E+05        | 15                | 8.13E+03        | 172               |
| L3   | 9.77E+04        | 1.81E+05        | 51                | 9.45E+04        | -100              |
| L4   | 9.97E+04        | 2.27E+05        | 16                | 4.89E+04        | -32               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.54E+04       | 1.70E+05        | 58                | 2.81E+04        | -41               |

Table G-420. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.85E+05         | 4.88E+05          | -4.80E+05         | 4.82E+05          |
| A2   | -2.56E+05         | 5.69E+05          | -2.39E+05         | 5.60E+05          |
| FD   | -3.39E+05         | 5.16E+05          | -3.27E+05         | 5.11E+05          |
| L1   | -4.30E+05         | 3.94E+05          | -4.29E+05         | 3.92E+05          |
| L3   | -2.02E+05         | 3.03E+05          | -1.97E+05         | 3.02E+05          |
| L4   | -1.67E+05         | 3.82E+05          | -1.34E+05         | 3.55E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.95E+05         | 1.85E+05          | -2.63E+05         | 1.32E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-211. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

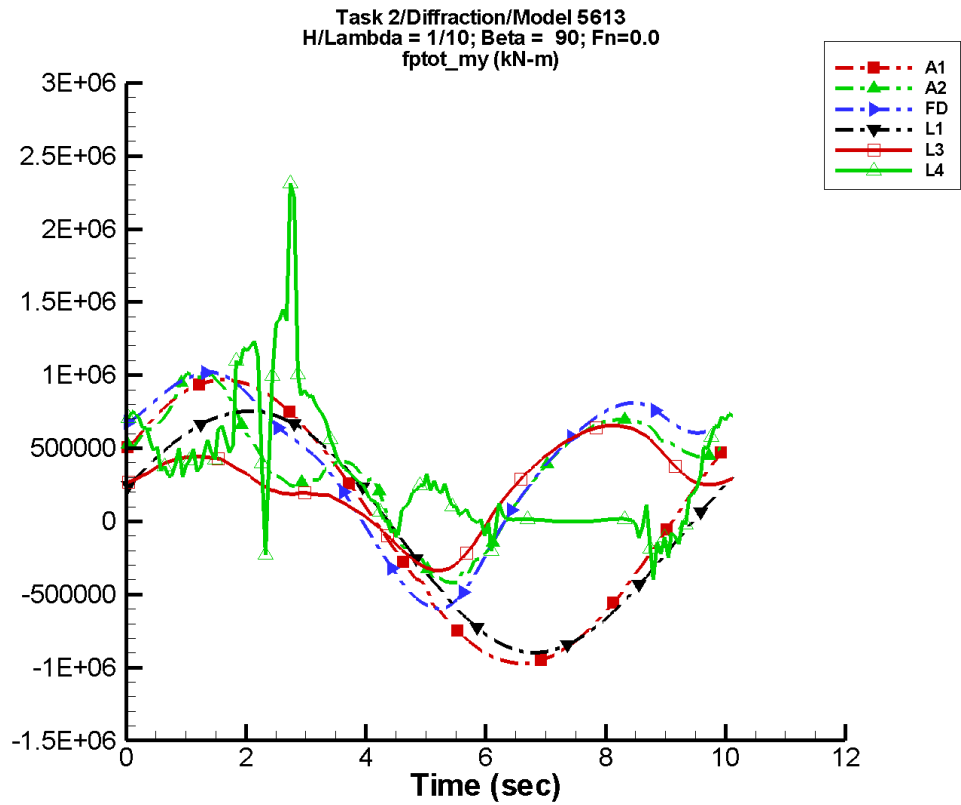
Table G-421. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 815.            | 6.45E+05        | 25                | 1.09E+03        | 58                |
| A2   | 2.75E+05        | 4.02E+05        | 40                | 2.18E+05        | -105              |
| FD   | 2.39E+05        | 4.47E+05        | 61                | 2.01E+05        | -107              |
| L1   | -2.30E+04       | 5.49E+05        | 15                | 1.46E+04        | 171               |
| L3   | 1.60E+05        | 2.03E+05        | 74                | 1.52E+05        | -101              |
| L4   | 1.64E+05        | 2.38E+05        | 16                | 7.82E+04        | -34               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.68E+05       | 1.06E+05        | 109               | 2.39E+04        | -76               |

Table G-422. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.48E+05         | 6.51E+05          | -6.41E+05         | 6.43E+05          |
| A2   | -3.21E+05         | 8.03E+05          | -2.93E+05         | 7.77E+05          |
| FD   | -4.29E+05         | 6.86E+05          | -4.11E+05         | 6.79E+05          |
| L1   | -5.82E+05         | 5.17E+05          | -5.80E+05         | 5.15E+05          |
| L3   | -2.46E+05         | 3.63E+05          | -2.40E+05         | 3.62E+05          |
| L4   | -1.85E+05         | 4.75E+05          | -1.38E+05         | 4.55E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.74E+05         | 4.77E+05          | -3.51E+05         | 5.09E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-212. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

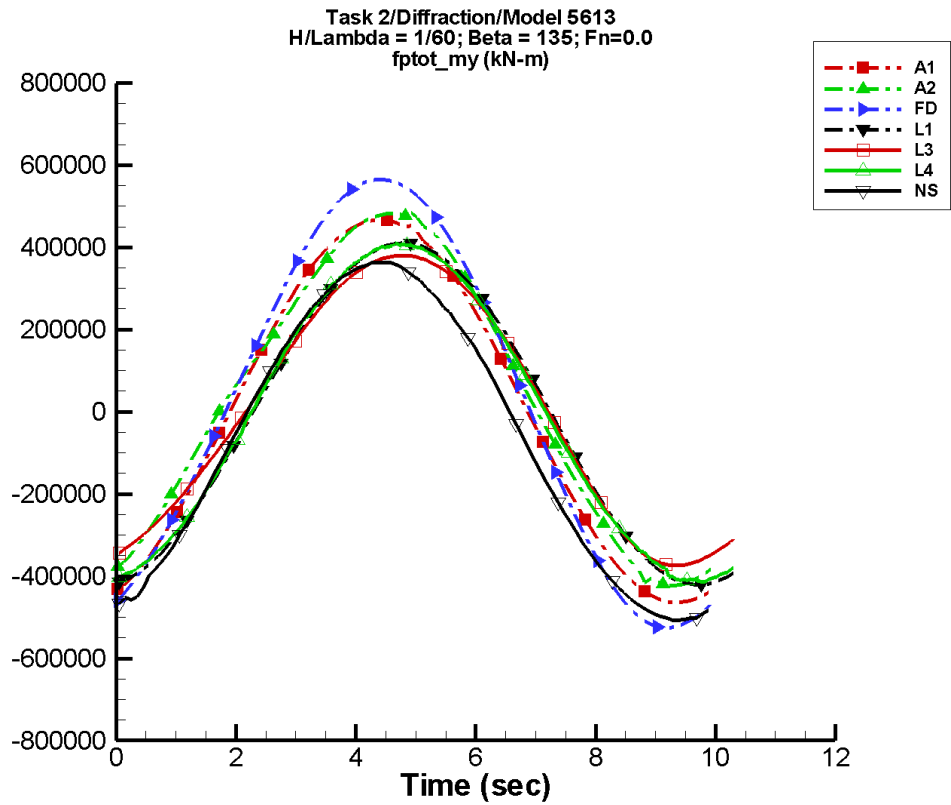
Table G-423. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.22E+03        | 9.68E+05        | 25                | 1.63E+03        | 58                |
| A2   | 3.80E+05        | 4.63E+05        | 73                | 1.90E+05        | -97               |
| FD   | 4.03E+05        | 6.32E+05        | 72                | 2.89E+05        | -106              |
| L1   | -5.16E+04       | 8.24E+05        | 15                | 3.31E+04        | 171               |
| L3   | 2.42E+05        | 3.17E+05        | 106               | 1.94E+05        | -104              |
| L4   | 3.27E+05        | 4.61E+05        | 5                 | 1.54E+05        | -100              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-424. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.72E+05         | 9.77E+05          | -9.62E+05         | 9.65E+05          |
| A2   | -4.21E+05         | 1.03E+06          | -3.76E+05         | 9.78E+05          |
| FD   | -5.99E+05         | 1.02E+06          | -5.70E+05         | 1.00E+06          |
| L1   | -8.98E+05         | 7.53E+05          | -8.95E+05         | 7.50E+05          |
| L3   | -3.37E+05         | 6.55E+05          | -3.28E+05         | 6.51E+05          |
| L4   | -3.97E+05         | 2.47E+06          | -1.74E+05         | 1.47E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-213. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-425. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

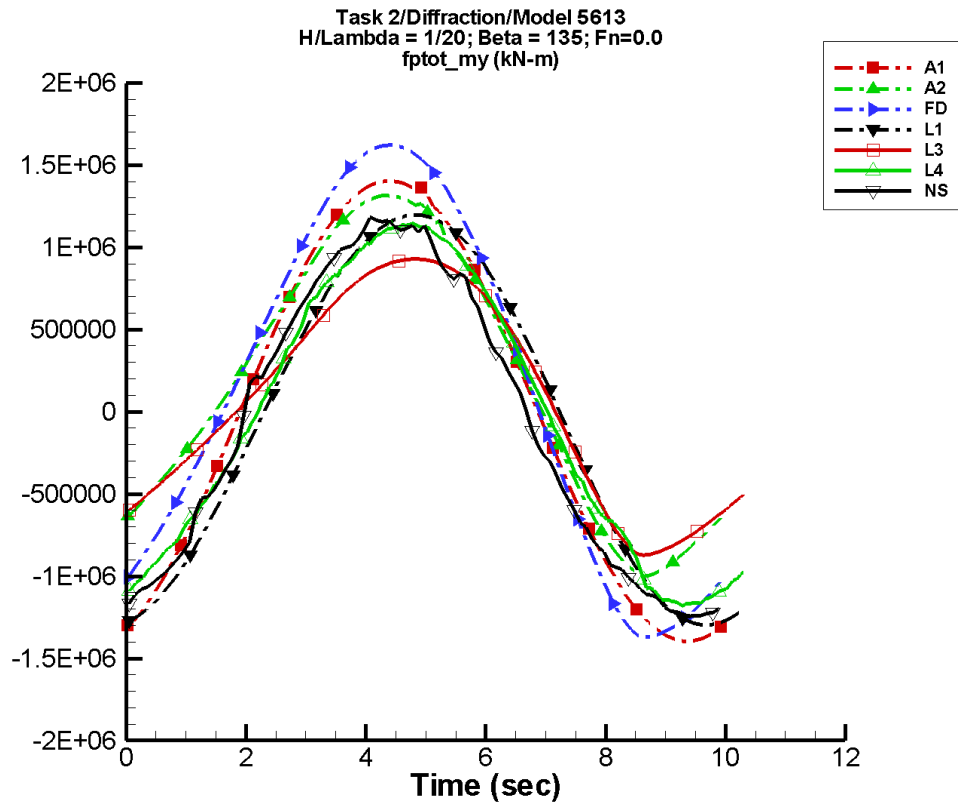
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 846.            | 4.66E+05        | -73               | 602.            | -165              |
| A2   | 3.51E+04        | 4.39E+05        | -75               | 2.31E+04        | 10                |
| FD   | 2.21E+04        | 5.39E+05        | -76               | 1.55E+04        | 30                |
| L1   | -3.22E+03       | 4.15E+05        | -87               | 3.52E+03        | -33               |
| L3   | 7.74E+03        | 3.73E+05        | -83               | 2.19E+04        | 8                 |
| L4   | -3.69E+03       | 4.09E+05        | -85               | 3.07E+03        | 104               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.69E+04       | 4.34E+05        | -69               | 4.45E+03        | 145               |

Table G-426. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.64E+05         | 4.66E+05          | -4.59E+05         | 4.62E+05          |
| A2   | -4.22E+05         | 4.84E+05          | -4.17E+05         | 4.79E+05          |
| FD   | -5.26E+05         | 5.65E+05          | -5.20E+05         | 5.60E+05          |
| L1   | -4.21E+05         | 4.10E+05          | -4.19E+05         | 4.08E+05          |
| L3   | -3.74E+05         | 3.80E+05          | -3.73E+05         | 3.79E+05          |
| L4   | -4.14E+05         | 4.11E+05          | -4.11E+05         | 4.05E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.07E+05         | 3.64E+05          | -5.02E+05         | 3.59E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-214. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

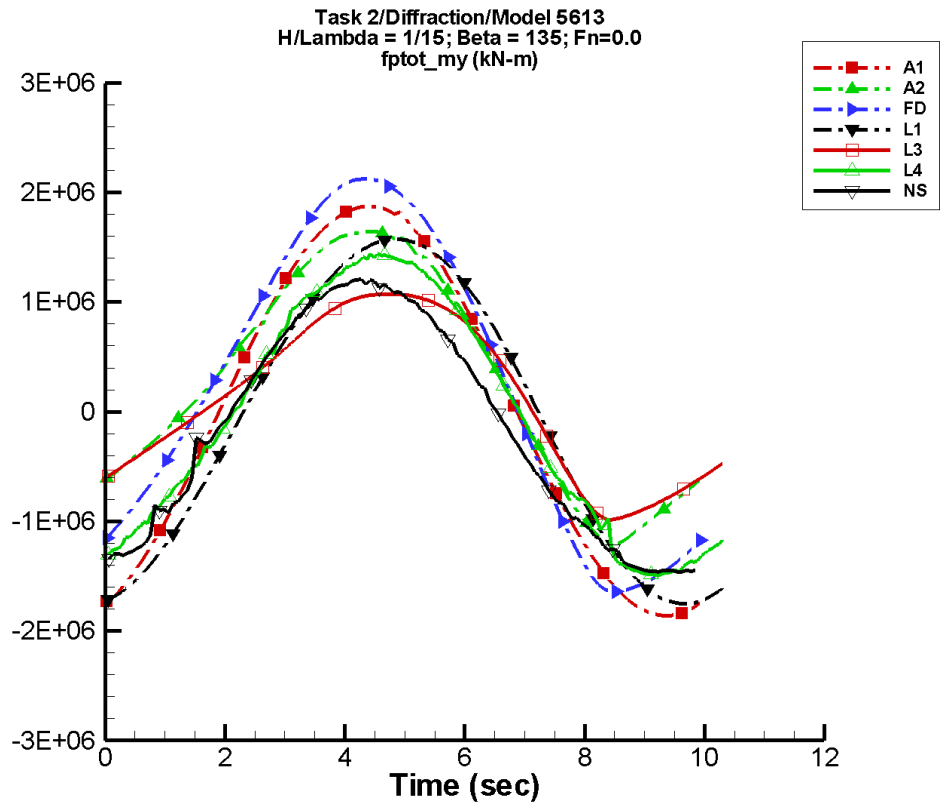
Table G-427. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.54E+03        | 1.40E+06        | -73               | 1.81E+03        | -165              |
| A2   | 1.73E+05        | 1.09E+06        | -67               | 1.17E+05        | 57                |
| FD   | 1.45E+05        | 1.45E+06        | -72               | 1.20E+05        | 39                |
| L1   | -3.16E+04       | 1.24E+06        | -87               | 3.07E+04        | -31               |
| L3   | 7.72E+04        | 8.55E+05        | -77               | 1.45E+05        | 21                |
| L4   | -1.47E+04       | 1.14E+06        | -81               | 3.41E+04        | 41                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.36E+04       | 1.20E+06        | -69               | 4.96E+04        | 157               |

Table G-428. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.40E+06         | 1.40E+06          | -1.38E+06         | 1.39E+06          |
| A2   | -1.00E+06         | 1.31E+06          | -9.68E+05         | 1.30E+06          |
| FD   | -1.37E+06         | 1.62E+06          | -1.35E+06         | 1.61E+06          |
| L1   | -1.30E+06         | 1.20E+06          | -1.29E+06         | 1.19E+06          |
| L3   | -8.73E+05         | 9.28E+05          | -8.63E+05         | 9.26E+05          |
| L4   | -1.18E+06         | 1.15E+06          | -1.17E+06         | 1.13E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.24E+06         | 1.18E+06          | -1.23E+06         | 1.14E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-215. Time history of  $M_y^{tot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

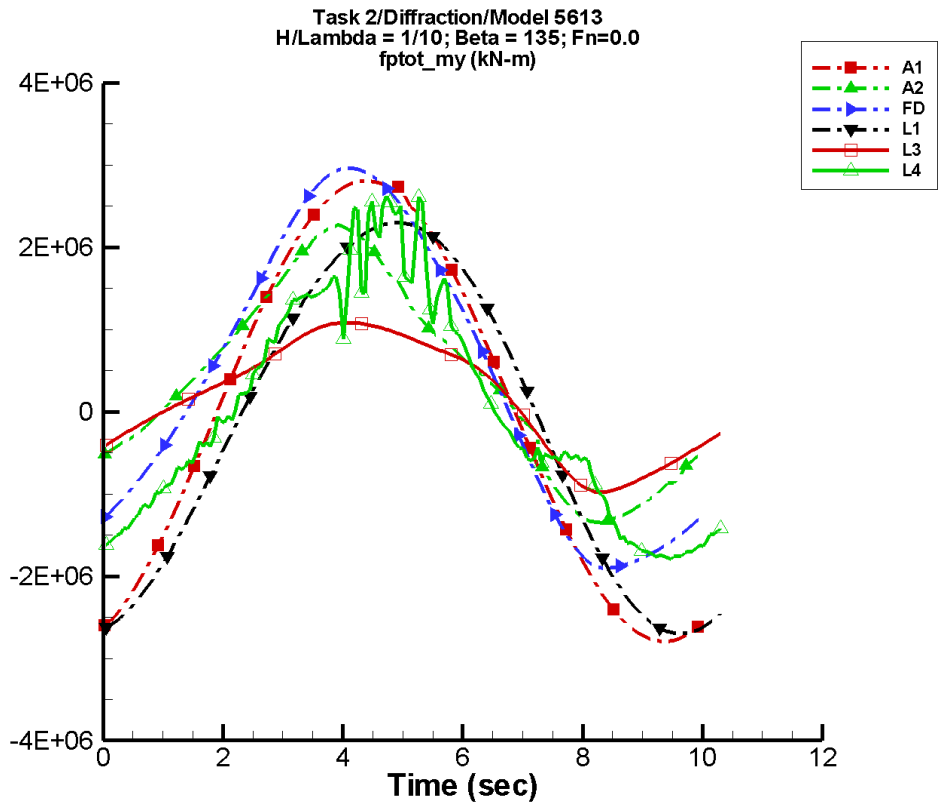
Table G-429. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.40E+03        | 1.87E+06        | -73               | 2.42E+03        | -165              |
| A2   | 2.70E+05        | 1.32E+06        | -64               | 2.00E+05        | 62                |
| FD   | 2.39E+05        | 1.83E+06        | -70               | 1.77E+05        | 49                |
| L1   | -5.69E+04       | 1.66E+06        | -87               | 5.43E+04        | -30               |
| L3   | 1.24E+05        | 9.66E+05        | -73               | 1.96E+05        | 26                |
| L4   | -3.24E+04       | 1.42E+06        | -77               | 6.24E+04        | 52                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.79E+05       | 1.34E+06        | -67               | 4.51E+04        | 167               |

Table G-430. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.86E+06         | 1.87E+06          | -1.84E+06         | 1.86E+06          |
| A2   | -1.21E+06         | 1.65E+06          | -1.15E+06         | 1.63E+06          |
| FD   | -1.64E+06         | 2.13E+06          | -1.62E+06         | 2.10E+06          |
| L1   | -1.75E+06         | 1.57E+06          | -1.75E+06         | 1.57E+06          |
| L3   | -9.85E+05         | 1.07E+06          | -9.71E+05         | 1.07E+06          |
| L4   | -1.50E+06         | 1.45E+06          | -1.48E+06         | 1.42E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.46E+06         | 1.21E+06          | -1.46E+06         | 1.18E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-216. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

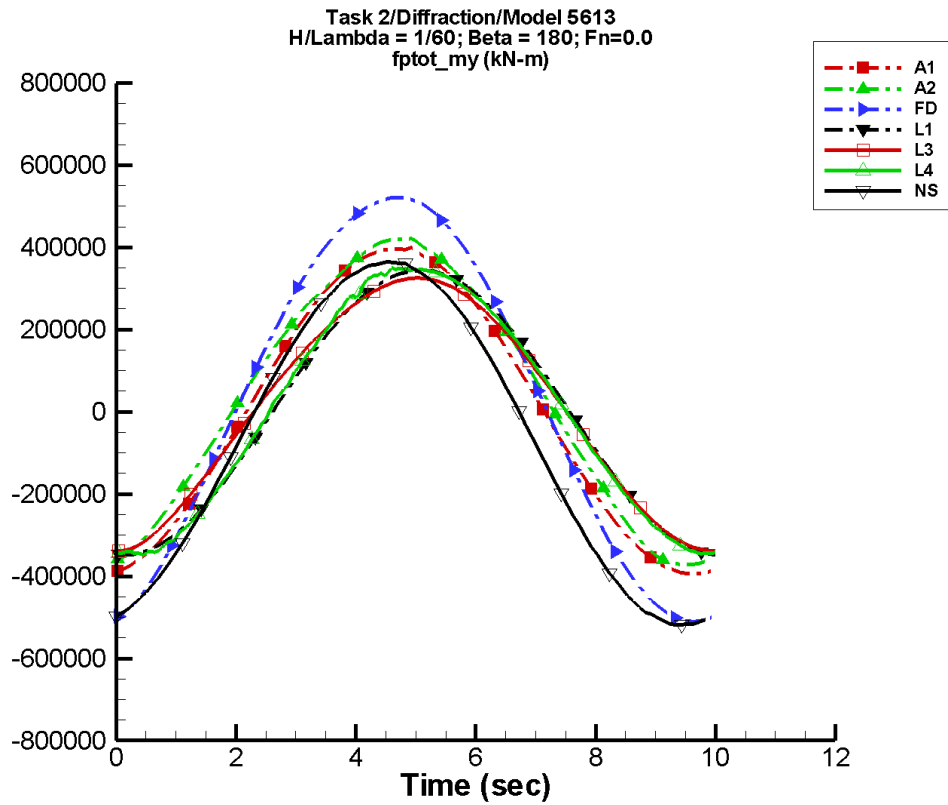
Table G-431. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.10E+03        | 2.80E+06        | -73               | 3.63E+03        | -165              |
| A2   | 3.76E+05        | 1.57E+06        | -53               | 1.43E+05        | 98                |
| FD   | 4.04E+05        | 2.35E+06        | -65               | 2.26E+05        | 88                |
| L1   | -1.29E+05       | 2.49E+06        | -87               | 1.22E+05        | -30               |
| L3   | 1.62E+05        | 9.31E+05        | -60               | 1.73E+05        | 33                |
| L4   | 4.31E+04        | 1.78E+06        | -76               | 1.98E+05        | 122               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-432. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.79E+06         | 2.81E+06          | -2.77E+06         | 2.78E+06          |
| A2   | -1.35E+06         | 2.27E+06          | -1.31E+06         | 2.20E+06          |
| FD   | -1.91E+06         | 2.96E+06          | -1.87E+06         | 2.93E+06          |
| L1   | -2.70E+06         | 2.30E+06          | -2.69E+06         | 2.29E+06          |
| L3   | -9.81E+05         | 1.08E+06          | -9.68E+05         | 1.08E+06          |
| L4   | -1.80E+06         | 2.63E+06          | -1.78E+06         | 2.37E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-217. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-433. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

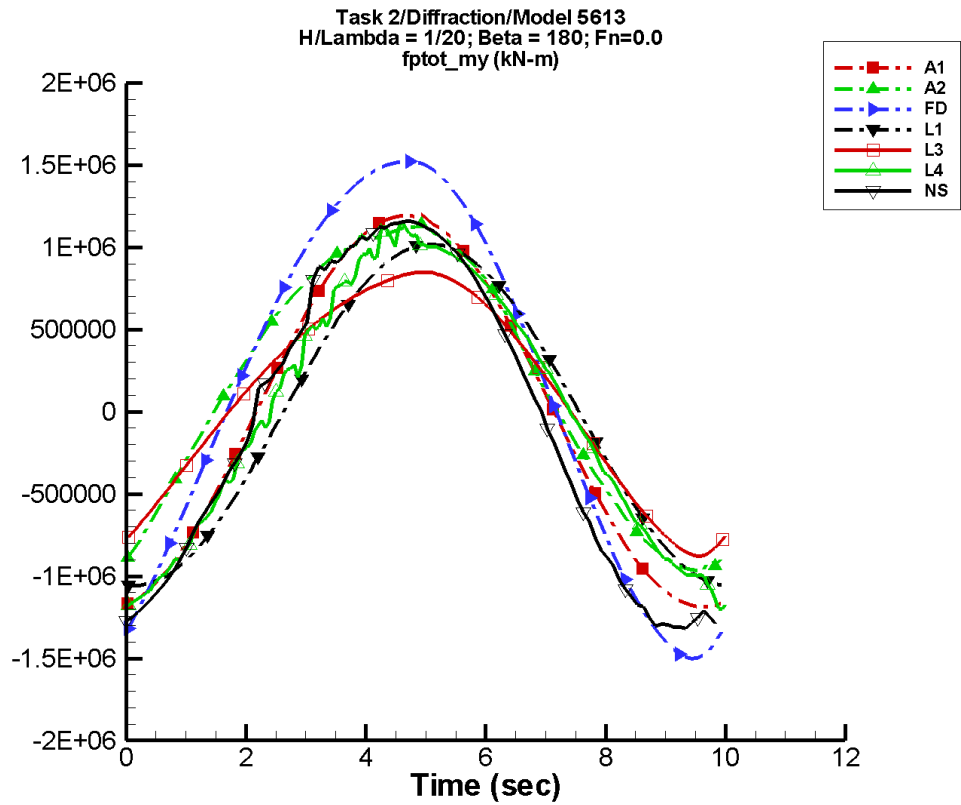
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 642.            | 3.96E+05        | -83               | 572.            | -165              |
| A2   | 3.46E+04        | 3.87E+05        | -82               | 1.85E+04        | -46               |
| FD   | 2.10E+04        | 5.14E+05        | -85               | 1.80E+04        | -66               |
| L1   | -1.57E+03       | 3.46E+05        | -99               | 724.            | -125              |
| L3   | 9.01E+03        | 3.25E+05        | -92               | 1.71E+04        | -71               |
| L4   | -998.           | 3.52E+05        | -97               | 7.29E+03        | 164               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.71E+04       | 4.43E+05        | -74               | 2.68E+03        | 33                |

Table G-434. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.94E+05         | 3.99E+05          | -3.91E+05         | 3.93E+05          |
| A2   | -3.72E+05         | 4.22E+05          | -3.69E+05         | 4.15E+05          |
| FD   | -5.11E+05         | 5.21E+05          | -5.05E+05         | 5.16E+05          |
| L1   | -3.48E+05         | 3.44E+05          | -3.49E+05         | 3.43E+05          |
| L3   | -3.39E+05         | 3.25E+05          | -3.38E+05         | 3.24E+05          |
| L4   | -3.49E+05         | 3.50E+05          | -3.44E+05         | 3.46E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.18E+05         | 3.65E+05          | -5.14E+05         | 3.59E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-218. Time history of  $M_y^{tot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

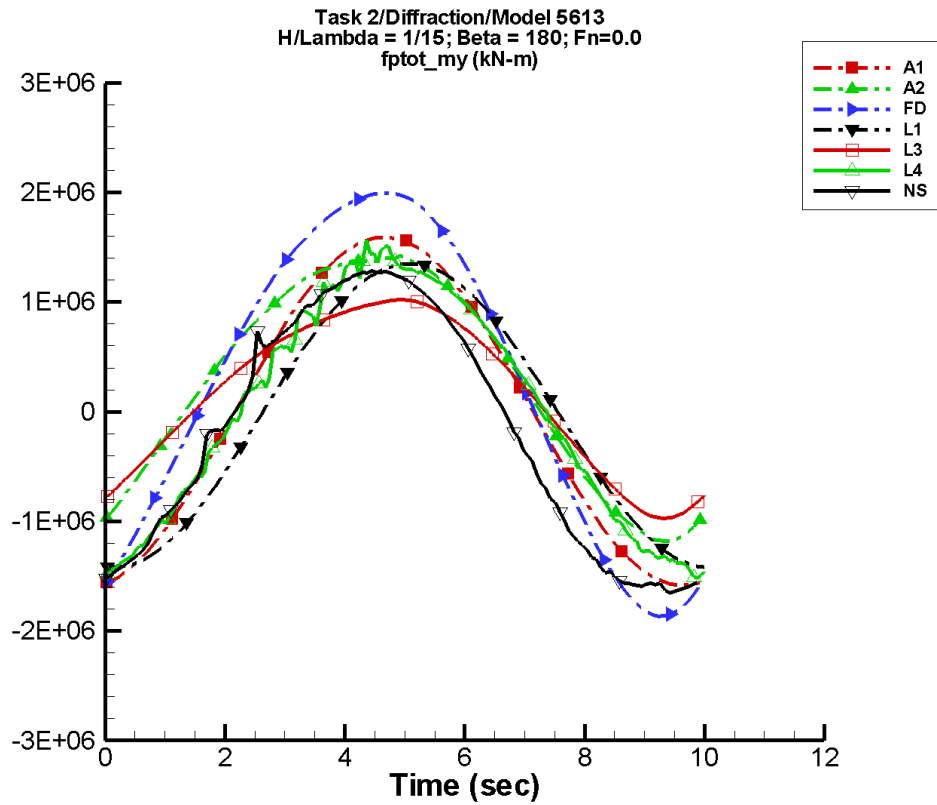
Table G-435. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.93E+03        | 1.19E+06        | -83               | 1.72E+03        | -165              |
| A2   | 1.73E+05        | 1.02E+06        | -74               | 9.70E+04        | -37               |
| FD   | 1.43E+05        | 1.46E+06        | -79               | 1.19E+05        | -41               |
| L1   | -1.56E+04       | 1.04E+06        | -99               | 5.67E+03        | -140              |
| L3   | 9.64E+04        | 7.97E+05        | -81               | 9.86E+04        | -40               |
| L4   | 8.33E+03        | 1.07E+06        | -91               | 3.61E+04        | -135              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.78E+04       | 1.26E+06        | -75               | 3.06E+04        | 49                |

Table G-436. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.19E+06         | 1.20E+06          | -1.18E+06         | 1.18E+06          |
| A2   | -9.66E+05         | 1.14E+06          | -9.43E+05         | 1.11E+06          |
| FD   | -1.50E+06         | 1.52E+06          | -1.47E+06         | 1.51E+06          |
| L1   | -1.06E+06         | 1.02E+06          | -1.06E+06         | 1.01E+06          |
| L3   | -8.79E+05         | 8.49E+05          | -8.66E+05         | 8.45E+05          |
| L4   | -1.20E+06         | 1.20E+06          | -1.17E+06         | 1.10E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.32E+06         | 1.16E+06          | -1.29E+06         | 1.14E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-219. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

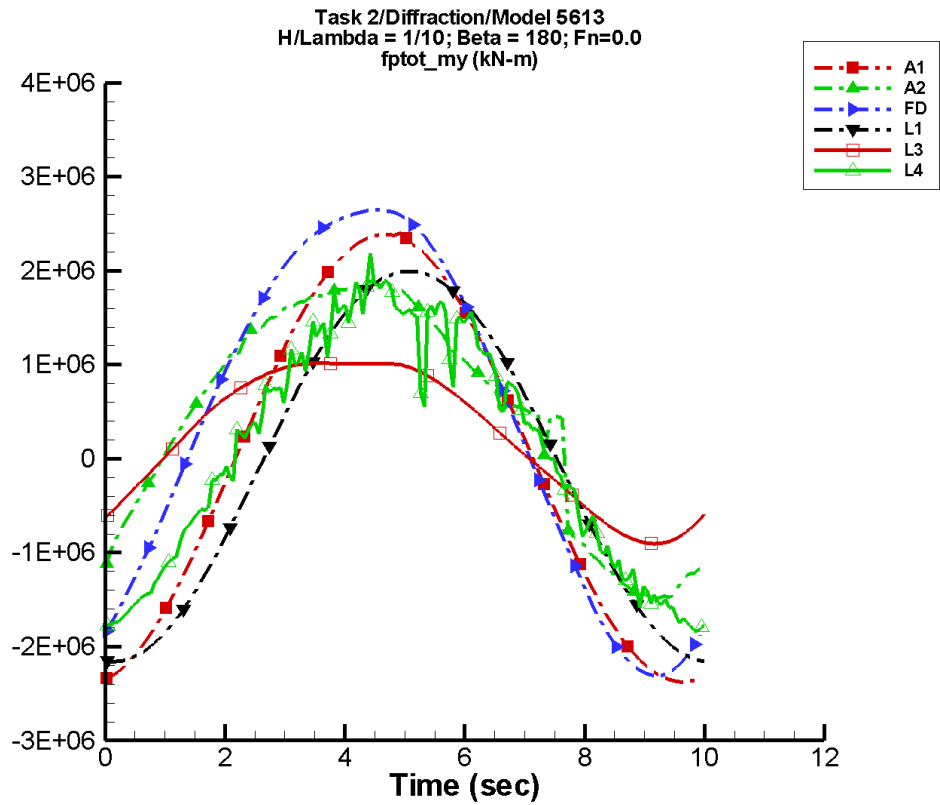
Table G-437. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.58E+03        | 1.59E+06        | -83               | 2.30E+03        | -165              |
| A2   | 2.72E+05        | 1.26E+06        | -72               | 1.49E+05        | -34               |
| FD   | 2.38E+05        | 1.87E+06        | -77               | 1.74E+05        | -31               |
| L1   | -2.81E+04       | 1.38E+06        | -99               | 9.96E+03        | -142              |
| L3   | 1.57E+05        | 9.27E+05        | -76               | 1.33E+05        | -30               |
| L4   | 1.96E+04        | 1.39E+06        | -87               | 4.06E+04        | -97               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.95E+05       | 1.48E+06        | -69               | 3.57E+04        | 61                |

Table G-438. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.58E+06         | 1.60E+06          | -1.57E+06         | 1.58E+06          |
| A2   | -1.18E+06         | 1.42E+06          | -1.15E+06         | 1.39E+06          |
| FD   | -1.87E+06         | 1.99E+06          | -1.83E+06         | 1.98E+06          |
| L1   | -1.42E+06         | 1.35E+06          | -1.42E+06         | 1.34E+06          |
| L3   | -9.72E+05         | 1.02E+06          | -9.63E+05         | 1.02E+06          |
| L4   | -1.52E+06         | 1.62E+06          | -1.46E+06         | 1.46E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.65E+06         | 1.28E+06          | -1.62E+06         | 1.27E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-220. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

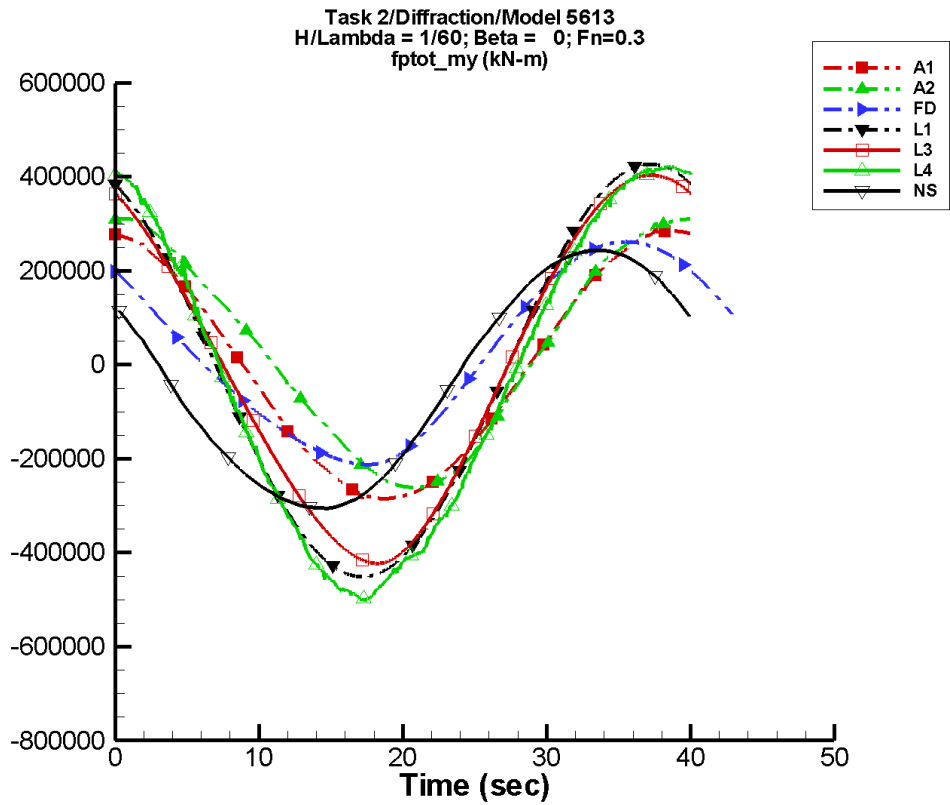
Table G-439. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.87E+03        | 2.38E+06        | -83               | 3.45E+03        | -165              |
| A2   | 4.63E+05        | 1.57E+06        | -64               | 2.81E+05        | -44               |
| FD   | 4.02E+05        | 2.45E+06        | -72               | 2.16E+05        | -35               |
| L1   | -6.40E+04       | 2.08E+06        | -99               | 2.22E+04        | -144              |
| L3   | 2.32E+05        | 9.44E+05        | -60               | 1.42E+05        | -38               |
| L4   | 8.70E+04        | 1.70E+06        | -87               | 1.17E+05        | -98               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-440. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.38E+06         | 2.40E+06          | -2.36E+06         | 2.37E+06          |
| A2   | -1.52E+06         | 1.89E+06          | -1.45E+06         | 1.85E+06          |
| FD   | -2.31E+06         | 2.65E+06          | -2.27E+06         | 2.63E+06          |
| L1   | -2.16E+06         | 1.99E+06          | -2.16E+06         | 1.99E+06          |
| L3   | -9.08E+05         | 1.02E+06          | -8.99E+05         | 1.02E+06          |
| L4   | -1.83E+06         | 2.18E+06          | -1.78E+06         | 1.86E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-221. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-441. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

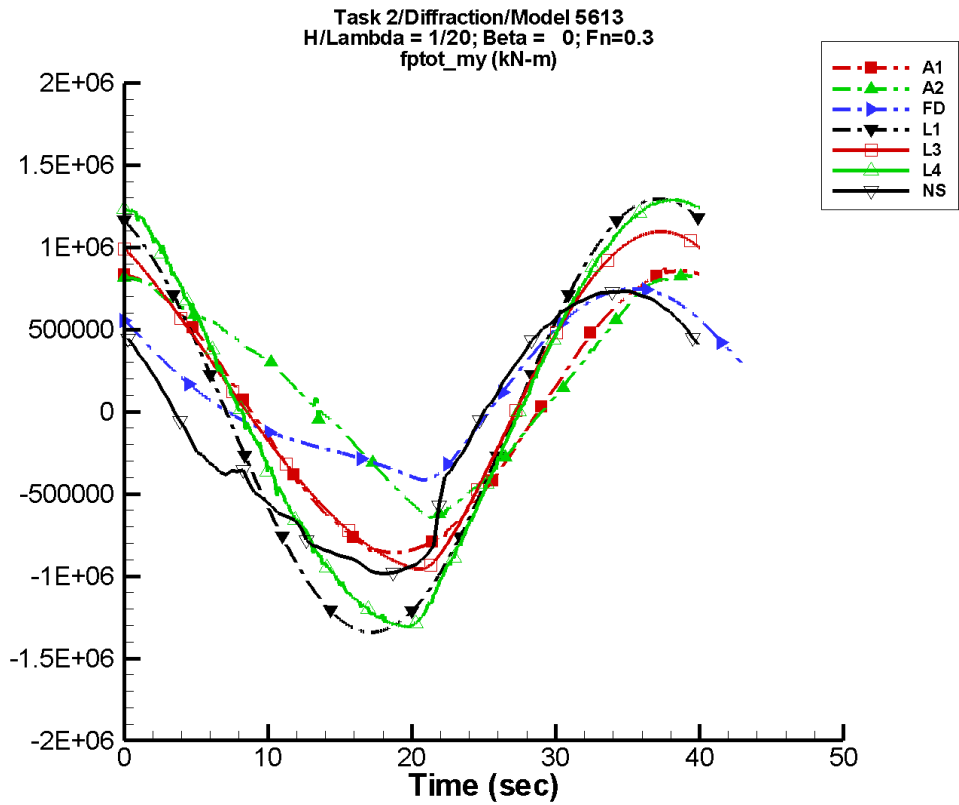
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 102.            | 2.85E+05        | 100               | 953.            | -143              |
| A2   | 3.41E+04        | 2.82E+05        | 90                | 1.84E+04        | -159              |
| FD   | 2.11E+04        | 2.33E+05        | 125               | 1.87E+04        | -131              |
| L1   | -1.18E+04       | 4.39E+05        | 114               | 483.            | -98               |
| L3   | -649.           | 4.05E+05        | 111               | 1.78E+04        | -116              |
| L4   | -2.66E+04       | 4.54E+05        | 110               | 1.63E+04        | 36                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.90E+04       | 2.83E+05        | 149               | 5.31E+03        | -176              |

Table G-442. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.86E+05         | 2.90E+05          | -2.85E+05         | 2.84E+05          |
| A2   | -2.61E+05         | 3.11E+05          | -2.61E+05         | 3.11E+05          |
| FD   | -2.12E+05         | 2.62E+05          | -2.12E+05         | 2.61E+05          |
| L1   | -4.51E+05         | 4.27E+05          | -4.51E+05         | 4.27E+05          |
| L3   | -4.23E+05         | 4.03E+05          | -4.23E+05         | 4.03E+05          |
| L4   | -5.05E+05         | 4.23E+05          | -5.01E+05         | 4.21E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.34E+05         | 2.44E+05          | -3.28E+05         | 2.41E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-222. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

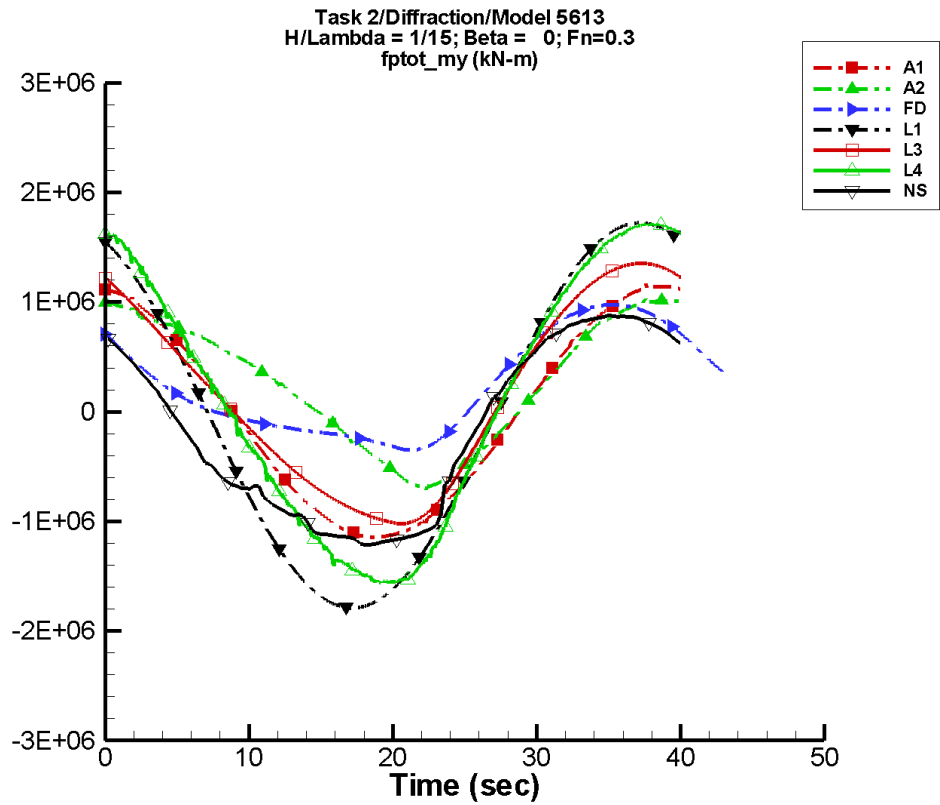
Table G-443. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 308.            | 8.57E+05        | 100               | 2.87E+03        | -143              |
| A2   | 1.70E+05        | 6.61E+05        | 82                | 9.91E+04        | -163              |
| FD   | 1.43E+05        | 5.34E+05        | 122               | 1.22E+05        | -159              |
| L1   | -1.86E+04       | 1.32E+06        | 114               | 5.41E+03        | -70               |
| L3   | 9.44E+04        | 9.87E+05        | 107               | 1.10E+05        | -145              |
| L4   | 4.33E+04        | 1.27E+06        | 107               | 4.18E+04        | -107              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.19E+05       | 8.48E+05        | 137               | 1.07E+05        | -111              |

Table G-444. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.60E+05         | 8.73E+05          | -8.57E+05         | 8.56E+05          |
| A2   | -6.47E+05         | 8.34E+05          | -6.32E+05         | 8.26E+05          |
| FD   | -4.15E+05         | 7.48E+05          | -4.13E+05         | 7.47E+05          |
| L1   | -1.34E+06         | 1.29E+06          | -1.34E+06         | 1.29E+06          |
| L3   | -9.58E+05         | 1.10E+06          | -9.58E+05         | 1.10E+06          |
| L4   | -1.31E+06         | 1.29E+06          | -1.31E+06         | 1.29E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.85E+05         | 7.32E+05          | -9.76E+05         | 7.25E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-223. Time history of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

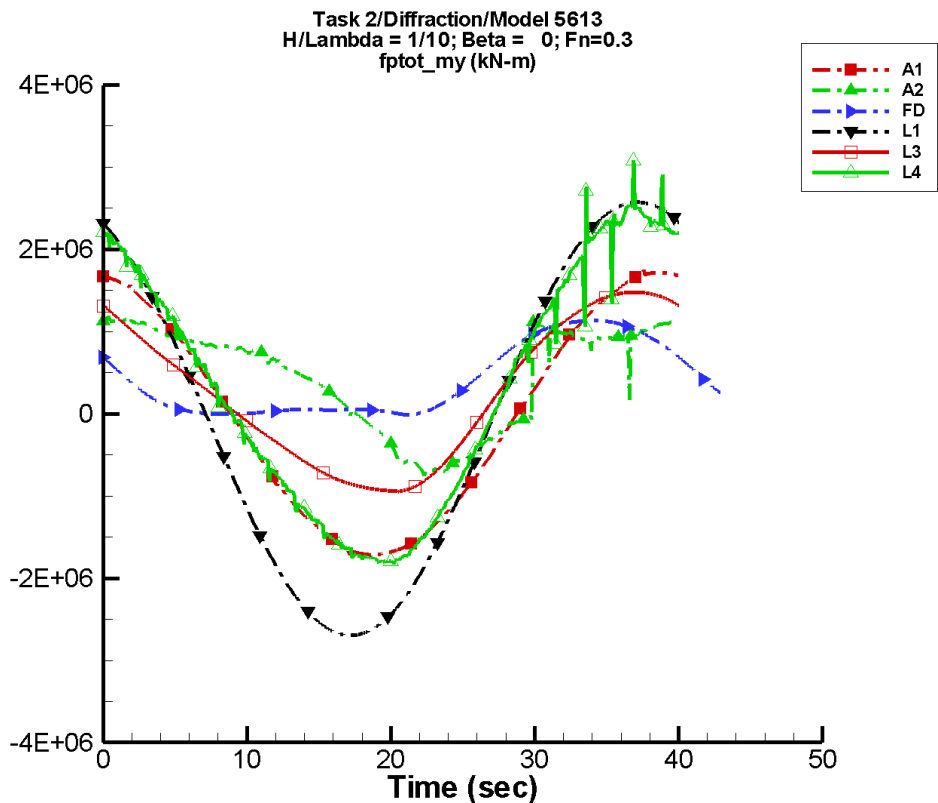
Table G-445. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 410.            | 1.14E+06        | 100               | 3.83E+03        | -143              |
| A2   | 2.69E+05        | 7.73E+05        | 80                | 1.52E+05        | -163              |
| FD   | 2.37E+05        | 6.11E+05        | 124               | 1.77E+05        | -168              |
| L1   | -2.43E+04       | 1.76E+06        | 114               | 9.98E+03        | -68               |
| L3   | 1.62E+05        | 1.15E+06        | 107               | 1.47E+05        | -156              |
| L4   | 1.25E+05        | 1.62E+06        | 106               | 1.08E+05        | -131              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.96E+05       | 1.08E+06        | 127               | 1.20E+05        | -148              |

Table G-446. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.15E+06         | 1.17E+06          | -1.14E+06         | 1.14E+06          |
| A2   | -7.13E+05         | 1.03E+06          | -6.87E+05         | 1.01E+06          |
| FD   | -3.49E+05         | 9.75E+05          | -3.48E+05         | 9.74E+05          |
| L1   | -1.79E+06         | 1.72E+06          | -1.79E+06         | 1.72E+06          |
| L3   | -1.02E+06         | 1.35E+06          | -1.02E+06         | 1.35E+06          |
| L4   | -1.57E+06         | 1.72E+06          | -1.55E+06         | 1.71E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.22E+06         | 8.77E+05          | -1.20E+06         | 8.68E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-224. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

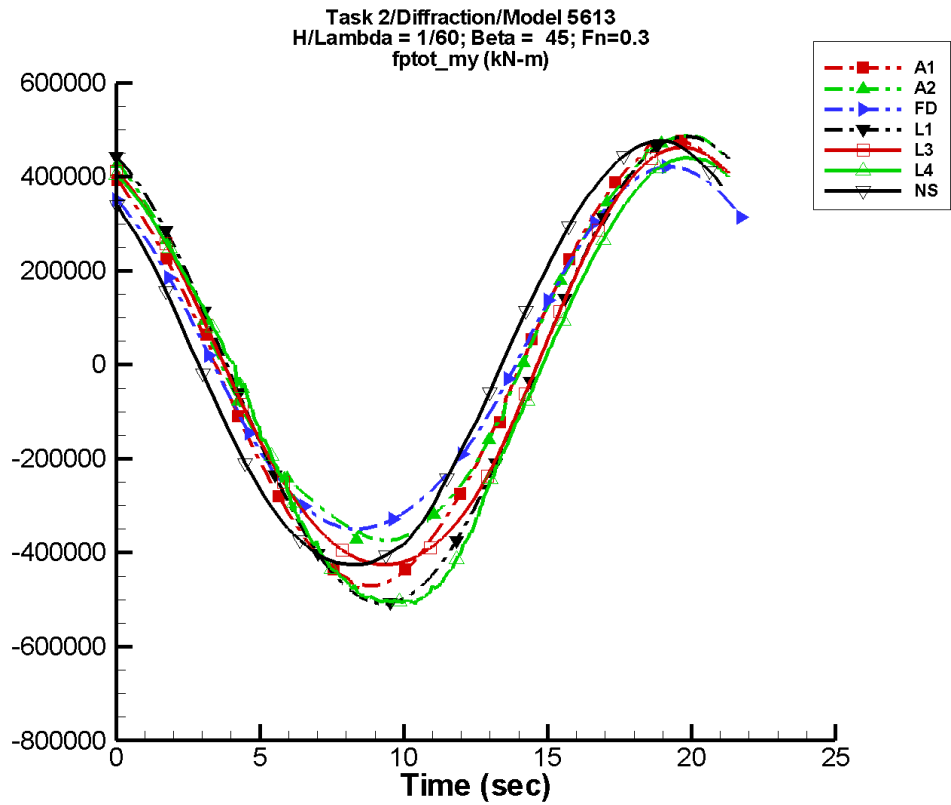
Table G-447. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 616.            | 1.72E+06        | 100               | 5.74E+03        | -143              |
| A2   | 4.56E+05        | 8.06E+05        | 74                | 2.77E+05        | -154              |
| FD   | 4.01E+05        | 5.64E+05        | 145               | 2.20E+05        | -164              |
| L1   | -4.02E+04       | 2.63E+06        | 114               | 2.33E+04        | -65               |
| L3   | 2.58E+05        | 1.18E+06        | 110               | 1.62E+05        | -147              |
| L4   | 3.04E+05        | 2.06E+06        | 106               | 1.64E+05        | -155              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-448. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.72E+06         | 1.75E+06          | -1.72E+06         | 1.71E+06          |
| A2   | -7.57E+05         | 1.19E+06          | -7.19E+05         | 1.14E+06          |
| FD   | -9.89E+03         | 1.14E+06          | -9.02E+03         | 1.13E+06          |
| L1   | -2.70E+06         | 2.57E+06          | -2.70E+06         | 2.57E+06          |
| L3   | -9.45E+05         | 1.48E+06          | -9.42E+05         | 1.48E+06          |
| L4   | -1.83E+06         | 3.08E+06          | -1.80E+06         | 2.66E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-225. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-449. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

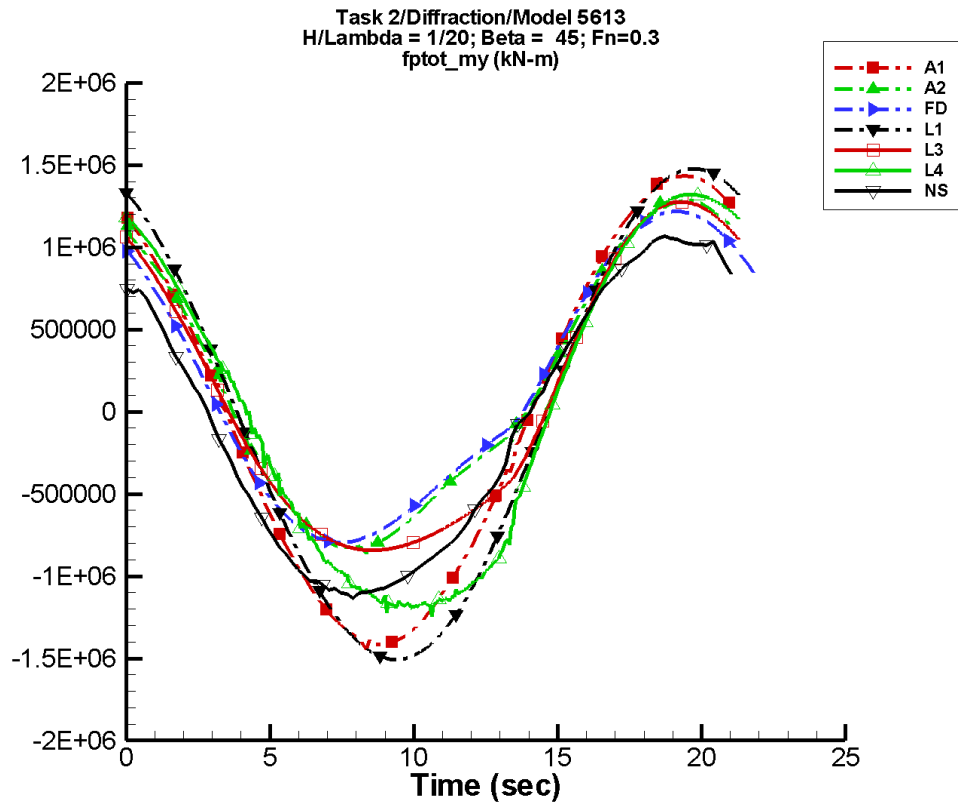
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.27E+03        | 4.70E+05        | 122               | 888.            | -160              |
| A2   | 3.50E+04        | 4.34E+05        | 119               | 2.44E+04        | 144               |
| FD   | 2.13E+04        | 3.90E+05        | 129               | 1.57E+04        | 143               |
| L1   | -1.25E+04       | 4.97E+05        | 114               | 3.62E+03        | -155              |
| L3   | -1.33E+03       | 4.51E+05        | 114               | 2.14E+04        | 164               |
| L4   | -3.00E+04       | 4.75E+05        | 111               | 1.57E+04        | -91               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.59E+04        | 4.55E+05        | 131               | 5.24E+03        | 166               |

Table G-450. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.81E+05         | 4.77E+05          | -4.70E+05         | 4.75E+05          |
| A2   | -3.74E+05         | 4.88E+05          | -3.73E+05         | 4.87E+05          |
| FD   | -3.50E+05         | 4.21E+05          | -3.49E+05         | 4.20E+05          |
| L1   | -5.08E+05         | 4.86E+05          | -5.08E+05         | 4.86E+05          |
| L3   | -4.25E+05         | 4.62E+05          | -4.25E+05         | 4.62E+05          |
| L4   | -5.11E+05         | 4.40E+05          | -5.04E+05         | 4.40E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.26E+05         | 4.77E+05          | -4.22E+05         | 4.71E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-226. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

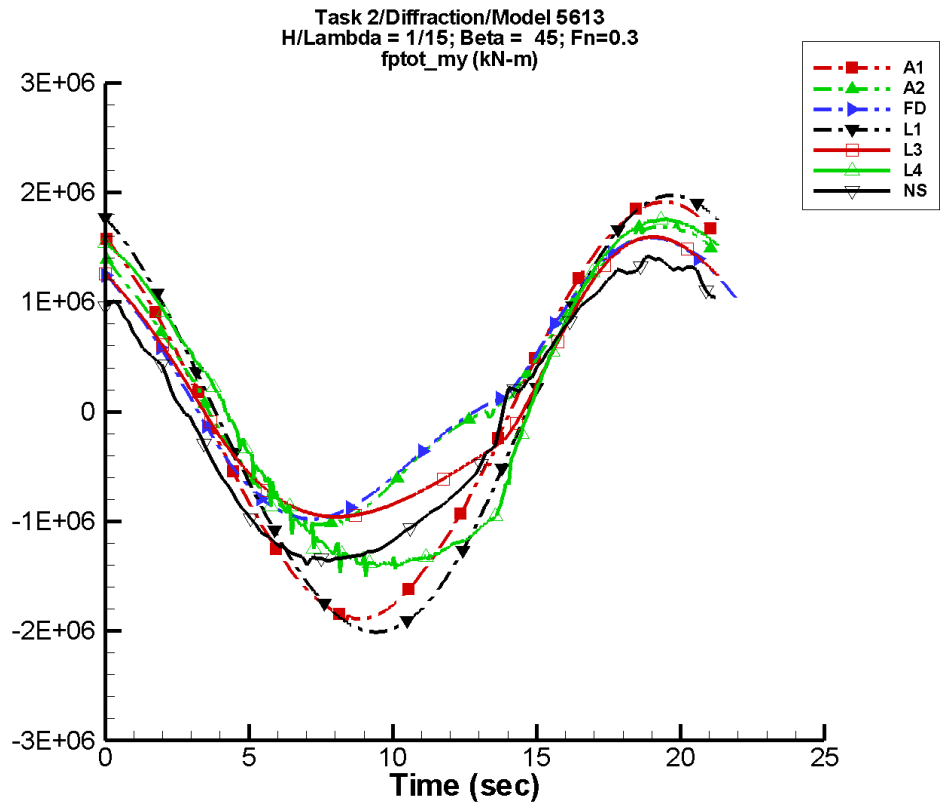
Table G-451. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.82E+03        | 1.42E+06        | 122               | 2.67E+03        | -160              |
| A2   | 1.76E+05        | 1.03E+06        | 124               | 1.10E+05        | 109               |
| FD   | 1.41E+05        | 9.89E+05        | 134               | 1.24E+05        | 134               |
| L1   | -2.70E+04       | 1.49E+06        | 114               | 3.22E+04        | -156              |
| L3   | 8.44E+04        | 1.07E+06        | 118               | 1.42E+05        | 153               |
| L4   | 1.33E+04        | 1.29E+06        | 110               | 9.77E+04        | -163              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.89E+04       | 1.10E+06        | 127               | 5.01E+04        | 122               |

Table G-452. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.45E+06         | 1.43E+06          | -1.41E+06         | 1.43E+06          |
| A2   | -8.66E+05         | 1.28E+06          | -8.28E+05         | 1.28E+06          |
| FD   | -7.95E+05         | 1.22E+06          | -8.01E+05         | 1.22E+06          |
| L1   | -1.51E+06         | 1.48E+06          | -1.51E+06         | 1.48E+06          |
| L3   | -8.43E+05         | 1.28E+06          | -8.42E+05         | 1.28E+06          |
| L4   | -1.25E+06         | 1.32E+06          | -1.18E+06         | 1.32E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.13E+06         | 1.07E+06          | -1.10E+06         | 1.04E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-227. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

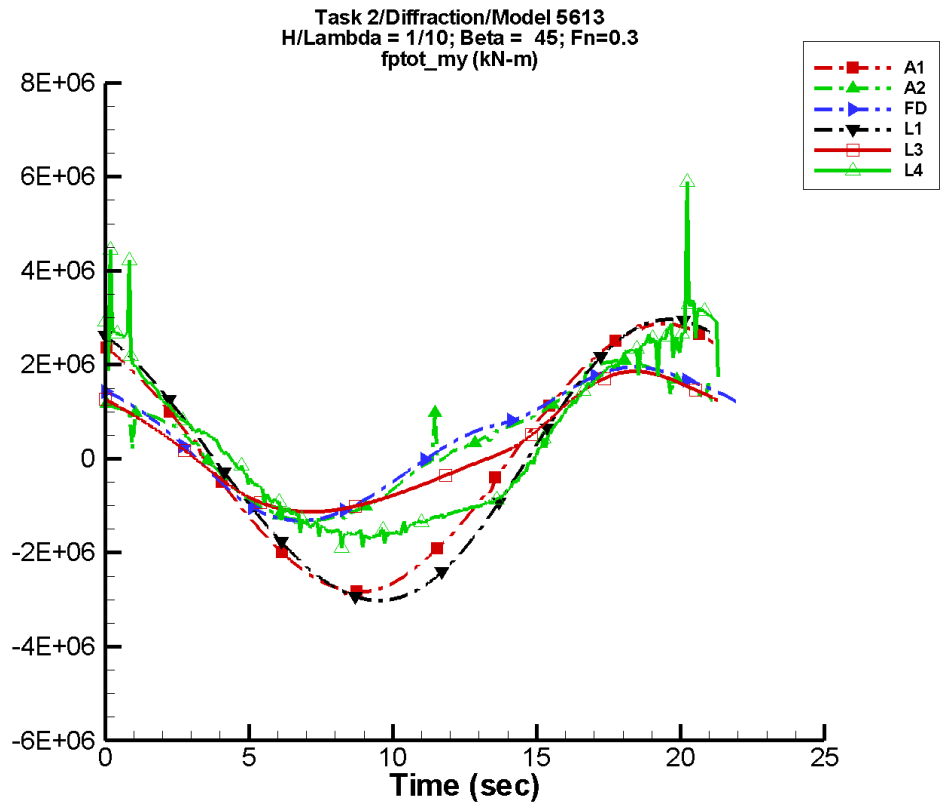
Table G-453. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.10E+03        | 1.89E+06        | 122               | 3.57E+03        | -160              |
| A2   | 2.76E+05        | 1.27E+06        | 128               | 1.86E+05        | 105               |
| FD   | 2.35E+05        | 1.23E+06        | 137               | 1.83E+05        | 124               |
| L1   | -3.98E+04       | 1.99E+06        | 114               | 5.71E+04        | -156              |
| L3   | 1.44E+05        | 1.27E+06        | 122               | 1.91E+05        | 148               |
| L4   | 7.80E+04        | 1.64E+06        | 110               | 1.59E+05        | -172              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.29E+04       | 1.39E+06        | 128               | 8.56E+04        | 126               |

Table G-454. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.93E+06         | 1.91E+06          | -1.89E+06         | 1.91E+06          |
| A2   | -1.04E+06         | 1.72E+06          | -1.02E+06         | 1.68E+06          |
| FD   | -9.79E+05         | 1.59E+06          | -9.77E+05         | 1.58E+06          |
| L1   | -2.01E+06         | 1.97E+06          | -2.01E+06         | 1.97E+06          |
| L3   | -9.58E+05         | 1.59E+06          | -9.58E+05         | 1.59E+06          |
| L4   | -1.51E+06         | 1.76E+06          | -1.39E+06         | 1.75E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.40E+06         | 1.42E+06          | -1.35E+06         | 1.36E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-228. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

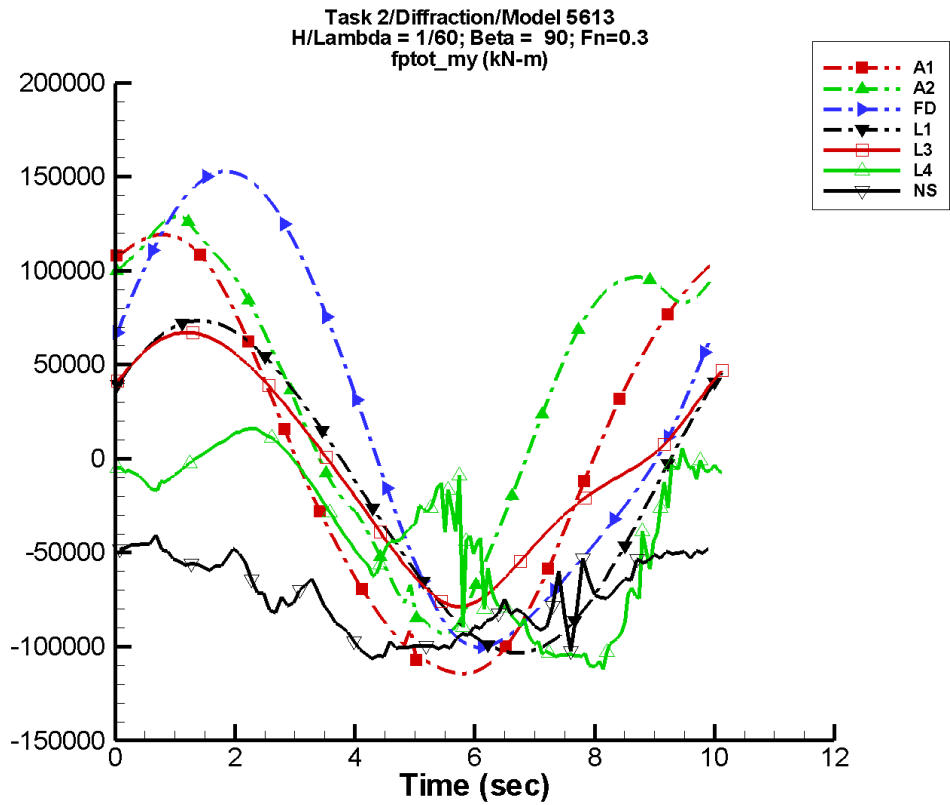
Table G-455. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.66E+03        | 2.83E+06        | 122               | 5.35E+03        | -160              |
| A2   | 3.83E+05        | 1.52E+06        | 141               | 1.33E+05        | 55                |
| FD   | 3.99E+05        | 1.53E+06        | 149               | 2.39E+05        | 85                |
| L1   | -7.63E+04       | 2.98E+06        | 114               | 1.28E+05        | -156              |
| L3   | 2.20E+05        | 1.42E+06        | 133               | 1.67E+05        | 142               |
| L4   | 3.17E+05        | 2.22E+06        | 110               | 3.47E+05        | 129               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-456. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.90E+06         | 2.87E+06          | -2.83E+06         | 2.86E+06          |
| A2   | -1.32E+06         | 2.10E+06          | -1.31E+06         | 2.07E+06          |
| FD   | -1.32E+06         | 1.95E+06          | -1.31E+06         | 1.95E+06          |
| L1   | -3.02E+06         | 2.96E+06          | -3.02E+06         | 2.96E+06          |
| L3   | -1.13E+06         | 1.86E+06          | -1.13E+06         | 1.86E+06          |
| L4   | -1.89E+06         | 5.89E+06          | -1.67E+06         | 3.39E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-229. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-457. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

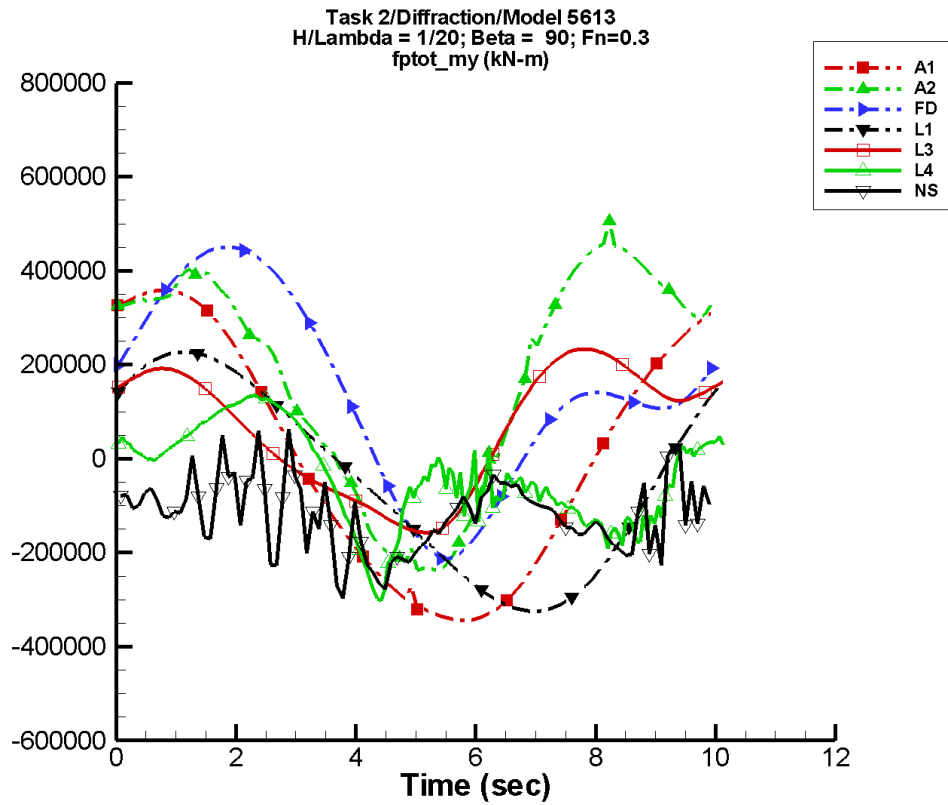
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 561.            | 1.16E+05        | 64                | 556.            | -48               |
| A2   | 3.48E+04        | 9.68E+04        | 76                | 2.53E+04        | -103              |
| FD   | 2.17E+04        | 1.23E+05        | 21                | 1.58E+04        | -108              |
| L1   | -1.48E+04       | 8.80E+04        | 29                | 4.68E+03        | 59                |
| L3   | -3.71E+03       | 6.61E+04        | 47                | 7.69E+03        | -80               |
| L4   | -3.76E+04       | 4.77E+04        | 9                 | 1.25E+04        | 49                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.26E+04       | 2.60E+04        | 79                | 2.39E+03        | -33               |

Table G-458. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.14E+05         | 1.19E+05          | -1.13E+05         | 1.18E+05          |
| A2   | -9.30E+04         | 1.29E+05          | -8.88E+04         | 1.25E+05          |
| FD   | -1.00E+05         | 1.53E+05          | -9.87E+04         | 1.51E+05          |
| L1   | -1.03E+05         | 7.35E+04          | -1.03E+05         | 7.31E+04          |
| L3   | -7.87E+04         | 6.72E+04          | -7.81E+04         | 6.68E+04          |
| L4   | -1.12E+05         | 1.62E+04          | -1.08E+05         | 1.51E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.06E+05         | -3.85E+04         | -1.02E+05         | -4.39E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-230. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

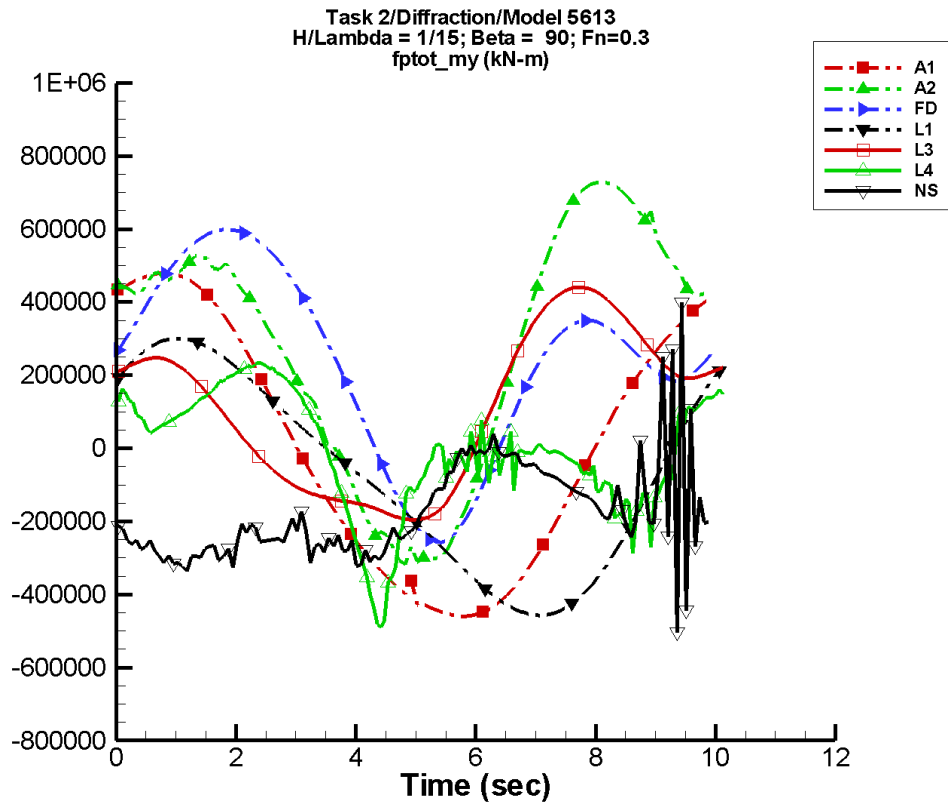
Table G-459. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.69E+03        | 3.48E+05        | 64                | 1.67E+03        | -48               |
| A2   | 1.76E+05        | 2.94E+05        | 93                | 1.33E+05        | -104              |
| FD   | 1.44E+05        | 2.54E+05        | 37                | 1.20E+05        | -107              |
| L1   | -4.76E+04       | 2.64E+05        | 29                | 4.21E+04        | 60                |
| L3   | 6.32E+04        | 1.69E+05        | 108               | 5.91E+04        | -78               |
| L4   | -3.83E+04       | 9.15E+04        | 23                | 6.80E+04        | -47               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.21E+05       | 3.06E+04        | 81                | 4.28E+04        | -36               |

Table G-460. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.44E+05         | 3.59E+05          | -3.41E+05         | 3.55E+05          |
| A2   | -2.38E+05         | 5.07E+05          | -2.27E+05         | 4.54E+05          |
| FD   | -2.13E+05         | 4.50E+05          | -2.02E+05         | 4.46E+05          |
| L1   | -3.25E+05         | 2.27E+05          | -3.24E+05         | 2.26E+05          |
| L3   | -1.57E+05         | 2.34E+05          | -1.55E+05         | 2.32E+05          |
| L4   | -3.01E+05         | 1.35E+05          | -2.63E+05         | 1.29E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.96E+05         | 6.21E+04          | -2.28E+05         | 4.16E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-231. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

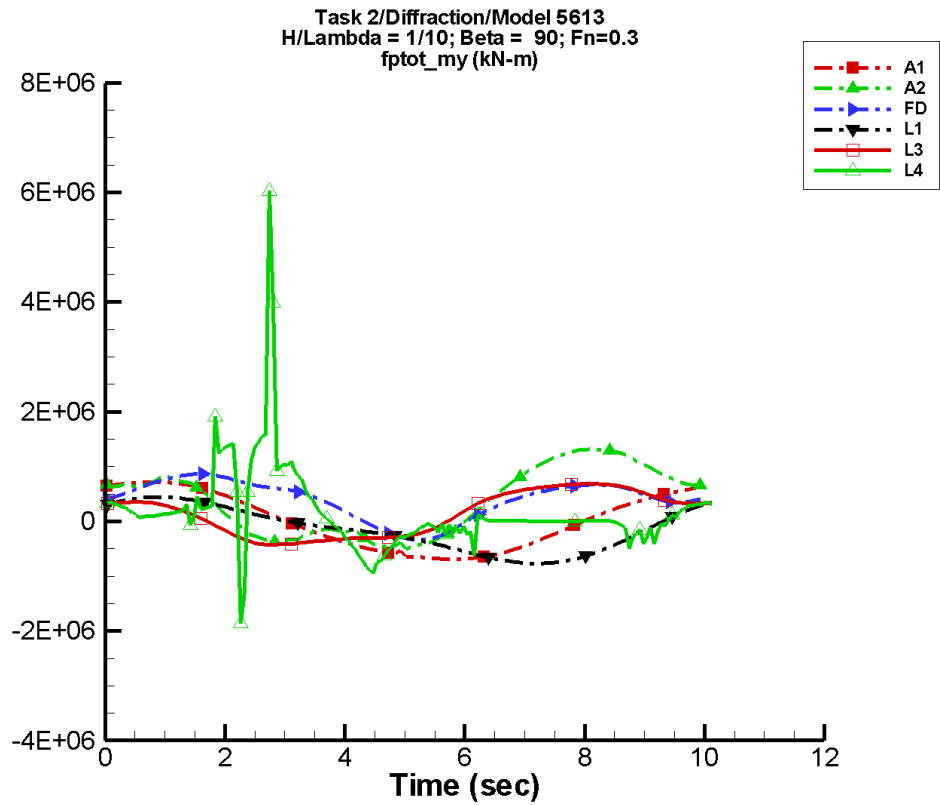
Table G-461. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.25E+03        | 4.65E+05        | 64                | 2.23E+03        | -48               |
| A2   | 2.77E+05        | 4.07E+05        | 100               | 2.20E+05        | -105              |
| FD   | 2.39E+05        | 2.89E+05        | 49                | 2.01E+05        | -107              |
| L1   | -7.62E+04       | 3.52E+05        | 29                | 7.49E+04        | 60                |
| L3   | 1.07E+05        | 2.77E+05        | 127               | 8.95E+04        | -75               |
| L4   | -6.85E+03       | 1.22E+05        | 40                | 1.16E+05        | -54               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.81E+05       | 1.18E+05        | -167              | 2.19E+04        | -45               |

Table G-462. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.60E+05         | 4.79E+05          | -4.55E+05         | 4.74E+05          |
| A2   | -3.19E+05         | 7.28E+05          | -2.99E+05         | 7.17E+05          |
| FD   | -2.58E+05         | 5.98E+05          | -2.41E+05         | 5.92E+05          |
| L1   | -4.57E+05         | 3.00E+05          | -4.55E+05         | 2.98E+05          |
| L3   | -1.96E+05         | 4.40E+05          | -1.94E+05         | 4.37E+05          |
| L4   | -4.89E+05         | 2.33E+05          | -4.18E+05         | 2.25E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.03E+05         | 3.98E+05          | -3.08E+05         | -2.70E+03         |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-232. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

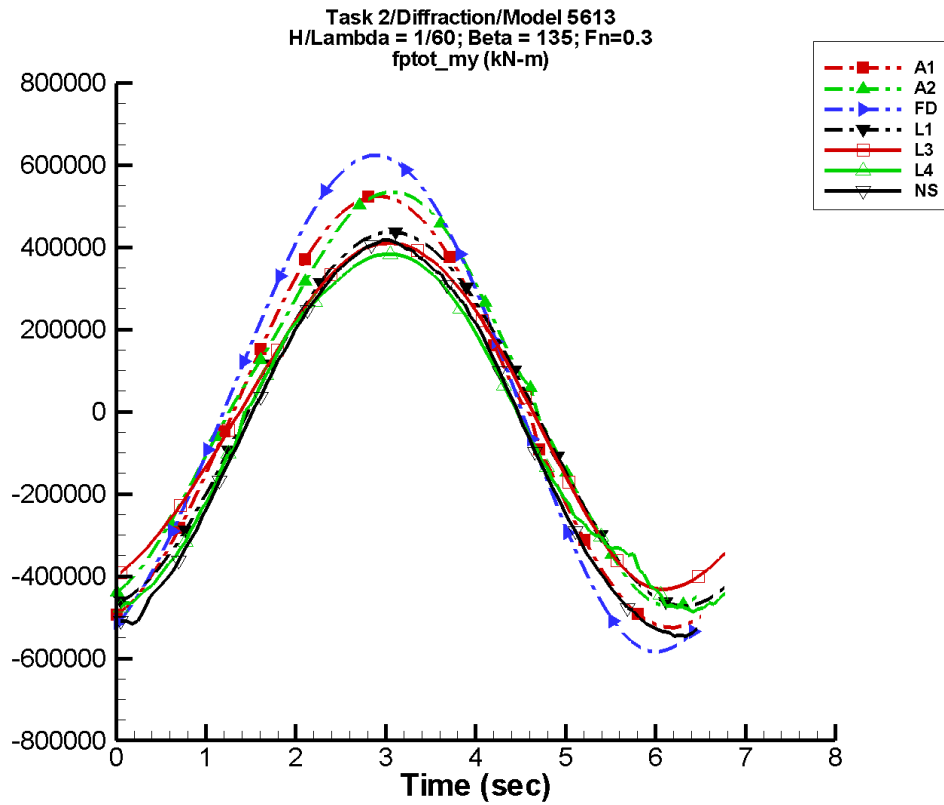
Table G-463. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.38E+03        | 6.97E+05        | 64                | 3.35E+03        | -48               |
| A2   | 3.82E+05        | 7.83E+05        | 124               | 1.94E+05        | -96               |
| FD   | 4.03E+05        | 3.74E+05        | 65                | 2.89E+05        | -106              |
| L1   | -1.58E+05       | 5.28E+05        | 29                | 1.68E+05        | 60                |
| L3   | 1.36E+05        | 5.43E+05        | 141               | 8.63E+04        | -34               |
| L4   | 1.69E+05        | 4.50E+05        | 12                | 4.41E+05        | -106              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-464. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.90E+05         | 7.19E+05          | -6.83E+05         | 7.10E+05          |
| A2   | -5.04E+05         | 1.32E+06          | -4.50E+05         | 1.30E+06          |
| FD   | -3.38E+05         | 8.64E+05          | -3.10E+05         | 8.44E+05          |
| L1   | -7.69E+05         | 4.45E+05          | -7.66E+05         | 4.41E+05          |
| L3   | -4.29E+05         | 6.84E+05          | -4.23E+05         | 6.81E+05          |
| L4   | -2.74E+06         | 6.03E+06          | -7.66E+05         | 2.28E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-233. Time history of  $M_y^{tot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-465. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

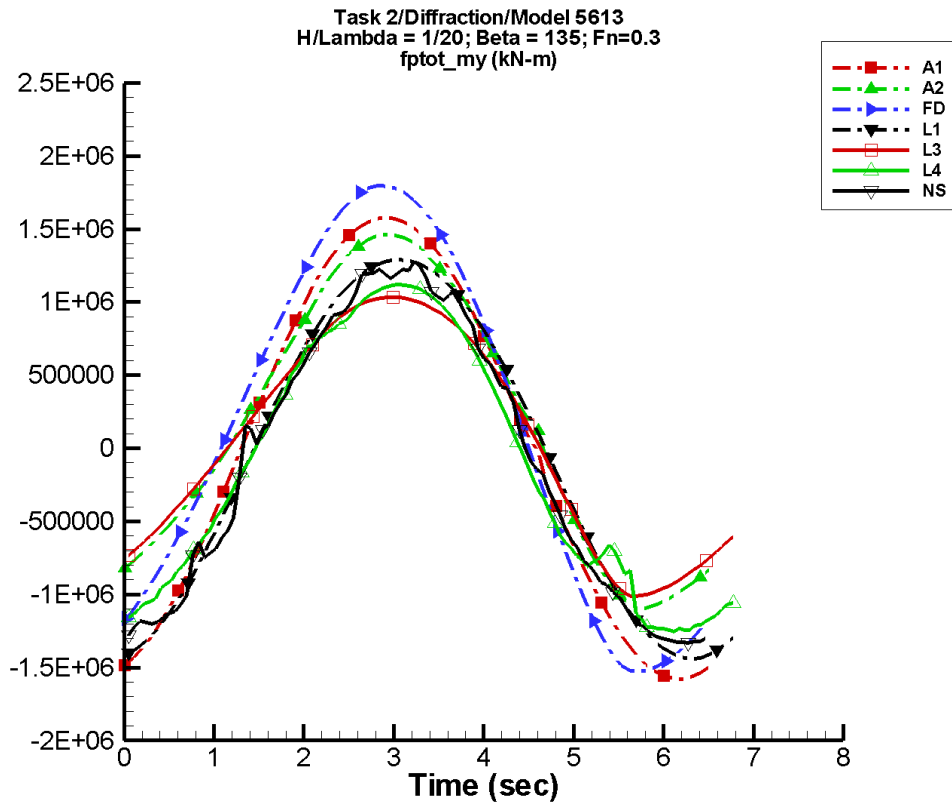
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 92.8            | 5.23E+05        | -75               | 1.61E+03        | -149              |
| A2   | 3.41E+04        | 4.89E+05        | -79               | 2.23E+04        | 9                 |
| FD   | 2.15E+04        | 5.98E+05        | -67               | 1.66E+04        | 47                |
| L1   | -1.39E+04       | 4.55E+05        | -83               | 3.91E+03        | -84               |
| L3   | -2.51E+03       | 4.16E+05        | -79               | 1.91E+04        | 9                 |
| L4   | -4.70E+04       | 4.28E+05        | -80               | 2.01E+04        | -172              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.73E+04       | 4.77E+05        | -76               | 3.95E+03        | 48                |

Table G-466. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.25E+05         | 5.25E+05          | -5.12E+05         | 5.12E+05          |
| A2   | -4.73E+05         | 5.34E+05          | -4.59E+05         | 5.21E+05          |
| FD   | -5.84E+05         | 6.23E+05          | -5.68E+05         | 6.08E+05          |
| L1   | -4.72E+05         | 4.37E+05          | -4.68E+05         | 4.33E+05          |
| L3   | -4.32E+05         | 4.10E+05          | -4.28E+05         | 4.06E+05          |
| L4   | -4.87E+05         | 3.84E+05          | -4.78E+05         | 3.80E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.46E+05         | 4.18E+05          | -5.37E+05         | 4.08E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-234. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

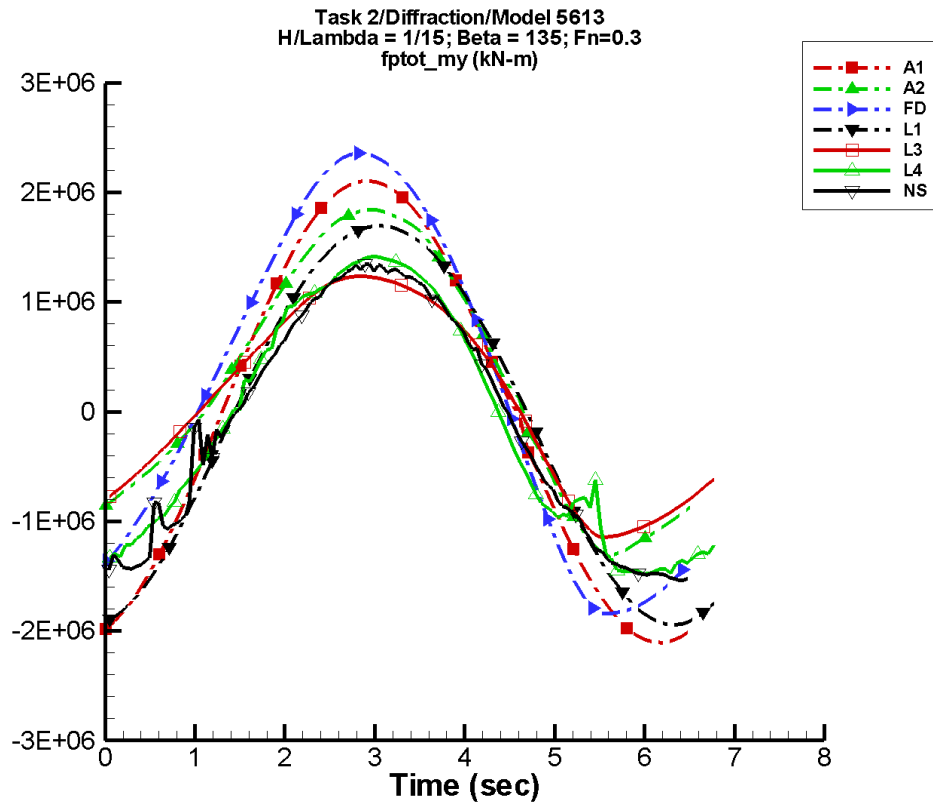
Table G-467. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 279.            | 1.57E+06        | -75               | 4.84E+03        | -149              |
| A2   | 1.71E+05        | 1.23E+06        | -72               | 1.14E+05        | 57                |
| FD   | 1.41E+05        | 1.63E+06        | -63               | 1.29E+05        | 59                |
| L1   | -3.95E+04       | 1.36E+06        | -83               | 3.53E+04        | -84               |
| L3   | 7.24E+04        | 9.92E+05        | -72               | 1.13E+05        | 21                |
| L4   | -9.46E+04       | 1.16E+06        | -77               | 5.86E+04        | 108               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.80E+04       | 1.30E+06        | -77               | 4.29E+04        | 110               |

Table G-468. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.58E+06         | 1.58E+06          | -1.54E+06         | 1.54E+06          |
| A2   | -1.10E+06         | 1.46E+06          | -1.04E+06         | 1.42E+06          |
| FD   | -1.53E+06         | 1.80E+06          | -1.48E+06         | 1.75E+06          |
| L1   | -1.44E+06         | 1.29E+06          | -1.43E+06         | 1.28E+06          |
| L3   | -1.01E+06         | 1.03E+06          | -9.95E+05         | 1.03E+06          |
| L4   | -1.25E+06         | 1.12E+06          | -1.25E+06         | 1.11E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.33E+06         | 1.28E+06          | -1.32E+06         | 1.21E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-235. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

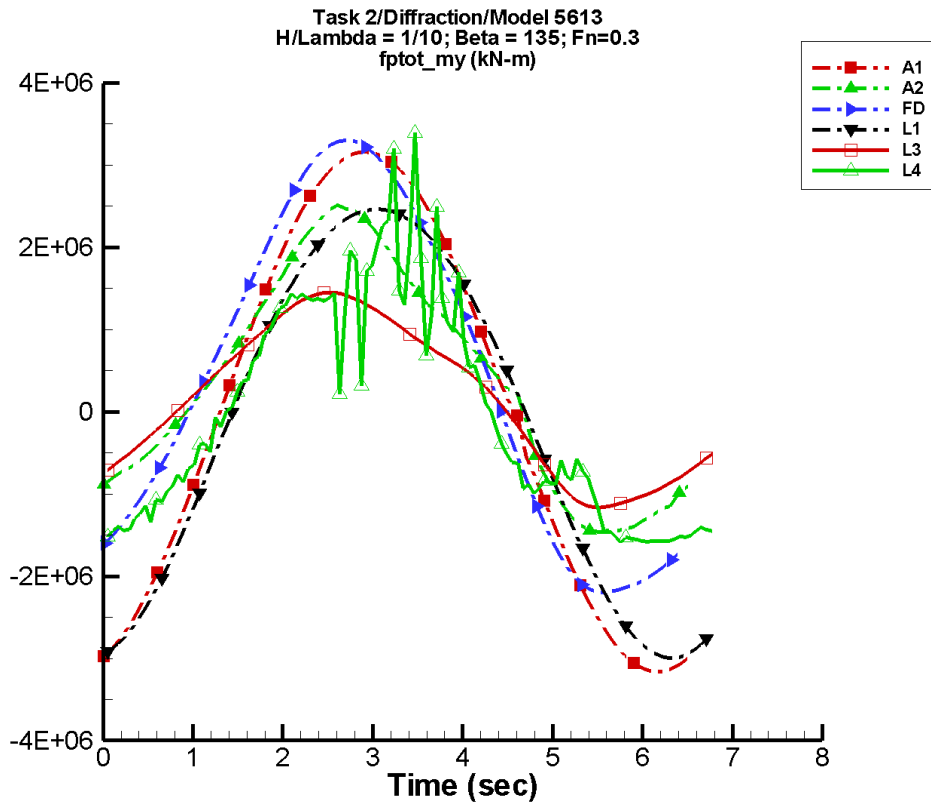
Table G-469. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 373.            | 2.10E+06        | -75               | 6.47E+03        | -149              |
| A2   | 2.69E+05        | 1.50E+06        | -71               | 1.95E+05        | 62                |
| FD   | 2.34E+05        | 2.06E+06        | -62               | 1.90E+05        | 69                |
| L1   | -6.19E+04       | 1.82E+06        | -83               | 6.28E+04        | -84               |
| L3   | 1.23E+05        | 1.16E+06        | -69               | 1.38E+05        | 26                |
| L4   | -8.64E+04       | 1.43E+06        | -74               | 9.89E+04        | 109               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.25E+05       | 1.44E+06        | -74               | 3.06E+04        | 62                |

Table G-470. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.11E+06         | 2.11E+06          | -2.06E+06         | 2.06E+06          |
| A2   | -1.32E+06         | 1.85E+06          | -1.22E+06         | 1.81E+06          |
| FD   | -1.84E+06         | 2.36E+06          | -1.79E+06         | 2.30E+06          |
| L1   | -1.94E+06         | 1.70E+06          | -1.93E+06         | 1.68E+06          |
| L3   | -1.15E+06         | 1.24E+06          | -1.12E+06         | 1.23E+06          |
| L4   | -1.48E+06         | 1.41E+06          | -1.47E+06         | 1.39E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.54E+06         | 1.35E+06          | -1.50E+06         | 1.32E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-236. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

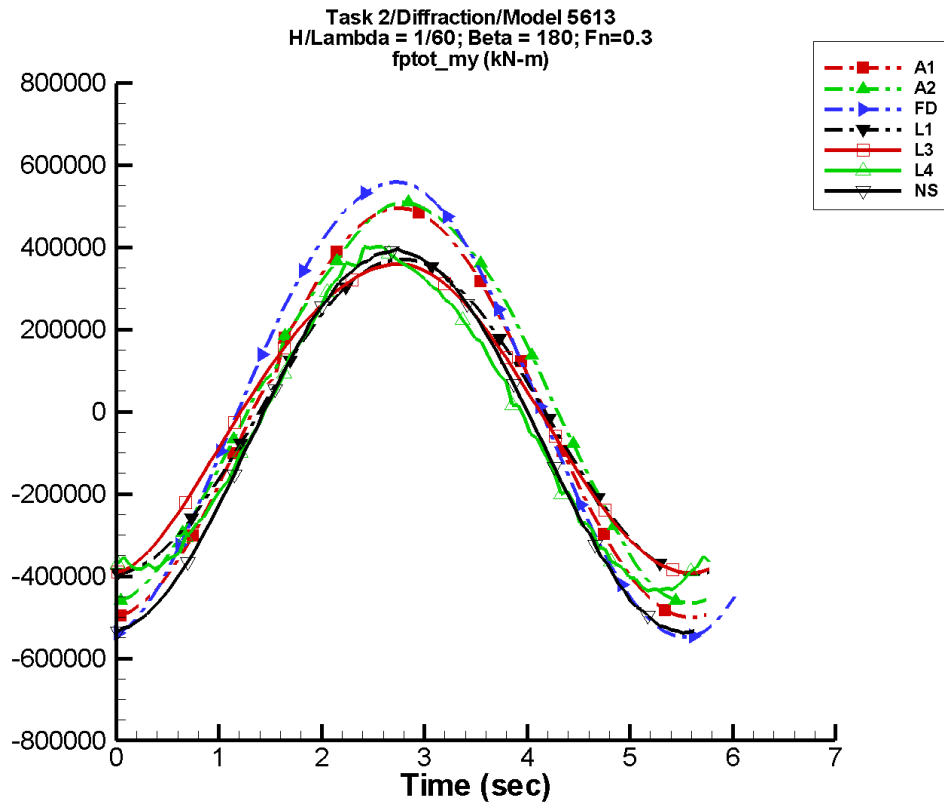
Table G-471. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 559.            | 3.15E+06        | -75               | 9.70E+03        | -149              |
| A2   | 3.69E+05        | 1.79E+06        | -63               | 1.49E+05        | 99                |
| FD   | 3.99E+05        | 2.70E+06        | -58               | 2.41E+05        | 105               |
| L1   | -1.26E+05       | 2.73E+06        | -83               | 1.41E+05        | -84               |
| L3   | 1.72E+05        | 1.24E+06        | -57               | 4.91E+04        | 33                |
| L4   | 9.46E+03        | 1.73E+06        | -75               | 1.58E+05        | 110               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-472. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.16E+06         | 3.16E+06          | -3.09E+06         | 3.08E+06          |
| A2   | -1.46E+06         | 2.51E+06          | -1.43E+06         | 2.36E+06          |
| FD   | -2.20E+06         | 3.31E+06          | -2.14E+06         | 3.21E+06          |
| L1   | -2.99E+06         | 2.46E+06          | -2.97E+06         | 2.44E+06          |
| L3   | -1.17E+06         | 1.45E+06          | -1.15E+06         | 1.44E+06          |
| L4   | -1.59E+06         | 3.39E+06          | -1.58E+06         | 2.13E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-237. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-473. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.40E+03       | 4.98E+05        | -92               | 622.            | -112              |
| A2   | 3.25E+04        | 4.78E+05        | -95               | 1.91E+04        | -57               |
| FD   | 2.16E+04        | 5.51E+05        | -116              | 1.84E+04        | -129              |
| L1   | -1.15E+04       | 3.83E+05        | -101              | 786.            | -171              |
| L3   | -550.           | 3.71E+05        | -94               | 1.67E+04        | -96               |
| L4   | -5.02E+04       | 4.04E+05        | -93               | 3.32E+04        | 90                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.14E+04       | 4.65E+05        | -84               | 2.48E+03        | -113              |

Table G-474. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.01E+05         | 4.96E+05          | -4.89E+05         | 4.80E+05          |
| A2   | -4.65E+05         | 5.09E+05          | -4.51E+05         | 4.90E+05          |
| FD   | -5.49E+05         | 5.59E+05          | -5.26E+05         | 5.43E+05          |
| L1   | -3.95E+05         | 3.71E+05          | -3.91E+05         | 3.67E+05          |
| L3   | -3.92E+05         | 3.59E+05          | -3.87E+05         | 3.55E+05          |
| L4   | -4.35E+05         | 4.04E+05          | -4.26E+05         | 3.86E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.38E+05         | 3.96E+05          | -5.31E+05         | 3.86E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613

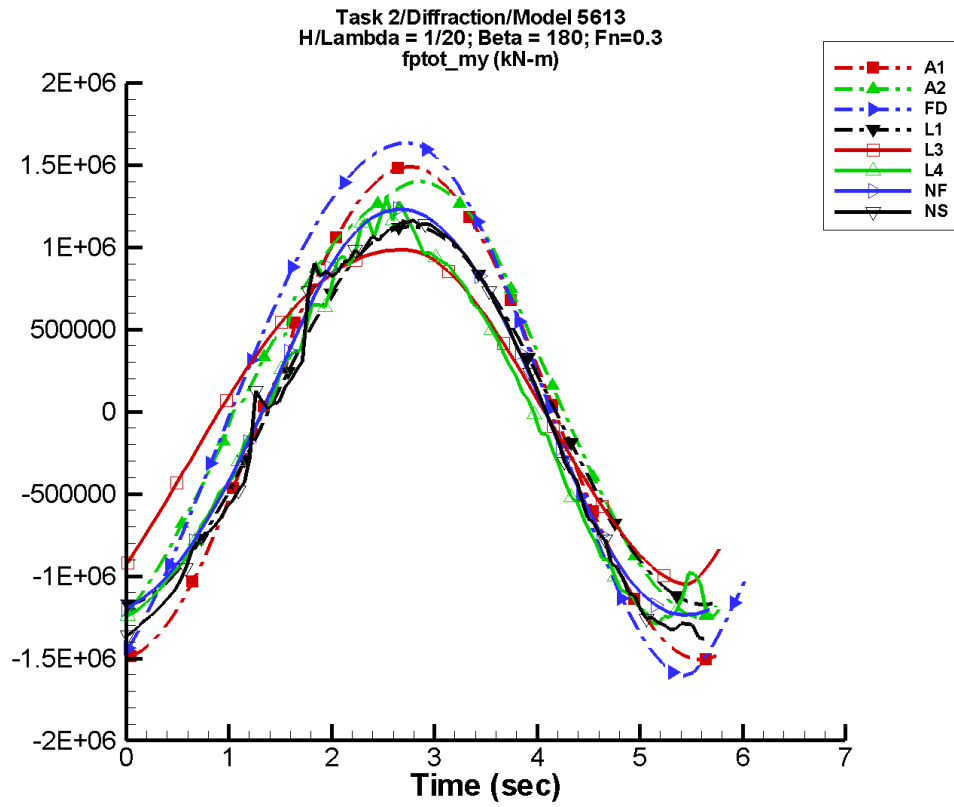


Figure G-238. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-475. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -4.21E+03       | 1.50E+06        | -92               | 1.87E+03        | -112              |
| A2   | 1.66E+05        | 1.28E+06        | -89               | 1.02E+05        | -50               |
| FD   | 1.44E+05        | 1.57E+06        | -111              | 1.23E+05        | -101              |
| L1   | -2.25E+04       | 1.15E+06        | -101              | 6.43E+03        | 162               |
| L3   | 9.11E+04        | 9.67E+05        | -83               | 9.31E+04        | -64               |
| L4   | -1.02E+05       | 1.19E+06        | -91               | 5.14E+04        | 76                |
| NF   | -2.60E+04       | 1.24E+06        | 1                 | 3.60E+04        | -111              |
| NS   | -9.05E+04       | 1.27E+06        | -83               | 2.12E+04        | 8                 |

Table G-476. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.51E+06         | 1.49E+06          | -1.47E+06         | 1.45E+06          |
| A2   | -1.25E+06         | 1.40E+06          | -1.17E+06         | 1.35E+06          |
| FD   | -1.61E+06         | 1.64E+06          | -1.50E+06         | 1.59E+06          |
| L1   | -1.17E+06         | 1.13E+06          | -1.16E+06         | 1.11E+06          |
| L3   | -1.05E+06         | 9.84E+05          | -1.02E+06         | 9.77E+05          |
| L4   | -1.29E+06         | 1.36E+06          | -1.21E+06         | 1.19E+06          |
| NF   | -1.24E+06         | 1.23E+06          | -1.18E+06         | 1.21E+06          |
| NS   | -1.38E+06         | 1.16E+06          | -1.34E+06         | 1.14E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613

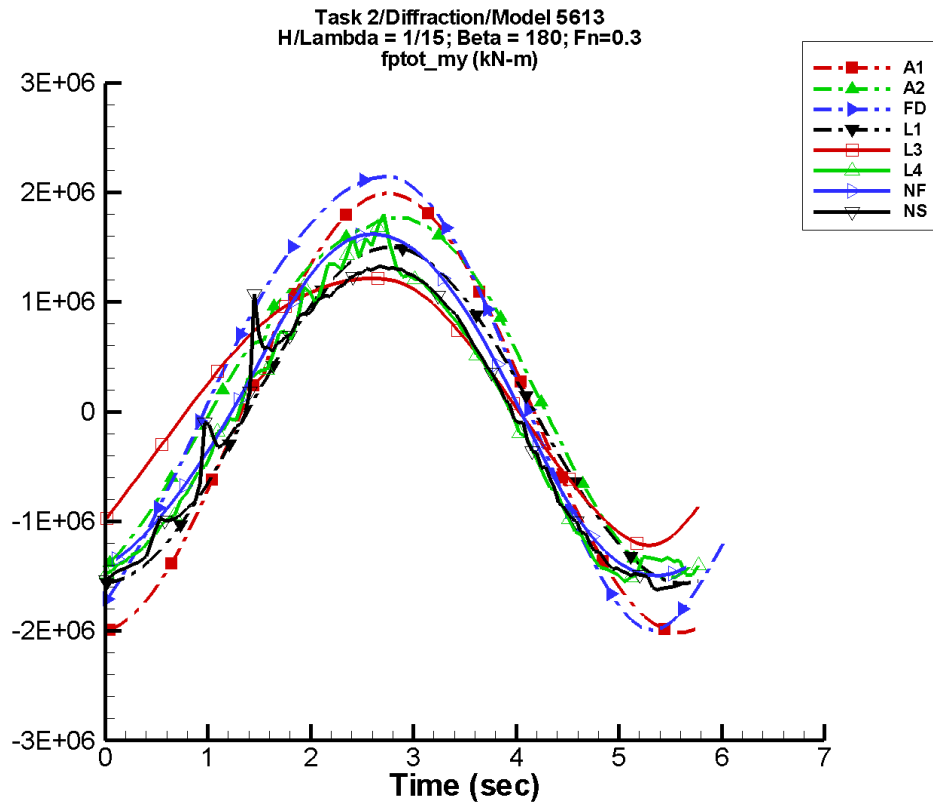


Figure G-239. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

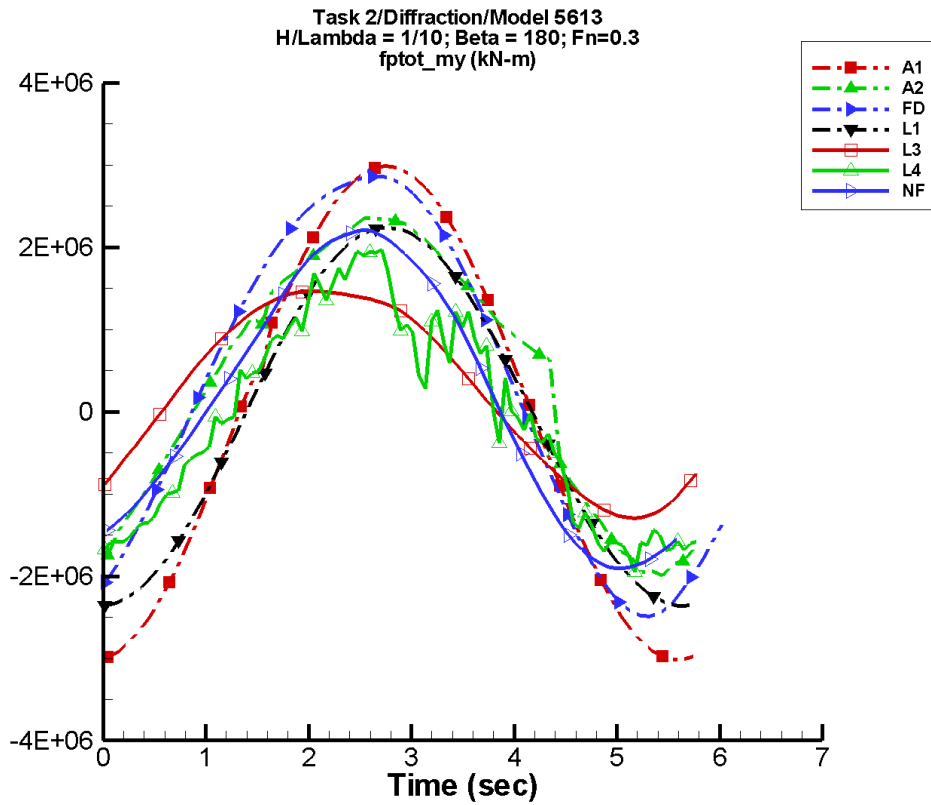
Table G-477. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -5.62E+03       | 2.00E+06        | -92               | 2.50E+03        | -112              |
| A2   | 2.63E+05        | 1.59E+06        | -88               | 1.52E+05        | -46               |
| FD   | 2.39E+05        | 2.01E+06        | -109              | 1.79E+05        | -90               |
| L1   | -3.26E+04       | 1.53E+06        | -101              | 1.15E+04        | 158               |
| L3   | 1.54E+05        | 1.17E+06        | -78               | 1.26E+05        | -52               |
| L4   | -9.04E+04       | 1.50E+06        | -89               | 7.90E+04        | 63                |
| NF   | 2.57E+04        | 1.56E+06        | 5                 | 6.64E+04        | -119              |
| NS   | -1.30E+05       | 1.47E+06        | -77               | 3.42E+04        | -2                |

Table G-478. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.01E+06         | 1.99E+06          | -1.96E+06         | 1.93E+06          |
| A2   | -1.52E+06         | 1.77E+06          | -1.42E+06         | 1.72E+06          |
| FD   | -1.99E+06         | 2.15E+06          | -1.87E+06         | 2.09E+06          |
| L1   | -1.57E+06         | 1.50E+06          | -1.55E+06         | 1.48E+06          |
| L3   | -1.22E+06         | 1.22E+06          | -1.19E+06         | 1.21E+06          |
| L4   | -1.56E+06         | 1.80E+06          | -1.51E+06         | 1.55E+06          |
| NF   | -1.49E+06         | 1.62E+06          | -1.42E+06         | 1.57E+06          |
| NS   | -1.62E+06         | 1.33E+06          | -1.59E+06         | 1.31E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NSHIPMO.

Figure G-240. Time history of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

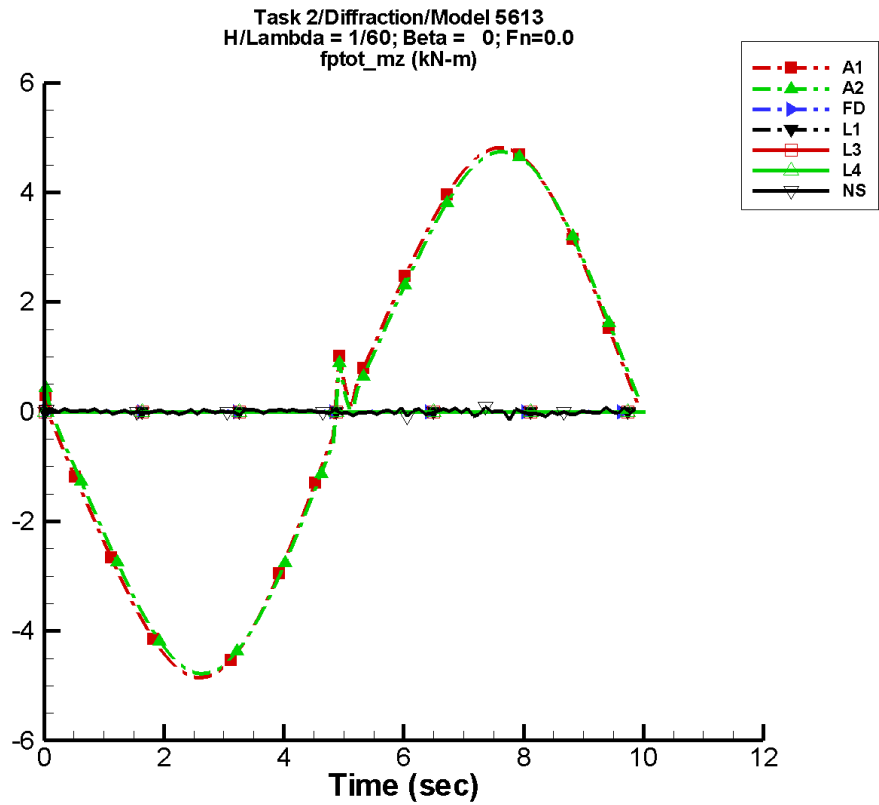
Table G-479. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -8.43E+03       | 3.00E+06        | -92               | 3.75E+03        | -112              |
| A2   | 4.47E+05        | 2.03E+06        | -84               | 2.90E+05        | -55               |
| FD   | 4.04E+05        | 2.63E+06        | -105              | 2.21E+05        | -93               |
| L1   | -6.22E+04       | 2.30E+06        | -101              | 2.61E+04        | 155               |
| L3   | 2.34E+05        | 1.37E+06        | -64               | 1.27E+05        | -59               |
| L4   | -6.15E+04       | 1.68E+06        | -88               | 6.72E+04        | -155              |
| NF   | 1.26E+05        | 2.01E+06        | -3                | 1.83E+05        | -169              |
| NS   | —               | —               | —                 | —               | —                 |

Table G-480. Minimum and maximum of  $M_y^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.02E+06         | 2.99E+06          | -2.95E+06         | 2.89E+06          |
| A2   | -1.99E+06         | 2.35E+06          | -1.84E+06         | 2.28E+06          |
| FD   | -2.49E+06         | 2.86E+06          | -2.35E+06         | 2.80E+06          |
| L1   | -2.36E+06         | 2.24E+06          | -2.34E+06         | 2.21E+06          |
| L3   | -1.29E+06         | 1.47E+06          | -1.27E+06         | 1.46E+06          |
| L4   | -1.95E+06         | 2.12E+06          | -1.67E+06         | 1.87E+06          |
| NF   | -1.90E+06         | 2.21E+06          | -1.87E+06         | 2.16E+06          |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-241. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-481. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

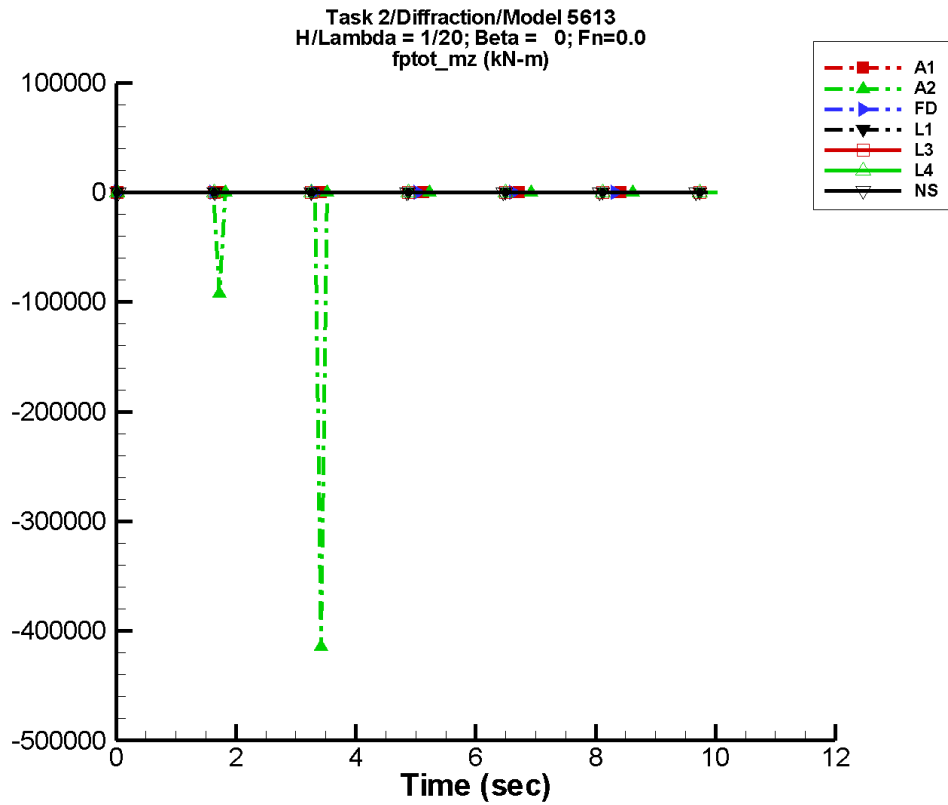
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.83E-02        | 4.63            | 173               | 2.16E-02        | 31                |
| A2   | 1.79E-02        | 4.55            | 171               | 2.13E-02        | 29                |
| FD   | -4.14E-05       | 3.28E-04        | 0                 | 1.44E-04        | 133               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.38E-03        | 9.36E-03        | 22                | 8.99E-03        | 58                |

Table G-482. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.86             | 4.82              | -4.79             | 4.75              |
| A2   | -4.78             | 4.74              | -4.72             | 4.68              |
| FD   | -4.63E-03         | 3.82E-03          | -1.08E-03         | 1.09E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.152            | 0.102             | -3.58E-02         | 4.03E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-242. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

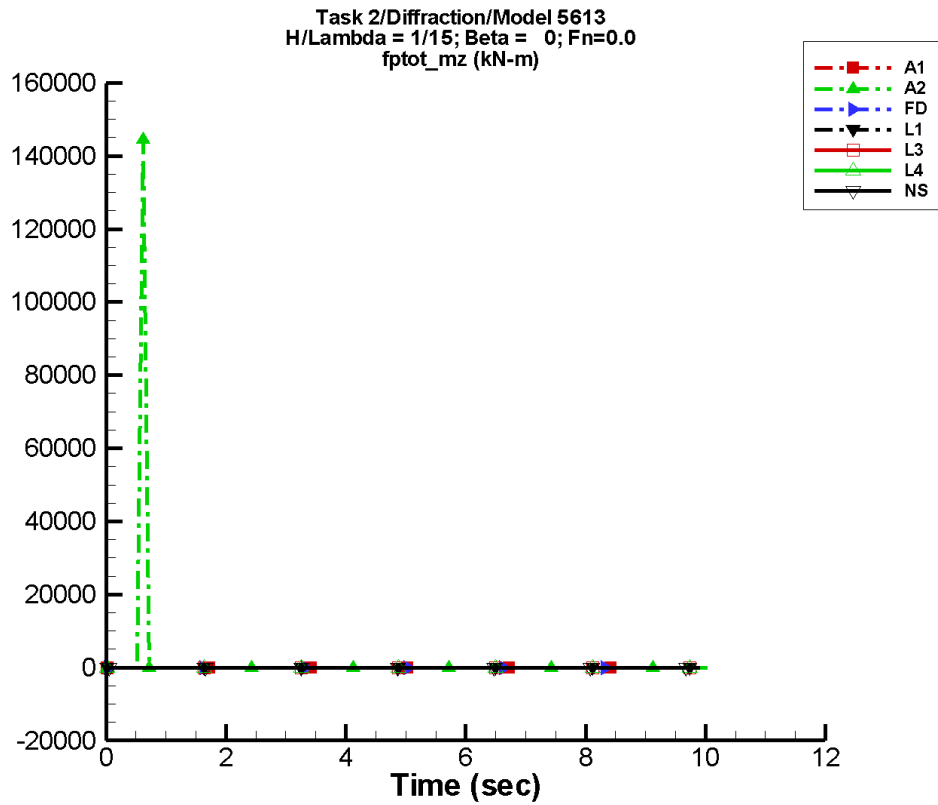
Table G-483. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.51E-02        | 13.9            | 173               | 6.49E-02        | 31                |
| A2   | -4.21E+03       | 8.15E+03        | 142               | 8.69E+03        | 11                |
| FD   | 1.84E-04        | 1.47E-04        | 104               | 3.93E-04        | 160               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 7.66E-03        | 4.63E-02        | 61                | 6.35E-02        | 59                |

Table G-484. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -14.6             | 14.5              | -14.4             | 14.3              |
| A2   | -4.15E+05         | 1.20E+05          | -5.54E+04         | 1.60E+04          |
| FD   | -5.76E-03         | 6.43E-03          | -1.79E-03         | 2.59E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.227            | 0.523             | -0.140            | 0.475             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-243. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

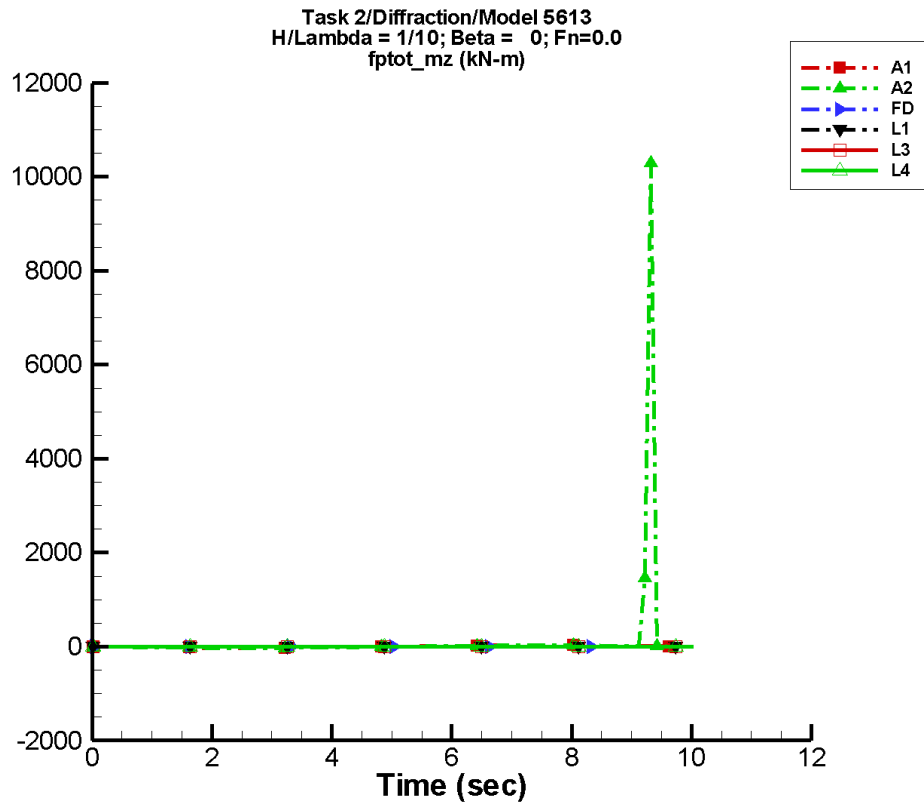
Table G-485. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.35E-02        | 18.6            | 173               | 8.67E-02        | 31                |
| A2   | 760.            | 1.62E+03        | 71                | 1.89E+03        | 45                |
| FD   | -2.53E-04       | 5.26E-04        | -43               | 3.23E-04        | 6                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.15E-02       | 3.52E-02        | -33               | 4.25E-02        | -26               |

Table G-486. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -19.5             | 19.3              | -19.2             | 19.1              |
| A2   | -19.2             | 1.44E+05          | -1.66E+03         | 1.93E+04          |
| FD   | -6.52E-03         | 4.48E-03          | -2.23E-03         | 1.16E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.579            | 0.668             | -0.136            | 0.141             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-244. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

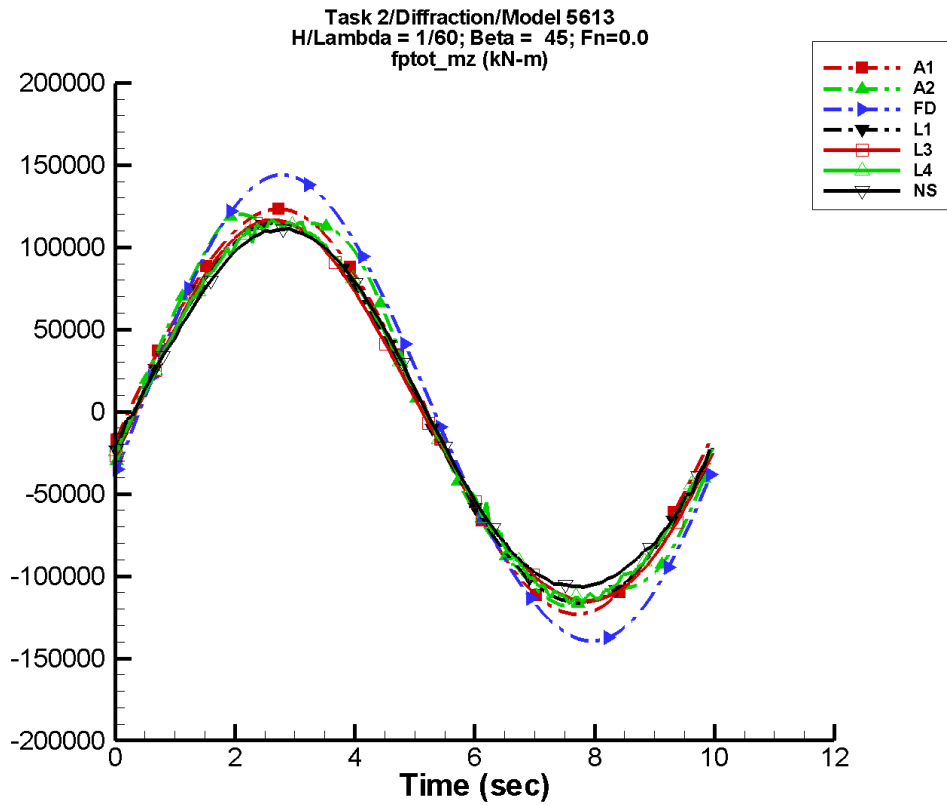
Table G-487. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 0.110           | 27.9            | 173               | 0.130           | 31                |
| A2   | 95.8            | 206.            | 121               | 215.            | 142               |
| FD   | -3.59E-05       | 3.05E-05        | -54               | 3.47E-04        | 30                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-488. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -29.3             | 29.0              | -28.9             | 28.6              |
| A2   | -1.14E+03         | 1.03E+04          | -192.             | 1.56E+03          |
| FD   | -8.25E-03         | 8.35E-03          | -2.57E-03         | 2.48E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-245. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-489. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

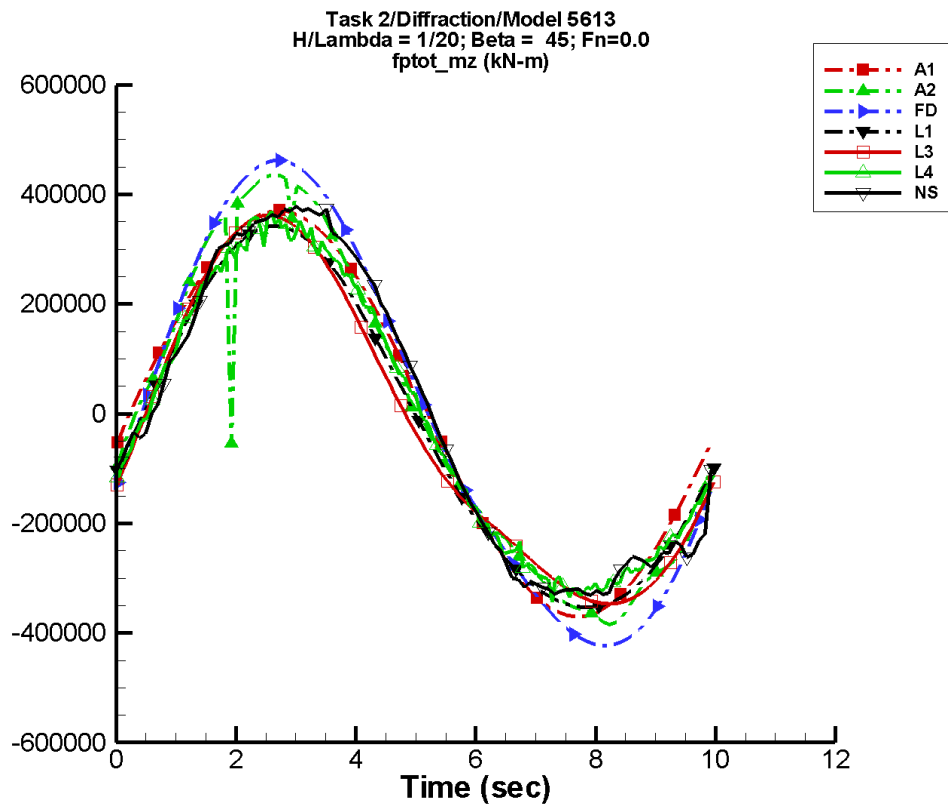
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -155.           | 1.22E+05        | -13               | 115.            | -94               |
| A2   | 401.            | 1.26E+05        | -14               | 5.31E+03        | -64               |
| FD   | 77.2            | 1.41E+05        | -22               | 5.00E+03        | -71               |
| L1   | -2.91E+03       | 1.16E+05        | -13               | 2.73E+03        | -84               |
| L3   | -2.89E+03       | 1.15E+05        | -14               | 6.44E+03        | -65               |
| L4   | -1.45E+03       | 1.14E+05        | -14               | 2.61E+03        | -83               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -764.           | 1.10E+05        | -11               | 2.45E+03        | -118              |

Table G-490. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.23E+05         | 1.23E+05          | -1.22E+05         | 1.22E+05          |
| A2   | -1.18E+05         | 1.20E+05          | -1.16E+05         | 1.19E+05          |
| FD   | -1.39E+05         | 1.44E+05          | -1.38E+05         | 1.42E+05          |
| L1   | -1.16E+05         | 1.15E+05          | -1.16E+05         | 1.15E+05          |
| L3   | -1.15E+05         | 1.17E+05          | -1.15E+05         | 1.16E+05          |
| L4   | -1.16E+05         | 1.16E+05          | -1.14E+05         | 1.14E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.07E+05         | 1.11E+05          | -1.06E+05         | 1.10E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-246. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

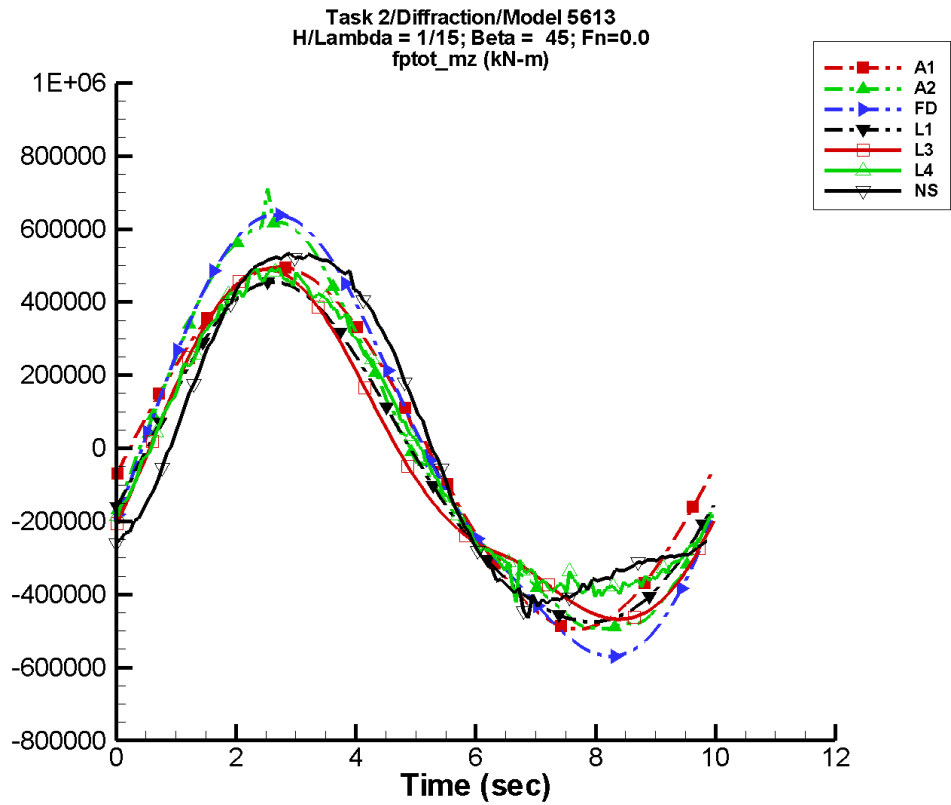
Table G-491. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -466.           | 3.67E+05        | -13               | 345.            | -94               |
| A2   | -253.           | 3.88E+05        | -14               | 4.77E+04        | -68               |
| FD   | 580.            | 4.36E+05        | -21               | 4.31E+04        | -77               |
| L1   | -2.66E+04       | 3.47E+05        | -13               | 2.48E+04        | -86               |
| L3   | -2.63E+04       | 3.43E+05        | -13               | 5.78E+04        | -74               |
| L4   | -1.22E+04       | 3.39E+05        | -15               | 2.80E+04        | -101              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.44E+03       | 3.64E+05        | -15               | 3.24E+04        | -125              |

Table G-492. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.70E+05         | 3.71E+05          | -3.66E+05         | 3.67E+05          |
| A2   | -3.84E+05         | 7.52E+05          | -3.72E+05         | 4.22E+05          |
| FD   | -4.24E+05         | 4.62E+05          | -4.19E+05         | 4.57E+05          |
| L1   | -3.53E+05         | 3.42E+05          | -3.52E+05         | 3.41E+05          |
| L3   | -3.47E+05         | 3.62E+05          | -3.46E+05         | 3.60E+05          |
| L4   | -3.43E+05         | 3.70E+05          | -3.22E+05         | 3.47E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.31E+05         | 3.79E+05          | -3.25E+05         | 3.70E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-247. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

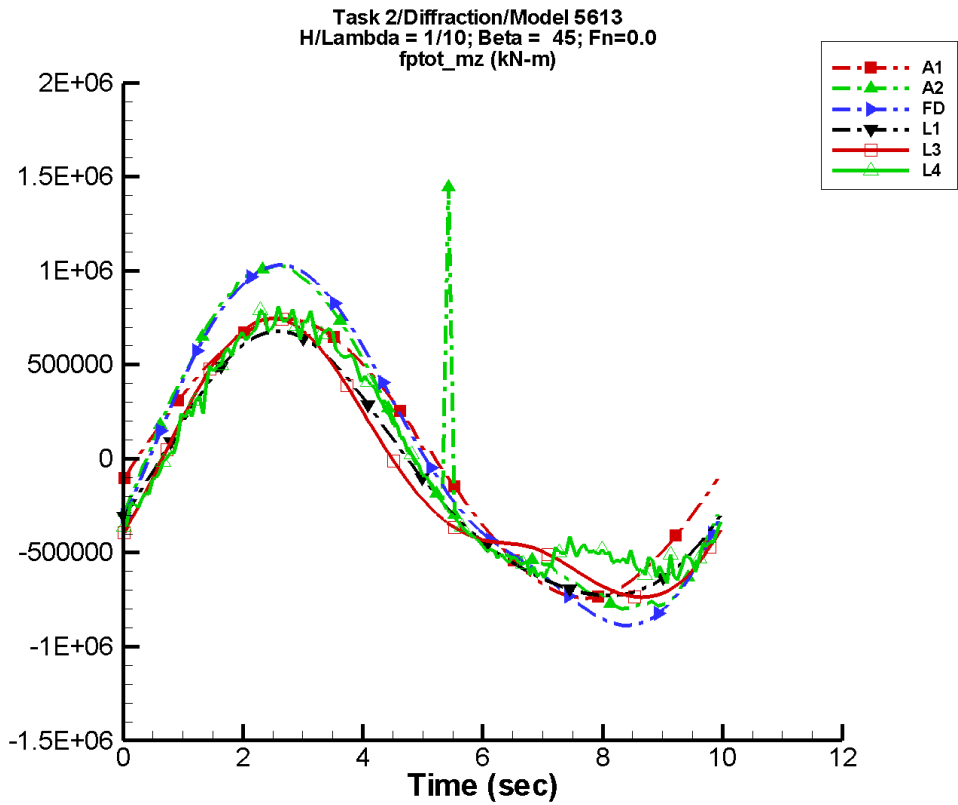
Table G-493. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -622.           | 4.90E+05        | -13               | 460.            | -94               |
| A2   | 743.            | 5.40E+05        | -14               | 9.51E+04        | -78               |
| FD   | 1.18E+03        | 5.91E+05        | -21               | 7.57E+04        | -80               |
| L1   | -4.73E+04       | 4.62E+05        | -13               | 4.42E+04        | -86               |
| L3   | -4.69E+04       | 4.55E+05        | -13               | 1.00E+05        | -77               |
| L4   | -1.54E+04       | 4.47E+05        | -16               | 6.04E+04        | -106              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.85E+03       | 4.86E+05        | -19               | 1.06E+05        | -143              |

Table G-494. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.94E+05         | 4.95E+05          | -4.89E+05         | 4.90E+05          |
| A2   | -4.94E+05         | 7.10E+05          | -4.91E+05         | 6.21E+05          |
| FD   | -5.70E+05         | 6.39E+05          | -5.64E+05         | 6.31E+05          |
| L1   | -4.75E+05         | 4.55E+05          | -4.74E+05         | 4.52E+05          |
| L3   | -4.68E+05         | 4.89E+05          | -4.66E+05         | 4.86E+05          |
| L4   | -4.20E+05         | 5.11E+05          | -3.89E+05         | 4.78E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.65E+05         | 5.32E+05          | -4.23E+05         | 5.25E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-248. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

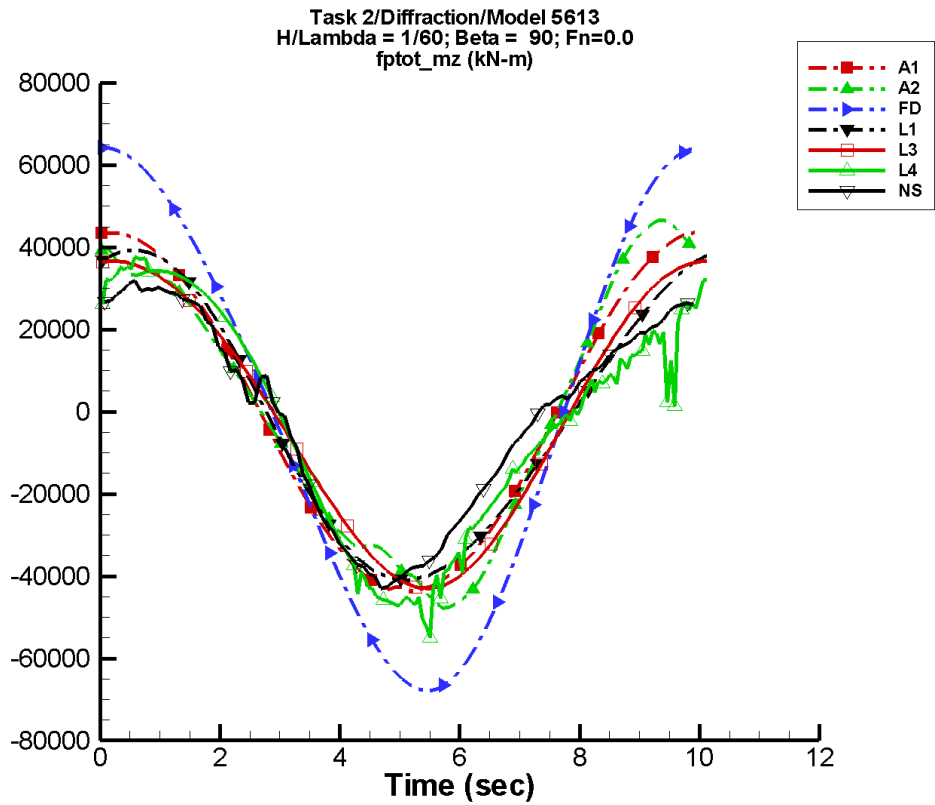
Table G-495. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -933.           | 7.36E+05        | -13               | 691.            | -94               |
| A2   | 2.13E+04        | 8.74E+05        | -15               | 1.75E+05        | -71               |
| FD   | 2.96E+03        | 9.22E+05        | -20               | 1.57E+05        | -82               |
| L1   | -1.07E+05       | 6.94E+05        | -13               | 9.95E+04        | -86               |
| L3   | -1.06E+05       | 6.79E+05        | -13               | 2.04E+05        | -80               |
| L4   | -5.50E+04       | 6.76E+05        | -15               | 1.61E+05        | -114              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-496. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.42E+05         | 7.43E+05          | -7.34E+05         | 7.35E+05          |
| A2   | -7.99E+05         | 1.45E+06          | -7.85E+05         | 1.01E+06          |
| FD   | -8.87E+05         | 1.03E+06          | -8.76E+05         | 1.02E+06          |
| L1   | -7.28E+05         | 6.77E+05          | -7.26E+05         | 6.73E+05          |
| L3   | -7.38E+05         | 7.46E+05          | -7.35E+05         | 7.42E+05          |
| L4   | -6.65E+05         | 8.10E+05          | -5.96E+05         | 7.44E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-249. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-497. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

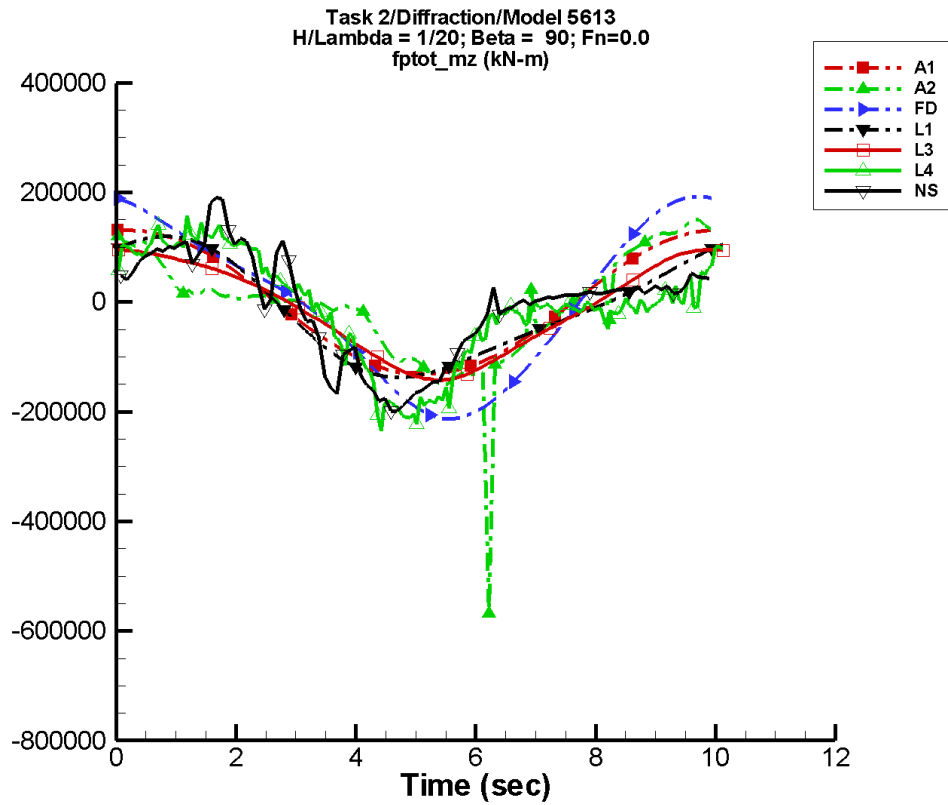
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -43.3           | 4.40E+04        | 79                | 78.1            | -75               |
| A2   | -70.8           | 4.31E+04        | 79                | 6.29E+03        | 170               |
| FD   | -1.33           | 6.50E+04        | 71                | 4.89E+03        | 165               |
| L1   | -1.45E+03       | 3.97E+04        | 73                | 2.95E+03        | -22               |
| L3   | -1.45E+03       | 3.95E+04        | 72                | 2.31E+03        | -170              |
| L4   | -2.70E+03       | 3.76E+04        | 70                | 8.16E+03        | -66               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.06E+03       | 3.33E+04        | 83                | 6.50E+03        | -57               |

Table G-498. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.38E+04         | 4.38E+04          | -4.31E+04         | 4.37E+04          |
| A2   | -4.77E+04         | 4.66E+04          | -4.61E+04         | 4.49E+04          |
| FD   | -6.79E+04         | 6.42E+04          | -6.70E+04         | 6.43E+04          |
| L1   | -4.09E+04         | 3.92E+04          | -4.08E+04         | 3.91E+04          |
| L3   | -4.30E+04         | 3.66E+04          | -4.28E+04         | 3.67E+04          |
| L4   | -5.49E+04         | 3.77E+04          | -4.78E+04         | 3.61E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.30E+04         | 3.19E+04          | -4.06E+04         | 3.00E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-250. Time history of  $M_z^{\text{tot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

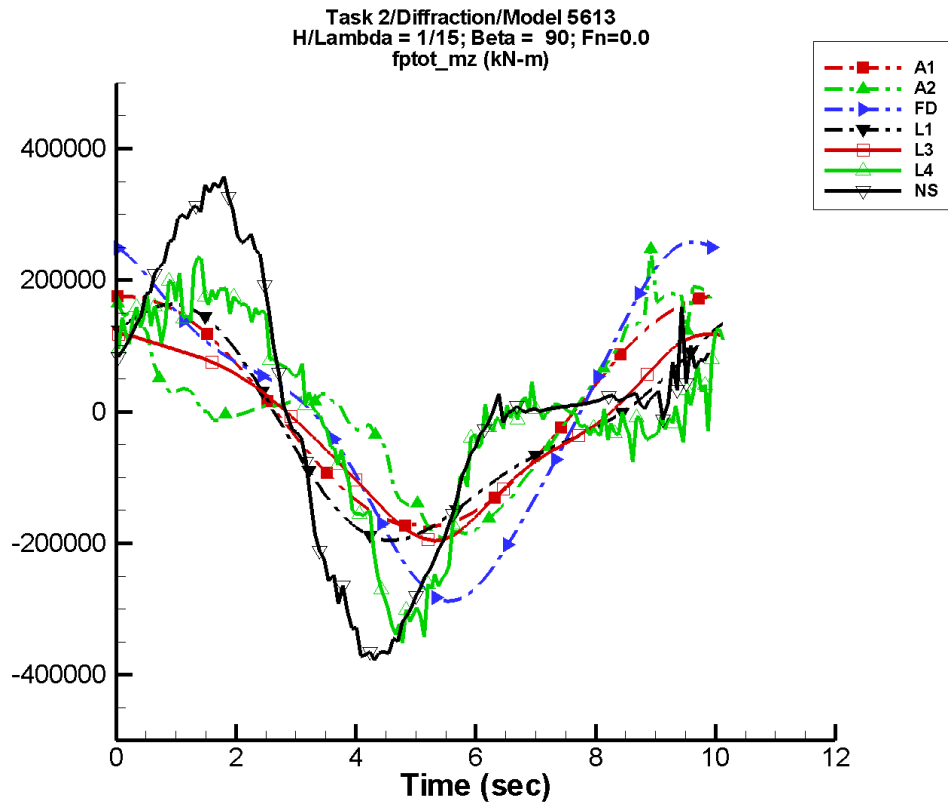
Table G-499. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -130.           | 1.32E+05        | 79                | 235.            | -75               |
| A2   | -4.65E+03       | 1.14E+05        | 76                | 5.39E+04        | 164               |
| FD   | 260.            | 1.85E+05        | 70                | 3.73E+04        | 166               |
| L1   | -1.29E+04       | 1.19E+05        | 73                | 2.64E+04        | -22               |
| L3   | -1.30E+04       | 1.12E+05        | 71                | 1.03E+04        | -151              |
| L4   | -1.01E+04       | 1.15E+05        | 65                | 5.92E+04        | -60               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.66E+03       | 1.05E+05        | 80                | 6.95E+04        | -51               |

Table G-500. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.32E+05         | 1.32E+05          | -1.30E+05         | 1.31E+05          |
| A2   | -5.68E+05         | 1.50E+05          | -1.82E+05         | 1.35E+05          |
| FD   | -2.13E+05         | 1.92E+05          | -2.10E+05         | 1.89E+05          |
| L1   | -1.37E+05         | 1.20E+05          | -1.37E+05         | 1.19E+05          |
| L3   | -1.42E+05         | 9.54E+04          | -1.41E+05         | 9.55E+04          |
| L4   | -2.34E+05         | 1.62E+05          | -2.02E+05         | 1.26E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.99E+05         | 1.90E+05          | -1.81E+05         | 1.38E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-251. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

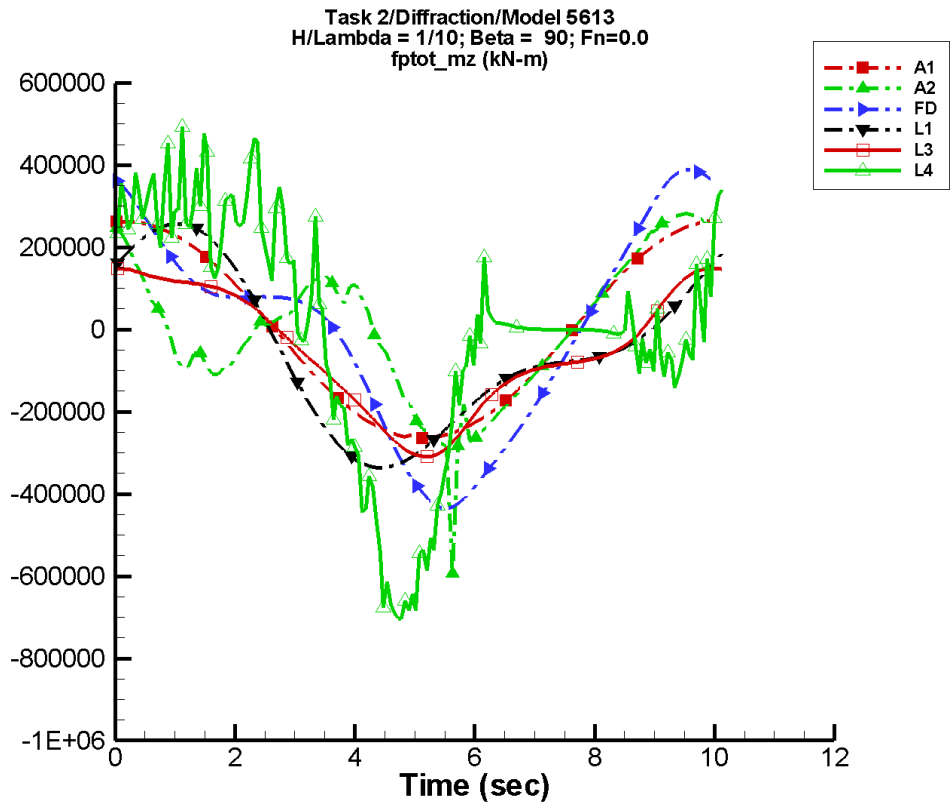
Table G-501. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -174.           | 1.77E+05        | 79                | 314.            | -75               |
| A2   | 71.0            | 1.34E+05        | 80                | 7.79E+04        | 163               |
| FD   | 648.            | 2.37E+05        | 70                | 6.09E+04        | 167               |
| L1   | -2.30E+04       | 1.59E+05        | 73                | 4.69E+04        | -22               |
| L3   | -2.31E+04       | 1.42E+05        | 70                | 1.24E+04        | -127              |
| L4   | -9.22E+03       | 1.54E+05        | 63                | 1.05E+05        | -60               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.54E+03       | 2.13E+05        | 77                | 1.71E+05        | -38               |

Table G-502. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.76E+05         | 1.76E+05          | -1.73E+05         | 1.75E+05          |
| A2   | -1.91E+05         | 2.47E+05          | -1.84E+05         | 1.77E+05          |
| FD   | -2.88E+05         | 2.58E+05          | -2.82E+05         | 2.53E+05          |
| L1   | -1.96E+05         | 1.63E+05          | -1.95E+05         | 1.62E+05          |
| L3   | -1.96E+05         | 1.18E+05          | -1.95E+05         | 1.18E+05          |
| L4   | -3.51E+05         | 2.35E+05          | -3.23E+05         | 1.93E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.77E+05         | 3.58E+05          | -3.64E+05         | 3.30E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-252. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

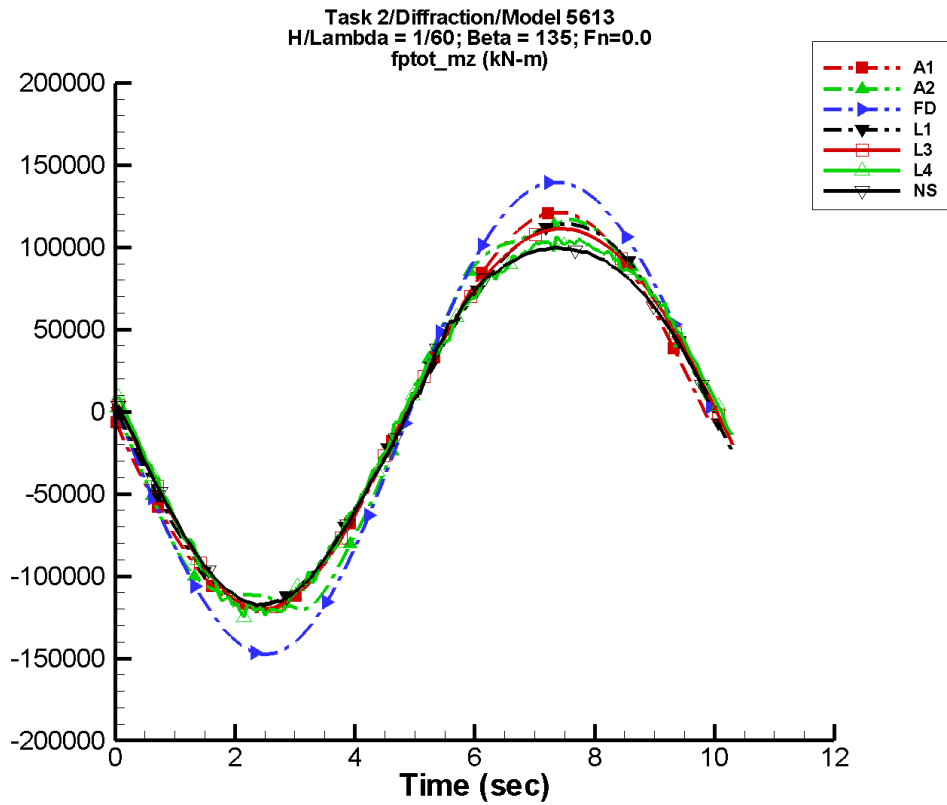
Table G-503. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -261.           | 2.65E+05        | 79                | 470.            | -75               |
| A2   | -2.54E+03       | 1.60E+05        | 79                | 1.63E+05        | 163               |
| FD   | 1.77E+03        | 3.22E+05        | 69                | 1.19E+05        | 167               |
| L1   | -5.17E+04       | 2.38E+05        | 73                | 1.06E+05        | -22               |
| L3   | -5.20E+04       | 1.92E+05        | 69                | 2.87E+04        | -66               |
| L4   | -8.97E+03       | 2.87E+05        | 67                | 2.08E+05        | -60               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-504. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.64E+05         | 2.64E+05          | -2.60E+05         | 2.63E+05          |
| A2   | -5.94E+05         | 2.82E+05          | -3.06E+05         | 2.71E+05          |
| FD   | -4.35E+05         | 3.89E+05          | -4.22E+05         | 3.79E+05          |
| L1   | -3.36E+05         | 2.57E+05          | -3.34E+05         | 2.55E+05          |
| L3   | -3.10E+05         | 1.48E+05          | -3.07E+05         | 1.48E+05          |
| L4   | -7.04E+05         | 5.13E+05          | -6.74E+05         | 3.44E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-253. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-505. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

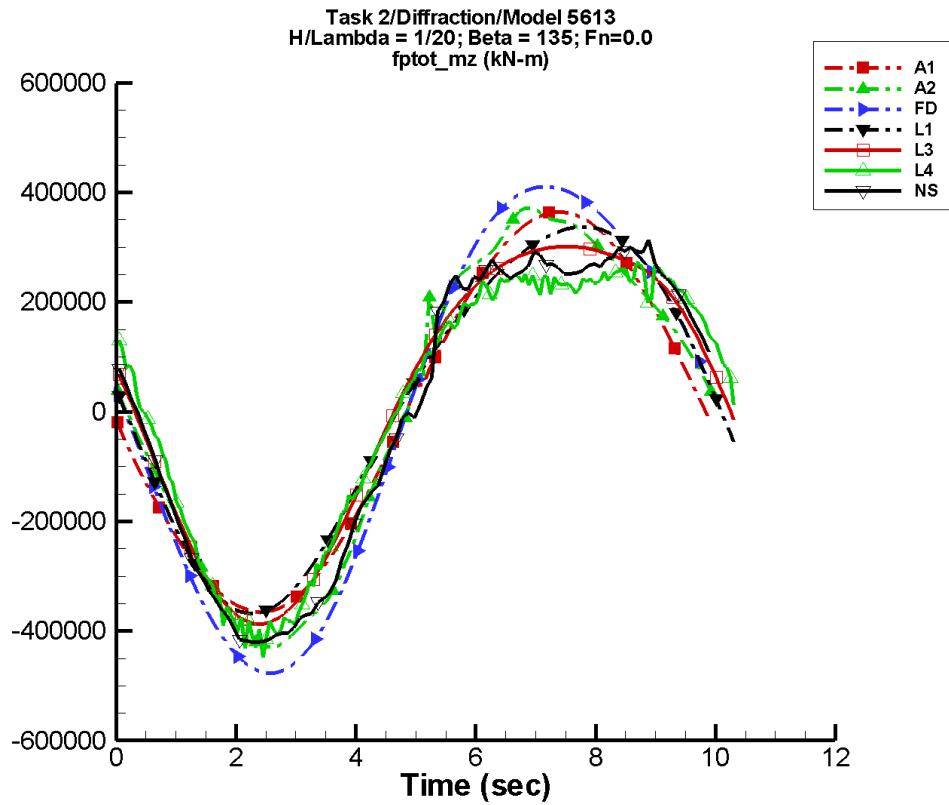
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 184.            | 1.20E+05        | 179               | 145.            | 92                |
| A2   | -204.           | 1.23E+05        | 178               | 3.41E+03        | 47                |
| FD   | -47.5           | 1.44E+05        | 173               | 4.92E+03        | 40                |
| L1   | 1.67E+03        | 1.16E+05        | 177               | 4.93E+03        | 126               |
| L3   | 1.65E+03        | 1.16E+05        | 176               | 6.20E+03        | 87                |
| L4   | 954.            | 1.13E+05        | 176               | 1.06E+04        | 94                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -611.           | 1.10E+05        | -180              | 7.93E+03        | 88                |

Table G-506. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.21E+05         | 1.21E+05          | -1.20E+05         | 1.20E+05          |
| A2   | -1.20E+05         | 1.17E+05          | -1.18E+05         | 1.15E+05          |
| FD   | -1.48E+05         | 1.40E+05          | -1.46E+05         | 1.38E+05          |
| L1   | -1.18E+05         | 1.14E+05          | -1.18E+05         | 1.14E+05          |
| L3   | -1.20E+05         | 1.11E+05          | -1.20E+05         | 1.11E+05          |
| L4   | -1.27E+05         | 1.07E+05          | -1.22E+05         | 1.03E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.18E+05         | 9.98E+04          | -1.16E+05         | 9.88E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-254. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

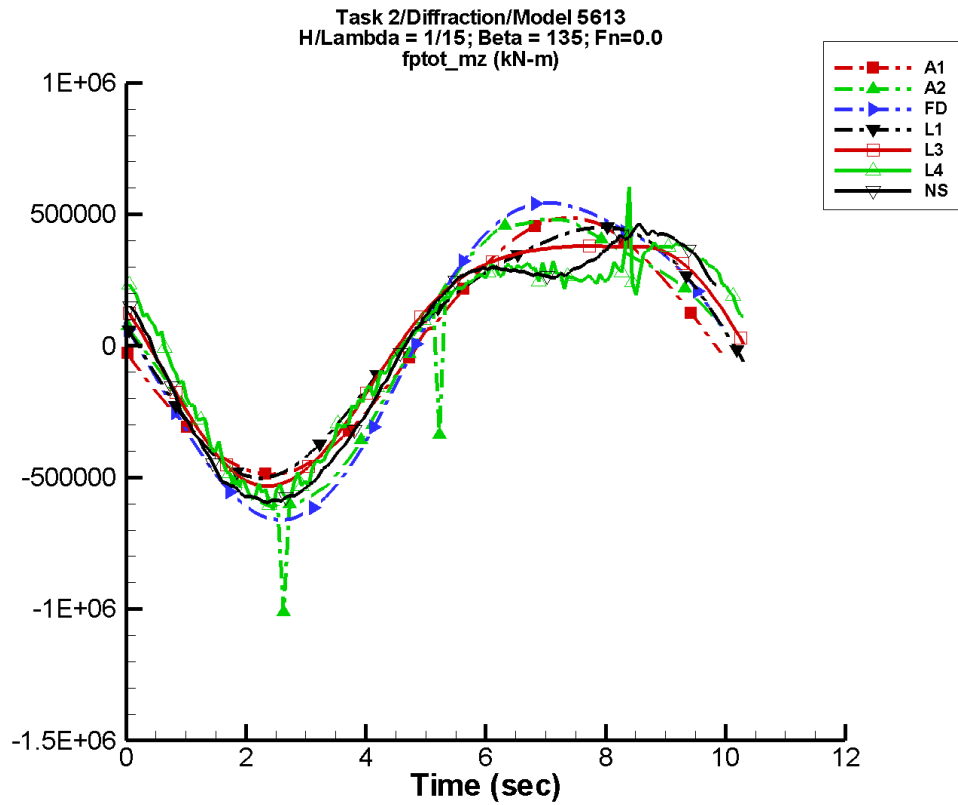
Table G-507. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 552.            | 3.62E+05        | 179               | 435.            | 92                |
| A2   | 1.22E+03        | 3.85E+05        | 177               | 5.28E+04        | 45                |
| FD   | -206.           | 4.45E+05        | 173               | 4.23E+04        | 45                |
| L1   | 1.51E+04        | 3.48E+05        | 177               | 4.39E+04        | 125               |
| L3   | 1.49E+04        | 3.45E+05        | 176               | 6.06E+04        | 92                |
| L4   | 6.10E+03        | 3.24E+05        | 172               | 9.26E+04        | 89                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.08E+03       | 3.63E+05        | 176               | 7.21E+04        | 92                |

Table G-508. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.65E+05         | 3.65E+05          | -3.61E+05         | 3.61E+05          |
| A2   | -4.30E+05         | 3.71E+05          | -4.21E+05         | 3.61E+05          |
| FD   | -4.77E+05         | 4.10E+05          | -4.72E+05         | 4.07E+05          |
| L1   | -3.69E+05         | 3.37E+05          | -3.67E+05         | 3.36E+05          |
| L3   | -3.87E+05         | 3.02E+05          | -3.85E+05         | 3.01E+05          |
| L4   | -4.48E+05         | 2.74E+05          | -4.10E+05         | 2.56E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.20E+05         | 3.14E+05          | -4.16E+05         | 2.91E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-255. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

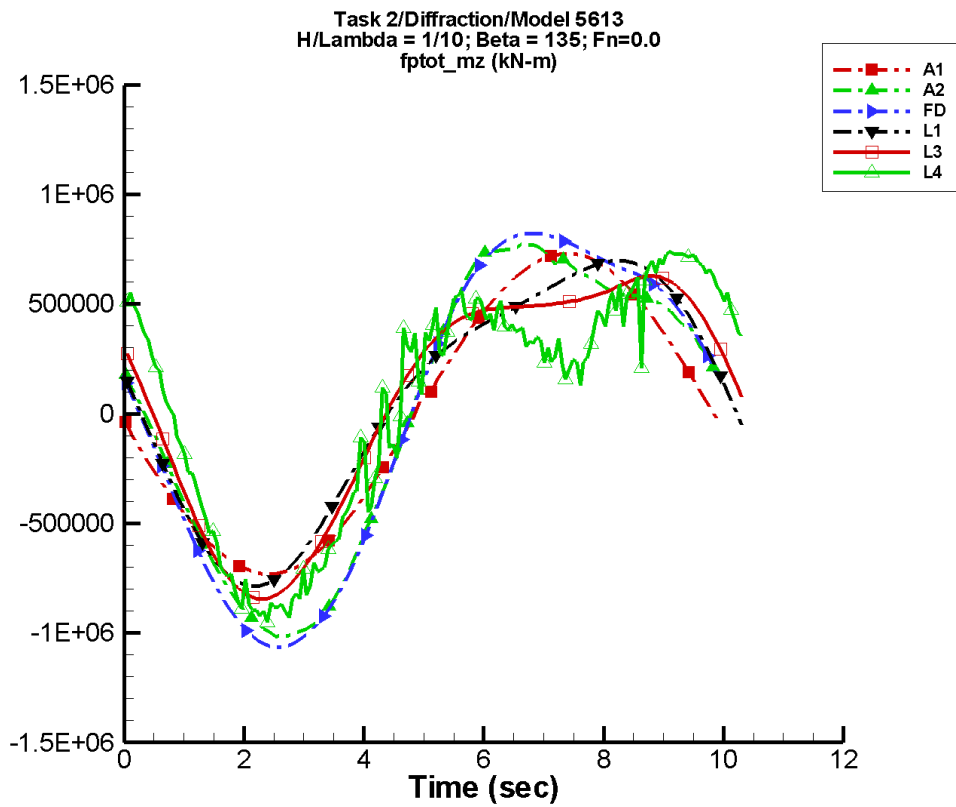
Table G-509. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 738.            | 4.84E+05        | 179               | 581.            | 92                |
| A2   | -8.85E+03       | 5.37E+05        | 175               | 9.24E+04        | 46                |
| FD   | -518.           | 6.04E+05        | 172               | 7.45E+04        | 47                |
| L1   | 2.68E+04        | 4.64E+05        | 177               | 7.79E+04        | 125               |
| L3   | 2.65E+04        | 4.58E+05        | 176               | 1.09E+05        | 95                |
| L4   | 1.16E+04        | 4.24E+05        | 170               | 1.66E+05        | 88                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -626.           | 4.79E+05        | 175               | 1.53E+05        | 106               |

Table G-510. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.88E+05         | 4.87E+05          | -4.82E+05         | 4.82E+05          |
| A2   | -1.01E+06         | 4.80E+05          | -6.55E+05         | 4.76E+05          |
| FD   | -6.62E+05         | 5.43E+05          | -6.54E+05         | 5.38E+05          |
| L1   | -5.02E+05         | 4.51E+05          | -4.99E+05         | 4.50E+05          |
| L3   | -5.34E+05         | 3.79E+05          | -5.31E+05         | 3.79E+05          |
| L4   | -6.24E+05         | 6.23E+05          | -5.69E+05         | 3.83E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.95E+05         | 4.65E+05          | -5.88E+05         | 4.34E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-256. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

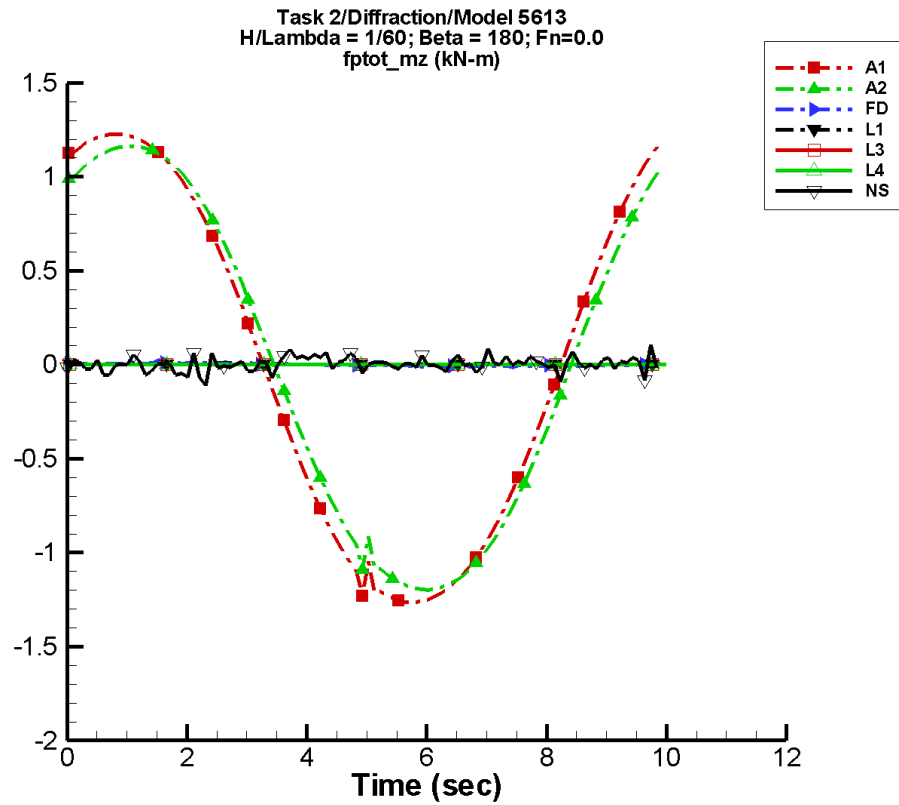
Table G-511. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.11E+03        | 7.25E+05        | 179               | 872.            | 92                |
| A2   | -4.33E+03       | 8.69E+05        | 176               | 1.93E+05        | 50                |
| FD   | -1.55E+03       | 9.44E+05        | 172               | 1.56E+05        | 49                |
| L1   | 6.04E+04        | 6.95E+05        | 177               | 1.75E+05        | 125               |
| L3   | 6.00E+04        | 6.84E+05        | 175               | 2.35E+05        | 100               |
| L4   | 5.39E+04        | 6.44E+05        | 165               | 3.75E+05        | 87                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-512. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.32E+05         | 7.30E+05          | -7.24E+05         | 7.22E+05          |
| A2   | -1.02E+06         | 7.74E+05          | -1.00E+06         | 7.58E+05          |
| FD   | -1.07E+06         | 8.23E+05          | -1.05E+06         | 8.15E+05          |
| L1   | -7.87E+05         | 6.97E+05          | -7.82E+05         | 6.95E+05          |
| L3   | -8.46E+05         | 6.28E+05          | -8.40E+05         | 6.24E+05          |
| L4   | -9.52E+05         | 7.59E+05          | -9.06E+05         | 7.31E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-257. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-513. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

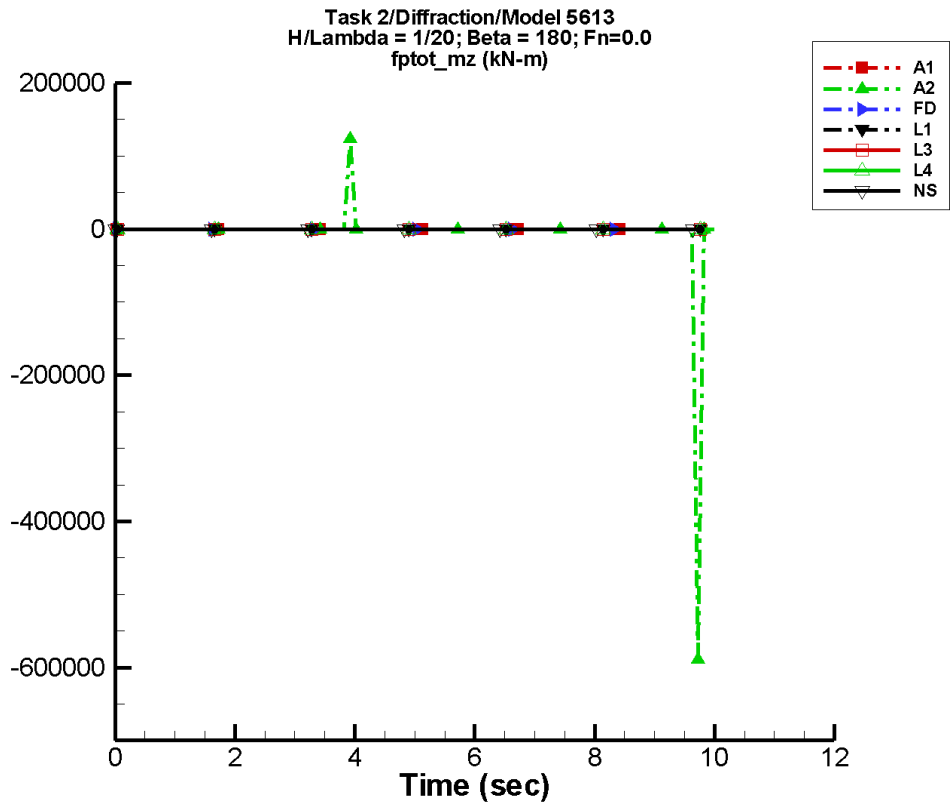
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.07E-03        | 1.30            | 57                | 4.73E-03        | 153               |
| A2   | 8.93E-04        | 1.23            | 51                | 4.50E-03        | 166               |
| FD   | -9.63E-05       | 8.85E-03        | 12                | 8.41E-04        | -44               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 4.26E-03        | 9.07E-03        | -136              | 1.23E-02        | 133               |

Table G-514. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.26             | 1.31              | -1.25             | 1.30              |
| A2   | -1.20             | 1.24              | -1.19             | 1.23              |
| FD   | -1.47E-02         | 2.52E-02          | -9.35E-03         | 1.07E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.110            | 0.107             | -3.94E-02         | 4.07E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-258. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

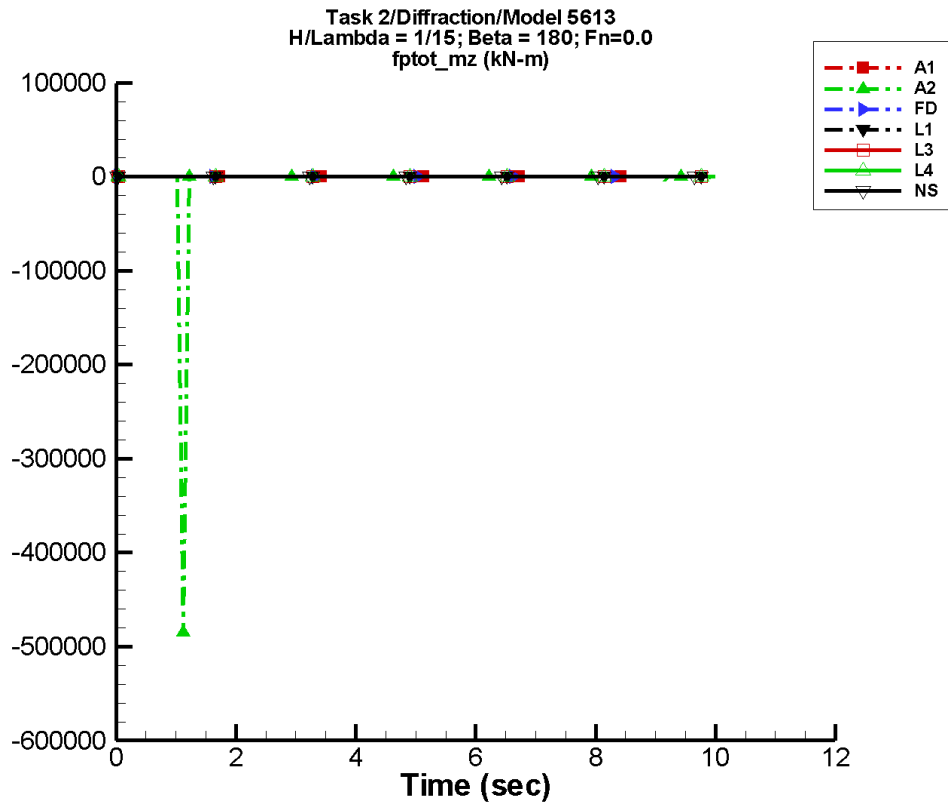
Table G-515. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.22E-03        | 3.91            | 57                | 1.42E-02        | 153               |
| A2   | -2.39E+03       | 1.12E+04        | -67               | 9.52E+03        | -78               |
| FD   | -1.35E-04       | 2.67E-02        | 15                | 2.61E-03        | -41               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.69E-03       | 1.35E-02        | -172              | 1.18E-02        | -160              |

Table G-516. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.80             | 3.94              | -3.77             | 3.90              |
| A2   | -5.89E+05         | 1.23E+05          | -7.88E+04         | 1.65E+04          |
| FD   | -4.23E-02         | 7.31E-02          | -2.55E-02         | 3.24E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.362            | 0.551             | -0.223            | 0.119             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-259. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

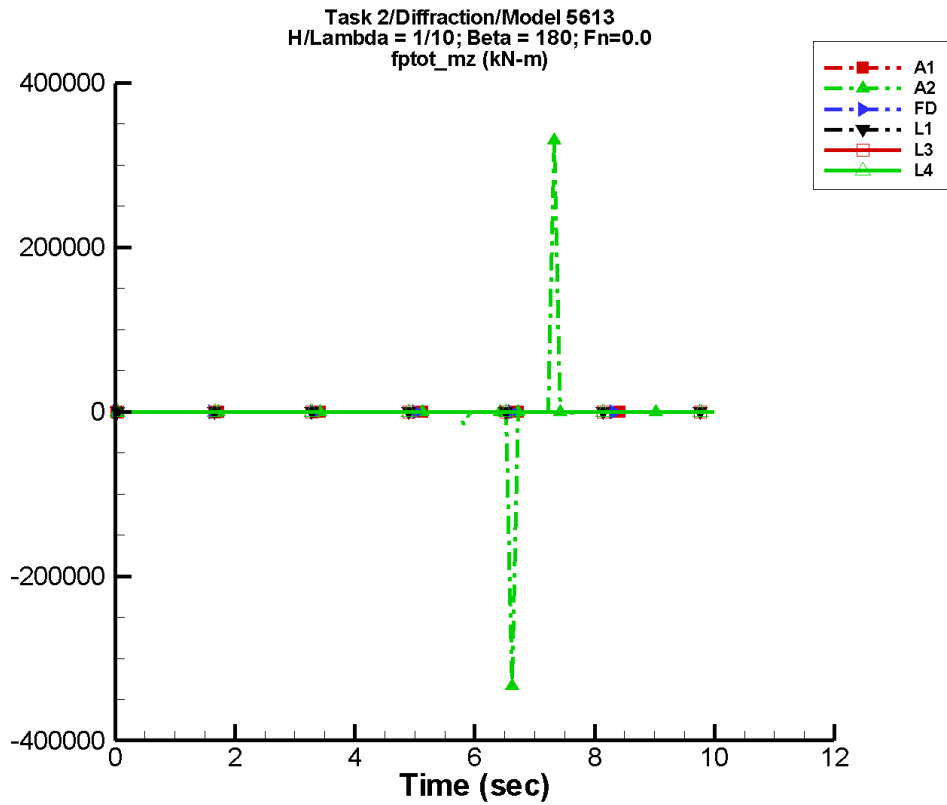
Table G-517. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.30E-03        | 5.22            | 57                | 1.90E-02        | 153               |
| A2   | -2.46E+03       | 5.15E+03        | -135              | 5.91E+03        | 180               |
| FD   | -3.25E-04       | 3.52E-02        | 15                | 3.56E-03        | -50               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.98E-03       | 9.61E-02        | -142              | 6.75E-02        | -115              |

Table G-518. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.08             | 5.25              | -5.03             | 5.21              |
| A2   | -4.85E+05         | 4.97              | -6.46E+04         | 5.53E+03          |
| FD   | -5.30E-02         | 9.85E-02          | -3.23E-02         | 4.26E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.01             | 2.90              | -0.256            | 0.200             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-260. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

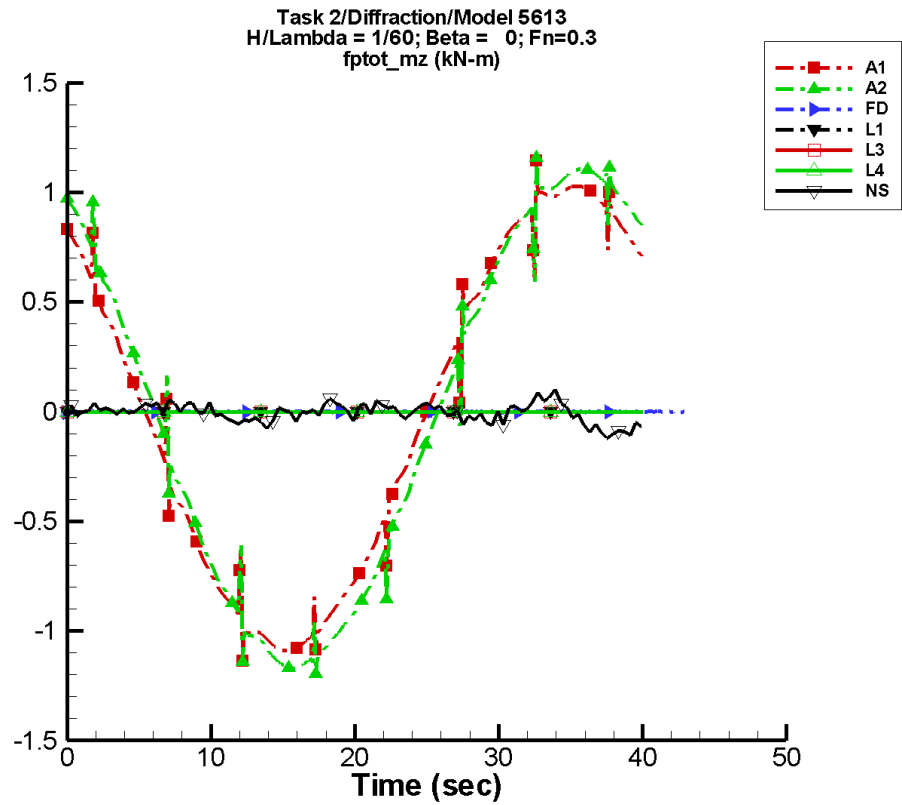
Table G–519. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.45E-03        | 7.83            | 57                | 2.85E-02        | 153               |
| A2   | 727.            | 4.94E+03        | 84                | 3.92E+03        | -160              |
| FD   | -1.27E-04       | 5.24E-02        | 15                | 4.67E-03        | -56               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–520. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.62             | 7.88              | -7.55             | 7.81              |
| A2   | -3.34E+05         | 3.30E+05          | -4.55E+04         | 4.47E+04          |
| FD   | -7.24E-02         | 0.142             | -5.00E-02         | 6.34E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-261. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–521. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

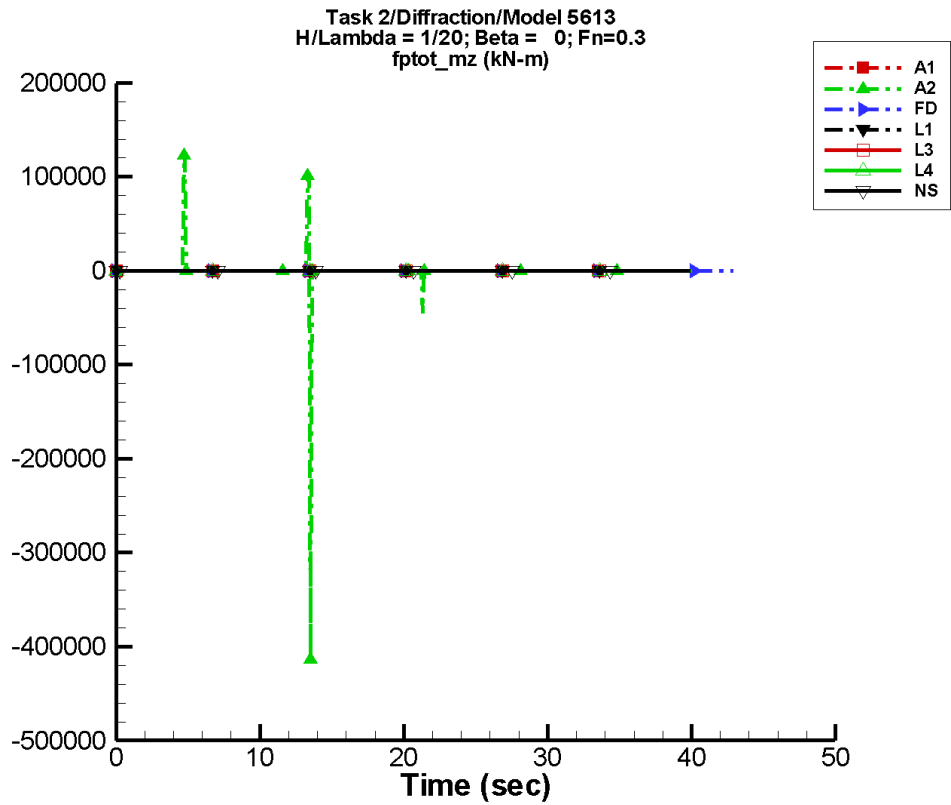
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.35E-03       | 1.04            | 133               | 2.68E-02        | -17               |
| A2   | -3.60E-03       | 1.12            | 127               | 2.69E-02        | -19               |
| FD   | -2.50E-05       | 1.03E-04        | -123              | 8.03E-05        | -105              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.24E-04        | 6.76E-03        | 90                | 3.16E-02        | 32                |

Table G–522. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.14             | 1.15              | -1.09             | 1.03              |
| A2   | -1.20             | 1.16              | -1.17             | 1.11              |
| FD   | -5.00E-03         | 6.00E-03          | -1.55E-03         | 1.54E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.120            | 0.232             | -9.35E-02         | 0.166             |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-262. Time history of  $M_z^{tot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

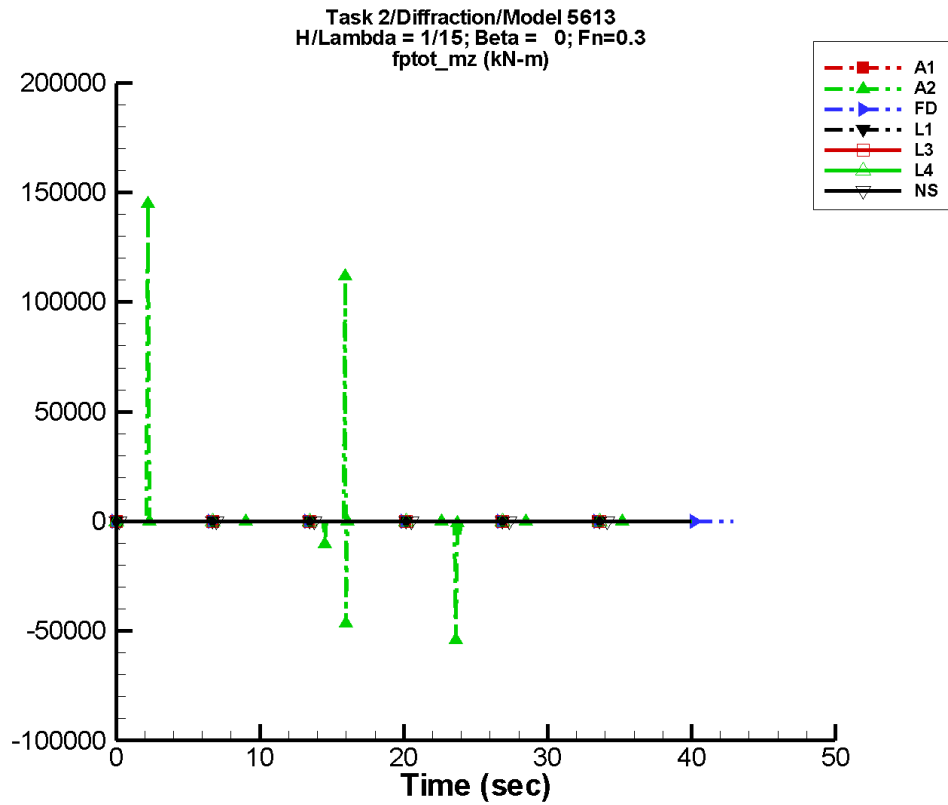
Table G–523. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.01E-02       | 3.14            | 133               | 8.07E-02        | -17               |
| A2   | -63.2           | 1.66E+03        | 88                | 2.39E+03        | 5                 |
| FD   | -1.39E-05       | 3.01E-04        | -17               | 1.96E-04        | 71                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 8.31E-03        | 4.65E-02        | 12                | 5.04E-02        | 130               |

Table G–524. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.42             | 3.44              | -3.28             | 3.09              |
| A2   | -4.14E+05         | 1.24E+05          | -3.26E+04         | 3.21E+04          |
| FD   | -7.93E-03         | 5.29E-03          | -2.03E-03         | 1.86E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.46             | 1.34              | -0.278            | 0.331             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-263. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

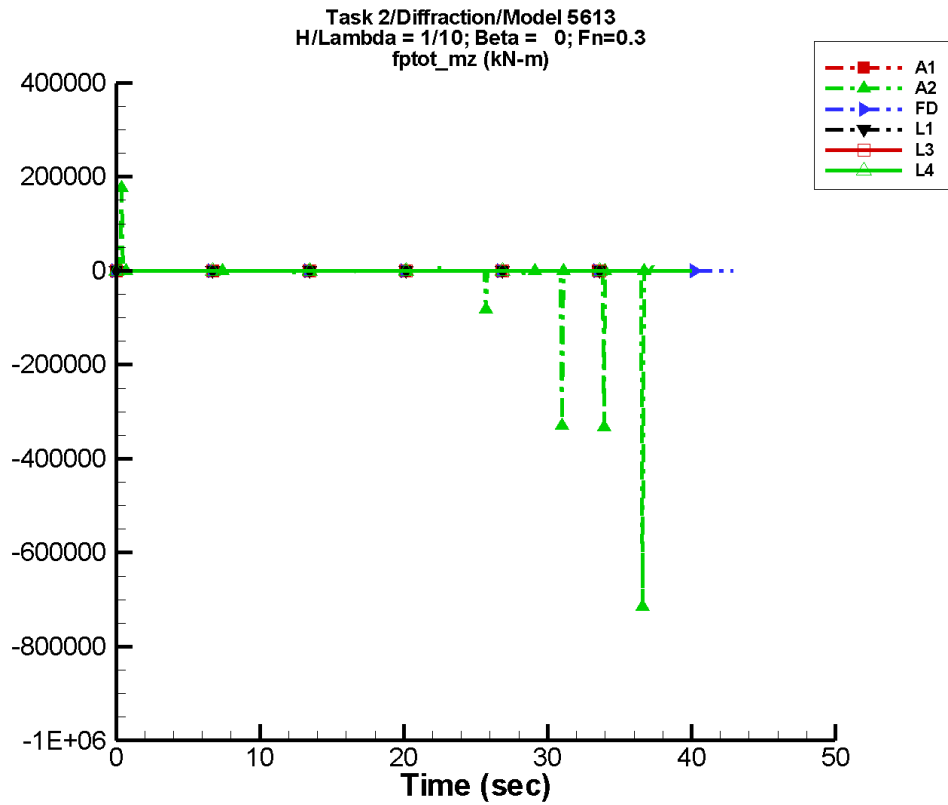
Table G–525. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.35E-02       | 4.19            | 133               | 0.108           | -17               |
| A2   | 370.            | 1.07E+03        | 60                | 811.            | 94                |
| FD   | -1.89E-04       | 2.96E-04        | -44               | 1.82E-04        | 58                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.53E-02        | 6.99E-02        | 161               | 5.37E-02        | -139              |

Table G–526. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.57             | 4.60              | -4.38             | 4.13              |
| A2   | -5.40E+04         | 1.45E+05          | -8.61E+03         | 1.94E+04          |
| FD   | -8.78E-03         | 8.43E-03          | -2.64E-03         | 2.02E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.328            | 0.541             | -0.239            | 0.362             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-264. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

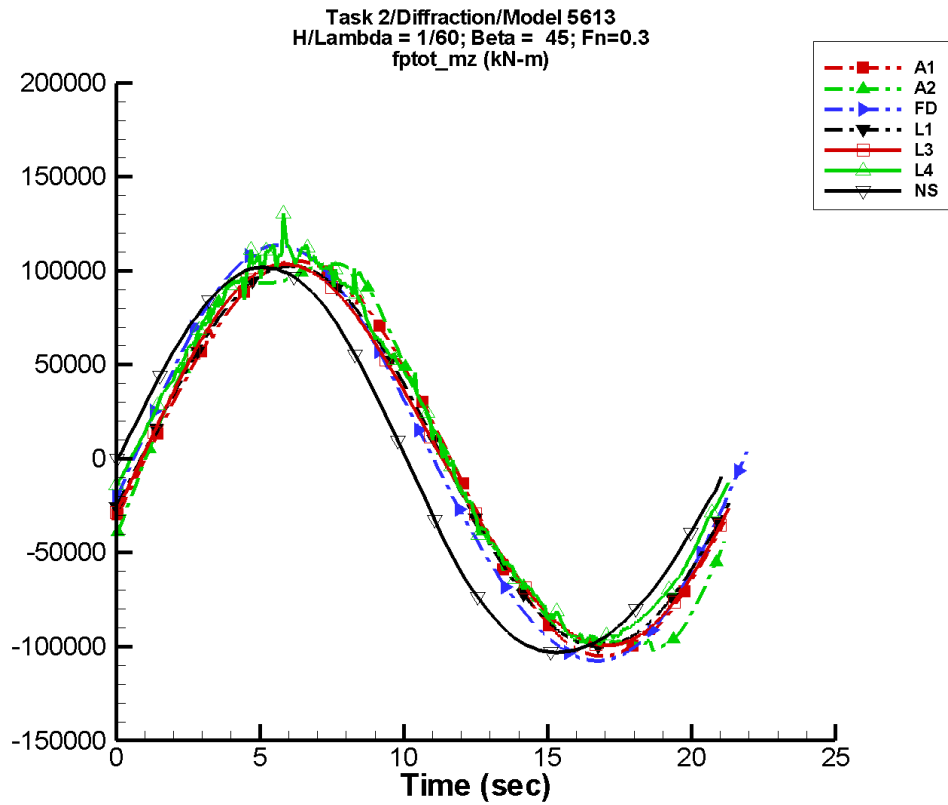
Table G-527. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.02E-02       | 6.29            | 133               | 0.162           | -17               |
| A2   | -3.34E+03       | 5.70E+03        | -34               | 4.94E+03        | 23                |
| FD   | 2.43E-04        | 3.80E-04        | -172              | 8.67E-05        | -9                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-528. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.86             | 6.90              | -6.56             | 6.19              |
| A2   | -7.15E+05         | 1.77E+05          | -9.57E+04         | 2.36E+04          |
| FD   | -9.67E-03         | 9.18E-03          | -2.21E-03         | 2.48E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-265. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-529. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

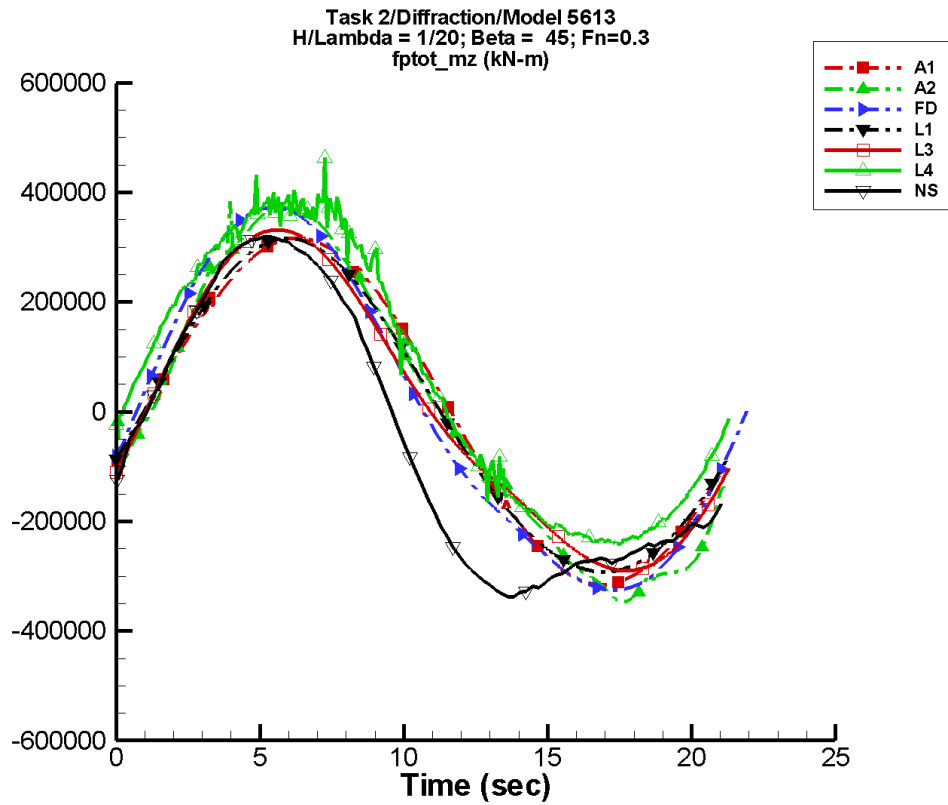
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 21.7            | 1.05E+05        | -16               | 35.0            | 156               |
| A2   | 404.            | 1.08E+05        | -16               | 4.81E+03        | -44               |
| FD   | 34.8            | 1.10E+05        | -4                | 4.91E+03        | -45               |
| L1   | -22.4           | 1.01E+05        | -13               | 1.64E+03        | -83               |
| L3   | -30.3           | 1.01E+05        | -14               | 5.23E+03        | -52               |
| L4   | 6.48E+03        | 1.02E+05        | -12               | 1.05E+03        | -70               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.20E+03       | 1.04E+05        | 5                 | 5.15E+03        | -109              |

Table G-530. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.05E+05         | 1.05E+05          | -1.05E+05         | 1.05E+05          |
| A2   | -1.03E+05         | 1.04E+05          | -9.97E+04         | 1.03E+05          |
| FD   | -1.08E+05         | 1.14E+05          | -1.07E+05         | 1.13E+05          |
| L1   | -9.99E+04         | 1.03E+05          | -9.98E+04         | 1.02E+05          |
| L3   | -9.94E+04         | 1.03E+05          | -9.93E+04         | 1.03E+05          |
| L4   | -9.91E+04         | 1.30E+05          | -9.64E+04         | 1.13E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.03E+05         | 1.02E+05          | -1.02E+05         | 1.02E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-266. Time history of  $M_z^{\text{tot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

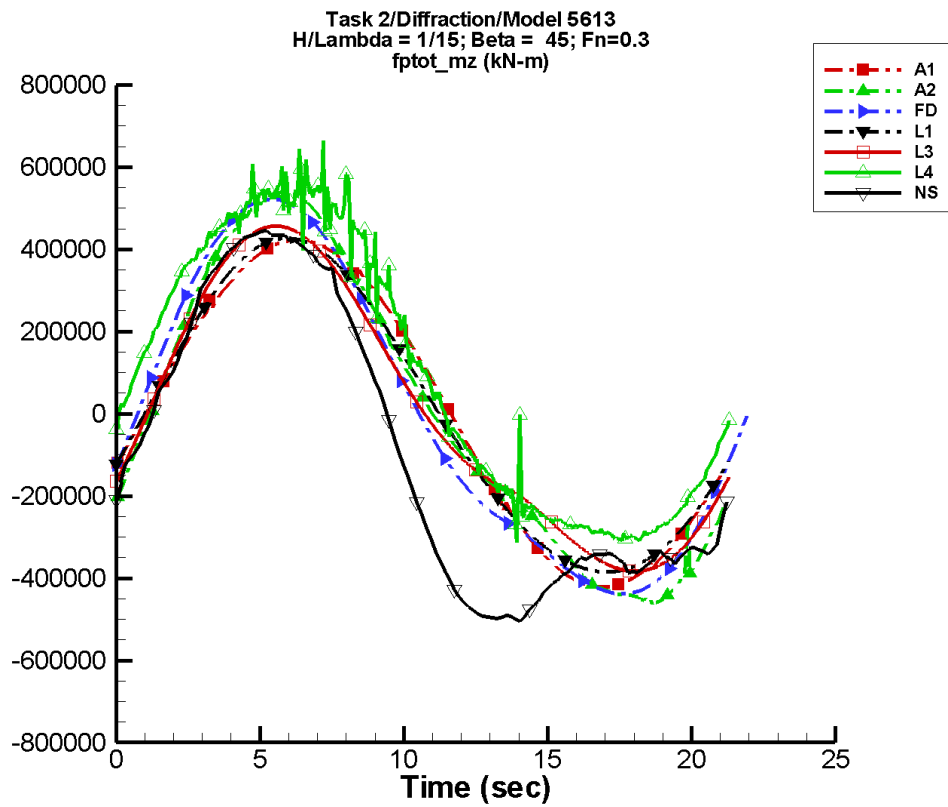
Table G-531. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 65.3            | 3.15E+05        | -16               | 105.            | 156               |
| A2   | 2.42E+03        | 3.38E+05        | -15               | 4.95E+04        | -56               |
| FD   | 212.            | 3.44E+05        | -3                | 4.21E+04        | -50               |
| L1   | -256.           | 3.04E+05        | -13               | 1.48E+04        | -83               |
| L3   | -359.           | 2.99E+05        | -13               | 4.65E+04        | -61               |
| L4   | 5.58E+04        | 3.18E+05        | -10               | 2.02E+04        | -85               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.29E+04       | 3.20E+05        | 3                 | 7.30E+04        | -106              |

Table G-532. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.16E+05         | 3.17E+05          | -3.15E+05         | 3.16E+05          |
| A2   | -3.46E+05         | 6.73E+05          | -3.43E+05         | 3.72E+05          |
| FD   | -3.25E+05         | 3.73E+05          | -3.25E+05         | 3.72E+05          |
| L1   | -2.92E+05         | 3.16E+05          | -2.92E+05         | 3.16E+05          |
| L3   | -2.90E+05         | 3.32E+05          | -2.90E+05         | 3.33E+05          |
| L4   | -2.42E+05         | 4.64E+05          | -2.39E+05         | 3.85E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.38E+05         | 3.20E+05          | -3.29E+05         | 3.21E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-267. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

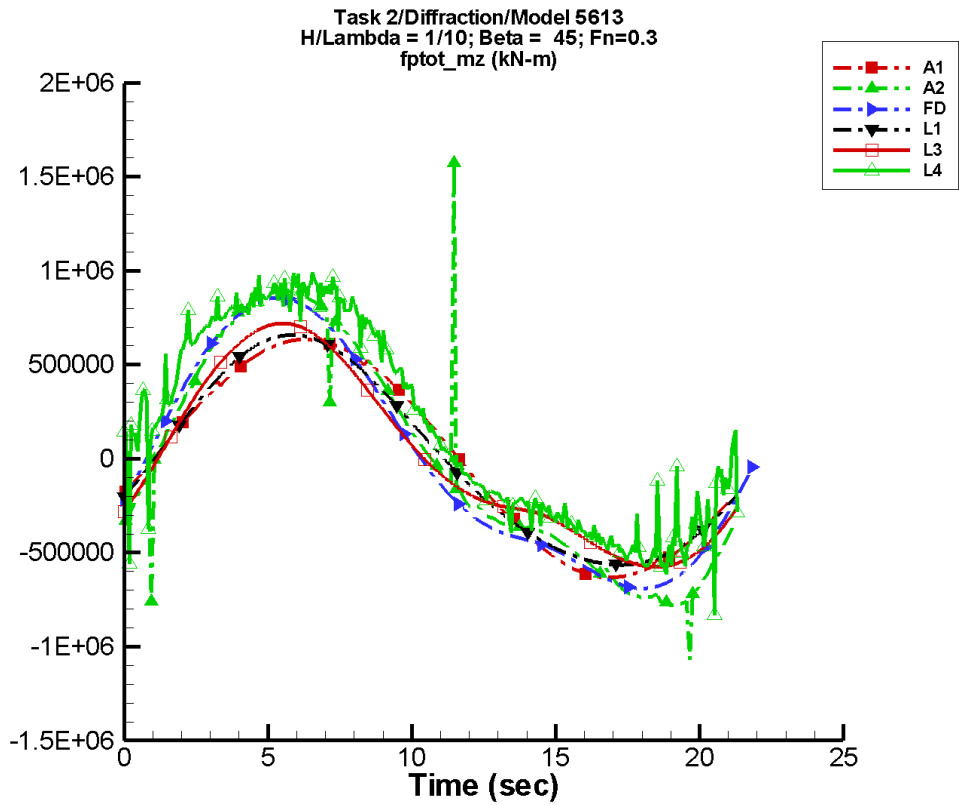
Table G-533. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 87.2            | 4.21E+05        | -16               | 141.            | 156               |
| A2   | 1.07E+03        | 4.67E+05        | -15               | 9.09E+04        | -62               |
| FD   | 353.            | 4.68E+05        | -3                | 7.40E+04        | -52               |
| L1   | -469.           | 4.05E+05        | -13               | 2.63E+04        | -83               |
| L3   | -604.           | 3.97E+05        | -13               | 8.04E+04        | -65               |
| L4   | 9.33E+04        | 4.39E+05        | -9                | 3.81E+04        | -79               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.40E+04       | 4.49E+05        | 4                 | 1.34E+05        | -105              |

Table G-534. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.22E+05         | 4.23E+05          | -4.21E+05         | 4.22E+05          |
| A2   | -4.70E+05         | 5.42E+05          | -4.55E+05         | 5.37E+05          |
| FD   | -4.38E+05         | 5.22E+05          | -4.37E+05         | 5.20E+05          |
| L1   | -3.85E+05         | 4.27E+05          | -3.85E+05         | 4.27E+05          |
| L3   | -3.83E+05         | 4.56E+05          | -3.83E+05         | 4.58E+05          |
| L4   | -3.13E+05         | 6.64E+05          | -3.02E+05         | 5.52E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.06E+05         | 4.46E+05          | -4.97E+05         | 4.47E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-268. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

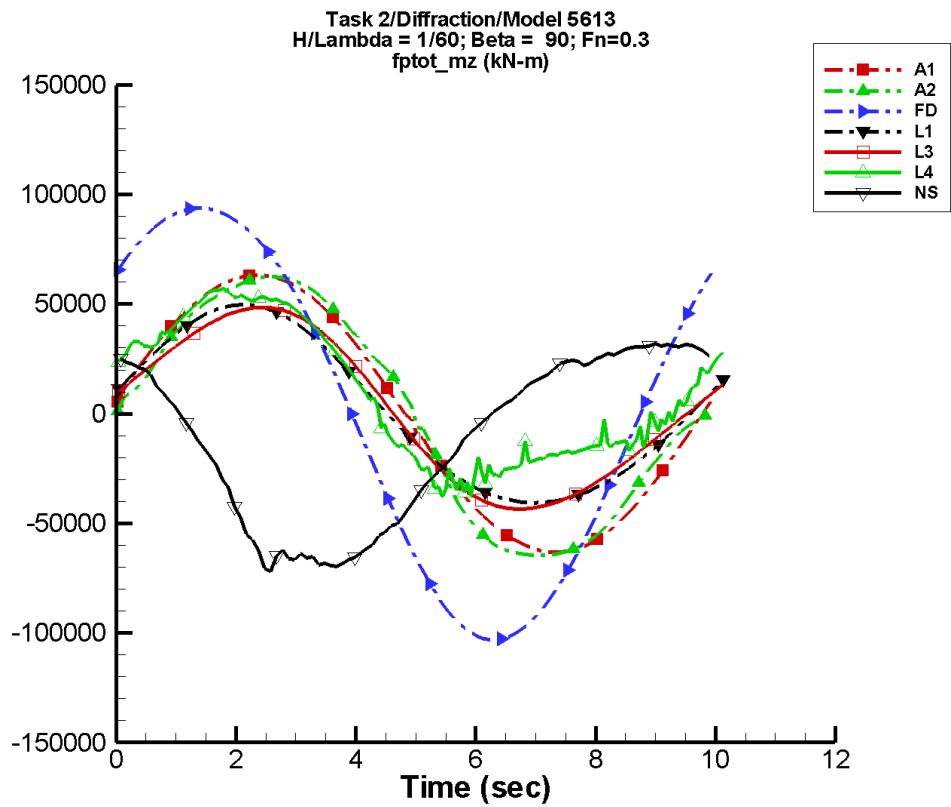
Table G-535. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 131.            | 6.31E+05        | -16               | 211.            | 156               |
| A2   | 6.88E+03        | 7.67E+05        | -14               | 1.87E+05        | -59               |
| FD   | 926.            | 7.40E+05        | -2                | 1.54E+05        | -54               |
| L1   | -1.09E+03       | 6.07E+05        | -13               | 5.92E+04        | -83               |
| L3   | -1.25E+03       | 5.91E+05        | -13               | 1.61E+05        | -68               |
| L4   | 1.70E+05        | 7.07E+05        | -10               | 9.67E+04        | -66               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-536. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.33E+05         | 6.34E+05          | -6.31E+05         | 6.33E+05          |
| A2   | -1.07E+06         | 1.57E+06          | -7.97E+05         | 8.92E+05          |
| FD   | -6.90E+05         | 8.56E+05          | -6.88E+05         | 8.54E+05          |
| L1   | -5.65E+05         | 6.58E+05          | -5.64E+05         | 6.57E+05          |
| L3   | -5.76E+05         | 7.20E+05          | -5.75E+05         | 7.22E+05          |
| L4   | -8.31E+05         | 1.00E+06          | -5.34E+05         | 9.21E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-269. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-537. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

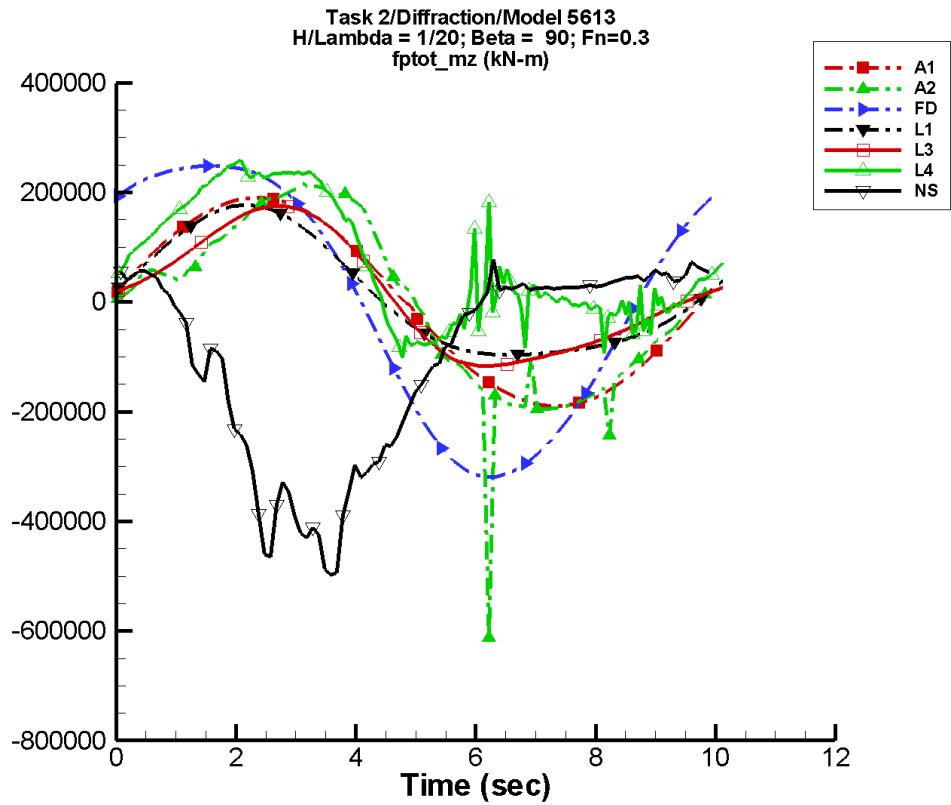
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -60.3           | 6.34E+04        | 1                 | 71.5            | 2                 |
| A2   | -87.8           | 6.34E+04        | 0                 | 6.26E+03        | 169               |
| FD   | 17.1            | 9.88E+04        | 32                | 4.87E+03        | 165               |
| L1   | 1.61E+03        | 4.51E+04        | 10                | 3.06E+03        | -83               |
| L3   | 1.61E+03        | 4.51E+04        | 9                 | 5.17E+03        | -153              |
| L4   | 8.71E+03        | 4.13E+04        | 21                | 8.97E+03        | -94               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.24E+04       | 5.11E+04        | 139               | 1.03E+04        | 43                |

Table G-538. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.31E+04         | 6.32E+04          | -6.25E+04         | 6.26E+04          |
| A2   | -6.44E+04         | 6.25E+04          | -6.42E+04         | 6.19E+04          |
| FD   | -1.03E+05         | 9.37E+04          | -1.02E+05         | 9.29E+04          |
| L1   | -4.06E+04         | 4.97E+04          | -4.05E+04         | 4.95E+04          |
| L3   | -4.35E+04         | 4.85E+04          | -4.33E+04         | 4.83E+04          |
| L4   | -3.78E+04         | 5.72E+04          | -3.26E+04         | 5.62E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.20E+04         | 3.18E+04          | -6.76E+04         | 3.12E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-270. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

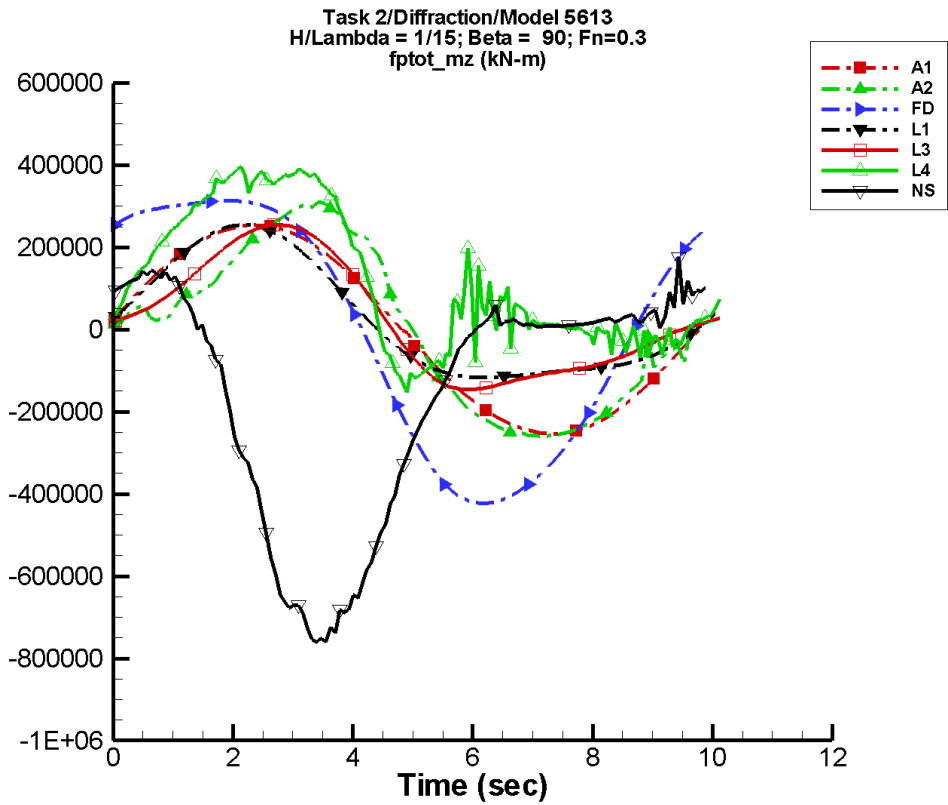
Table G-539. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -181.           | 1.91E+05        | 1                 | 215.            | 2                 |
| A2   | -4.70E+03       | 1.94E+05        | -5                | 5.38E+04        | 163               |
| FD   | 315.            | 2.90E+05        | 31                | 3.72E+04        | 166               |
| L1   | 1.46E+04        | 1.35E+05        | 10                | 2.74E+04        | -83               |
| L3   | 1.46E+04        | 1.34E+05        | 6                 | 3.75E+04        | -144              |
| L4   | 7.19E+04        | 1.26E+05        | 9                 | 6.42E+04        | -83               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.05E+05       | 2.23E+05        | 145               | 9.74E+04        | 31                |

Table G-540. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.90E+05         | 1.90E+05          | -1.88E+05         | 1.88E+05          |
| A2   | -6.13E+05         | 2.17E+05          | -2.25E+05         | 2.07E+05          |
| FD   | -3.19E+05         | 2.49E+05          | -3.15E+05         | 2.48E+05          |
| L1   | -9.66E+04         | 1.77E+05          | -9.64E+04         | 1.76E+05          |
| L3   | -1.16E+05         | 1.75E+05          | -1.16E+05         | 1.74E+05          |
| L4   | -1.02E+05         | 2.63E+05          | -7.81E+04         | 2.47E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.98E+05         | 7.74E+04          | -4.32E+05         | 5.65E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-271. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

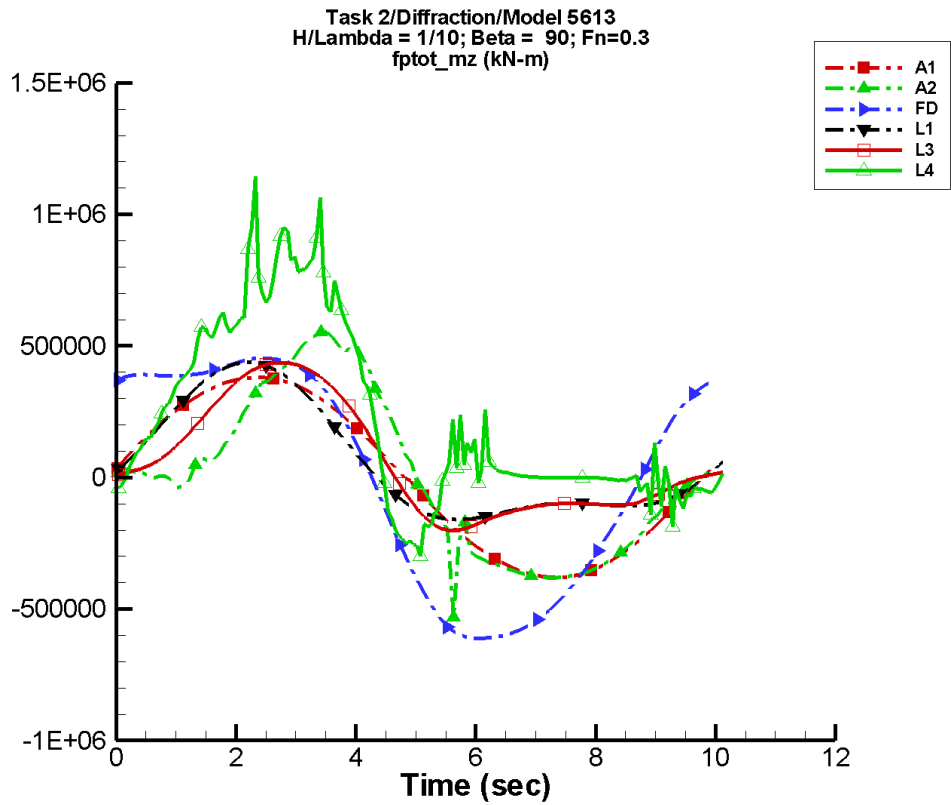
Table G-541. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -242.           | 2.55E+05        | 1                 | 287.            | 2                 |
| A2   | -118.           | 2.48E+05        | -9                | 7.76E+04        | 162               |
| FD   | 721.            | 3.79E+05        | 30                | 6.08E+04        | 167               |
| L1   | 2.61E+04        | 1.81E+05        | 10                | 4.86E+04        | -83               |
| L3   | 2.59E+04        | 1.77E+05        | 4                 | 6.07E+04        | -138              |
| L4   | 1.16E+05        | 1.87E+05        | 2                 | 1.04E+05        | -86               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.56E+05       | 3.39E+05        | 134               | 2.05E+05        | 16                |

Table G-542. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.54E+05         | 2.54E+05          | -2.51E+05         | 2.51E+05          |
| A2   | -2.60E+05         | 3.10E+05          | -2.57E+05         | 2.97E+05          |
| FD   | -4.23E+05         | 3.13E+05          | -4.18E+05         | 3.12E+05          |
| L1   | -1.17E+05         | 2.54E+05          | -1.17E+05         | 2.53E+05          |
| L3   | -1.46E+05         | 2.54E+05          | -1.45E+05         | 2.53E+05          |
| L4   | -1.52E+05         | 3.96E+05          | -1.17E+05         | 3.86E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.61E+05         | 1.76E+05          | -7.35E+05         | 1.34E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-272. Time history of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

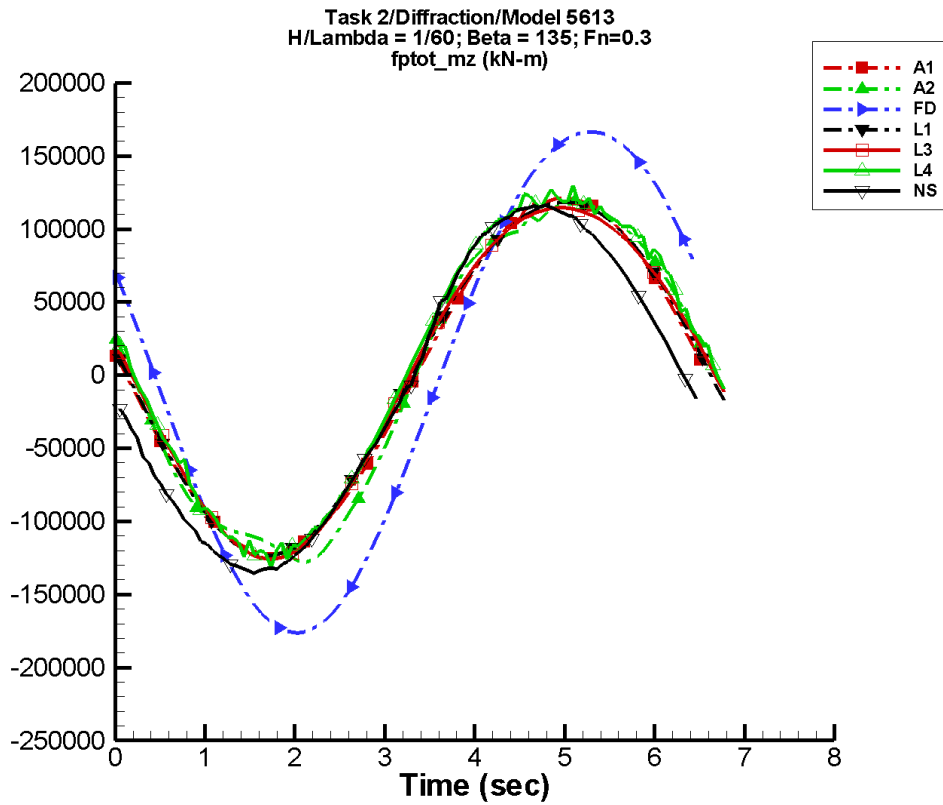
Table G-543. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -363.           | 3.82E+05        | 1                 | 431.            | 2                 |
| A2   | -2.64E+03       | 3.76E+05        | -15               | 1.63E+05        | 162               |
| FD   | 1.88E+03        | 5.47E+05        | 27                | 1.18E+05        | 167               |
| L1   | 5.87E+04        | 2.71E+05        | 10                | 1.09E+05        | -83               |
| L3   | 5.84E+04        | 2.62E+05        | -1                | 1.20E+05        | -128              |
| L4   | 2.15E+05        | 3.75E+05        | -7                | 2.34E+05        | -105              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-544. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.80E+05         | 3.81E+05          | -3.77E+05         | 3.77E+05          |
| A2   | -5.31E+05         | 5.54E+05          | -3.78E+05         | 5.26E+05          |
| FD   | -6.11E+05         | 4.53E+05          | -6.08E+05         | 4.49E+05          |
| L1   | -1.60E+05         | 4.37E+05          | -1.59E+05         | 4.35E+05          |
| L3   | -2.02E+05         | 4.37E+05          | -1.99E+05         | 4.34E+05          |
| L4   | -2.98E+05         | 1.14E+06          | -2.46E+05         | 8.50E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-273. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-545. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

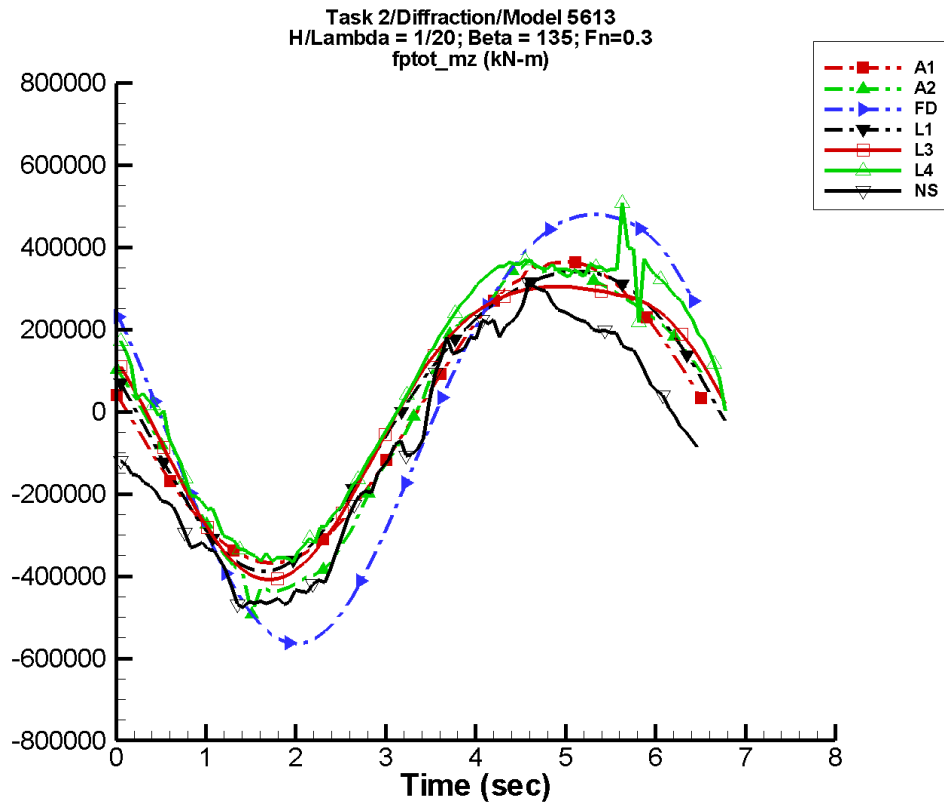
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 85.0            | 1.22E+05        | 171               | 583.            | 106               |
| A2   | 217.            | 1.24E+05        | 169               | 2.70E+03        | 46                |
| FD   | -14.2           | 1.72E+05        | 158               | 5.00E+03        | 58                |
| L1   | 1.66E+03        | 1.21E+05        | 172               | 4.75E+03        | 99                |
| L3   | 1.67E+03        | 1.20E+05        | 171               | 7.40E+03        | 71                |
| L4   | 7.63E+03        | 1.25E+05        | 172               | 7.33E+03        | 72                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.86E+03       | 1.25E+05        | -176              | 3.41E+03        | -13               |

Table G-546. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.22E+05         | 1.21E+05          | -1.22E+05         | 1.18E+05          |
| A2   | -1.28E+05         | 1.19E+05          | -1.21E+05         | 1.15E+05          |
| FD   | -1.76E+05         | 1.66E+05          | -1.72E+05         | 1.63E+05          |
| L1   | -1.24E+05         | 1.18E+05          | -1.22E+05         | 1.17E+05          |
| L3   | -1.26E+05         | 1.15E+05          | -1.24E+05         | 1.14E+05          |
| L4   | -1.31E+05         | 1.30E+05          | -1.22E+05         | 1.22E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.36E+05         | 1.16E+05          | -1.33E+05         | 1.14E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-274. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

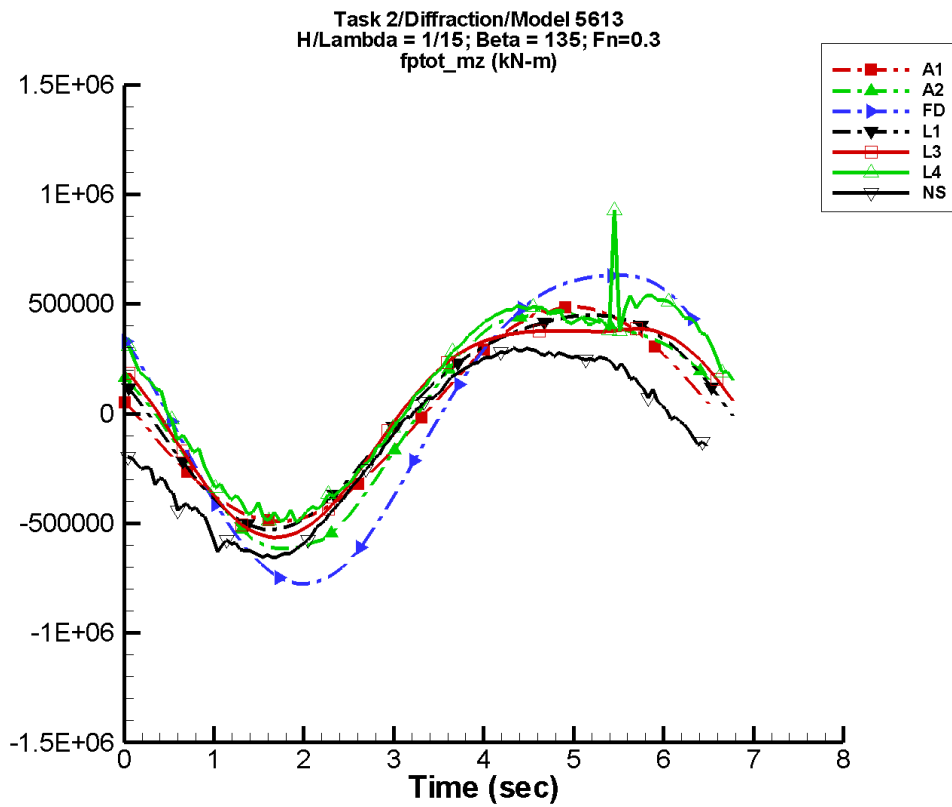
Table G-547. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 256.            | 3.67E+05        | 171               | 1.75E+03        | 106               |
| A2   | -930.           | 3.93E+05        | 169               | 5.27E+04        | 46                |
| FD   | -334.           | 5.29E+05        | 159               | 4.31E+04        | 64                |
| L1   | 1.49E+04        | 3.63E+05        | 172               | 4.27E+04        | 99                |
| L3   | 1.49E+04        | 3.58E+05        | 171               | 6.90E+04        | 77                |
| L4   | 6.17E+04        | 3.73E+05        | 169               | 5.90E+04        | 79                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.88E+04       | 3.54E+05        | -178              | 3.13E+04        | 31                |

Table G-548. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.68E+05         | 3.64E+05          | -3.67E+05         | 3.56E+05          |
| A2   | -4.92E+05         | 3.71E+05          | -4.30E+05         | 3.45E+05          |
| FD   | -5.65E+05         | 4.80E+05          | -5.50E+05         | 4.73E+05          |
| L1   | -3.87E+05         | 3.42E+05          | -3.83E+05         | 3.40E+05          |
| L3   | -4.09E+05         | 3.04E+05          | -4.04E+05         | 3.03E+05          |
| L4   | -3.71E+05         | 5.08E+05          | -3.57E+05         | 3.72E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.76E+05         | 3.13E+05          | -4.65E+05         | 2.76E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-275. Time history of  $M_z^{\text{tot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

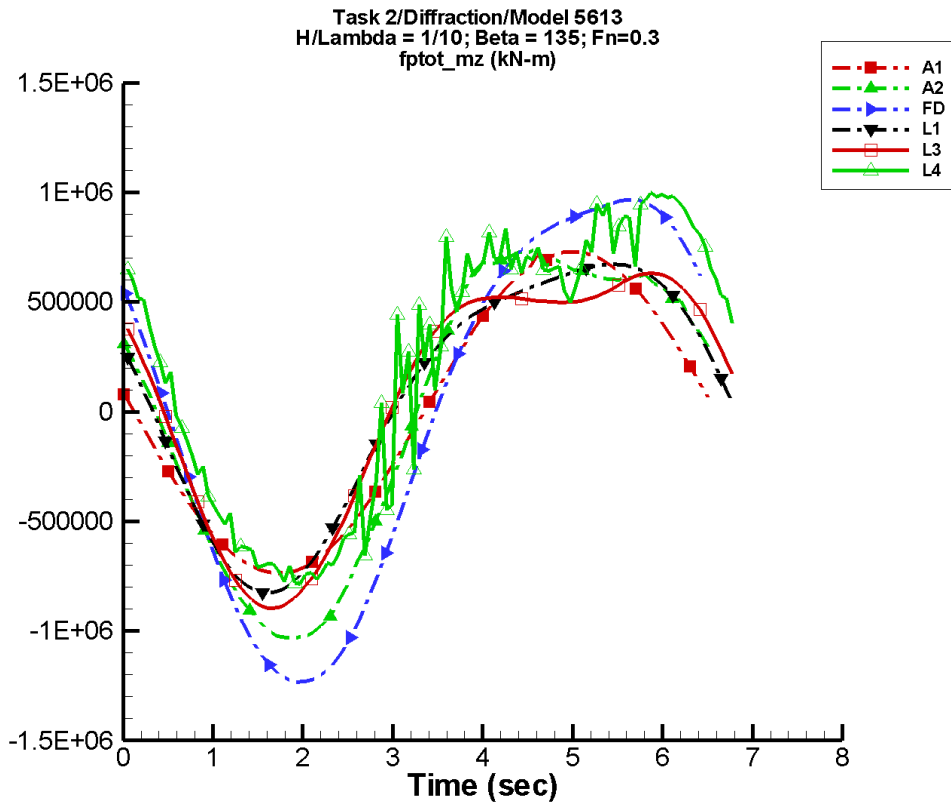
Table G-549. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 341.            | 4.89E+05        | 171               | 2.34E+03        | 106               |
| A2   | -763.           | 5.41E+05        | 168               | 9.47E+04        | 47                |
| FD   | -696.           | 7.15E+05        | 159               | 7.57E+04        | 67                |
| L1   | 2.64E+04        | 4.83E+05        | 172               | 7.58E+04        | 99                |
| L3   | 2.65E+04        | 4.76E+05        | 171               | 1.22E+05        | 80                |
| L4   | 9.95E+04        | 5.01E+05        | 165               | 1.01E+05        | 81                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.22E+05       | 4.62E+05        | -171              | 5.58E+04        | 83                |

Table G-550. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.91E+05         | 4.86E+05          | -4.90E+05         | 4.75E+05          |
| A2   | -6.15E+05         | 4.81E+05          | -6.08E+05         | 4.56E+05          |
| FD   | -7.77E+05         | 6.31E+05          | -7.56E+05         | 6.25E+05          |
| L1   | -5.28E+05         | 4.50E+05          | -5.22E+05         | 4.47E+05          |
| L3   | -5.64E+05         | 3.86E+05          | -5.57E+05         | 3.83E+05          |
| L4   | -4.94E+05         | 9.27E+05          | -4.70E+05         | 5.26E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.57E+05         | 3.01E+05          | -6.46E+05         | 2.89E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-276. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

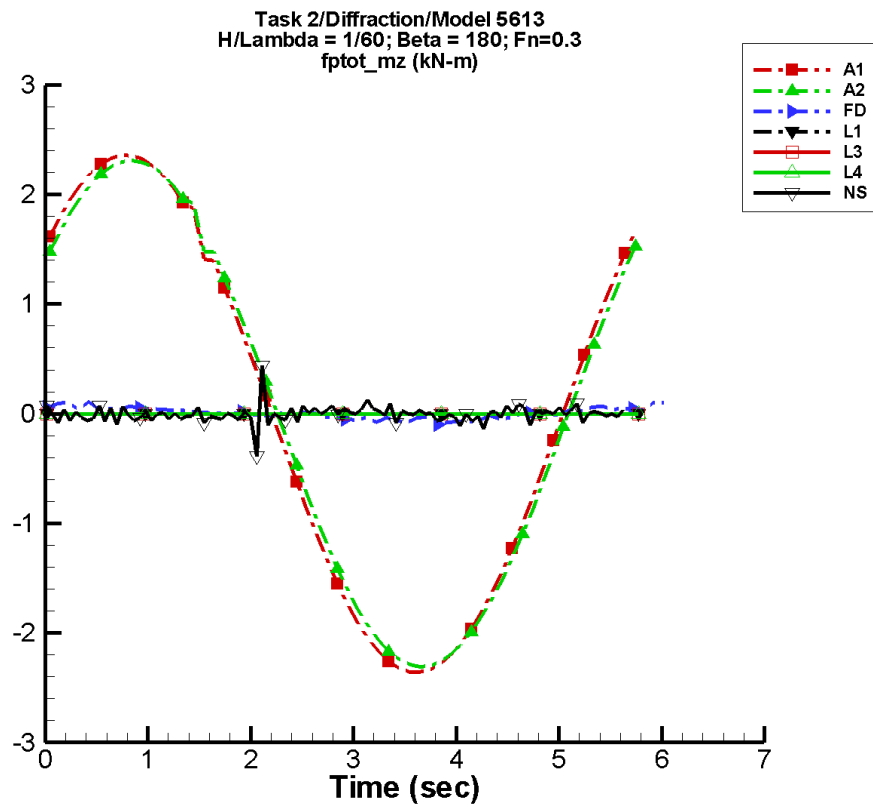
Table G-551. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 512.            | 7.34E+05        | 171               | 3.51E+03        | 106               |
| A2   | -4.29E+03       | 8.83E+05        | 168               | 1.90E+05        | 49                |
| FD   | -1.61E+03       | 1.11E+06        | 160               | 1.58E+05        | 69                |
| L1   | 5.94E+04        | 7.25E+05        | 172               | 1.71E+05        | 99                |
| L3   | 5.95E+04        | 7.11E+05        | 170               | 2.59E+05        | 83                |
| L4   | 1.98E+05        | 8.13E+05        | 160               | 2.22E+05        | 76                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-552. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.37E+05         | 7.30E+05          | -7.35E+05         | 7.13E+05          |
| A2   | -1.03E+06         | 7.46E+05          | -1.01E+06         | 7.09E+05          |
| FD   | -1.23E+06         | 9.68E+05          | -1.20E+06         | 9.47E+05          |
| L1   | -8.28E+05         | 6.72E+05          | -8.16E+05         | 6.68E+05          |
| L3   | -8.96E+05         | 6.32E+05          | -8.82E+05         | 6.23E+05          |
| L4   | -8.05E+05         | 9.99E+05          | -7.52E+05         | 9.64E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-277. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-553. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

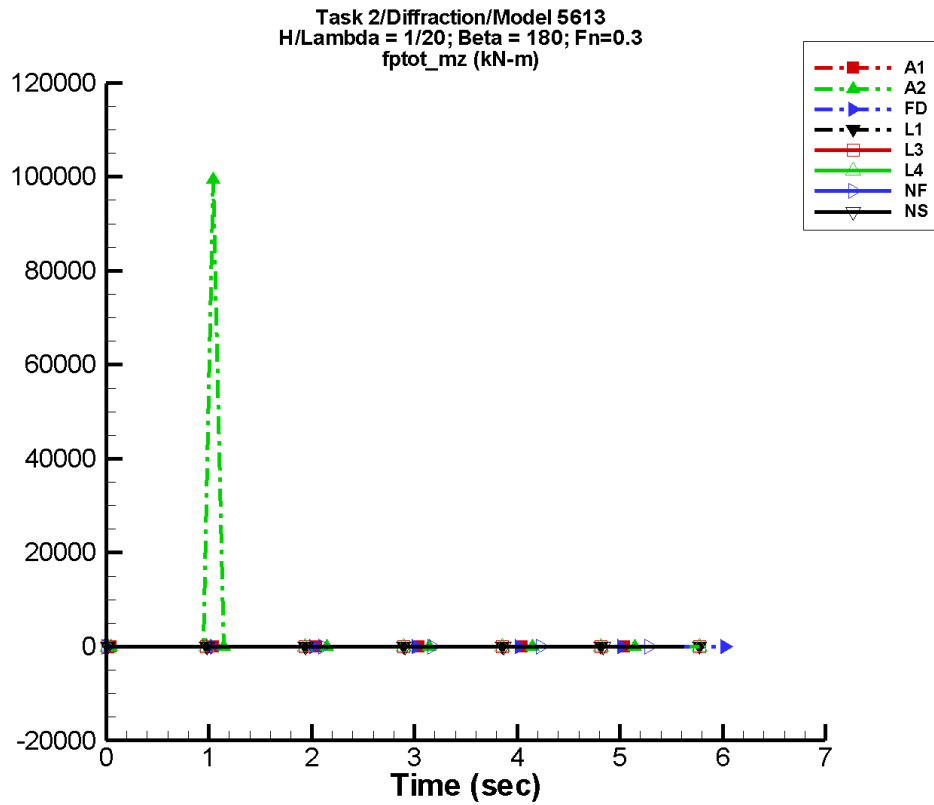
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.19E-03       | 2.37            | 32                | 8.56E-03        | -54               |
| A2   | -1.42E-03       | 2.32            | 29                | 9.32E-03        | -62               |
| FD   | 8.03E-04        | 6.10E-02        | 15                | 1.78E-02        | 31                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.36E-03       | 7.24E-03        | -149              | 2.05E-02        | 93                |

Table G-554. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.36             | 2.65              | -2.29             | 2.32              |
| A2   | -2.31             | 2.61              | -2.24             | 2.26              |
| FD   | -0.101            | 0.109             | -6.47E-02         | 8.61E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.389            | 0.439             | -4.90E-02         | 3.84E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3 and LAMP-4.

Figure G-278. Time history of  $M_z^{tot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

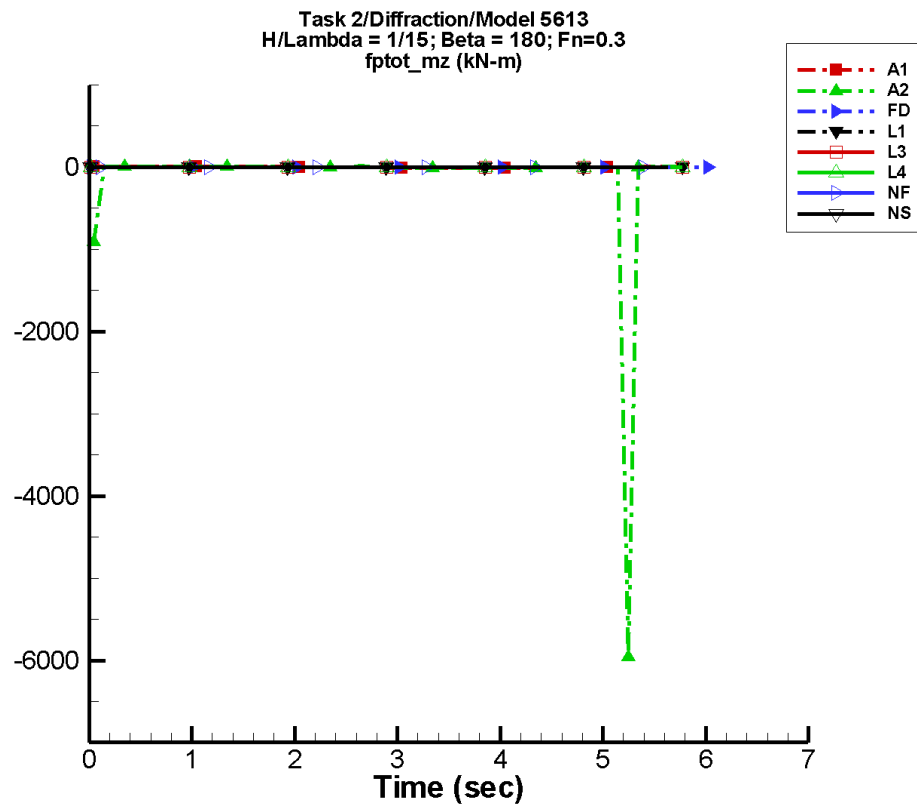
Table G-555. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.59E-03       | 7.12            | 32                | 2.57E-02        | -54               |
| A2   | 776.            | 1.74E+03        | 14                | 2.21E+03        | -60               |
| FD   | -2.14E-03       | 0.160           | 19                | 7.07E-02        | 28                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | -8.69E-11       | 2.04E-10        | 17                | 3.06E-10        | -112              |
| NS   | -1.51E-02       | 4.47E-02        | -85               | 1.34E-02        | 81                |

Table G-556. Minimum and maximum of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.10             | 7.99              | -6.88             | 6.98              |
| A2   | -6.95             | 9.94E+04          | -1.13E+03         | 1.33E+04          |
| FD   | -0.295            | 0.324             | -0.186            | 0.271             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | -1.20E-09         | 6.91E-10          | -4.38E-10         | 4.86E-10          |
| NS   | -0.565            | 0.792             | -8.48E-02         | 8.38E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3 and LAMP-4.

Figure G-279. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

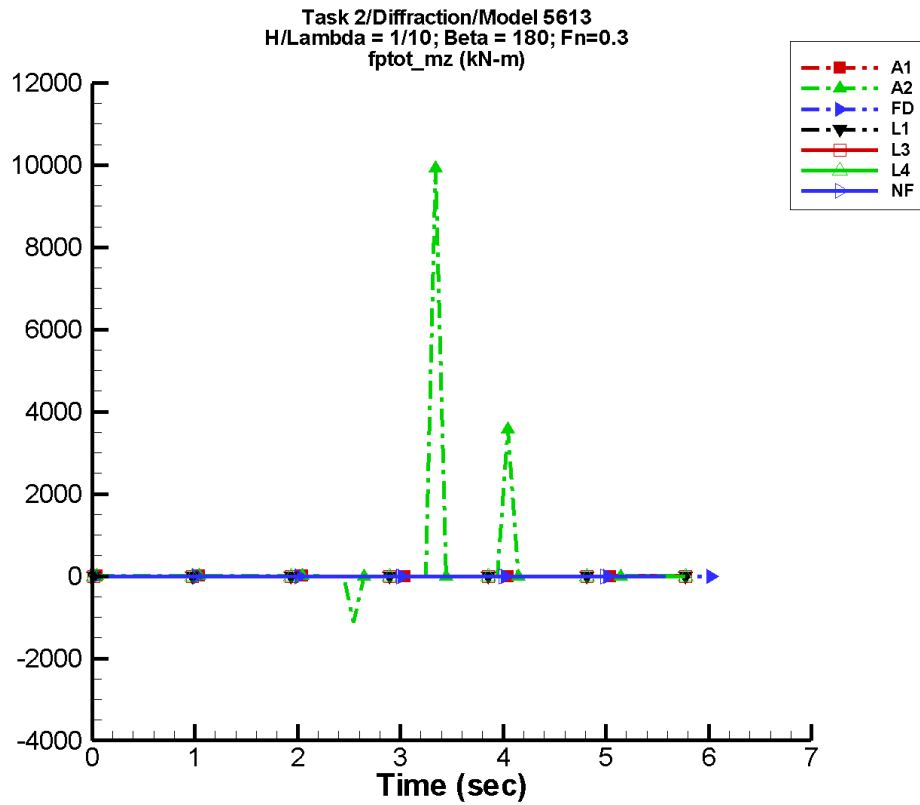
Table G–557. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -4.79E-03       | 9.50            | 32                | 3.44E-02        | -54               |
| A2   | -108.           | 197.            | -70               | 203.            | -44               |
| FD   | -2.73E-03       | 0.213           | 19                | 9.58E-02        | 25                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | 4.07E-10        | 7.21E-10        | -106              | 2.93E-10        | 80                |
| NS   | -2.49E-03       | 6.57E-02        | 177               | 2.47E-02        | -41               |

Table G–558. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.48             | 10.7              | -9.19             | 9.31              |
| A2   | -5.96E+03         | 18.8              | -793.             | 76.2              |
| FD   | -0.397            | 0.436             | -0.248            | 0.360             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | -6.39E-10         | 1.89E-09          | -2.52E-10         | 1.31E-09          |
| NS   | -1.30             | 0.810             | -0.149            | 0.153             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NSHIPMO.

Figure G-280. Time history of  $M_z^{ptot}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

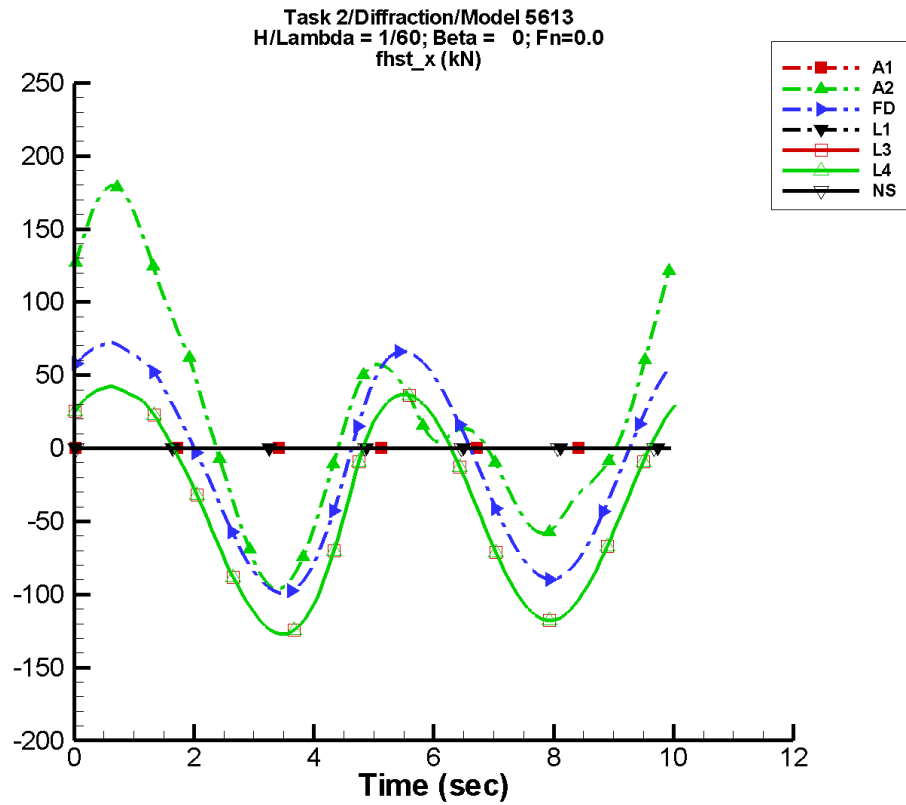
Table G–559. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -7.18E-03       | 14.3            | 32                | 5.15E-02        | -54               |
| A2   | 216.            | 432.            | -144              | 365.            | -17               |
| FD   | 1.49E-02        | 0.318           | 16                | 0.160           | 41                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | -4.41E-10       | 5.89E-10        | 42                | 3.27E-11        | -53               |
| NS   | —               | —               | —                 | —               | —                 |

Table G–560. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -14.2             | 16.0              | -13.8             | 14.0              |
| A2   | -1.13E+03         | 9.92E+03          | -251.             | 1.34E+03          |
| FD   | -0.590            | 0.731             | -0.410            | 0.538             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | -2.97E-09         | 1.84E-09          | -1.79E-09         | 1.62E-09          |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-281. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-561. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

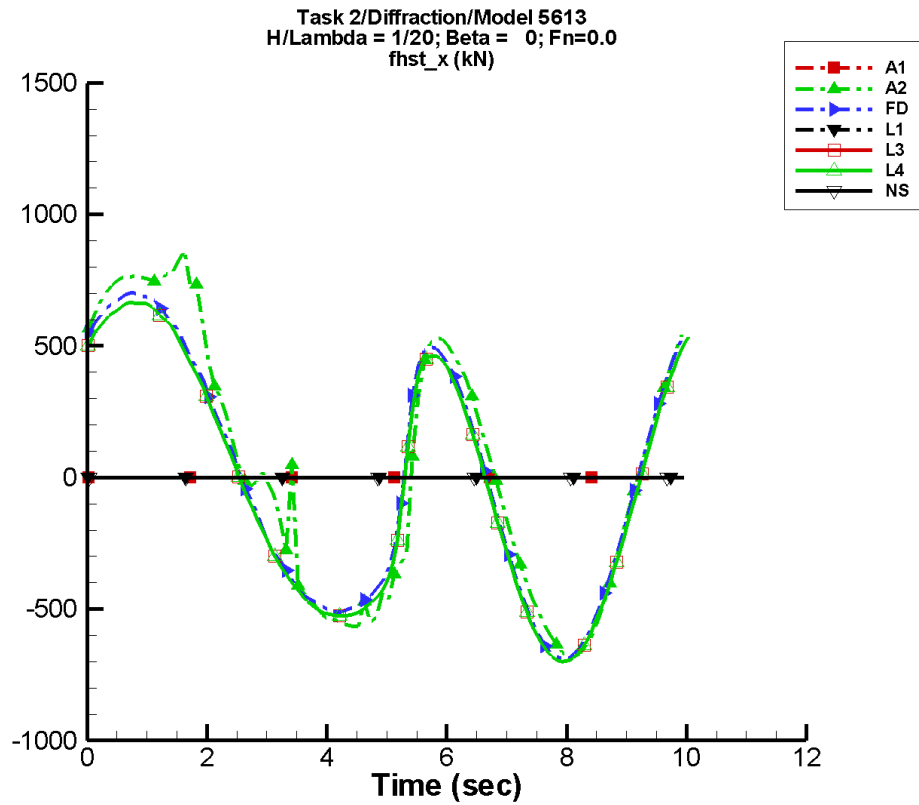
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.3          | 55.4          | 66                | 88.1          | 32                |
| FD   | -11.3         | 13.7          | 62                | 80.8          | 24                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -40.1         | 13.4          | 63                | 80.2          | 32                |
| L4   | -40.1         | 13.4          | 63                | 80.2          | 32                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-562. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -96.7           | 180.            | -89.9           | 171.            |
| FD   | -99.1           | 72.1            | -95.7           | 69.2            |
| L1   | —               | —               | —               | —               |
| L3   | -127.           | 42.2            | -126.           | 40.9            |
| L4   | -127.           | 42.2            | -126.           | 40.9            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-282. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

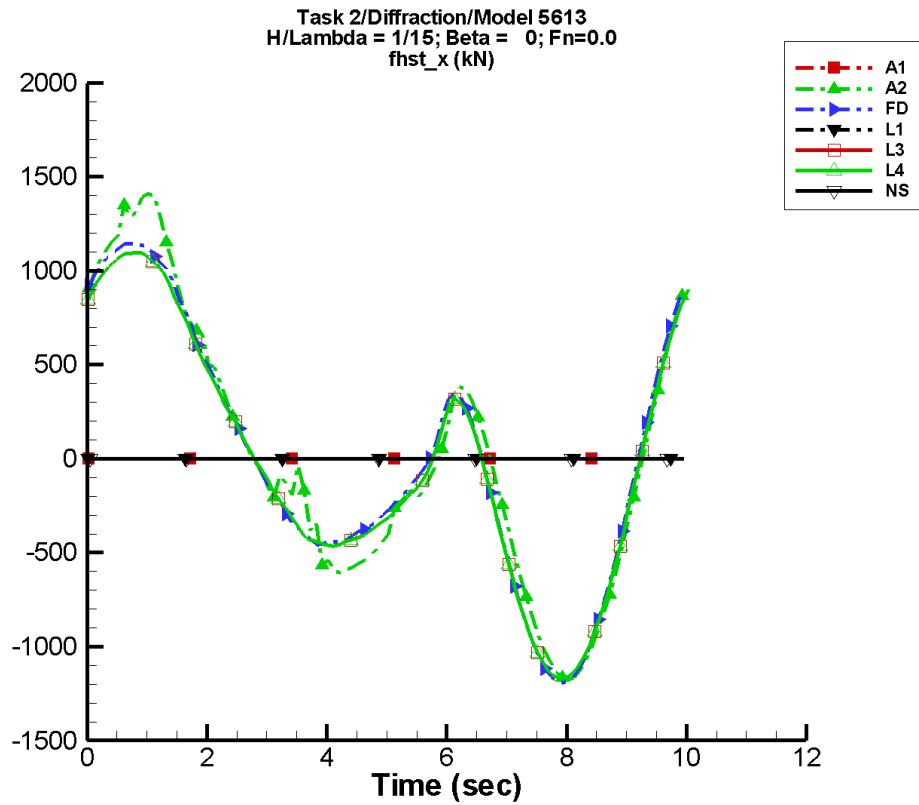
Table G-563. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 28.5          | 364.          | 47                | 519.          | 5                 |
| FD   | -19.5         | 303.          | 43                | 517.          | 6                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -47.2         | 302.          | 45                | 515.          | 13                |
| L4   | -47.2         | 302.          | 45                | 515.          | 13                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-564. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -681.           | 864.            | -646.           | 800.            |
| FD   | -688.           | 703.            | -661.           | 685.            |
| L1   | —               | —               | —               | —               |
| L3   | -700.           | 664.            | -691.           | 660.            |
| L4   | -700.           | 664.            | -691.           | 660.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-283. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

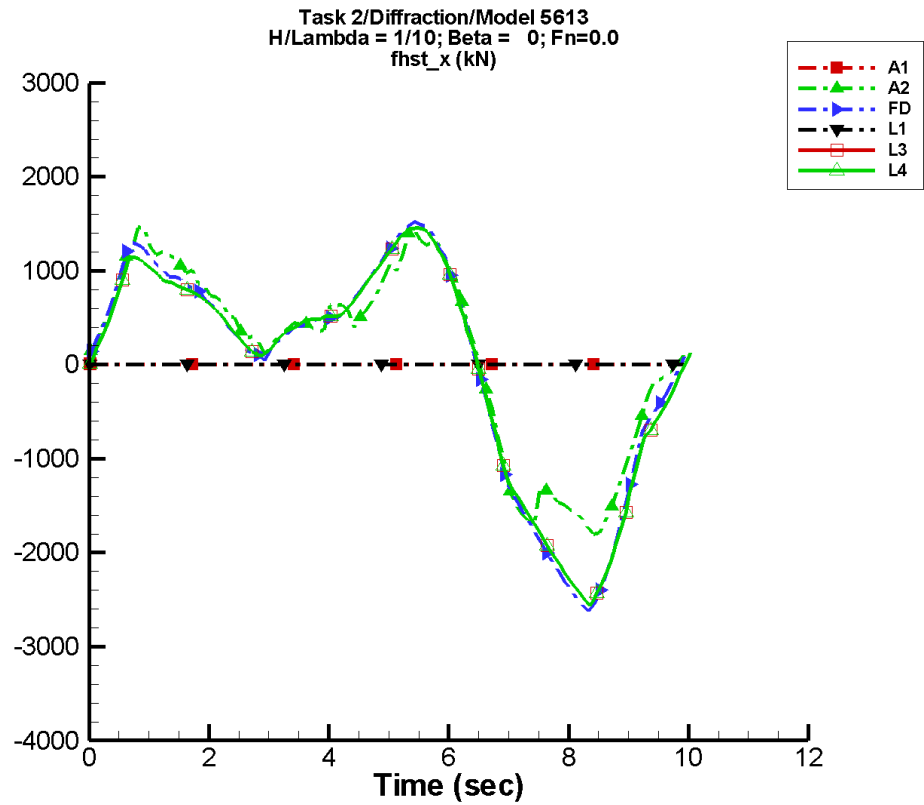
Table G-565. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 1.74          | 643.          | 38                | 688.          | 17                |
| FD   | -13.3         | 605.          | 31                | 650.          | 13                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -42.4         | 603.          | 33                | 639.          | 19                |
| L4   | -42.4         | 603.          | 33                | 639.          | 19                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-566. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.18E+03       | 1.42E+03        | -1.12E+03       | 1.32E+03        |
| FD   | -1.19E+03       | 1.15E+03        | -1.15E+03       | 1.12E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -1.17E+03       | 1.10E+03        | -1.16E+03       | 1.09E+03        |
| L4   | -1.17E+03       | 1.10E+03        | -1.16E+03       | 1.09E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-284. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

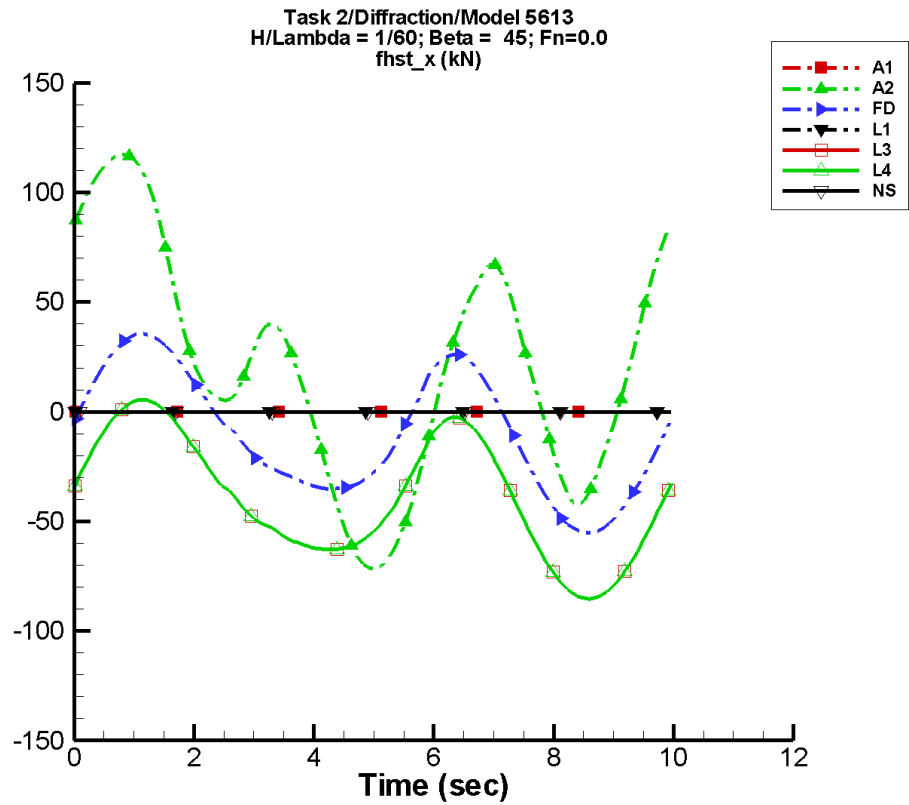
Table G-567. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 117.          | 989.          | -28               | 913.          | 32                |
| FD   | -11.4         | 1.21E+03      | -37               | 1.14E+03      | 27                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -30.3         | 1.21E+03      | -35               | 1.08E+03      | 33                |
| L4   | -30.3         | 1.21E+03      | -35               | 1.08E+03      | 33                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-568. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.80E+03       | 1.47E+03        | -1.65E+03       | 1.29E+03        |
| FD   | -2.62E+03       | 1.52E+03        | -2.44E+03       | 1.42E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.56E+03       | 1.46E+03        | -2.50E+03       | 1.43E+03        |
| L4   | -2.56E+03       | 1.46E+03        | -2.50E+03       | 1.43E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-285. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-569. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

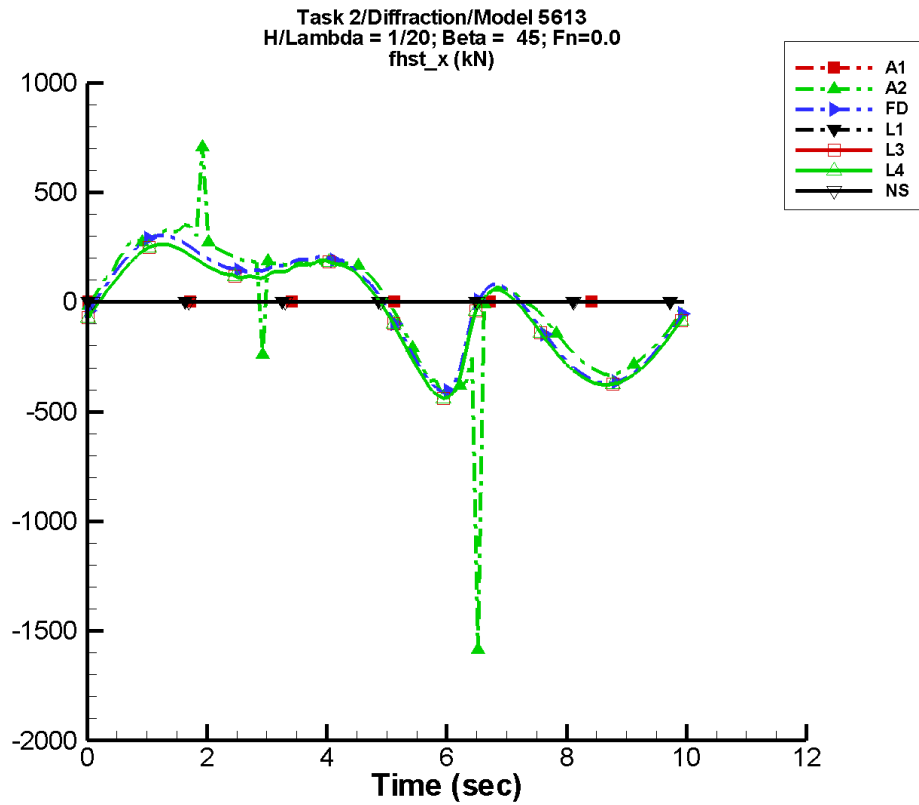
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 20.9          | 49.1          | 70                | 32.3          | -10               |
| FD   | -9.90         | 9.47          | 19                | 35.2          | -21               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -38.9         | 9.21          | 16                | 34.8          | -13               |
| L4   | -38.9         | 9.21          | 16                | 34.8          | -13               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-570. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -71.8           | 117.            | -67.8           | 114.            |
| FD   | -55.2           | 35.5            | -53.4           | 33.8            |
| L1   | —               | —               | —               | —               |
| L3   | -85.4           | 5.43            | -84.7           | 4.80            |
| L4   | -85.4           | 5.43            | -84.7           | 4.80            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-286. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

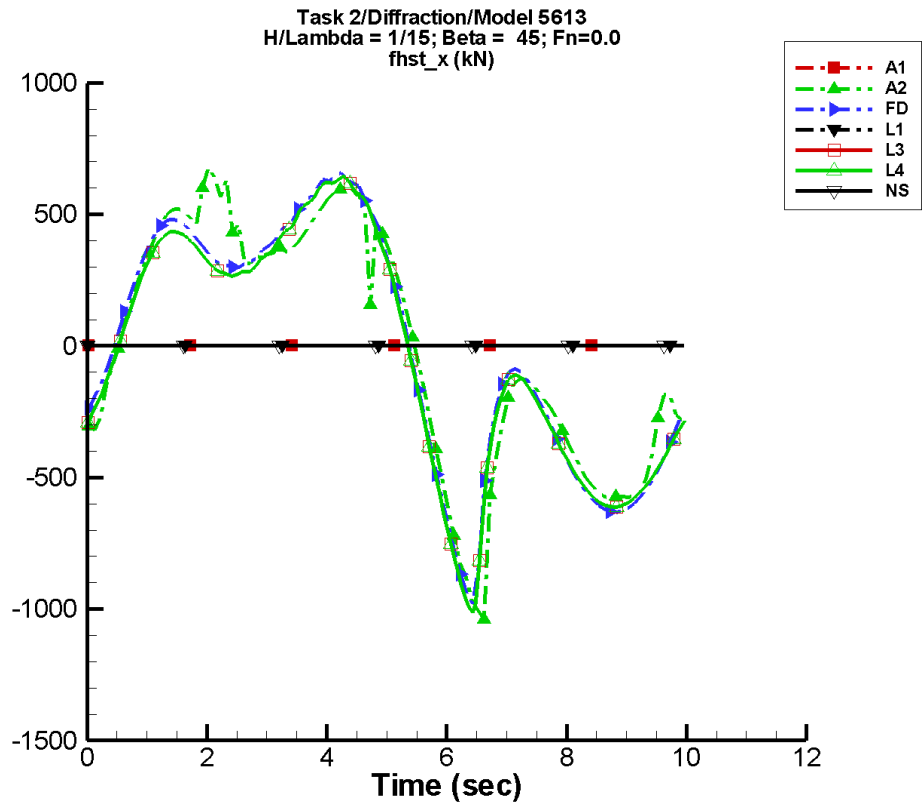
Table G-571. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 2.32          | 291.          | 5                 | 63.7          | -52               |
| FD   | 1.90E-02      | 228.          | -6                | 64.4          | -67               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -34.7         | 241.          | -3                | 42.5          | -56               |
| L4   | -34.7         | 241.          | -3                | 42.5          | -56               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-572. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.58E+03       | 707.            | -444.           | 379.            |
| FD   | -410.           | 304.            | -358.           | 288.            |
| L1   | —               | —               | —               | —               |
| L3   | -438.           | 264.            | -421.           | 259.            |
| L4   | -438.           | 264.            | -421.           | 259.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-287. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

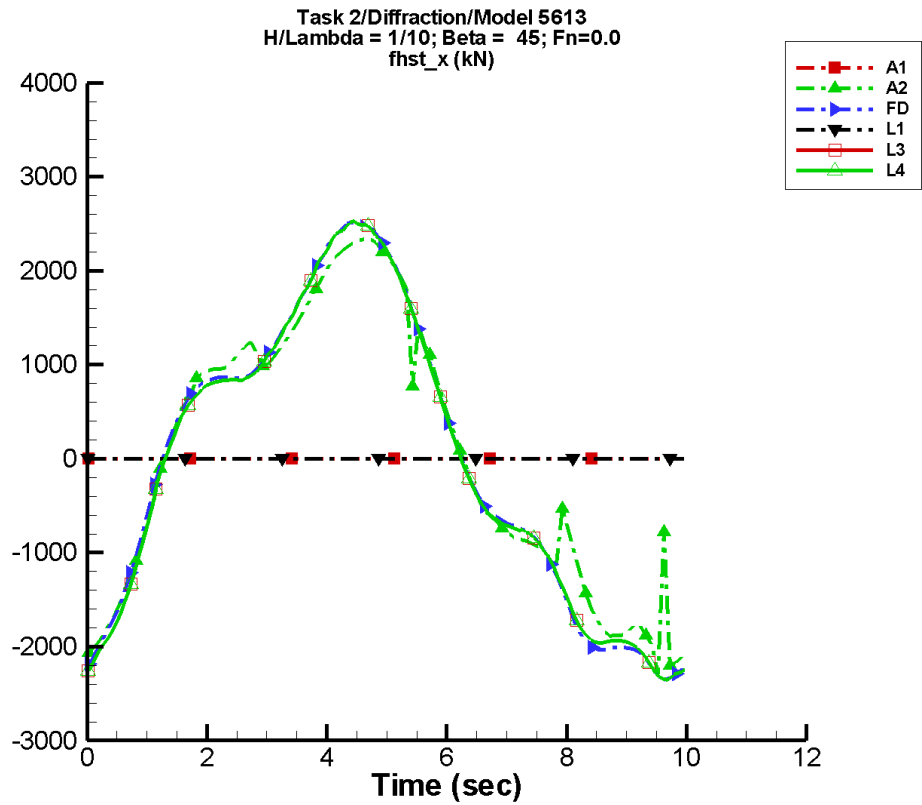
Table G-573. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 5.85          | 580.          | -17               | 42.9          | -123              |
| FD   | 4.88          | 537.          | -23               | 74.5          | 156               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -43.5         | 576.          | -19               | 108.          | 141               |
| L4   | -43.5         | 576.          | -19               | 108.          | 141               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-574. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.04E+03       | 678.            | -807.           | 591.            |
| FD   | -978.           | 658.            | -759.           | 626.            |
| L1   | —               | —               | —               | —               |
| L3   | -1.02E+03       | 643.            | -908.           | 626.            |
| L4   | -1.02E+03       | 643.            | -908.           | 626.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-288. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

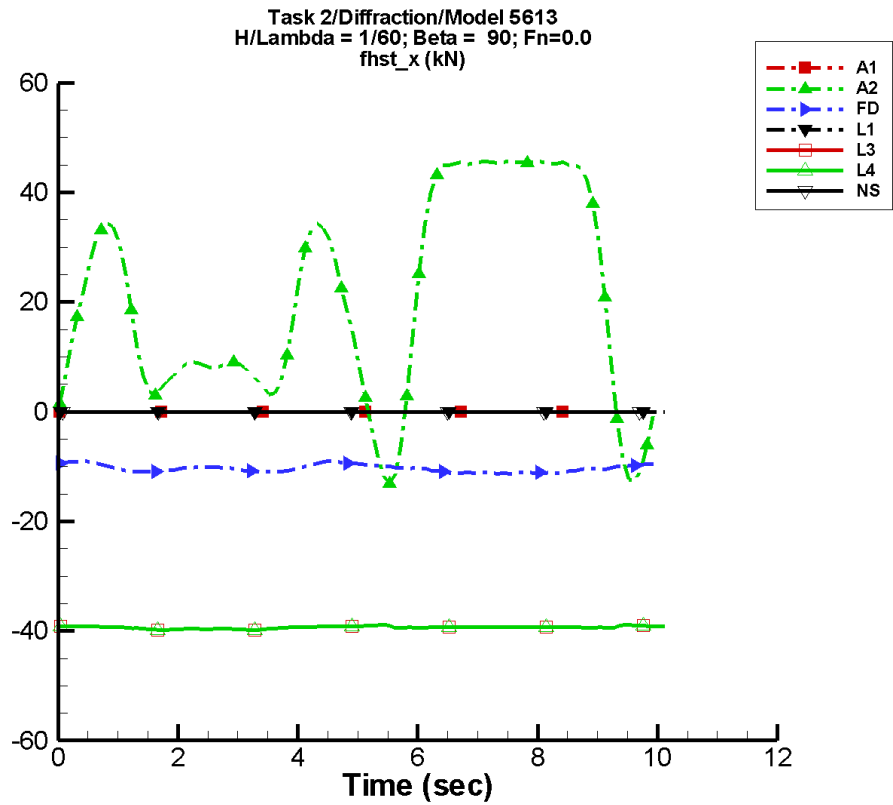
Table G-575. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 46.1          | 2.00E+03      | -62               | 85.5          | -104              |
| FD   | -10.8         | 2.16E+03      | -66               | 83.7          | 45                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -48.0         | 2.17E+03      | -62               | 93.7          | 76                |
| L4   | -48.0         | 2.17E+03      | -62               | 93.7          | 76                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-576. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.29E+03       | 2.34E+03        | -2.01E+03       | 2.29E+03        |
| FD   | -2.35E+03       | 2.54E+03        | -2.24E+03       | 2.46E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.36E+03       | 2.53E+03        | -2.31E+03       | 2.49E+03        |
| L4   | -2.36E+03       | 2.53E+03        | -2.31E+03       | 2.49E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-289. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-577. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

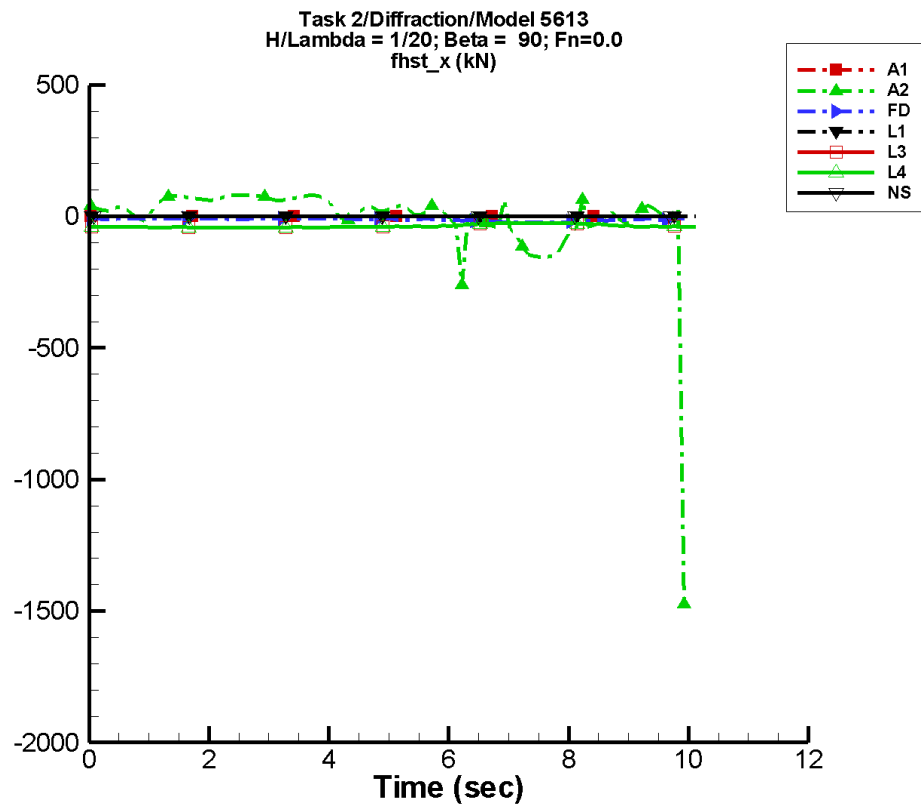
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.3          | 15.1          | 166               | 8.02          | -98               |
| FD   | -10.4         | 0.279         | -4                | 0.716         | 76                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -39.3         | 0.160         | 175               | 0.190         | 83                |
| L4   | -39.3         | 0.160         | 175               | 0.190         | 83                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-578. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -13.1           | 45.7            | -5.42           | 45.8            |
| FD   | -11.3           | -9.04           | -11.2           | -9.26           |
| L1   | —               | —               | —               | —               |
| L3   | -39.8           | -38.8           | -39.8           | -39.0           |
| L4   | -39.8           | -38.8           | -39.8           | -39.0           |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-290. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

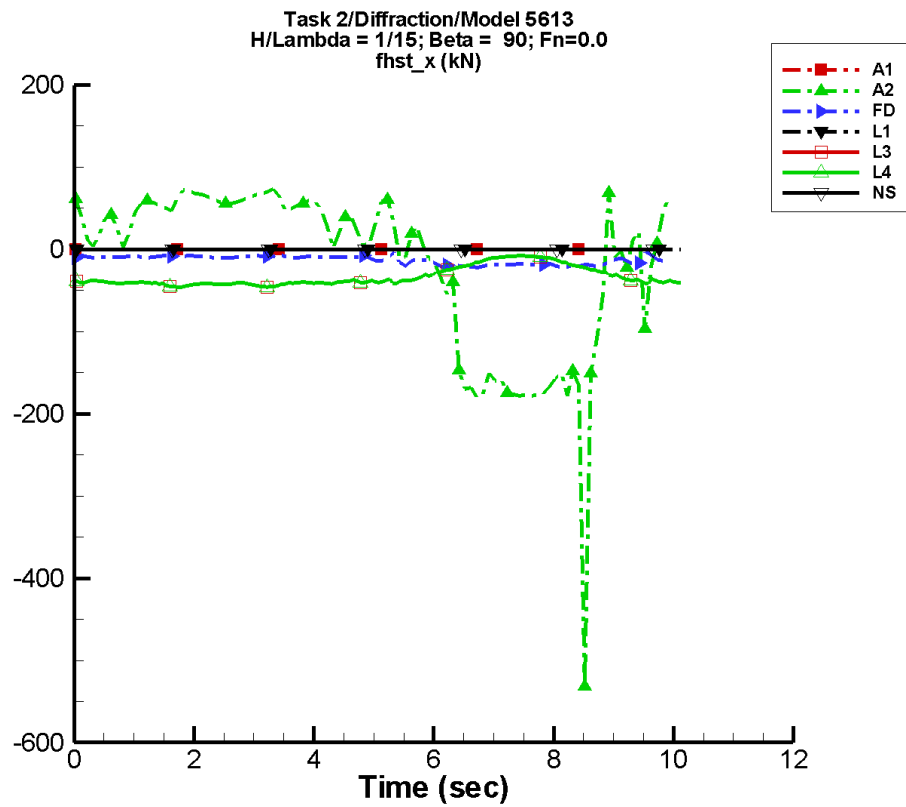
Table G-579. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 0.196         | 74.1          | -23               | 10.1          | -89               |
| FD   | -12.7         | 5.71          | -9                | 2.69          | 70                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -36.7         | 7.58          | 174               | 3.01          | -95               |
| L4   | -36.7         | 7.58          | 174               | 3.01          | -95               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-580. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.47E+03       | 81.4            | -174.           | 75.5            |
| FD   | -23.5           | -7.90           | -22.9           | -8.53           |
| L1   | —               | —               | —               | —               |
| L3   | -42.9           | -24.2           | -42.6           | -24.3           |
| L4   | -42.9           | -24.2           | -42.6           | -24.3           |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-291. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

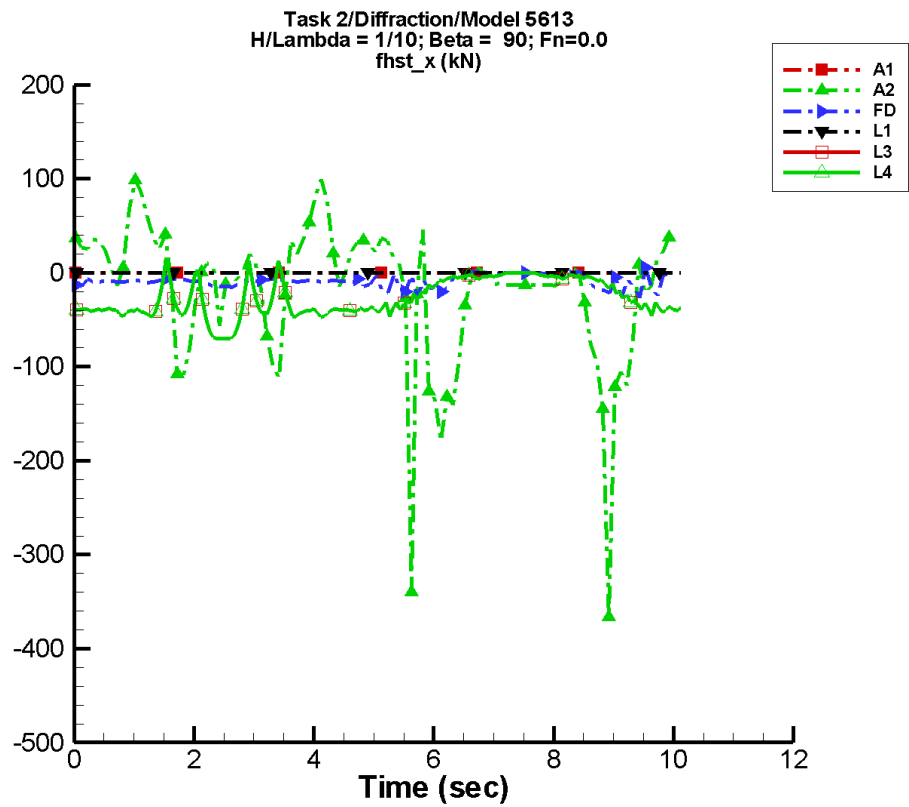
Table G-581. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -20.8         | 114.          | -11               | 45.9          | 70                |
| FD   | -12.9         | 5.67          | -6                | 1.99          | 80                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -33.3         | 14.5          | 174               | 6.45          | -96               |
| L4   | -33.3         | 14.5          | 174               | 6.45          | -96               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-582. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -531.           | 72.9            | -196.           | 65.3            |
| FD   | -22.6           | -3.13           | -20.3           | -8.54           |
| L1   | —               | —               | —               | —               |
| L3   | -46.0           | -7.96           | -45.0           | -8.28           |
| L4   | -46.0           | -7.96           | -45.0           | -8.28           |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-292. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

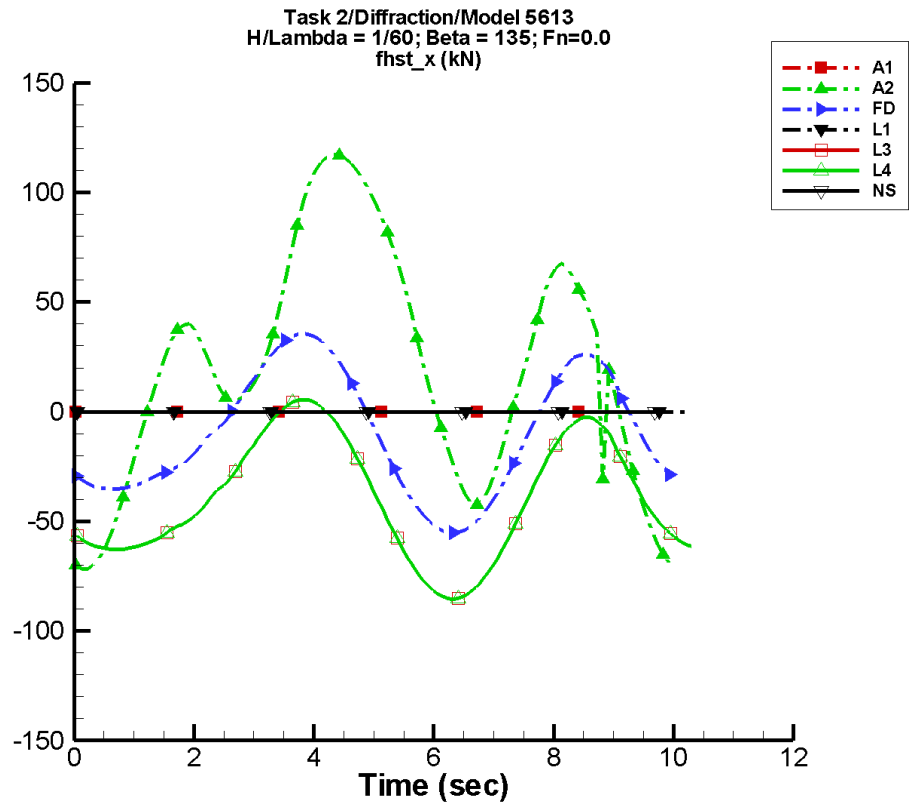
Table G-583. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -18.1         | 27.7          | 3                 | 18.5          | 69                |
| FD   | -8.39         | 2.89          | 163               | 3.73          | -113              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -26.6         | 18.5          | 175               | 9.55          | -93               |
| L4   | -26.6         | 18.5          | 175               | 9.55          | -93               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-584. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -366.           | 99.1            | -131.           | 48.1            |
| FD   | -27.6           | 5.17            | -15.5           | 0.708           |
| L1   | —               | —               | —               | —               |
| L3   | -70.0           | 16.0            | -65.7           | -2.86E-02       |
| L4   | -70.0           | 16.0            | -65.7           | -2.86E-02       |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-293. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-585. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

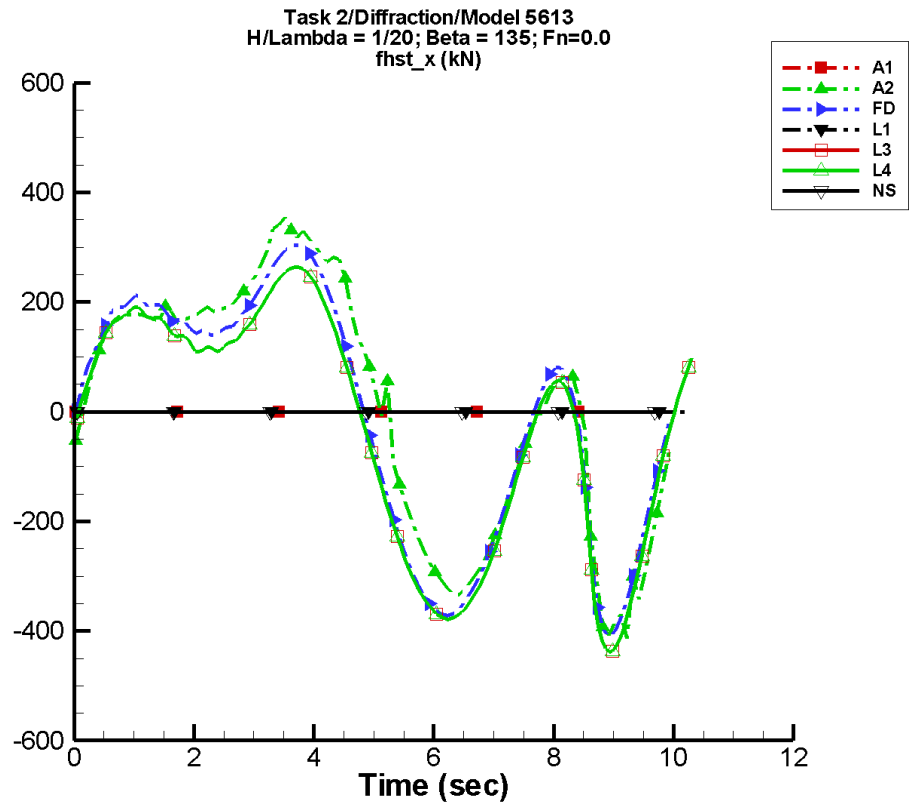
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.6          | 49.9          | -75               | 28.1          | -176              |
| FD   | -10.5         | 10.6          | -27               | 35.3          | 167               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -39.0         | 9.55          | -16               | 35.9          | 175               |
| L4   | -39.0         | 9.55          | -16               | 35.9          | 175               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-586. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -71.8           | 117.            | -71.4           | 114.            |
| FD   | -55.3           | 35.6            | -53.5           | 33.6            |
| L1   | —               | —               | —               | —               |
| L3   | -85.4           | 5.43            | -84.7           | 4.79            |
| L4   | -85.4           | 5.43            | -84.7           | 4.79            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-294. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

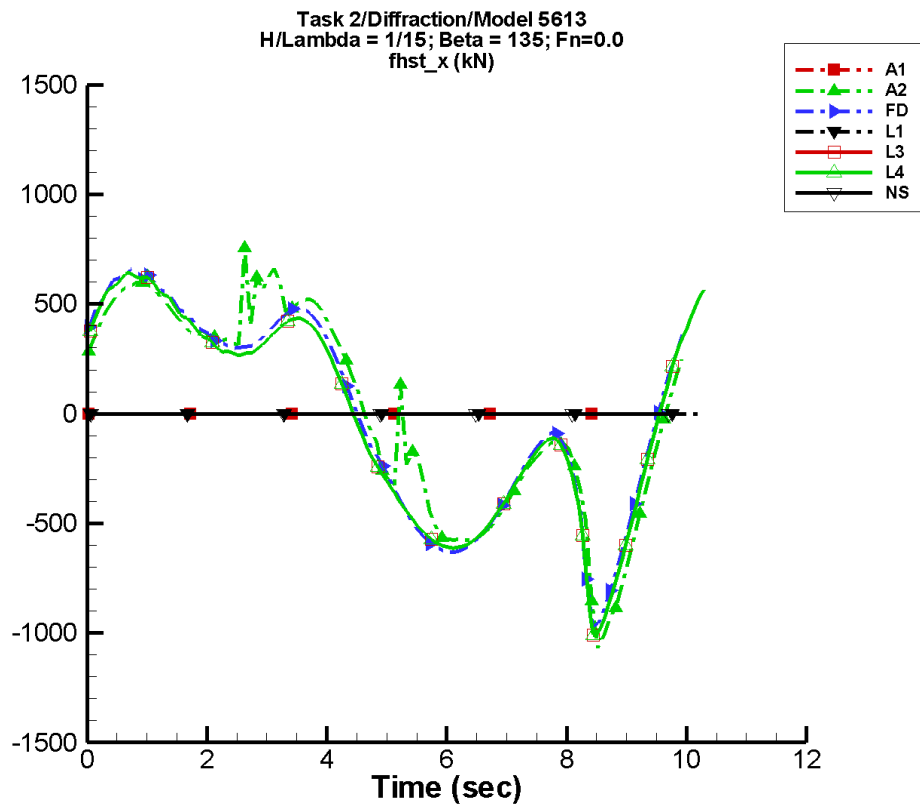
Table G-587. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 18.3          | 257.          | -11               | 57.6          | -159              |
| FD   | -2.72         | 242.          | 1                 | 82.6          | -174              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -35.7         | 236.          | -1                | 71.9          | -144              |
| L4   | -35.7         | 236.          | -1                | 71.9          | -144              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-588. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -414.           | 355.            | -363.           | 326.            |
| FD   | -411.           | 304.            | -359.           | 288.            |
| L1   | —               | —               | —               | —               |
| L3   | -438.           | 264.            | -421.           | 259.            |
| L4   | -438.           | 264.            | -421.           | 259.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-295. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

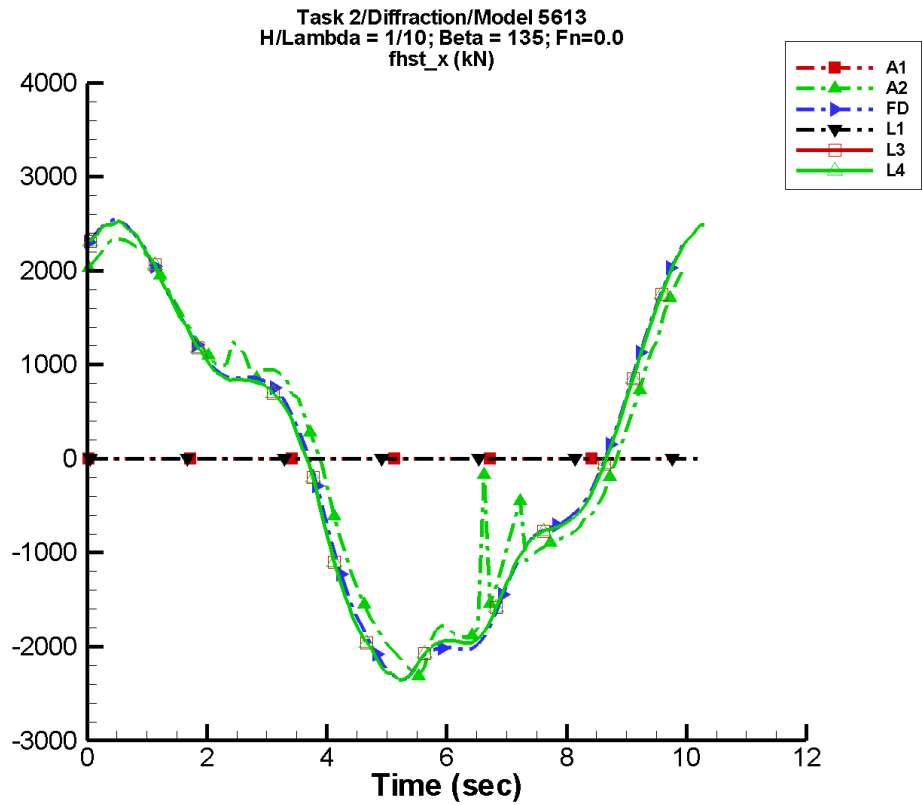
Table G-589. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 14.7          | 564.          | 5                 | 52.6          | 18                |
| FD   | 11.9          | 546.          | 15                | 4.81          | 120               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -36.6         | 547.          | 14                | 70.8          | -20               |
| L4   | -36.6         | 547.          | 14                | 70.8          | -20               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-590. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.07E+03       | 755.            | -826.           | 574.            |
| FD   | -971.           | 658.            | -760.           | 626.            |
| L1   | —               | —               | —               | —               |
| L3   | -1.02E+03       | 643.            | -907.           | 627.            |
| L4   | -1.02E+03       | 643.            | -907.           | 627.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-296. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

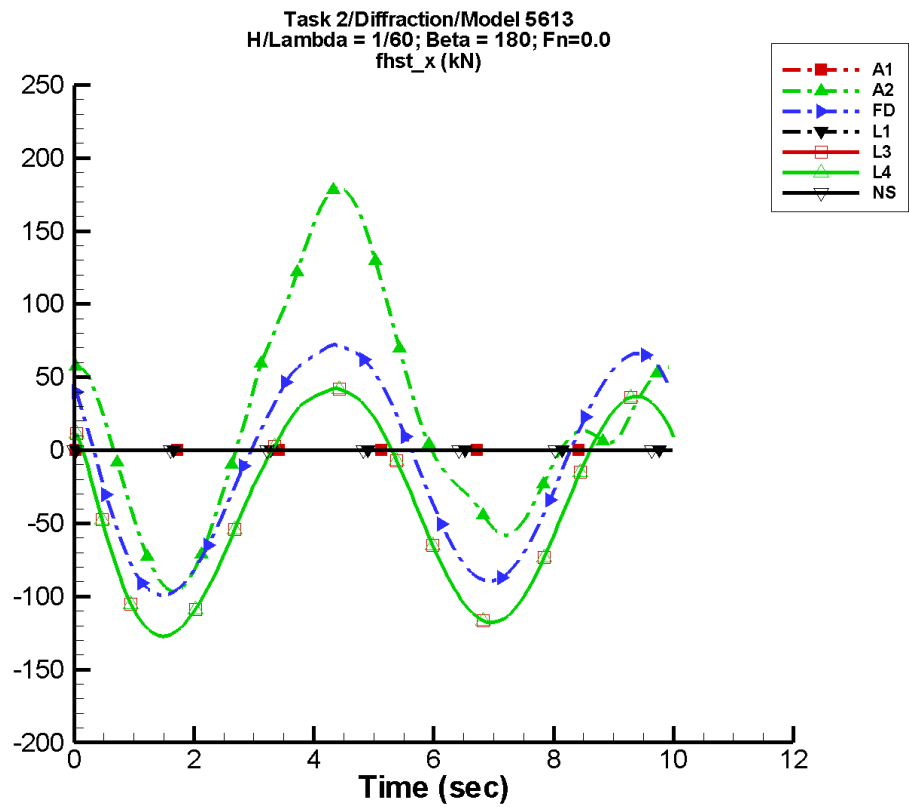
Table G-591. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 42.4          | 1.97E+03      | 49                | 60.8          | 53                |
| FD   | 21.8          | 2.16E+03      | 52                | 91.9          | 146               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -35.4         | 2.13E+03      | 55                | 35.6          | 41                |
| L4   | -35.4         | 2.13E+03      | 55                | 35.6          | 41                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-592. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.32E+03       | 2.34E+03        | -2.12E+03       | 2.28E+03        |
| FD   | -2.35E+03       | 2.55E+03        | -2.24E+03       | 2.46E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.36E+03       | 2.53E+03        | -2.31E+03       | 2.49E+03        |
| L4   | -2.36E+03       | 2.53E+03        | -2.31E+03       | 2.49E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-297. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-593. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

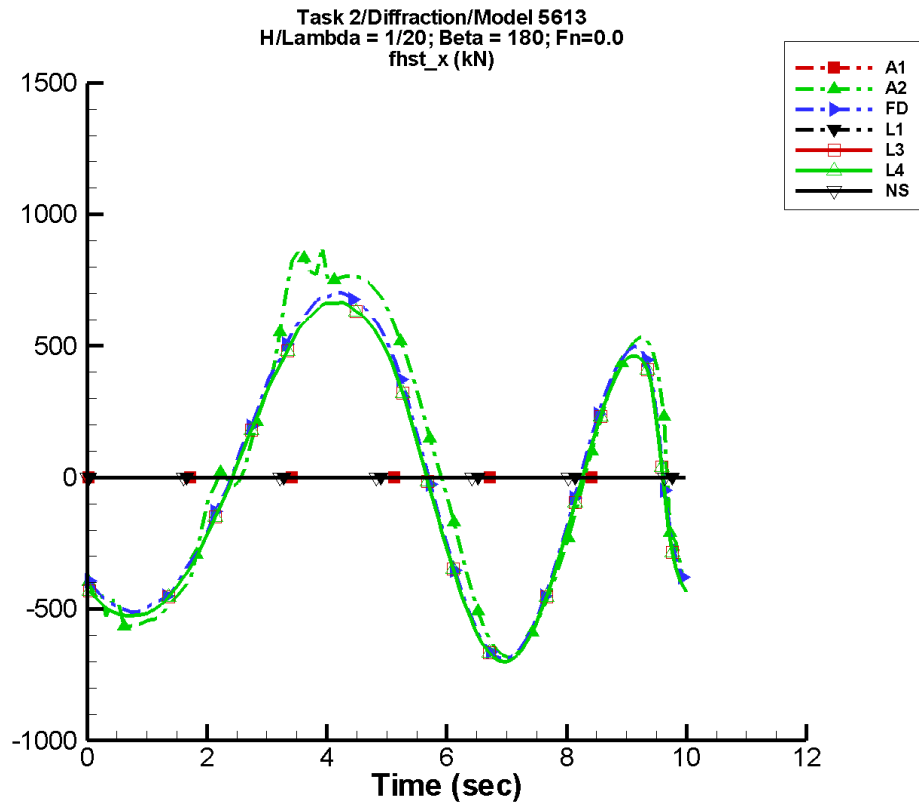
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.2          | 51.6          | -80               | 90.6          | 122               |
| FD   | -10.9         | 16.2          | -84               | 78.8          | 125               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -40.1         | 16.0          | -77               | 78.2          | 131               |
| L4   | -40.1         | 16.0          | -77               | 78.2          | 131               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-594. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -96.8           | 180.            | -89.6           | 172.            |
| FD   | -99.1           | 72.1            | -95.8           | 69.1            |
| L1   | —               | —               | —               | —               |
| L3   | -127.           | 42.3            | -126.           | 40.8            |
| L4   | -127.           | 42.3            | -126.           | 40.8            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-298. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

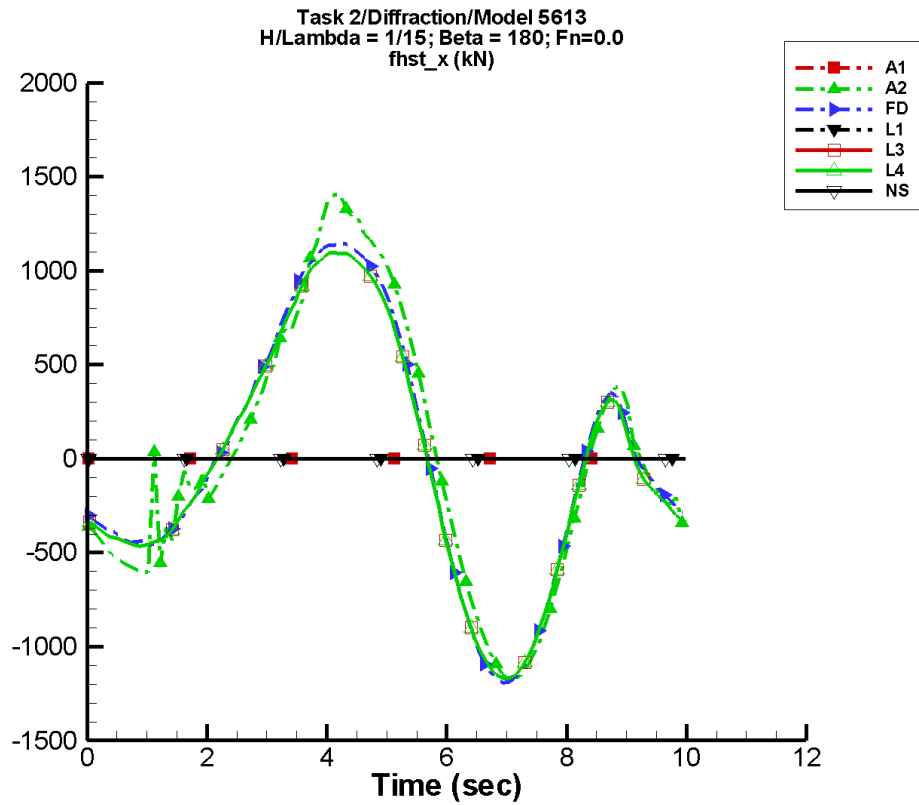
Table G-595. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 25.3          | 407.          | -64               | 521.          | 148               |
| FD   | -28.2         | 347.          | -60               | 485.          | 140               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -52.2         | 344.          | -56               | 476.          | 148               |
| L4   | -52.2         | 344.          | -56               | 476.          | 148               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-596. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -683.           | 873.            | -647.           | 803.            |
| FD   | -689.           | 704.            | -661.           | 685.            |
| L1   | —               | —               | —               | —               |
| L3   | -700.           | 664.            | -691.           | 660.            |
| L4   | -700.           | 664.            | -691.           | 660.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-299. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

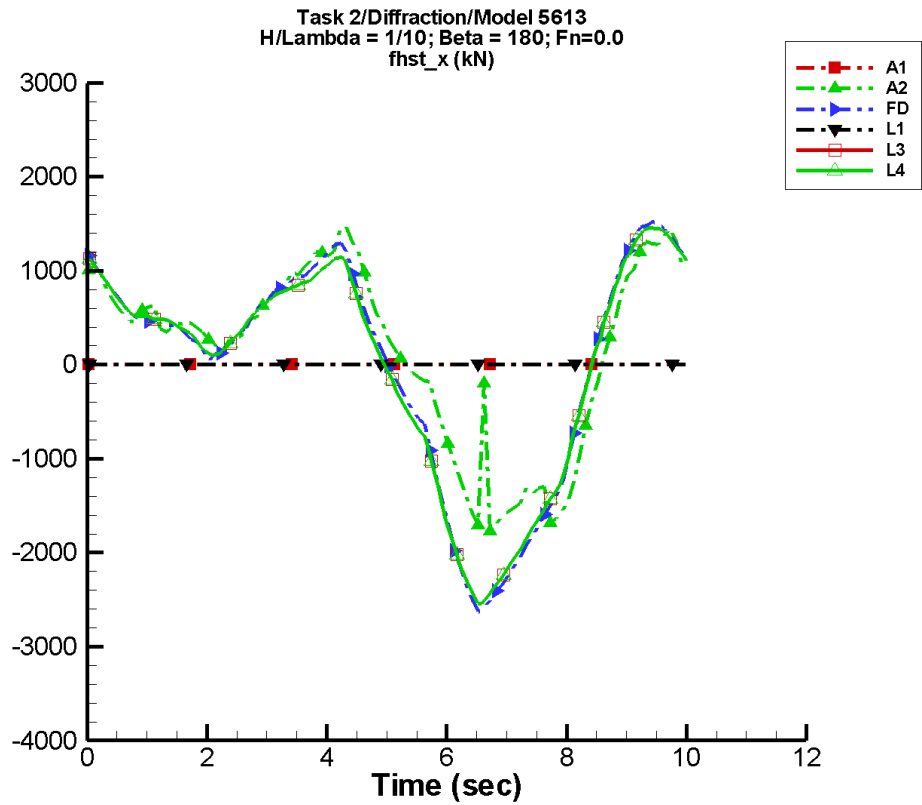
Table G-597. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 10.3          | 689.          | -51               | 637.          | 136               |
| FD   | -26.7         | 651.          | -46               | 650.          | 131               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -44.3         | 638.          | -42               | 623.          | 139               |
| L4   | -44.3         | 638.          | -42               | 623.          | 139               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-598. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.17E+03       | 1.40E+03        | -1.12E+03       | 1.31E+03        |
| FD   | -1.19E+03       | 1.15E+03        | -1.14E+03       | 1.12E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -1.17E+03       | 1.10E+03        | -1.16E+03       | 1.09E+03        |
| L4   | -1.17E+03       | 1.10E+03        | -1.16E+03       | 1.09E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-300. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

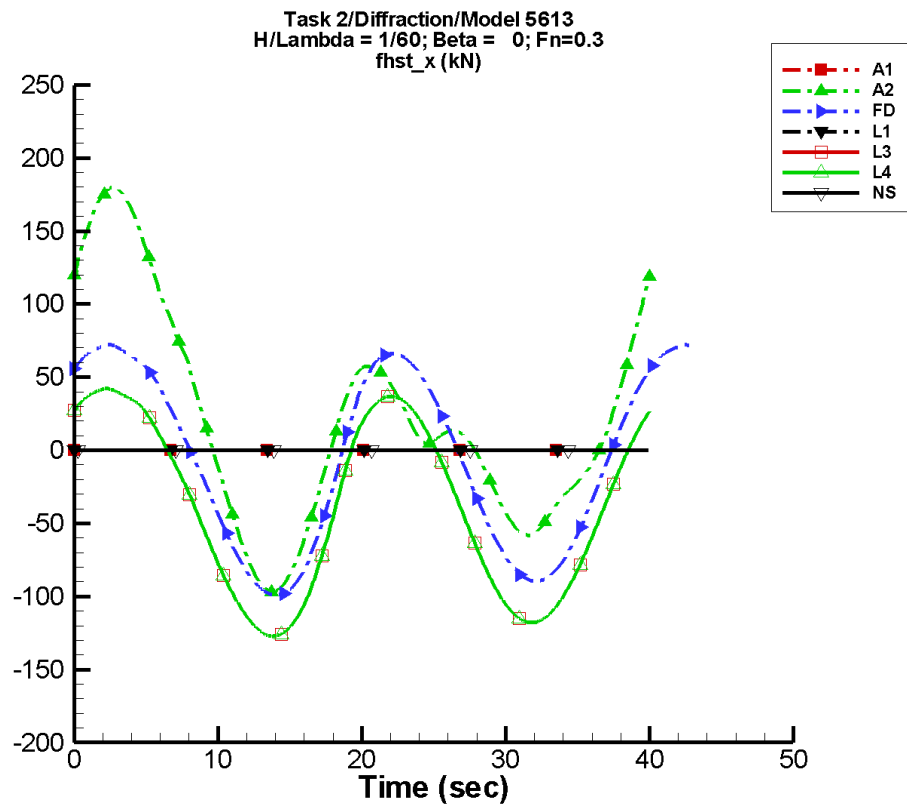
Table G-599. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 141.          | 948.          | 9                 | 873.          | 116               |
| FD   | -19.0         | 1.21E+03      | 20                | 1.12E+03      | 121               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -39.1         | 1.20E+03      | 25                | 1.06E+03      | 129               |
| L4   | -39.1         | 1.20E+03      | 25                | 1.06E+03      | 129               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-600. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.78E+03       | 1.46E+03        | -1.48E+03       | 1.28E+03        |
| FD   | -2.63E+03       | 1.52E+03        | -2.45E+03       | 1.42E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.56E+03       | 1.46E+03        | -2.45E+03       | 1.43E+03        |
| L4   | -2.56E+03       | 1.46E+03        | -2.45E+03       | 1.43E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-301. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-601. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

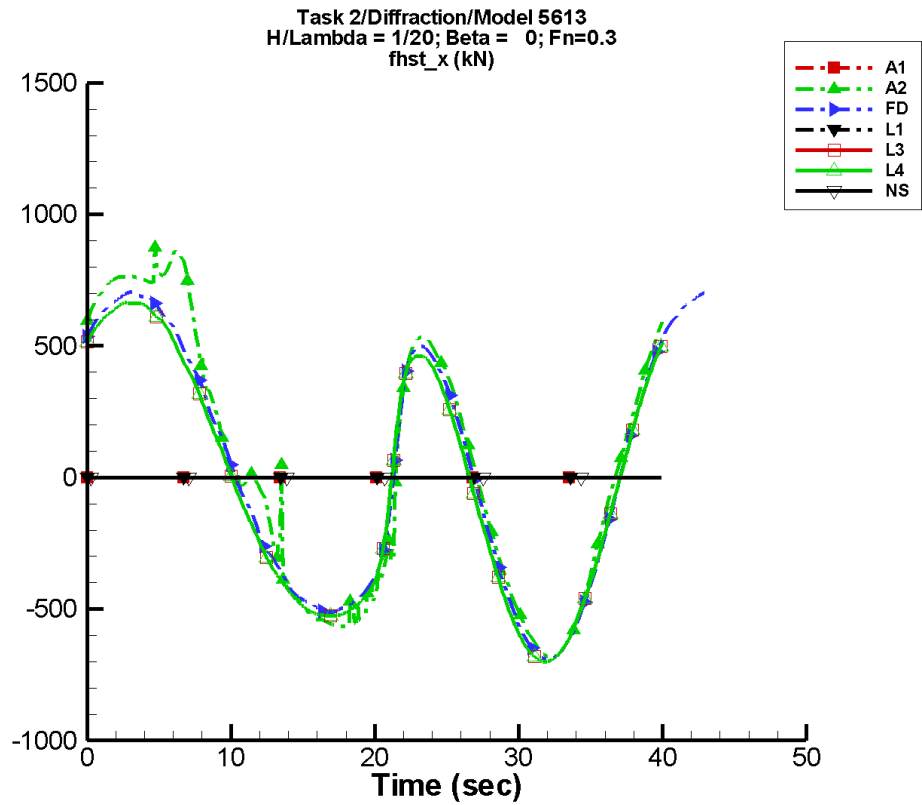
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.4          | 55.6          | 70                | 87.9          | 39                |
| FD   | -11.3         | 14.8          | 73                | 78.8          | 35                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -40.2         | 13.3          | 67                | 80.3          | 39                |
| L4   | -40.2         | 13.3          | 67                | 80.3          | 39                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-602. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -96.8           | 180.            | -96.4           | 179.            |
| FD   | -99.1           | 72.1            | -98.9           | 71.8            |
| L1   | —               | —               | —               | —               |
| L3   | -127.           | 42.3            | -127.           | 42.1            |
| L4   | -127.           | 42.3            | -127.           | 42.1            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-302. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

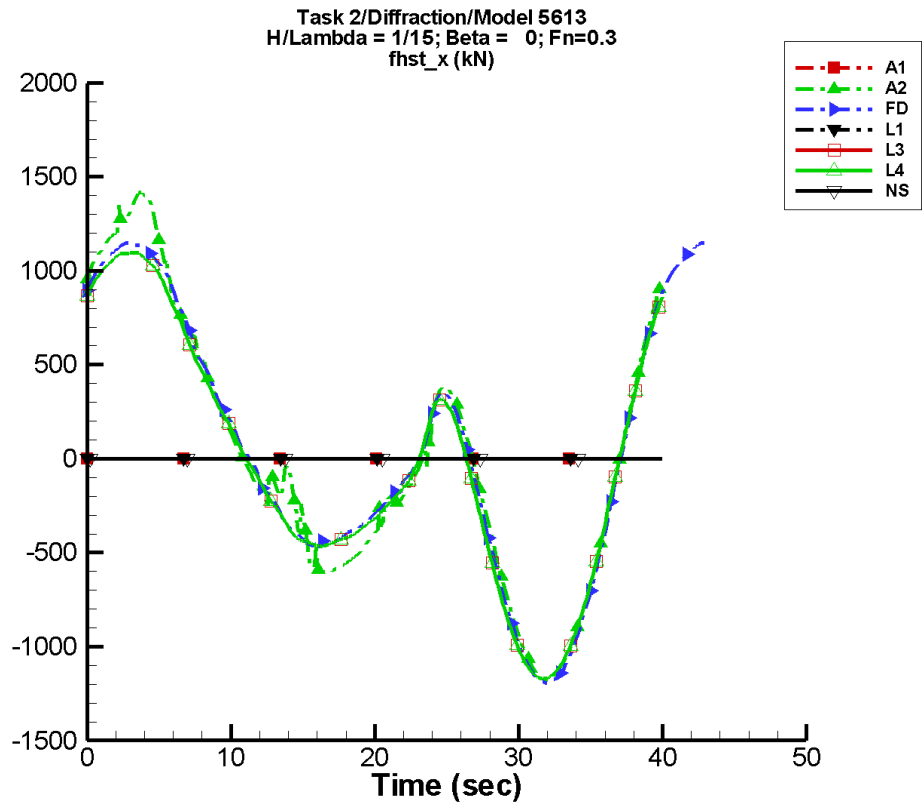
Table G-603. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 25.4          | 363.          | 54                | 525.          | 19                |
| FD   | -21.5         | 320.          | 51                | 483.          | 17                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -40.9         | 298.          | 51                | 505.          | 20                |
| L4   | -40.9         | 298.          | 51                | 505.          | 20                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-604. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -683.           | 874.            | -681.           | 850.            |
| FD   | -689.           | 704.            | -688.           | 701.            |
| L1   | —               | —               | —               | —               |
| L3   | -700.           | 664.            | -700.           | 663.            |
| L4   | -700.           | 664.            | -700.           | 663.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-303. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

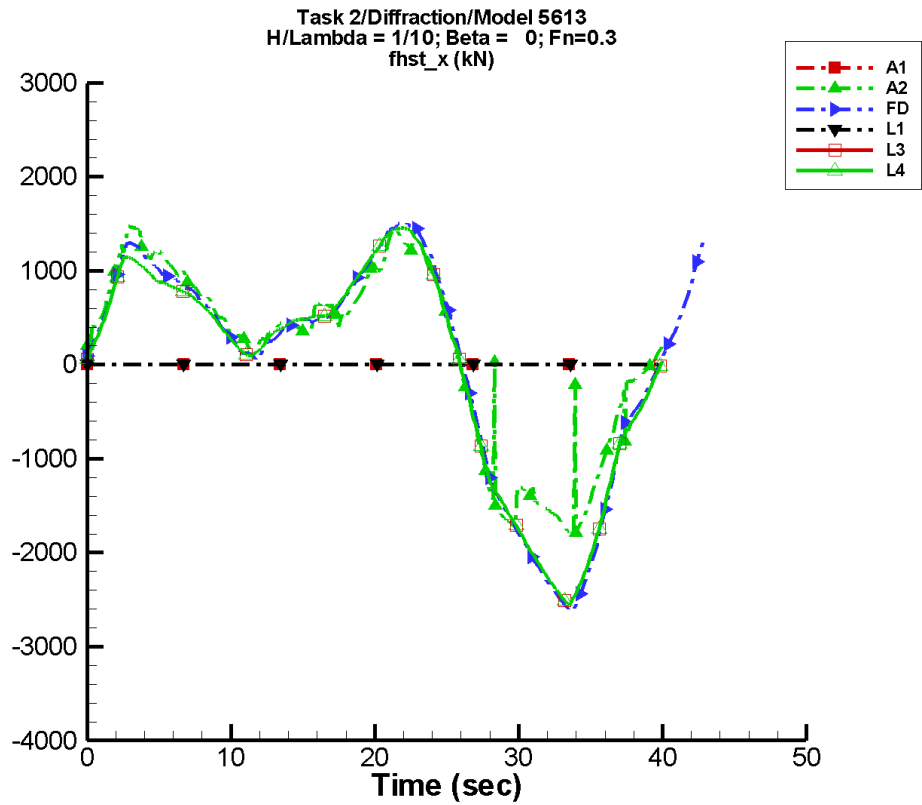
Table G-605. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -2.07         | 644.          | 45                | 684.          | 31                |
| FD   | -16.3         | 621.          | 37                | 630.          | 27                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -29.6         | 591.          | 39                | 617.          | 27                |
| L4   | -29.6         | 591.          | 39                | 617.          | 27                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-606. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.18E+03       | 1.42E+03        | -1.17E+03       | 1.41E+03        |
| FD   | -1.19E+03       | 1.15E+03        | -1.19E+03       | 1.14E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -1.17E+03       | 1.10E+03        | -1.17E+03       | 1.10E+03        |
| L4   | -1.17E+03       | 1.10E+03        | -1.17E+03       | 1.10E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-304. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

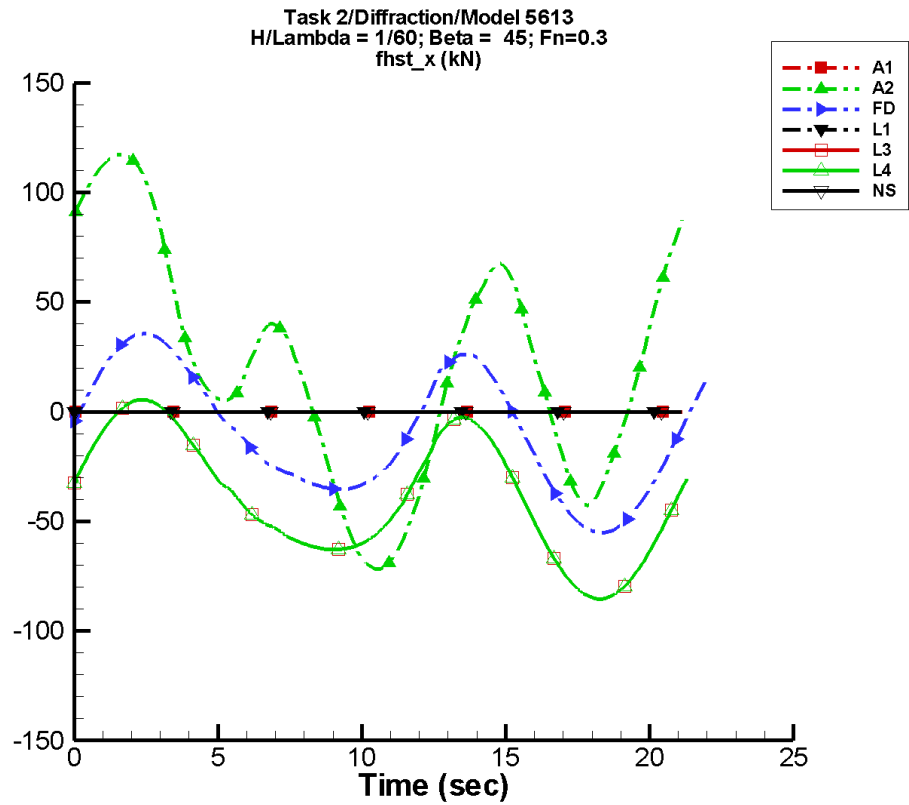
Table G-607. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 132.          | 977.          | -20               | 922.          | 46                |
| FD   | -19.4         | 1.21E+03      | -30               | 1.11E+03      | 39                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -29.0         | 1.21E+03      | -31               | 1.07E+03      | 41                |
| L4   | -29.0         | 1.21E+03      | -31               | 1.07E+03      | 41                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-608. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.83E+03       | 1.47E+03        | -1.72E+03       | 1.45E+03        |
| FD   | -2.63E+03       | 1.52E+03        | -2.59E+03       | 1.51E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.56E+03       | 1.46E+03        | -2.54E+03       | 1.45E+03        |
| L4   | -2.56E+03       | 1.46E+03        | -2.54E+03       | 1.45E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-305. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-609. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

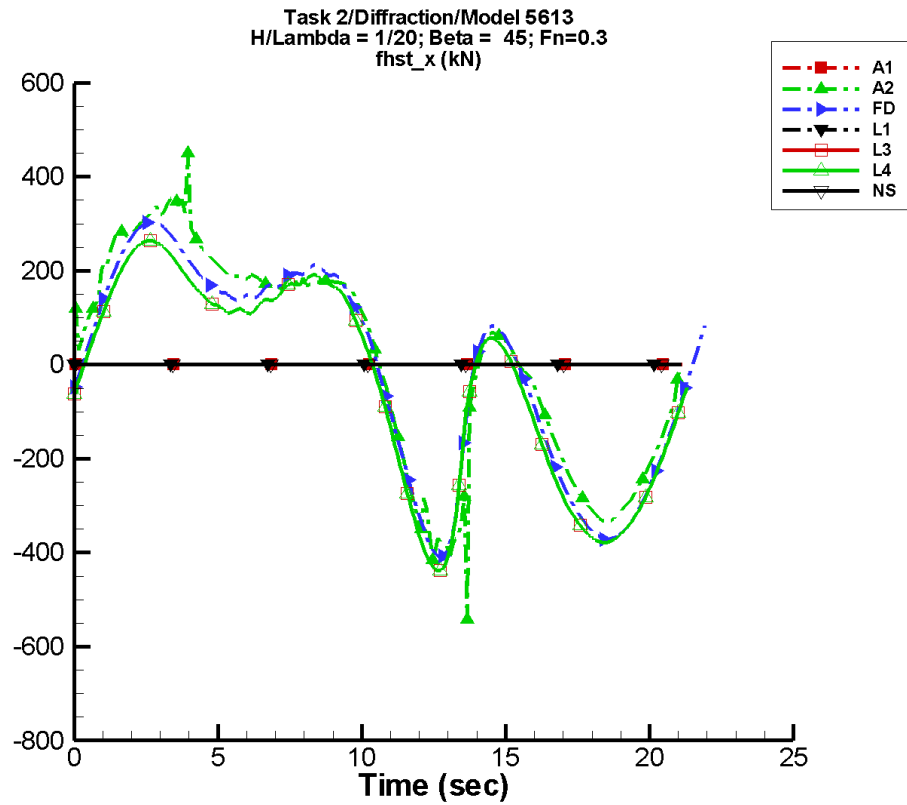
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 19.9          | 48.5          | 79                | 32.3          | 9                 |
| FD   | -10.1         | 9.84          | 28                | 35.1          | 8                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -39.5         | 9.07          | 21                | 35.6          | 2                 |
| L4   | -39.5         | 9.07          | 21                | 35.6          | 2                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-610. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -71.8           | 117.            | -70.9           | 117.            |
| FD   | -55.3           | 35.5            | -54.9           | 35.1            |
| L1   | —               | —               | —               | —               |
| L3   | -85.4           | 5.43            | -85.2           | 5.30            |
| L4   | -85.4           | 5.43            | -85.2           | 5.30            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-306. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

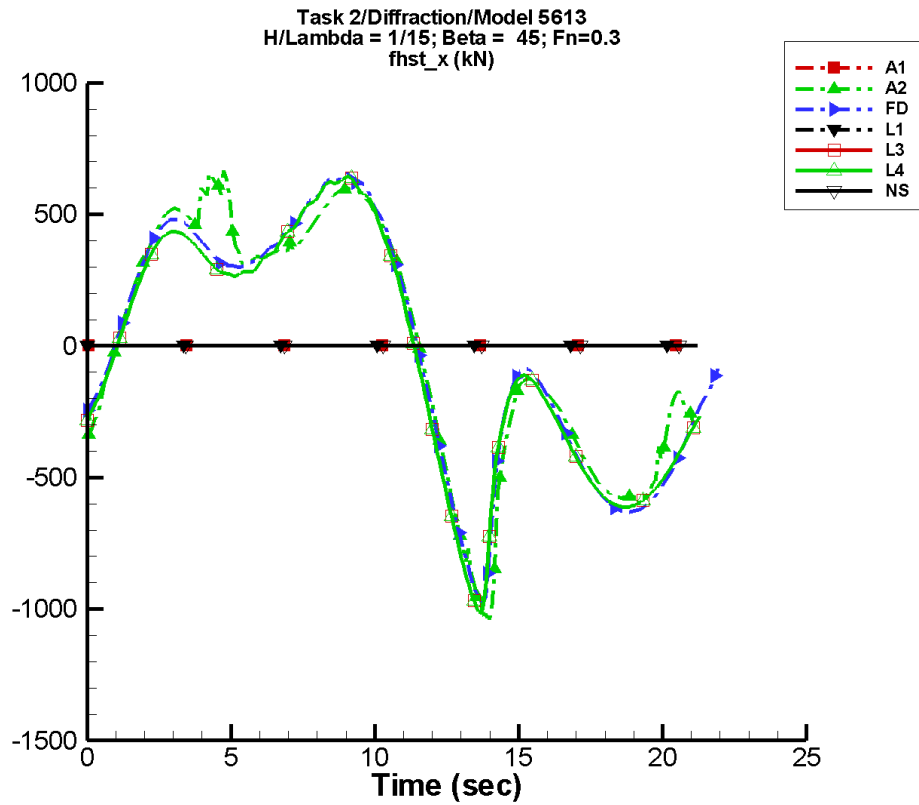
Table G-611. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 15.2          | 258.          | 10                | 76.1          | -29               |
| FD   | -11.8         | 235.          | 5                 | 75.9          | -11               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -35.8         | 229.          | 2                 | 68.1          | -22               |
| L4   | -35.8         | 229.          | 2                 | 68.1          | -22               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-612. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -542.           | 698.            | -390.           | 375.            |
| FD   | -411.           | 304.            | -399.           | 300.            |
| L1   | —               | —               | —               | —               |
| L3   | -438.           | 264.            | -434.           | 263.            |
| L4   | -438.           | 264.            | -434.           | 263.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-307. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

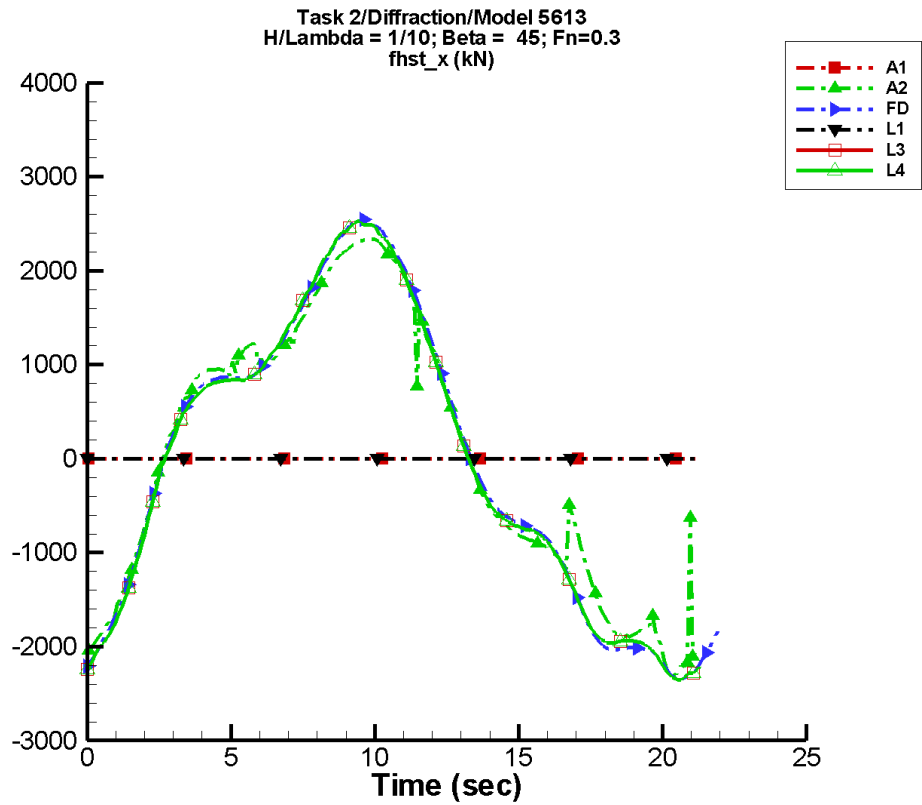
Table G-613. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 10.5          | 581.          | -10               | 34.0          | -119              |
| FD   | -15.6         | 542.          | -11               | 23.2          | 116               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -29.5         | 544.          | -15               | 39.5          | 167               |
| L4   | -29.5         | 544.          | -15               | 39.5          | 167               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-614. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.05E+03       | 668.            | -957.           | 624.            |
| FD   | -978.           | 658.            | -910.           | 642.            |
| L1   | —               | —               | —               | —               |
| L3   | -1.01E+03       | 643.            | -988.           | 635.            |
| L4   | -1.01E+03       | 643.            | -988.           | 635.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-308. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

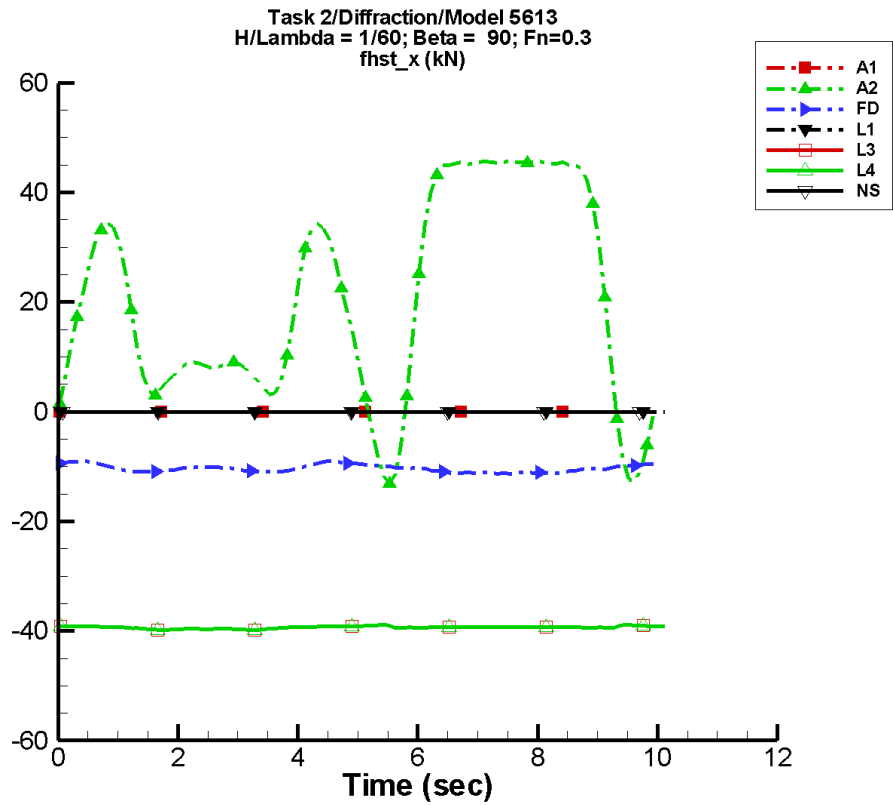
Table G-615. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 40.5          | 2.01E+03      | -54               | 77.0          | -73               |
| FD   | -28.8         | 2.13E+03      | -53               | 125.          | 24                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -20.7         | 2.16E+03      | -57               | 32.8          | -17               |
| L4   | -20.7         | 2.16E+03      | -57               | 32.8          | -17               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-616. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.31E+03       | 2.34E+03        | -2.20E+03       | 2.32E+03        |
| FD   | -2.36E+03       | 2.54E+03        | -2.33E+03       | 2.51E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.36E+03       | 2.53E+03        | -2.34E+03       | 2.51E+03        |
| L4   | -2.36E+03       | 2.53E+03        | -2.34E+03       | 2.51E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-309. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-617. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

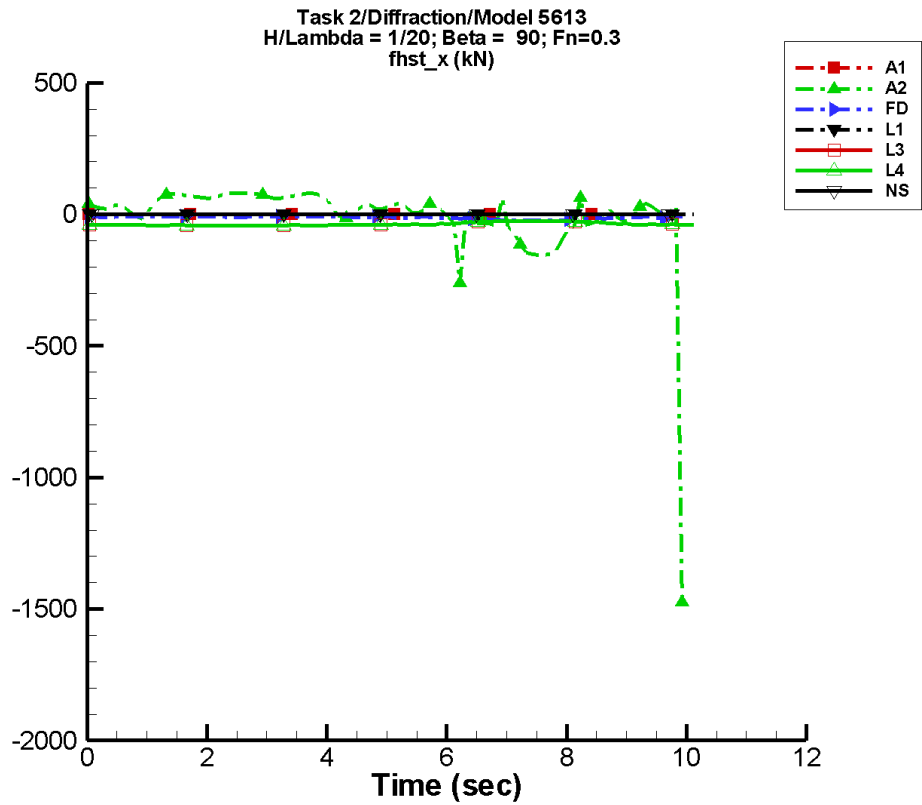
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.3          | 15.1          | 166               | 8.02          | -98               |
| FD   | -10.4         | 0.279         | -4                | 0.717         | 76                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -39.3         | 0.160         | 175               | 0.190         | 83                |
| L4   | -39.3         | 0.160         | 175               | 0.190         | 83                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-618. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -13.1           | 45.7            | -5.42           | 45.8            |
| FD   | -11.3           | -9.04           | -11.2           | -9.26           |
| L1   | —               | —               | —               | —               |
| L3   | -39.8           | -38.8           | -39.8           | -39.0           |
| L4   | -39.8           | -38.8           | -39.8           | -39.0           |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-310. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

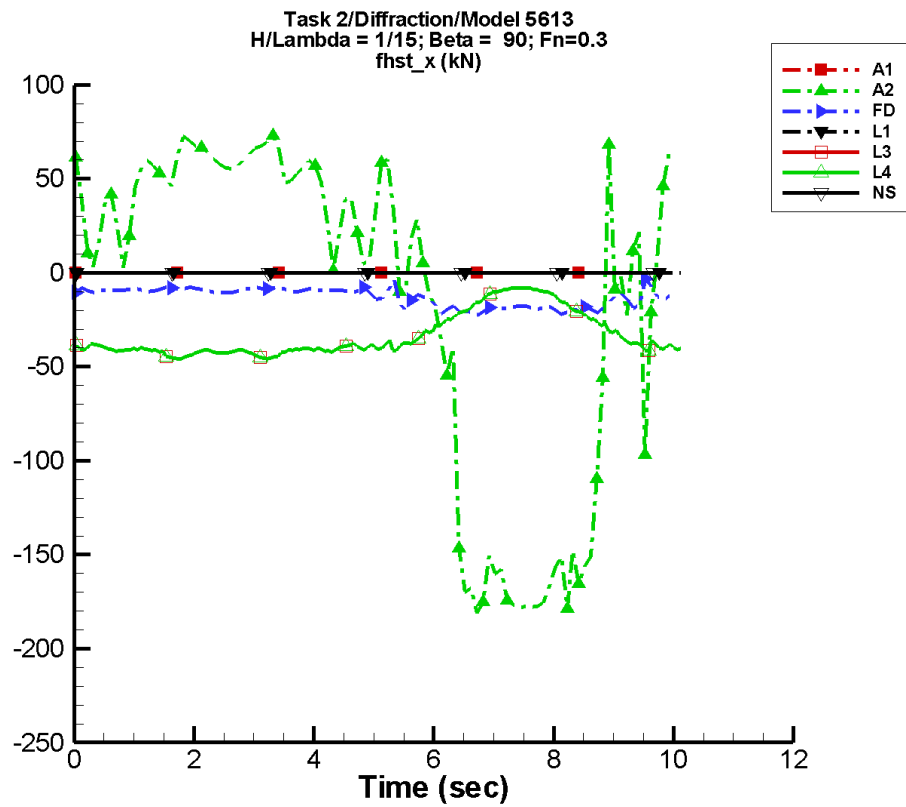
Table G-619. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 0.196         | 74.1          | -23               | 10.1          | -89               |
| FD   | -12.7         | 5.71          | -9                | 2.69          | 70                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -36.7         | 7.58          | 174               | 3.01          | -95               |
| L4   | -36.7         | 7.58          | 174               | 3.01          | -95               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-620. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.47E+03       | 81.4            | -174.           | 75.5            |
| FD   | -23.5           | -7.90           | -22.9           | -8.53           |
| L1   | —               | —               | —               | —               |
| L3   | -42.9           | -24.2           | -42.6           | -24.3           |
| L4   | -42.9           | -24.2           | -42.6           | -24.3           |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-311. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

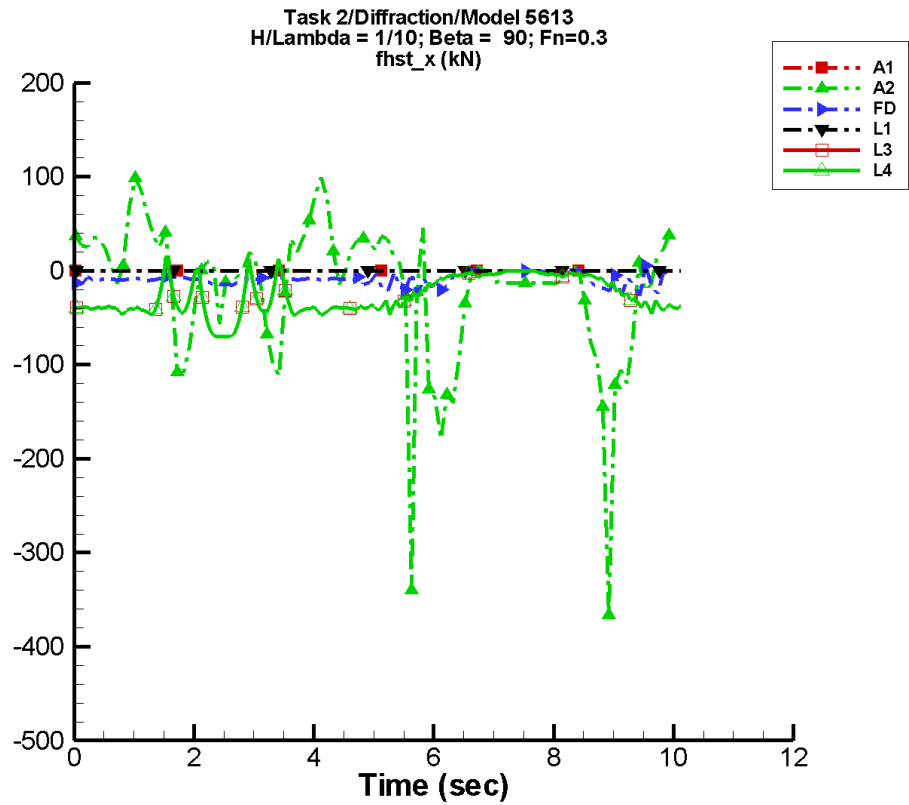
Table G-621. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -16.9         | 108.          | -9                | 42.9          | 78                |
| FD   | -12.9         | 5.67          | -6                | 1.99          | 80                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -33.3         | 14.5          | 174               | 6.45          | -96               |
| L4   | -33.3         | 14.5          | 174               | 6.45          | -96               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-622. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -181.           | 72.9            | -173.           | 65.6            |
| FD   | -22.6           | -3.13           | -20.3           | -8.54           |
| L1   | —               | —               | —               | —               |
| L3   | -46.0           | -7.96           | -45.0           | -8.28           |
| L4   | -46.0           | -7.96           | -45.0           | -8.28           |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-312. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

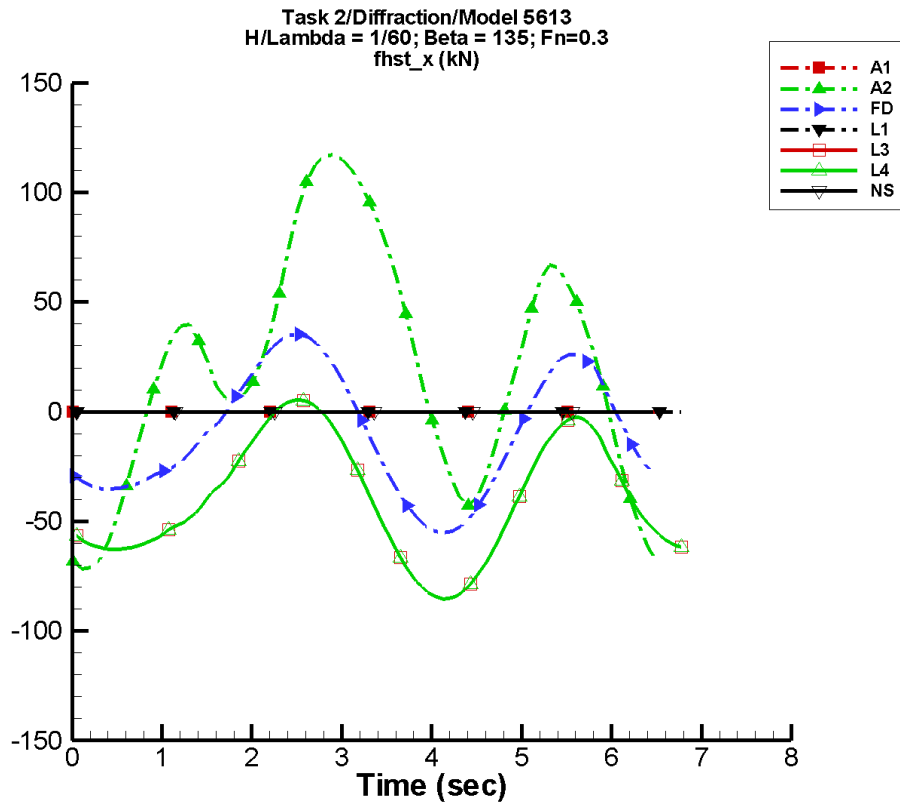
Table G-623. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -18.1         | 27.7          | 3                 | 18.5          | 69                |
| FD   | -8.39         | 2.89          | 163               | 3.73          | -113              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -26.6         | 18.5          | 175               | 9.55          | -93               |
| L4   | -26.6         | 18.5          | 175               | 9.55          | -93               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-624. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -366.           | 99.1            | -131.           | 48.1            |
| FD   | -27.6           | 5.17            | -15.5           | 0.709           |
| L1   | —               | —               | —               | —               |
| L3   | -70.0           | 16.0            | -65.7           | -2.86E-02       |
| L4   | -70.0           | 16.0            | -65.7           | -2.86E-02       |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-313. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-625. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

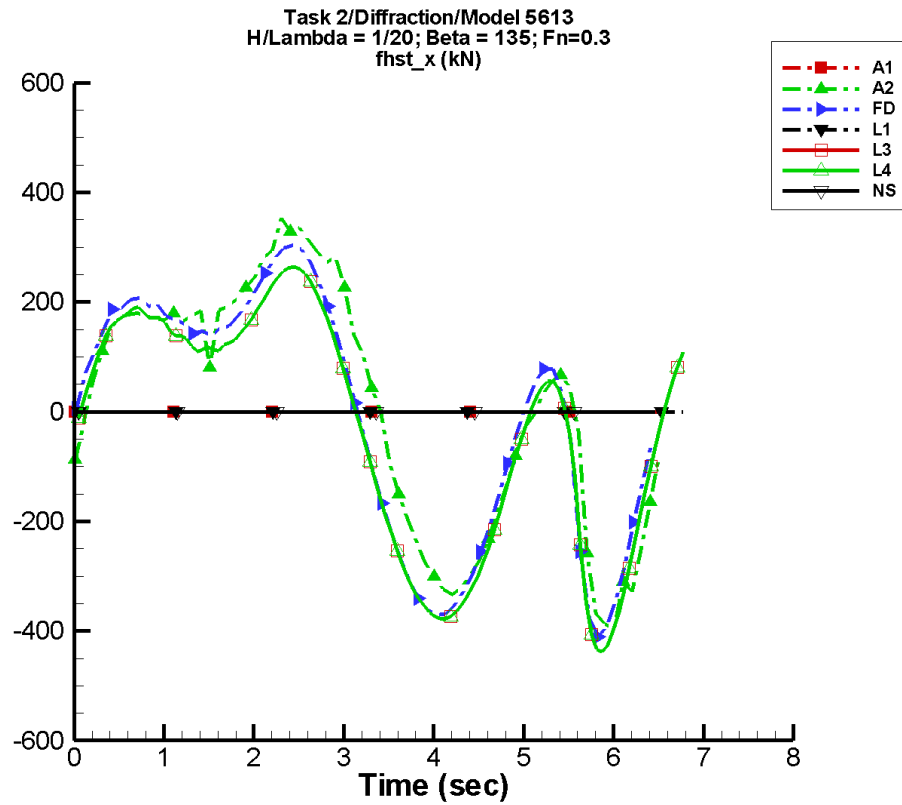
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.1          | 48.7          | -78               | 28.2          | -180              |
| FD   | -10.0         | 10.8          | -17               | 34.8          | -172              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -39.5         | 9.42          | -16               | 33.9          | 176               |
| L4   | -39.5         | 9.42          | -16               | 33.9          | 176               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-626. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -71.7           | 117.            | -69.5           | 110.            |
| FD   | -55.3           | 35.5            | -51.0           | 30.9            |
| L1   | —               | —               | —               | —               |
| L3   | -85.4           | 5.43            | -83.8           | 3.91            |
| L4   | -85.4           | 5.43            | -83.8           | 3.91            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-314. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

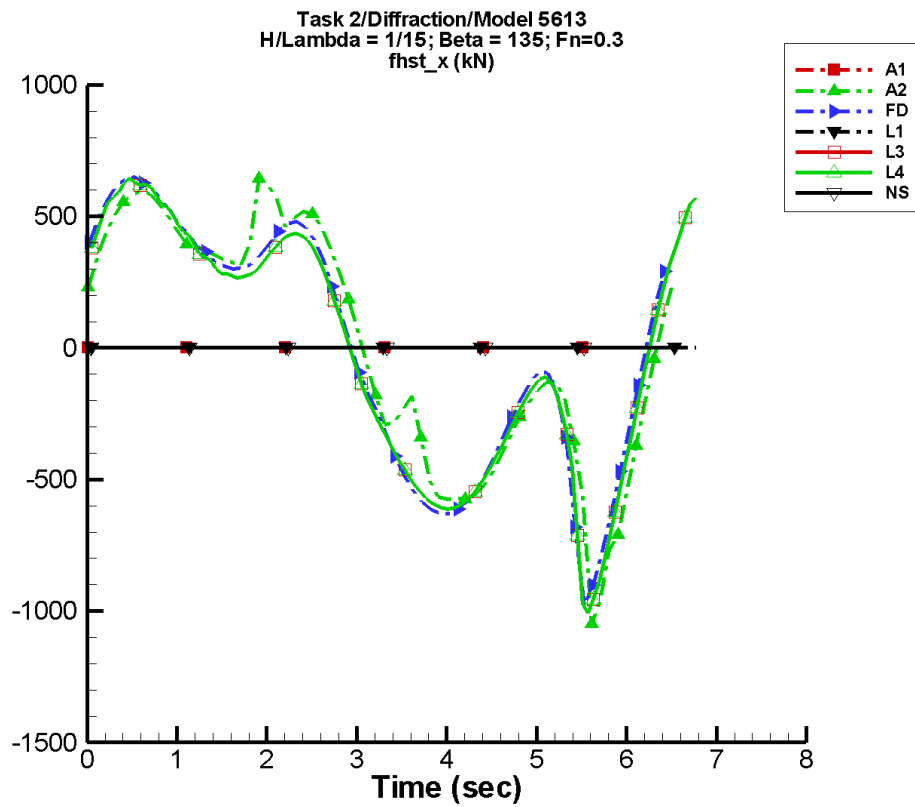
Table G-627. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 14.1          | 245.          | -11               | 55.1          | -168              |
| FD   | -3.55         | 250.          | 8                 | 60.9          | -138              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -32.0         | 233.          | 3                 | 45.9          | -161              |
| L4   | -32.0         | 233.          | 3                 | 45.9          | -161              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-628. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -398.           | 354.            | -298.           | 310.            |
| FD   | -411.           | 304.            | -341.           | 267.            |
| L1   | —               | —               | —               | —               |
| L3   | -438.           | 264.            | -389.           | 260.            |
| L4   | -438.           | 264.            | -389.           | 260.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-315. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

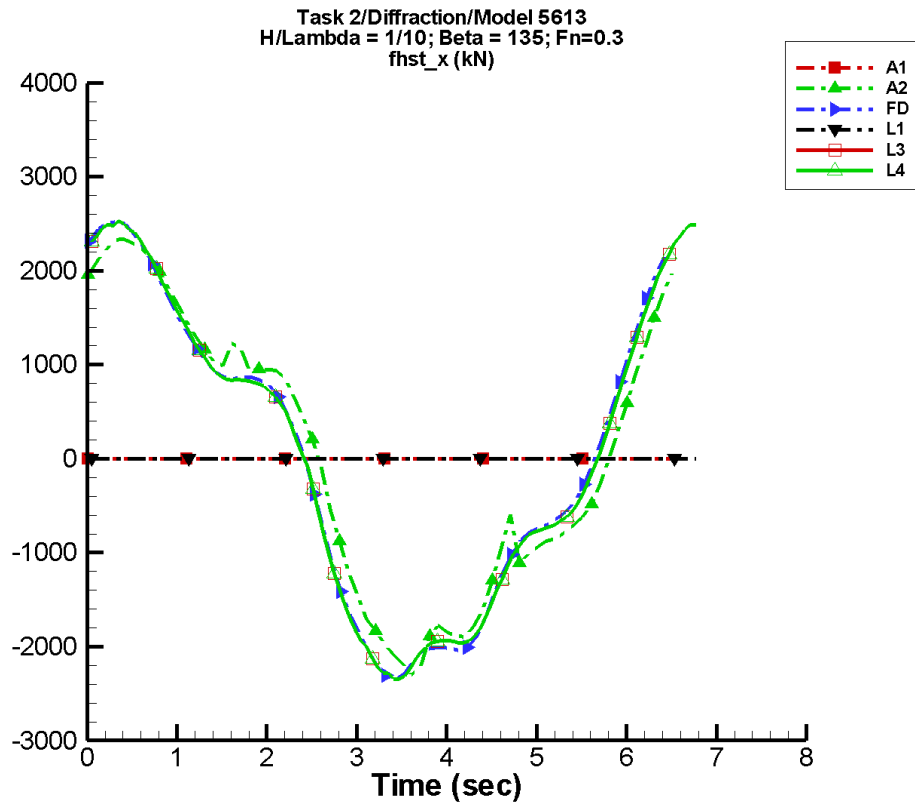
Table G-629. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 4.01          | 542.          | 6                 | 57.7          | 31                |
| FD   | -2.47         | 566.          | 22                | 61.2          | 31                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -21.9         | 547.          | 16                | 73.5          | 34                |
| L4   | -21.9         | 547.          | 16                | 73.5          | 34                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-630. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.05E+03       | 642.            | -645.           | 536.            |
| FD   | -978.           | 649.            | -614.           | 593.            |
| L1   | —               | —               | —               | —               |
| L3   | -1.01E+03       | 643.            | -814.           | 616.            |
| L4   | -1.01E+03       | 643.            | -814.           | 616.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-316. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

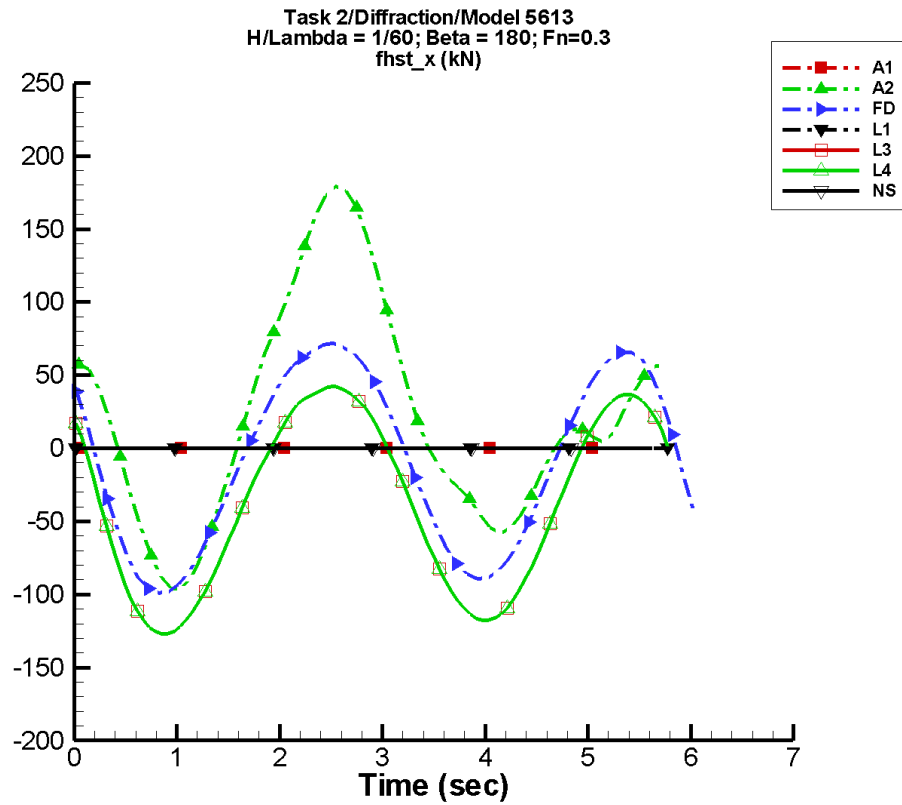
Table G-631. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 24.4          | 2.00E+03      | 48                | 80.7          | 82                |
| FD   | -5.01         | 2.17E+03      | 61                | 126.          | 112               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 2.01          | 2.14E+03      | 55                | 128.          | 113               |
| L4   | 2.01          | 2.14E+03      | 55                | 128.          | 113               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-632. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.30E+03       | 2.34E+03        | -2.07E+03       | 2.21E+03        |
| FD   | -2.35E+03       | 2.52E+03        | -2.18E+03       | 2.42E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.35E+03       | 2.53E+03        | -2.26E+03       | 2.46E+03        |
| L4   | -2.35E+03       | 2.53E+03        | -2.26E+03       | 2.46E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-317. Time history of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-633. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

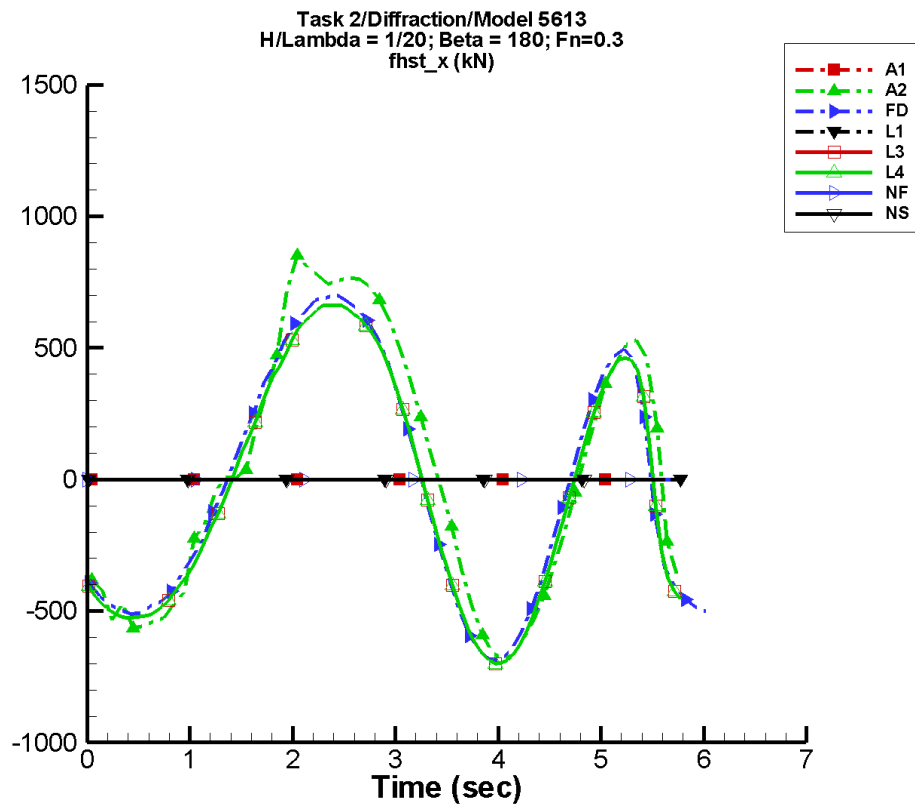
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 21.5          | 51.8          | -85               | 90.5          | 110               |
| FD   | -10.3         | 14.9          | -111              | 80.6          | 67                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -40.2         | 16.2          | -87               | 78.1          | 108               |
| L4   | -40.2         | 16.2          | -87               | 78.1          | 108               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-634. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -96.6           | 179.            | -76.0           | 156.            |
| FD   | -99.0           | 71.6            | -87.8           | 64.7            |
| L1   | —               | —               | —               | —               |
| L3   | -127.           | 42.2            | -123.           | 39.4            |
| L4   | -127.           | 42.2            | -123.           | 39.4            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-318. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

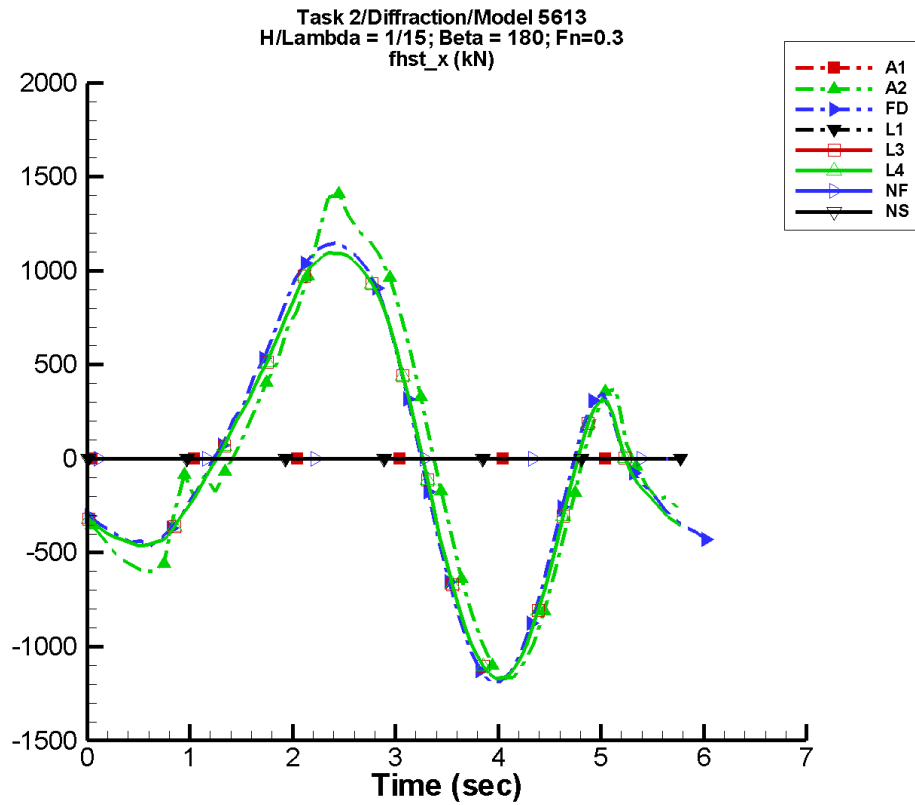
Table G-635. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 25.8          | 401.          | -69               | 515.          | 135               |
| FD   | -25.5         | 334.          | -92               | 514.          | 87                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -46.1         | 333.          | -68               | 486.          | 126               |
| L4   | -46.1         | 333.          | -68               | 486.          | 126               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-636. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -682.           | 852.            | -581.           | 772.            |
| FD   | -686.           | 703.            | -604.           | 657.            |
| L1   | —               | —               | —               | —               |
| L3   | -700.           | 664.            | -670.           | 650.            |
| L4   | -700.           | 664.            | -670.           | 650.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-319. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

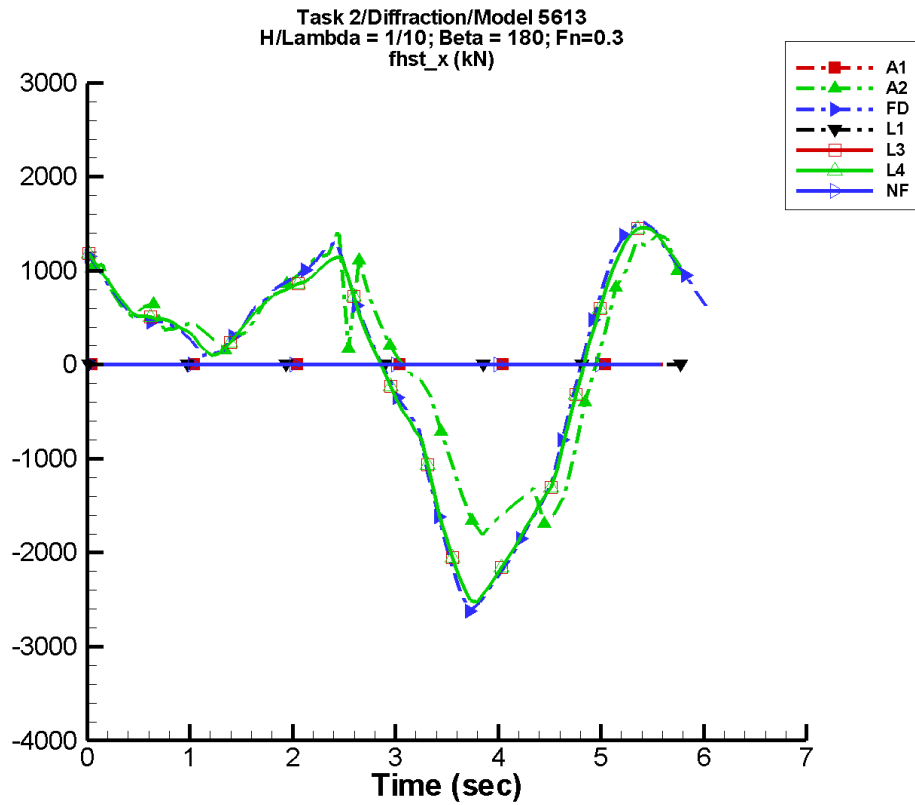
Table G-637. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 0.746         | 680.          | -59               | 645.          | 124               |
| FD   | -21.0         | 631.          | -76               | 663.          | 78                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -27.6         | 606.          | -53               | 647.          | 118               |
| L4   | -27.6         | 606.          | -53               | 647.          | 118               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-638. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.17E+03       | 1.41E+03        | -1.02E+03       | 1.21E+03        |
| FD   | -1.19E+03       | 1.15E+03        | -1.05E+03       | 1.08E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -1.17E+03       | 1.10E+03        | -1.12E+03       | 1.07E+03        |
| L4   | -1.17E+03       | 1.10E+03        | -1.12E+03       | 1.07E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-320. Time history of  $F_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

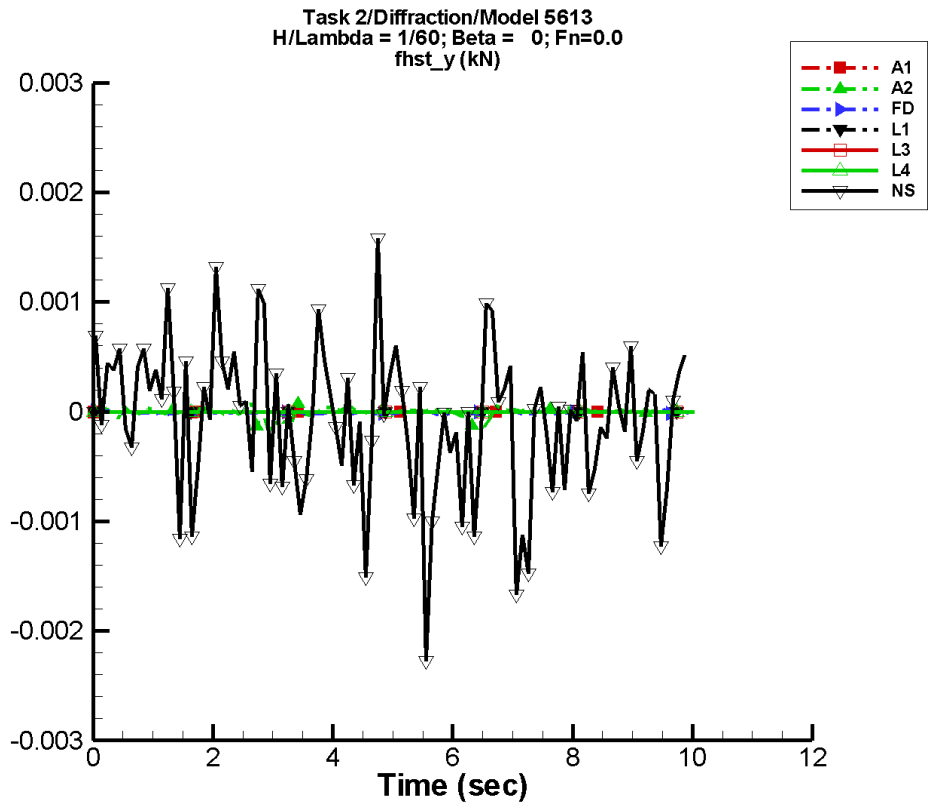
Table G-639. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 93.8          | 975.          | 6                 | 867.          | 104               |
| FD   | -23.6         | 1.19E+03      | -9                | 1.14E+03      | 65                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -38.9         | 1.20E+03      | 14                | 1.06E+03      | 106               |
| L4   | -38.9         | 1.20E+03      | 14                | 1.06E+03      | 106               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-640. Minimum and maximum of  $F_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.81E+03       | 1.44E+03        | -1.60E+03       | 1.13E+03        |
| FD   | -2.62E+03       | 1.51E+03        | -2.23E+03       | 1.27E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.56E+03       | 1.46E+03        | -2.36E+03       | 1.37E+03        |
| L4   | -2.56E+03       | 1.46E+03        | -2.36E+03       | 1.37E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-321. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-641. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

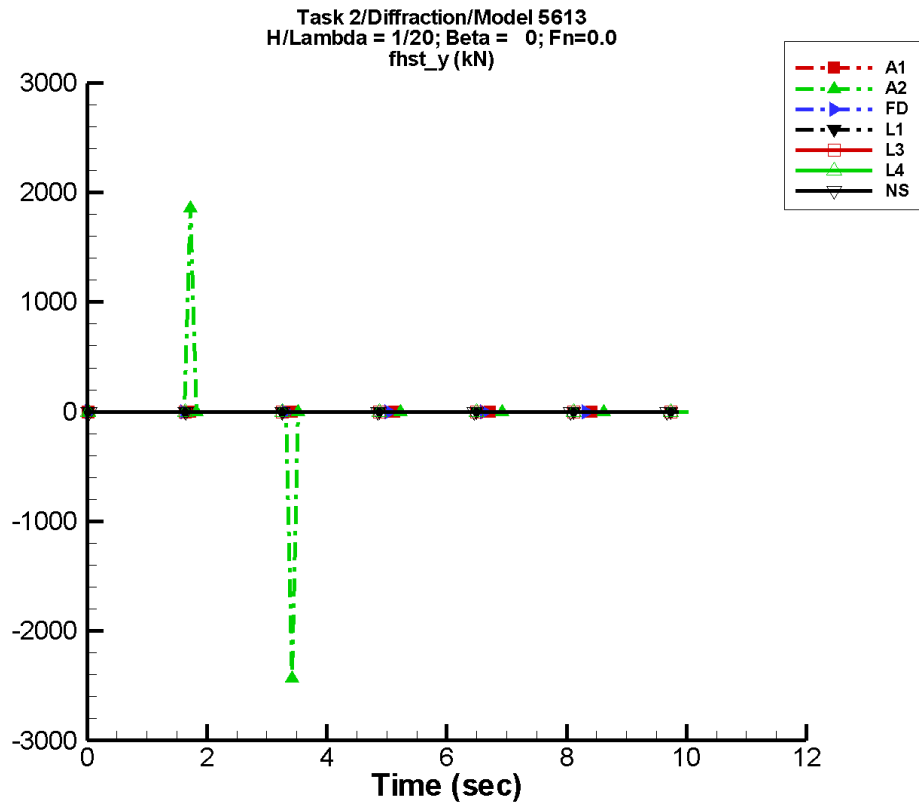
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -3.61E-06     | 8.93E-06      | 110               | 5.53E-06      | 114               |
| FD   | -6.27E-06     | 3.56E-06      | 84                | 1.24E-06      | -160              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.03E-04     | 2.13E-04      | 45                | 7.99E-05      | 107               |

Table G-642. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.81E-04       | 9.62E-05        | -7.19E-05       | 2.56E-05        |
| FD   | -2.40E-05       | 1.50E-05        | -1.39E-05       | 5.16E-06        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.27E-03       | 1.58E-03        | -7.15E-04       | 4.66E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-322. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

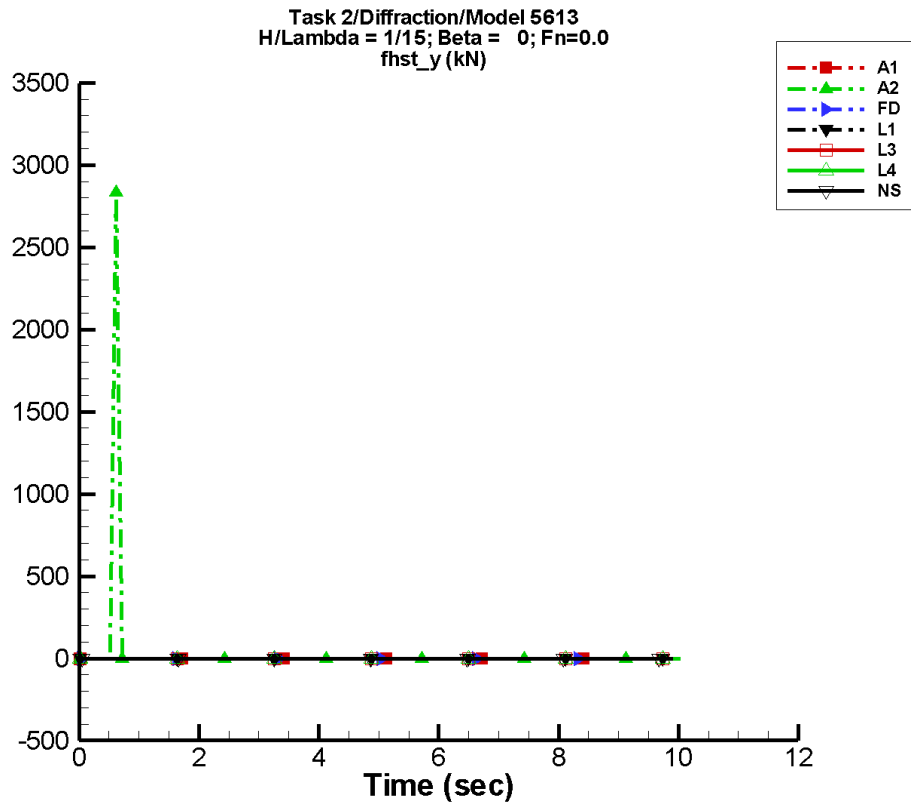
Table G-643. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -0.532        | 51.0          | 80                | 98.0          | -15               |
| FD   | 4.41E-07      | 8.56E-06      | 164               | 2.78E-05      | 161               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.94E-04     | 7.84E-05      | 26                | 5.17E-04      | 179               |

Table G-644. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.43E+03       | 2.81E+03        | -323.           | 375.            |
| FD   | -6.31E-05       | 9.31E-05        | -3.31E-05       | 5.65E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.76E-03       | 2.11E-03        | -1.32E-03       | 5.40E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-323. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

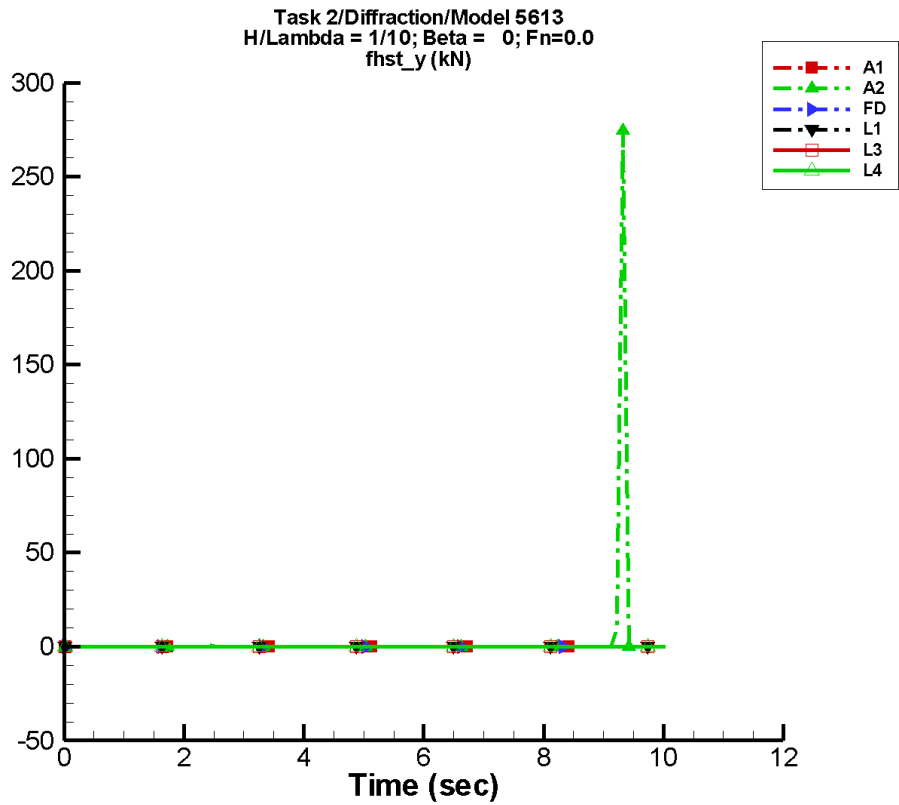
Table G-645. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 14.9          | 31.9          | 70                | 37.1          | 45                |
| FD   | 2.49E-06      | 1.07E-05      | 104               | 2.31E-05      | 146               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.11E-04     | 1.83E-04      | 124               | 5.75E-04      | 89                |

Table G-646. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.37E-03       | 2.84E+03        | -32.3           | 378.            |
| FD   | -5.92E-05       | 7.36E-05        | -3.10E-05       | 3.42E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.88E-03       | 3.68E-03        | -2.79E-03       | 1.32E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-324. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

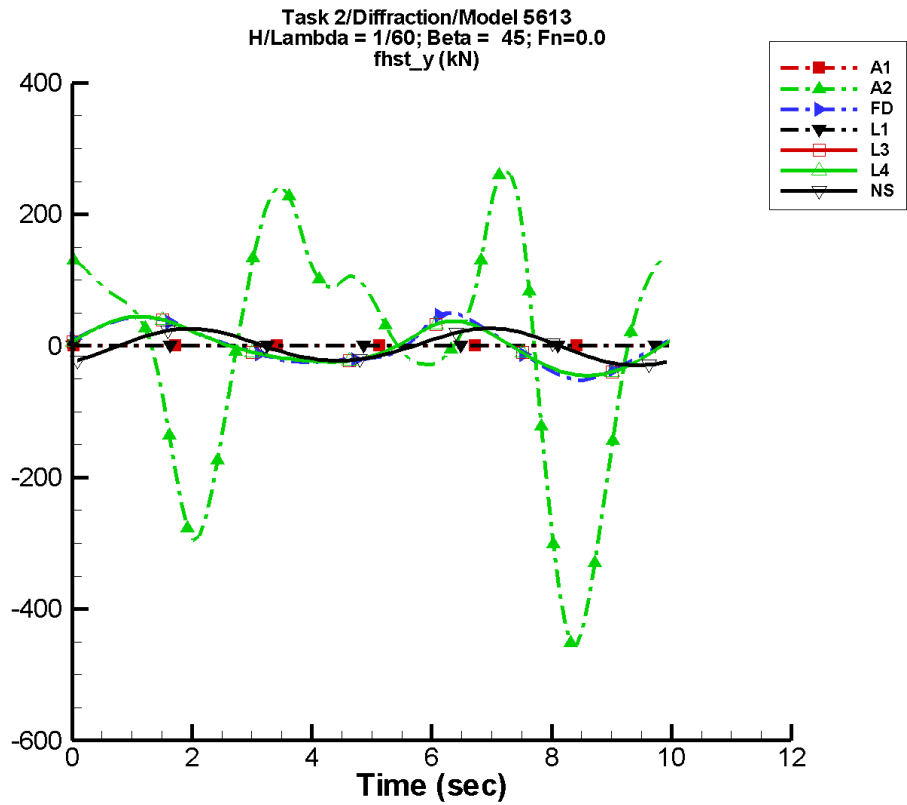
Table G-647. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 2.45          | 4.77          | 112               | 5.08          | 138               |
| FD   | -3.81E-06     | 2.82E-05      | -173              | 2.56E-05      | 157               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-648. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -8.58E-02       | 275.            | -3.22           | 37.8            |
| FD   | -1.47E-04       | 1.09E-04        | -8.51E-05       | 6.55E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-325. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-649. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

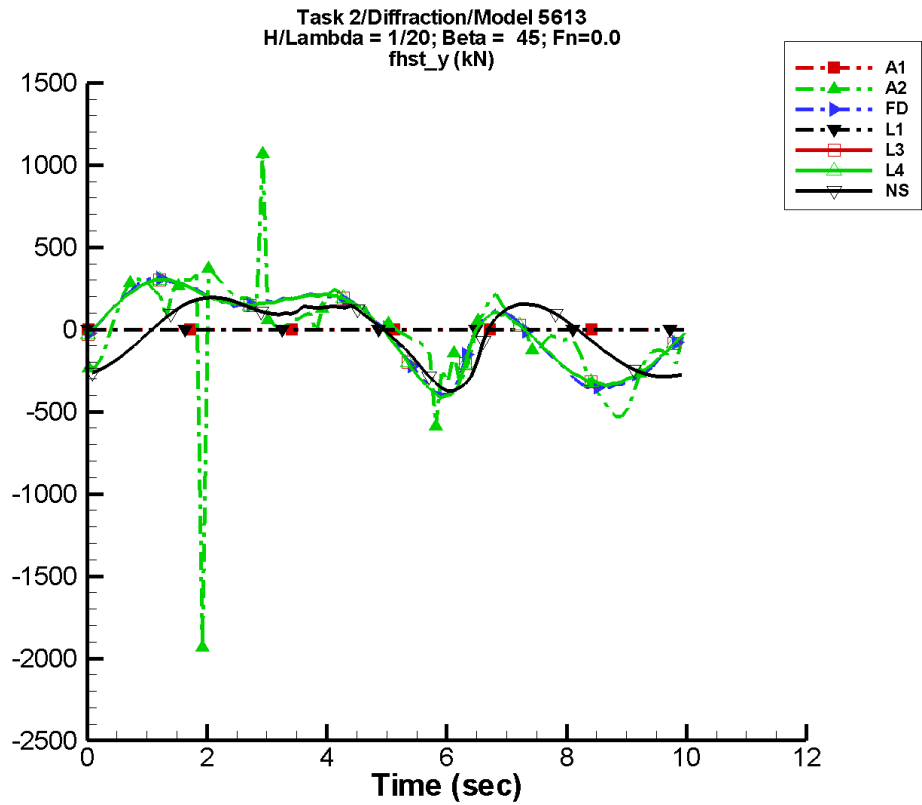
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 8.89E-02      | 70.8          | -80               | 88.3          | 70                |
| FD   | 0.452         | 7.87          | 15                | 36.9          | -21               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 0.455         | 8.80          | 19                | 35.0          | -13               |
| L4   | 0.455         | 8.80          | 19                | 35.0          | -13               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -0.390        | 2.06          | -76               | 26.3          | -53               |

Table G-650. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -454.           | 267.            | -393.           | 212.            |
| FD   | -52.6           | 50.3            | -48.7           | 44.1            |
| L1   | —               | —               | —               | —               |
| L3   | -45.4           | 44.7            | -44.6           | 44.1            |
| L4   | -45.4           | 44.7            | -44.6           | 44.1            |
| NF   | —               | —               | —               | —               |
| NS   | -29.5           | 26.6            | -28.4           | 25.4            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-326. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

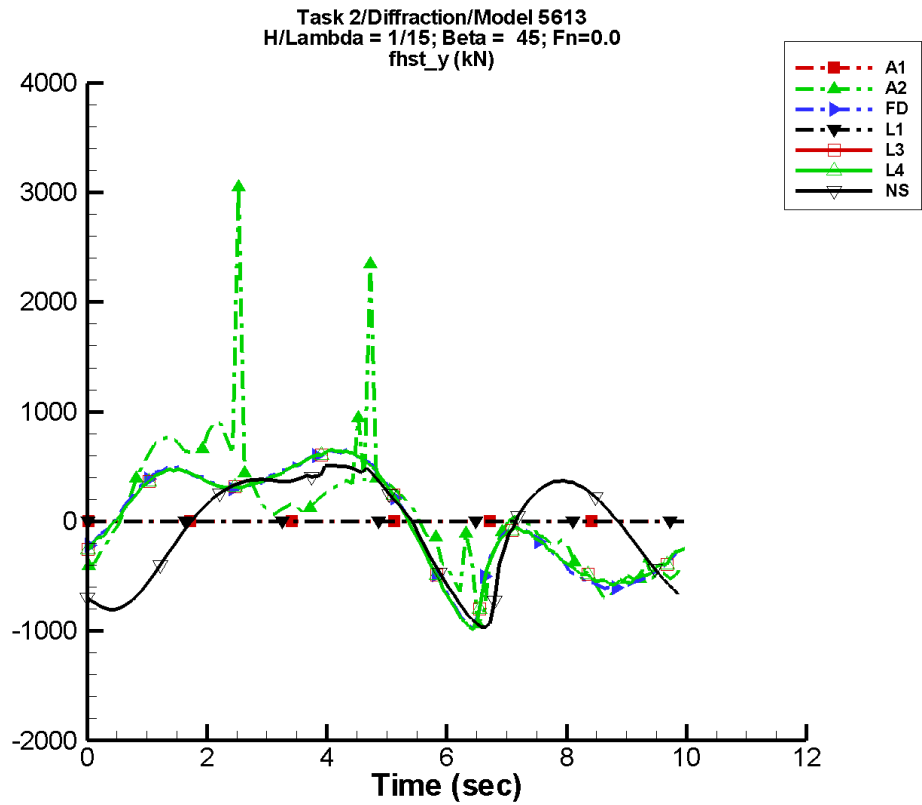
Table G-651. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 23.7          | 243.          | -12               | 160.          | -49               |
| FD   | 12.7          | 219.          | -5                | 67.7          | -69               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 2.06          | 238.          | 0                 | 46.1          | -61               |
| L4   | 2.06          | 238.          | 0                 | 46.1          | -61               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -23.5         | 124.          | -24               | 157.          | -104              |

Table G-652. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.93E+03       | 2.90E+03        | -436.           | 745.            |
| FD   | -398.           | 310.            | -343.           | 295.            |
| L1   | —               | —               | —               | —               |
| L3   | -415.           | 303.            | -393.           | 299.            |
| L4   | -415.           | 303.            | -393.           | 299.            |
| NF   | —               | —               | —               | —               |
| NS   | -373.           | 195.            | -332.           | 185.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-327. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

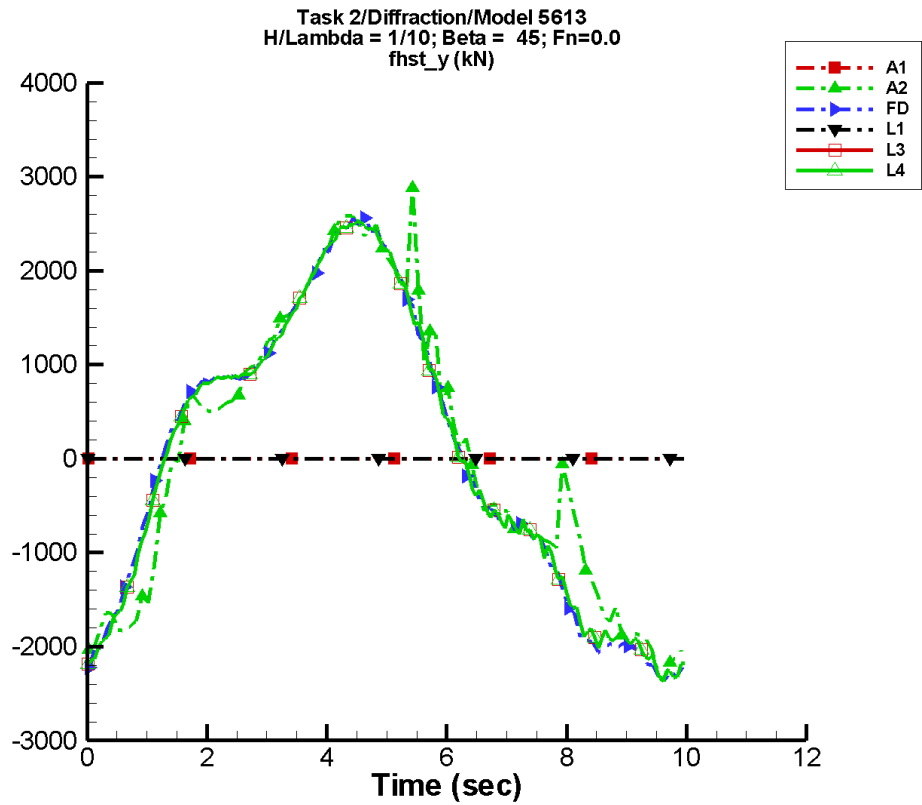
Table G-653. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 79.5          | 570.          | -21               | 203.          | -48               |
| FD   | 18.2          | 526.          | -22               | 78.4          | 160               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -10.2         | 568.          | -17               | 106.          | 145               |
| L4   | -10.2         | 568.          | -17               | 106.          | 145               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -54.5         | 316.          | -54               | 470.          | -149              |

Table G-654. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -938.           | 3.05E+03        | -579.           | 957.            |
| FD   | -991.           | 652.            | -756.           | 621.            |
| L1   | —               | —               | —               | —               |
| L3   | -993.           | 656.            | -883.           | 638.            |
| L4   | -993.           | 656.            | -883.           | 638.            |
| NF   | —               | —               | —               | —               |
| NS   | -966.           | 511.            | -870.           | 495.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-328. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

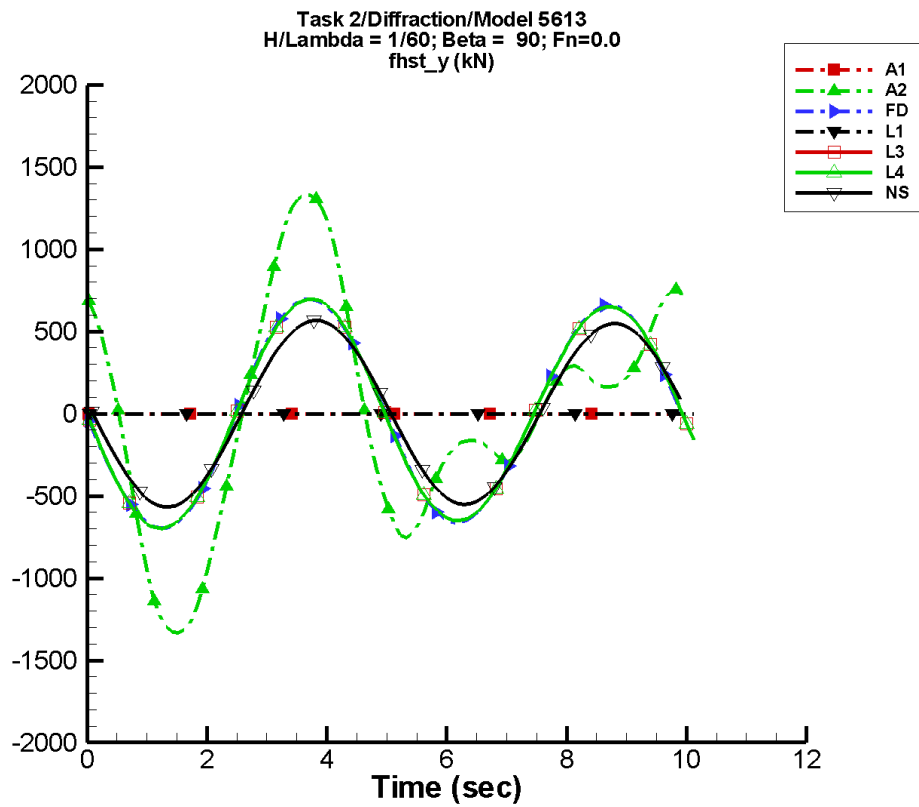
Table G-655. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 81.7          | 2.08E+03      | -69               | 176.          | -172              |
| FD   | -0.809        | 2.15E+03      | -66               | 81.1          | 43                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -20.7         | 2.15E+03      | -62               | 84.6          | 78                |
| L4   | -20.7         | 2.15E+03      | -62               | 84.6          | 78                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-656. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.37E+03       | 2.88E+03        | -2.10E+03       | 2.47E+03        |
| FD   | -2.36E+03       | 2.59E+03        | -2.23E+03       | 2.46E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.37E+03       | 2.53E+03        | -2.28E+03       | 2.49E+03        |
| L4   | -2.37E+03       | 2.53E+03        | -2.28E+03       | 2.49E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-329. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-657. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

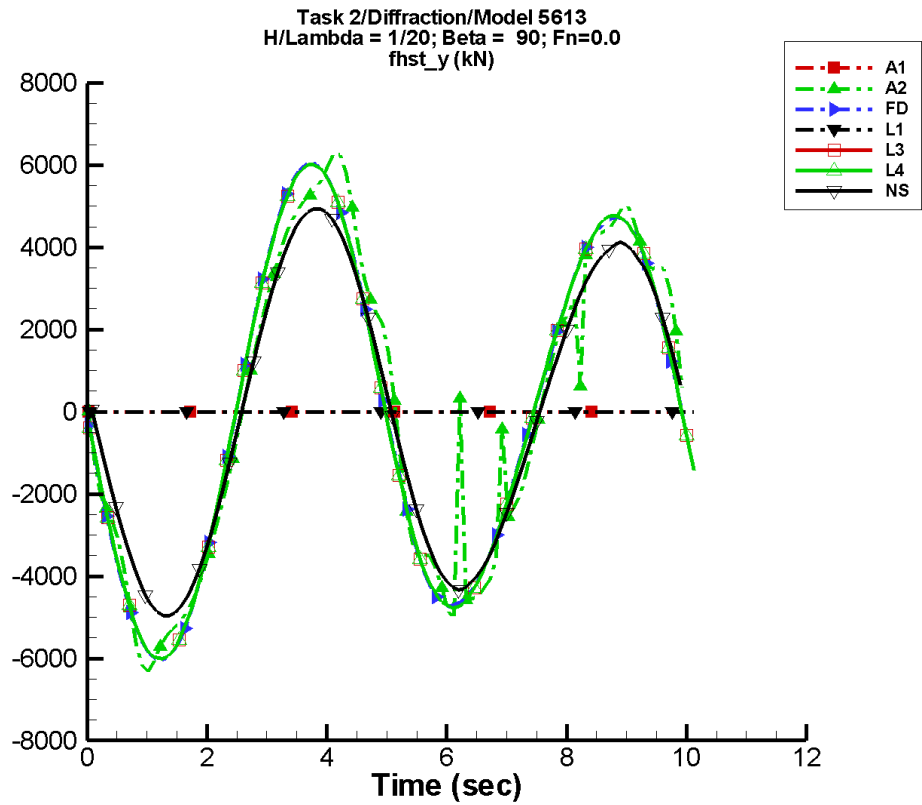
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -2.90         | 78.1          | -141              | 817.          | 158               |
| FD   | 0.415         | 17.6          | -101              | 680.          | 165               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -0.417        | 18.2          | -96               | 677.          | 172               |
| L4   | -0.417        | 18.2          | -96               | 677.          | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -0.587        | 8.02          | -93               | 560.          | 172               |

Table G-658. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.33E+03       | 1.33E+03        | -1.26E+03       | 1.26E+03        |
| FD   | -696.           | 697.            | -669.           | 668.            |
| L1   | —               | —               | —               | —               |
| L3   | -697.           | 697.            | -688.           | 687.            |
| L4   | -697.           | 697.            | -688.           | 687.            |
| NF   | —               | —               | —               | —               |
| NS   | -567.           | 567.            | -546.           | 544.            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-330. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

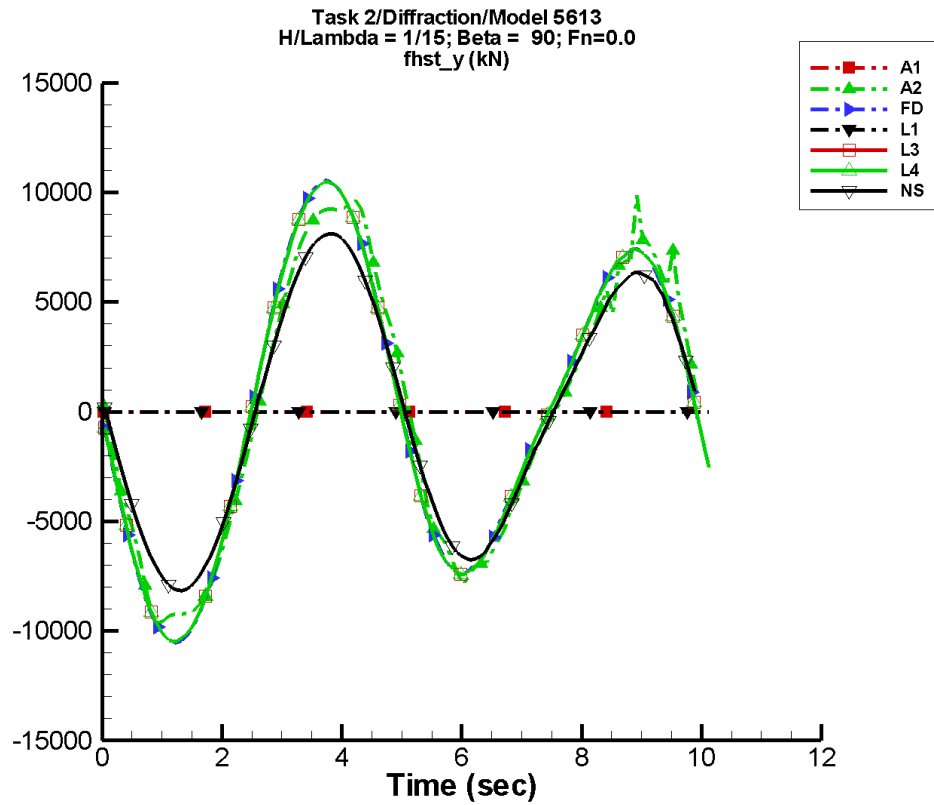
Table G-659. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 32.3          | 705.          | -103              | 5.23E+03      | 165               |
| FD   | 14.4          | 534.          | -102              | 5.42E+03      | 165               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -4.45         | 509.          | -96               | 5.42E+03      | 172               |
| L4   | -4.45         | 509.          | -96               | 5.42E+03      | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -38.9         | 311.          | -92               | 4.58E+03      | 172               |

Table G-660. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -6.33E+03       | 6.30E+03        | -5.69E+03       | 5.66E+03        |
| FD   | -6.04E+03       | 6.04E+03        | -5.81E+03       | 5.81E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -6.01E+03       | 6.01E+03        | -5.93E+03       | 5.93E+03        |
| L4   | -6.01E+03       | 6.01E+03        | -5.93E+03       | 5.93E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -4.96E+03       | 4.94E+03        | -4.77E+03       | 4.74E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-331. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

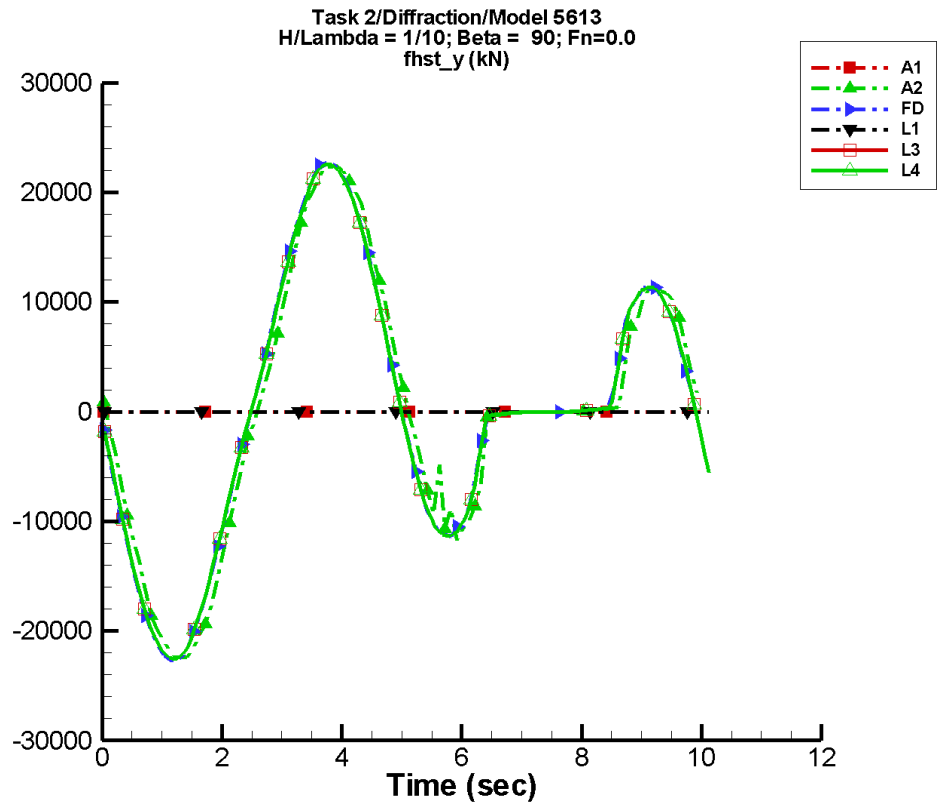
Table G-661. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 3.62          | 1.17E+03      | -100              | 8.59E+03      | 164               |
| FD   | 42.3          | 1.38E+03      | -103              | 8.88E+03      | 166               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -10.2         | 1.34E+03      | -96               | 8.88E+03      | 172               |
| L4   | -10.2         | 1.34E+03      | -96               | 8.88E+03      | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -88.4         | 707.          | -90               | 7.26E+03      | 173               |

Table G-662. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -9.64E+03       | 9.86E+03        | -9.31E+03       | 9.29E+03        |
| FD   | -1.05E+04       | 1.05E+04        | -1.01E+04       | 1.01E+04        |
| L1   | —               | —               | —               | —               |
| L3   | -1.05E+04       | 1.05E+04        | -1.03E+04       | 1.03E+04        |
| L4   | -1.05E+04       | 1.05E+04        | -1.03E+04       | 1.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -8.16E+03       | 8.12E+03        | -7.96E+03       | 7.93E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-332. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

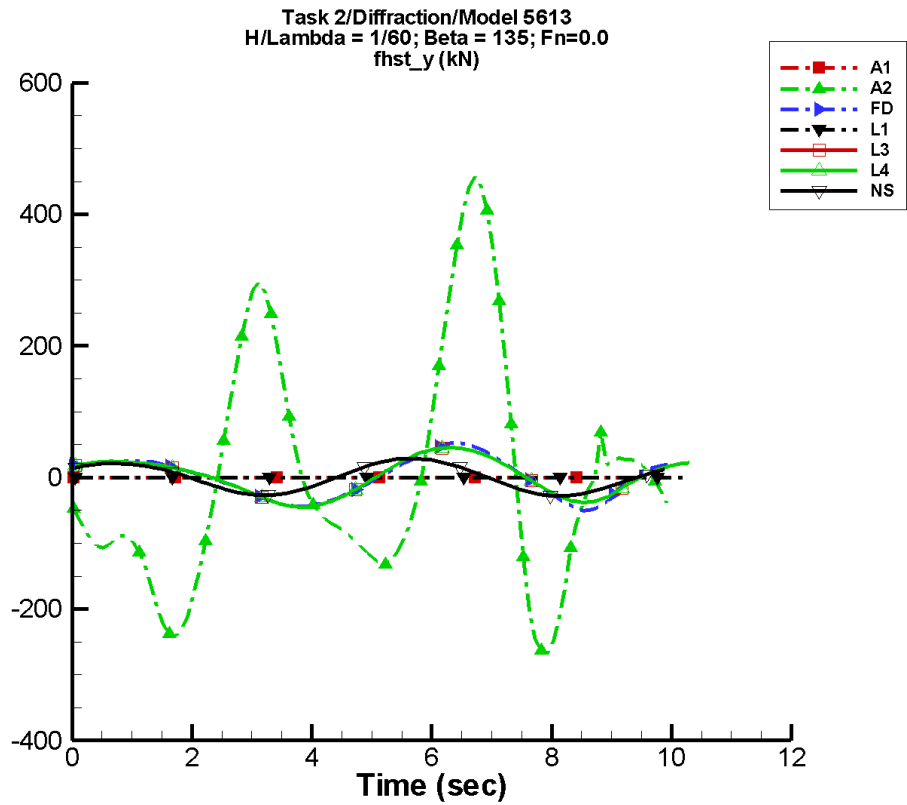
Table G-663. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -3.63         | 5.99E+03      | -102              | 1.47E+04      | 162               |
| FD   | 182.          | 5.91E+03      | -104              | 1.49E+04      | 168               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -76.9         | 5.84E+03      | -96               | 1.48E+04      | 171               |
| L4   | -76.9         | 5.84E+03      | -96               | 1.48E+04      | 171               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-664. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.27E+04       | 2.24E+04        | -2.16E+04       | 2.15E+04        |
| FD   | -2.27E+04       | 2.27E+04        | -2.17E+04       | 2.17E+04        |
| L1   | —               | —               | —               | —               |
| L3   | -2.26E+04       | 2.26E+04        | -2.22E+04       | 2.22E+04        |
| L4   | -2.26E+04       | 2.26E+04        | -2.22E+04       | 2.22E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-333. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-665. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

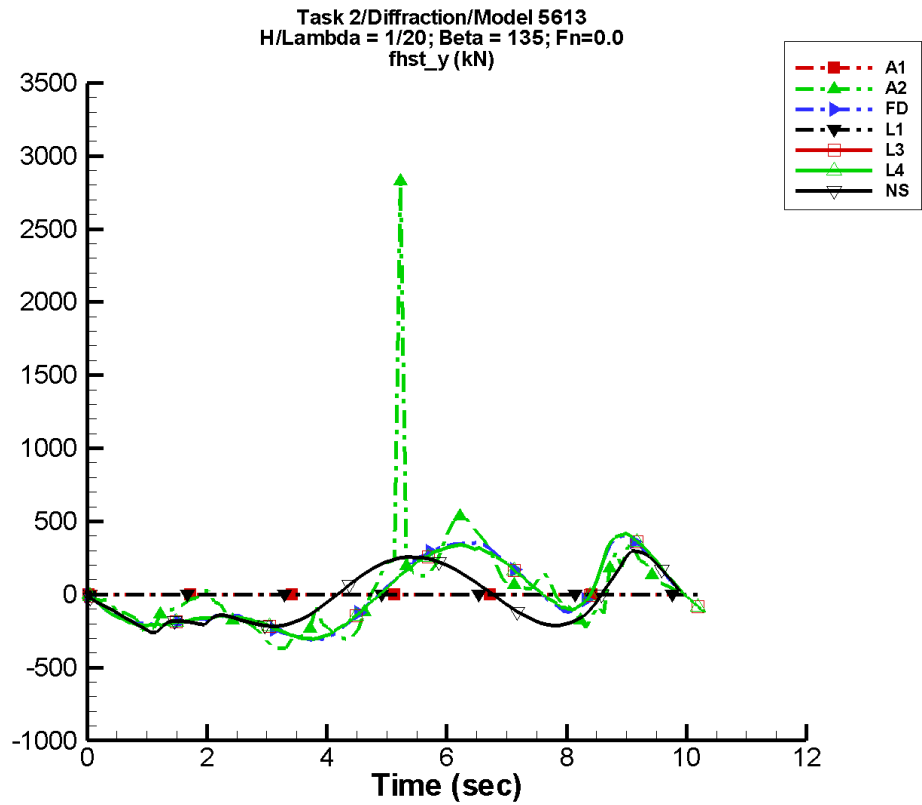
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -6.73         | 94.8          | -132              | 43.2          | -111              |
| FD   | 0.201         | 9.86          | 158               | 36.7          | -15               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -0.307        | 9.12          | 162               | 36.0          | -5                |
| L4   | -0.307        | 9.12          | 162               | 36.0          | -5                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -0.469        | 2.40          | -103              | 26.0          | 38                |

Table G-666. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -268.           | 457.            | -214.           | 393.            |
| FD   | -50.4           | 52.5            | -44.2           | 48.8            |
| L1   | —               | —               | —               | —               |
| L3   | -44.7           | 45.4            | -44.1           | 44.6            |
| L4   | -44.7           | 45.4            | -44.1           | 44.6            |
| NF   | —               | —               | —               | —               |
| NS   | -27.8           | 28.8            | -26.7           | 27.7            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-334. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

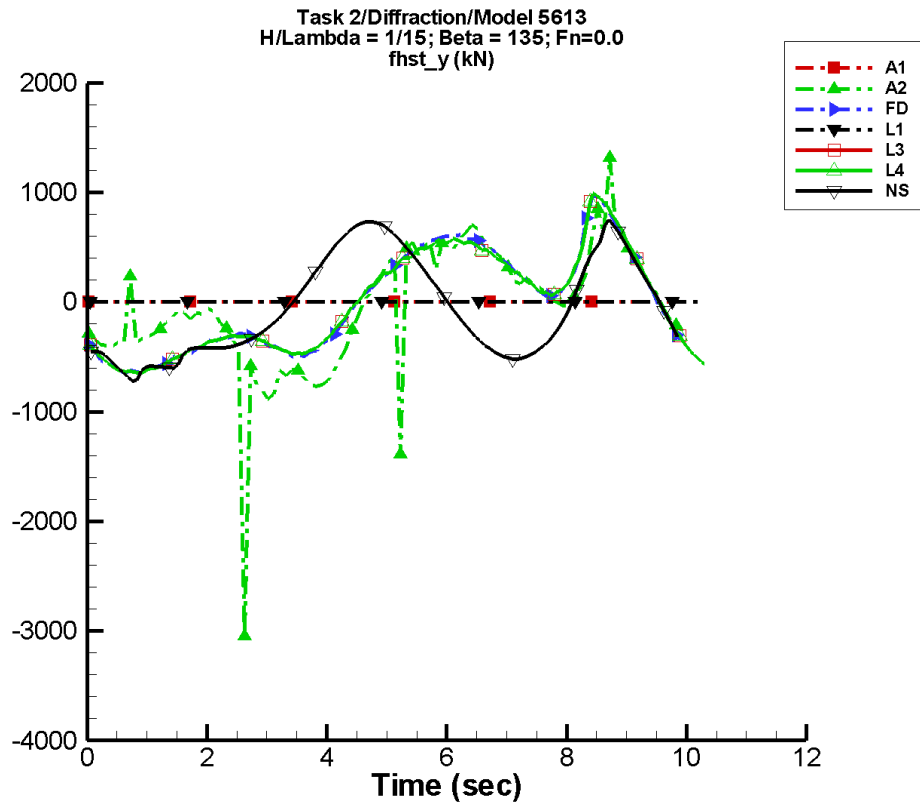
Table G-667. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 16.8          | 229.          | -159              | 151.          | 22                |
| FD   | -9.52         | 234.          | -180              | 84.2          | 7                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -0.987        | 233.          | 177               | 75.2          | 39                |
| L4   | -0.987        | 233.          | 177               | 75.2          | 39                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -31.6         | 131.          | -139              | 139.          | 94                |

Table G-668. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -367.           | 2.83E+03        | -320.           | 518.            |
| FD   | -311.           | 401.            | -295.           | 342.            |
| L1   | —               | —               | —               | —               |
| L3   | -304.           | 415.            | -298.           | 393.            |
| L4   | -304.           | 415.            | -298.           | 393.            |
| NF   | —               | —               | —               | —               |
| NS   | -259.           | 298.            | -218.           | 246.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-335. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

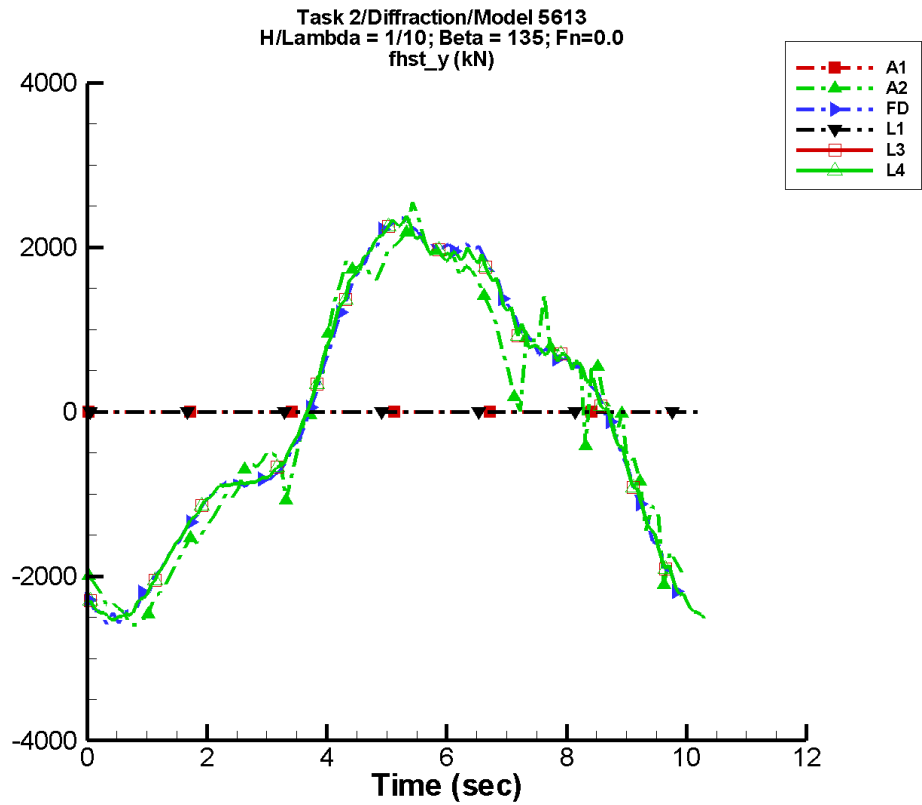
Table G-669. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -52.1         | 510.          | 177               | 165.          | -3                |
| FD   | -25.3         | 534.          | -165              | 1.51          | 96                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 3.15          | 538.          | -168              | 74.7          | 155               |
| L4   | 3.15          | 538.          | -168              | 74.7          | 155               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -58.8         | 309.          | -106              | 427.          | 145               |

Table G-670. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -3.05E+03       | 1.31E+03        | -939.           | 672.            |
| FD   | -652.           | 968.            | -622.           | 759.            |
| L1   | —               | —               | —               | —               |
| L3   | -653.           | 993.            | -638.           | 883.            |
| L4   | -653.           | 993.            | -638.           | 883.            |
| NF   | —               | —               | —               | —               |
| NS   | -722.           | 756.            | -647.           | 711.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-336. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

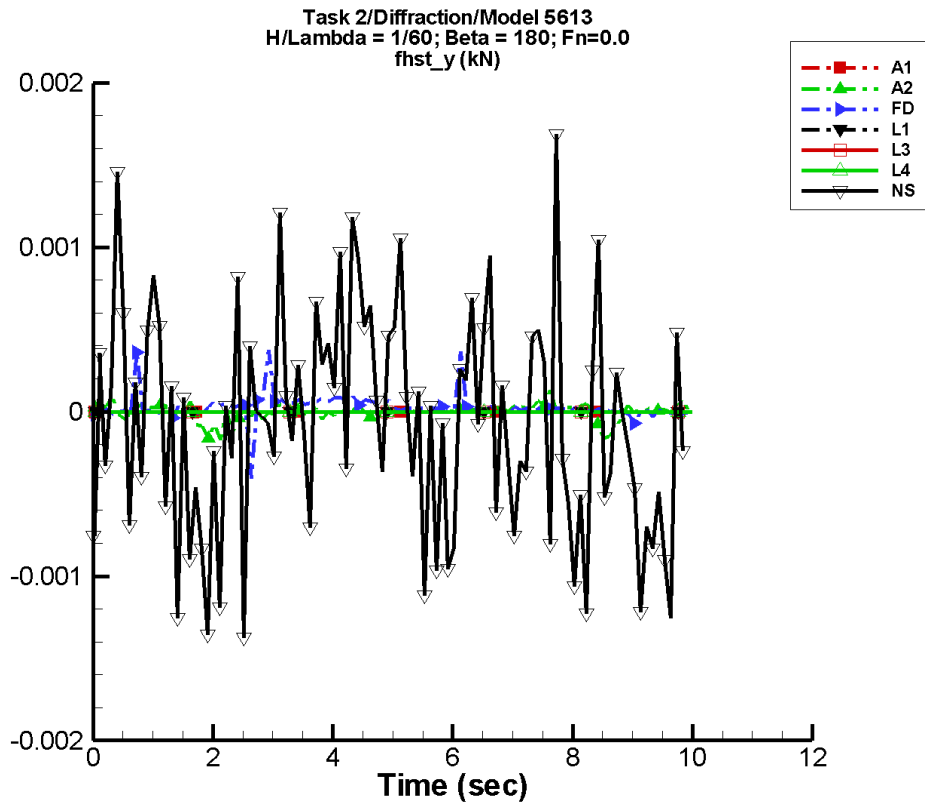
Table G-671. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -58.0         | 2.06E+03      | -125              | 174.          | 168               |
| FD   | -29.9         | 2.15E+03      | -128              | 90.6          | -30               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 8.71          | 2.11E+03      | -125              | 32.6          | -154              |
| L4   | 8.71          | 2.11E+03      | -125              | 32.6          | -154              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-672. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.60E+03       | 2.55E+03        | -2.47E+03       | 2.13E+03        |
| FD   | -2.58E+03       | 2.36E+03        | -2.46E+03       | 2.24E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.53E+03       | 2.38E+03        | -2.49E+03       | 2.28E+03        |
| L4   | -2.53E+03       | 2.38E+03        | -2.49E+03       | 2.28E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-337. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-673. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

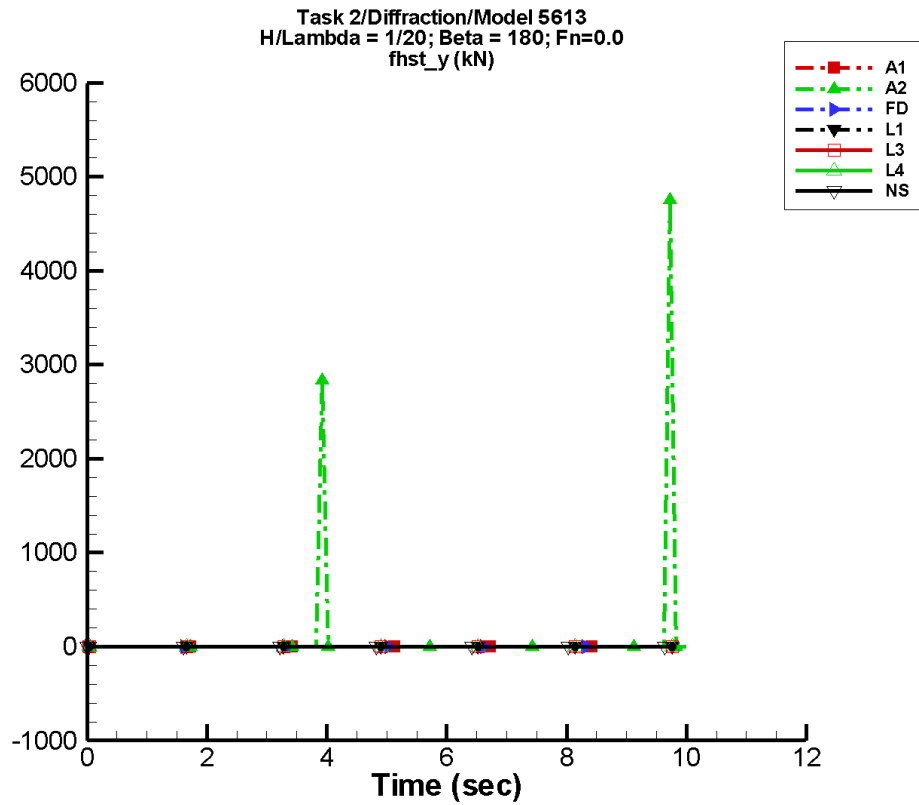
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -4.02E-06     | 1.93E-05      | 178               | 1.42E-05      | 65                |
| FD   | 2.21E-05      | 2.49E-05      | -60               | 7.56E-06      | -124              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -7.78E-05     | 2.21E-04      | -78               | 1.16E-04      | 122               |

Table G-674. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.71E-04       | 1.32E-04        | -1.13E-04       | 4.57E-05        |
| FD   | -4.07E-04       | 3.74E-04        | -1.16E-05       | 8.12E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.50E-03       | 1.69E-03        | -6.90E-04       | 5.07E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-338. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

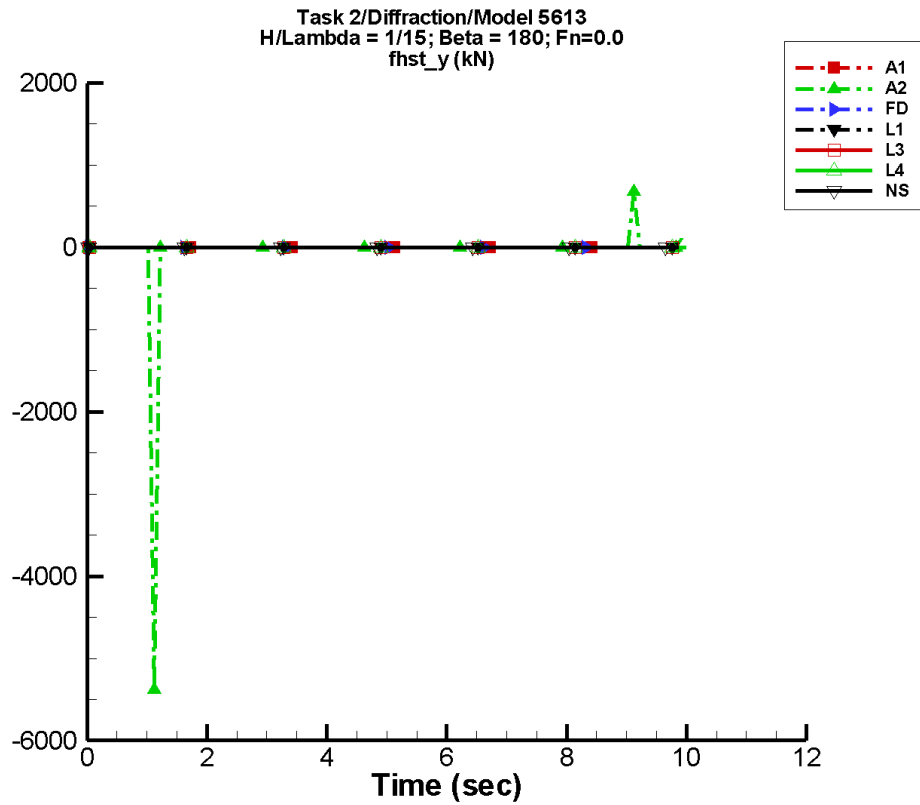
Table G-675. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 80.7          | 61.9          | 32                | 87.1          | 132               |
| FD   | 3.12E-03      | 7.53E-04      | 74                | 4.42E-03      | -99               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.11E-04     | 2.94E-04      | 108               | 5.34E-04      | -17               |

Table G-676. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -3.23E-04       | 4.75E+03        | -74.1           | 627.            |
| FD   | -1.49E-02       | 1.09E-02        | -8.31E-04       | 9.95E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.54E-03       | 2.41E-03        | -1.32E-03       | 8.48E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-339. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

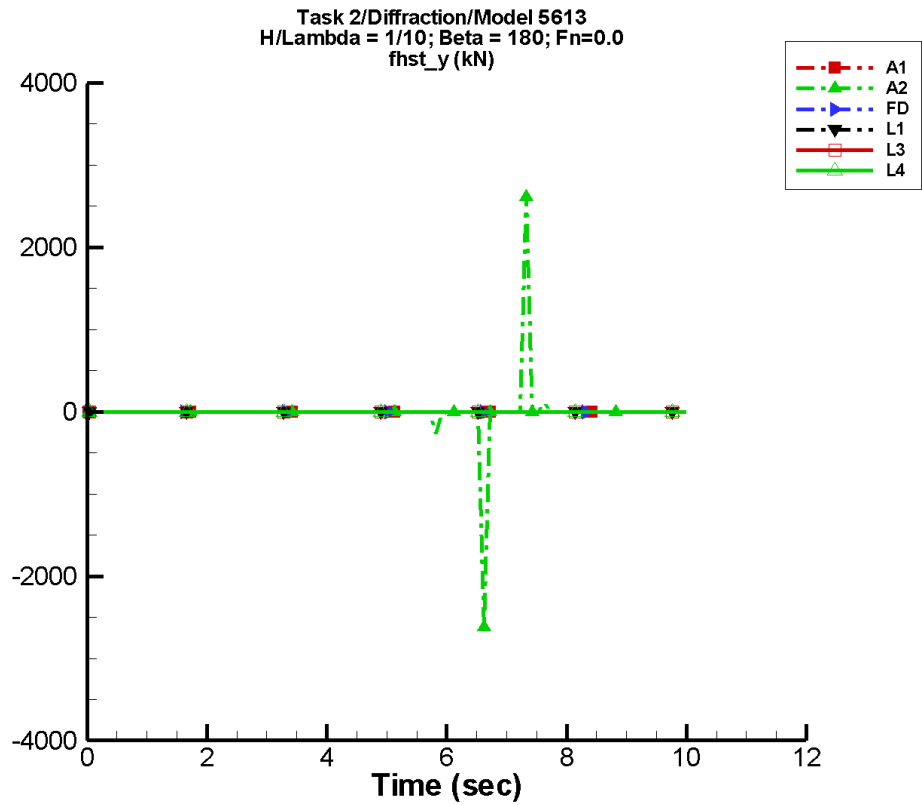
Table G-677. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -19.5         | 53.7          | -150              | 78.4          | 173               |
| FD   | 3.29E-03      | 2.41E-03      | -13               | 2.74E-03      | -116              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.45E-04     | 2.48E-04      | -77               | 4.72E-04      | 95                |

Table G-678. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -5.38E+03       | 676.            | -718.           | 89.8            |
| FD   | -2.42E-03       | 1.63E-02        | -7.47E-04       | 1.12E-02        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.69E-03       | 3.08E-03        | -1.46E-03       | 8.14E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-340. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

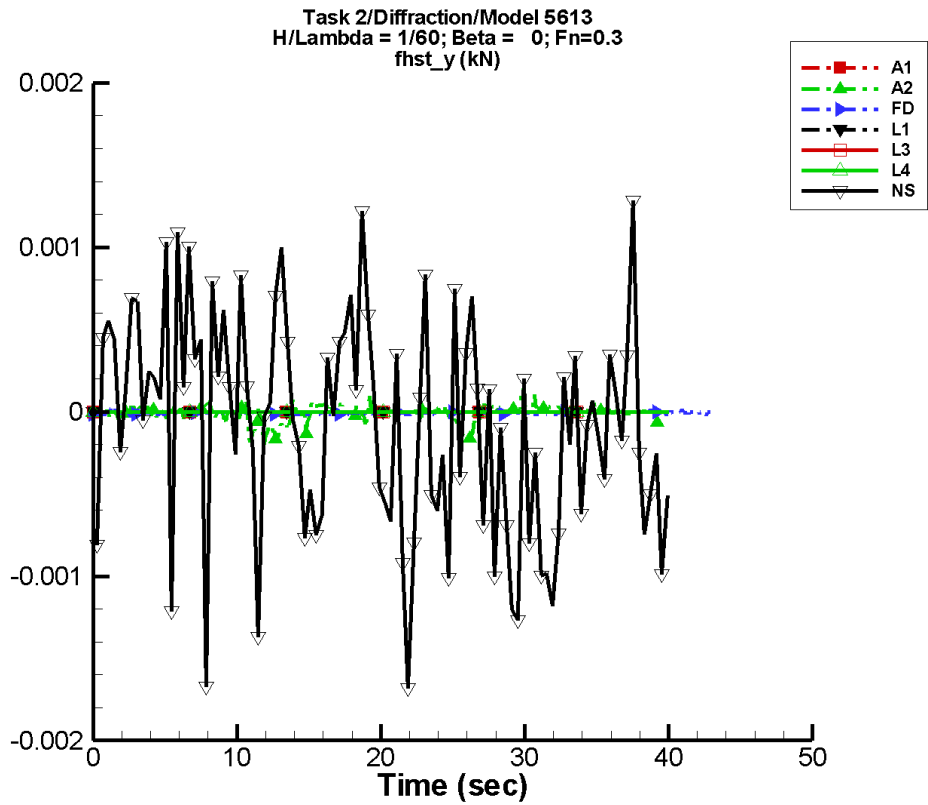
Table G-679. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 13.5          | 57.7          | 80                | 17.8          | -173              |
| FD   | 1.43E-03      | 4.86E-04      | 20                | 1.21E-03      | 74                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-680. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.62E+03       | 2.61E+03        | -359.           | 368.            |
| FD   | -1.99E-02       | 1.62E-02        | -3.32E-03       | 6.74E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-341. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-681. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

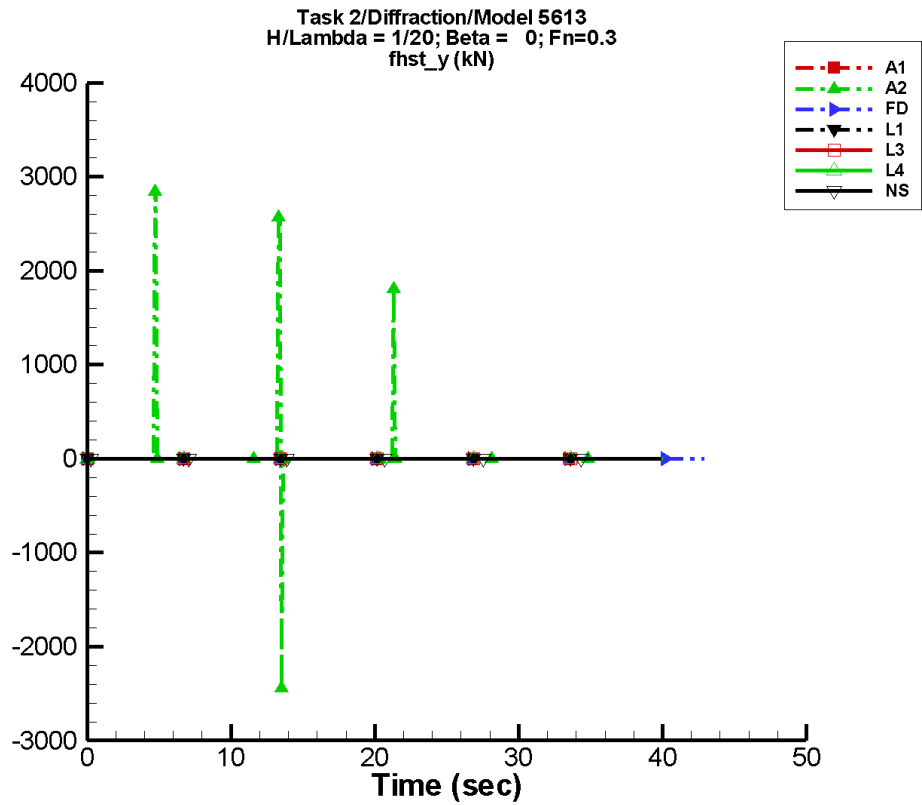
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -4.45E-06     | 1.21E-05      | 139               | 4.25E-06      | 78                |
| FD   | -5.71E-06     | 2.48E-06      | 105               | 8.72E-07      | -149              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.02E-04     | 2.61E-04      | 18                | 1.46E-04      | 67                |

Table G-682. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.97E-04       | 1.41E-04        | -1.50E-04       | 5.20E-05        |
| FD   | -3.19E-05       | 1.50E-05        | -1.63E-05       | 1.36E-06        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.68E-03       | 1.28E-03        | -7.49E-04       | 4.12E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-342. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

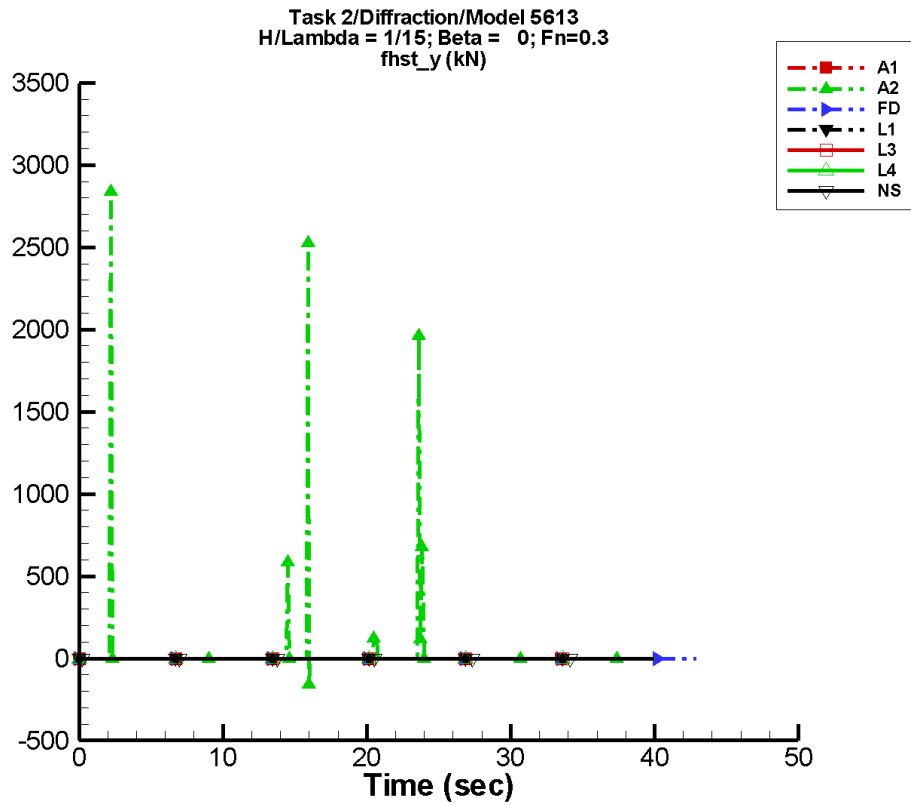
Table G-683. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 23.9          | 28.6          | 13                | 27.8          | 12                |
| FD   | -4.32E-07     | 7.90E-06      | 174               | 2.67E-05      | 179               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.28E-04     | 2.31E-04      | -83               | 4.40E-04      | -158              |

Table G-684. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.44E+03       | 2.84E+03        | -61.1           | 741.            |
| FD   | -7.09E-05       | 7.75E-05        | -4.02E-05       | 6.10E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -4.26E-03       | 2.65E-03        | -1.54E-03       | 4.02E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-343. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

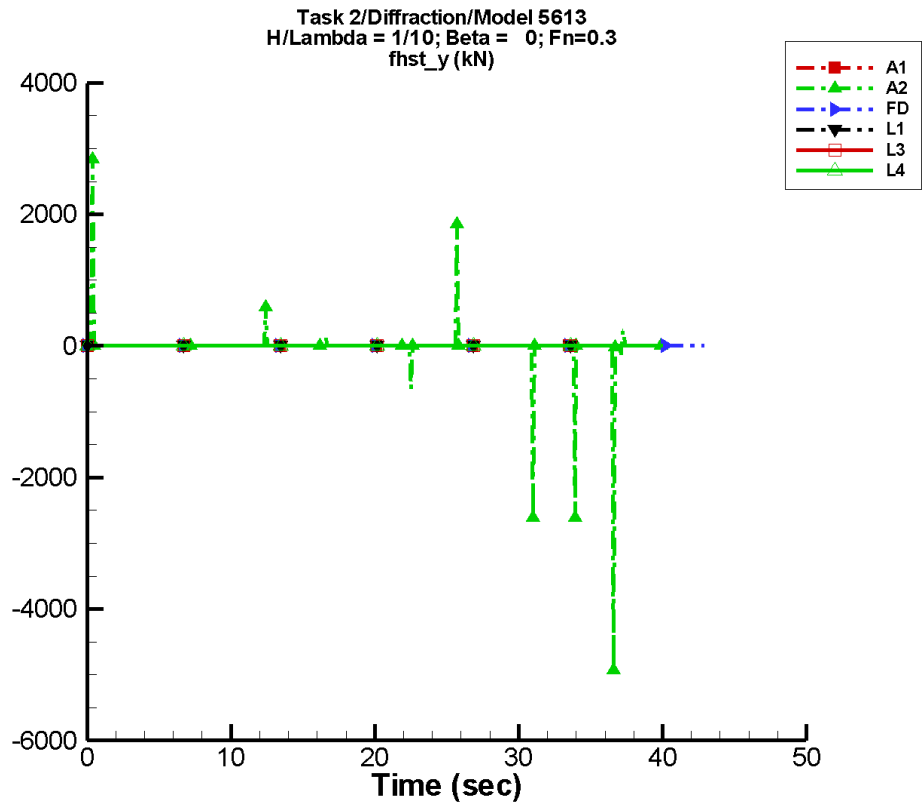
Table G-685. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 24.2          | 11.7          | -73               | 29.6          | 69                |
| FD   | 3.56E-06      | 1.10E-05      | 102               | 2.04E-05      | 163               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.27E-04     | 4.41E-04      | 98                | 5.19E-04      | 88                |

Table G-686. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -159.           | 2.84E+03        | -32.4           | 419.            |
| FD   | -9.05E-05       | 8.14E-05        | -3.34E-05       | 5.00E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.70E-03       | 2.94E-03        | -1.31E-03       | 9.25E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-344. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

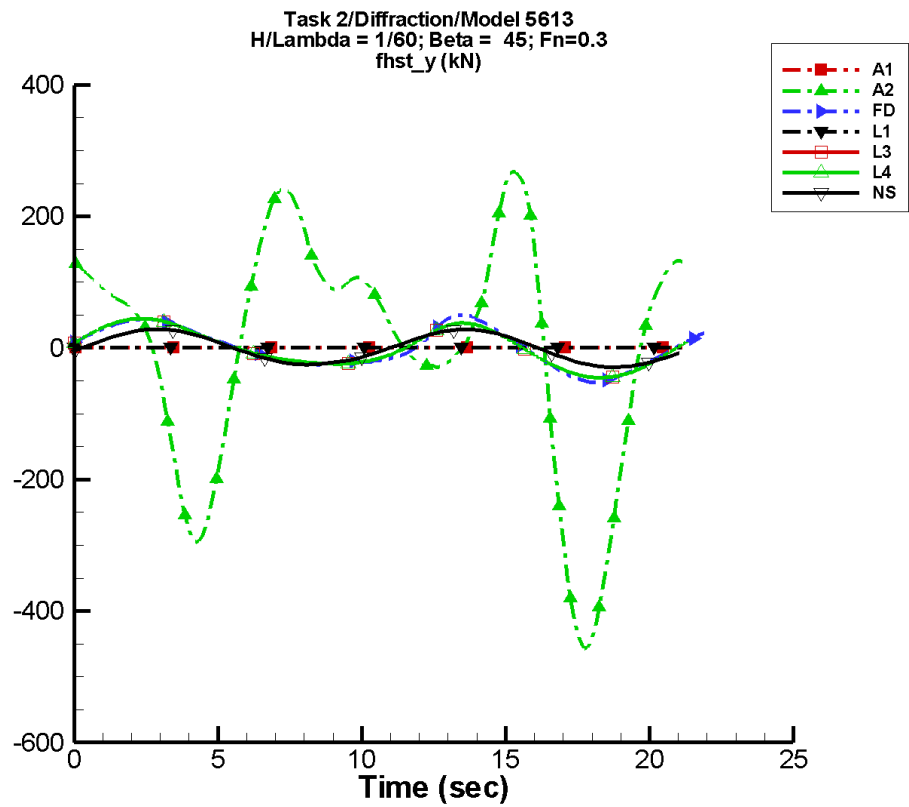
Table G-687. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -15.7         | 36.7          | -39               | 40.4          | 23                |
| FD   | 1.40E-06      | 2.17E-05      | -158              | 2.51E-05      | 175               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-688. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -4.93E+03       | 2.84E+03        | -661.           | 379.            |
| FD   | -1.39E-04       | 1.16E-04        | -9.62E-05       | 7.08E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-345. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-689. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

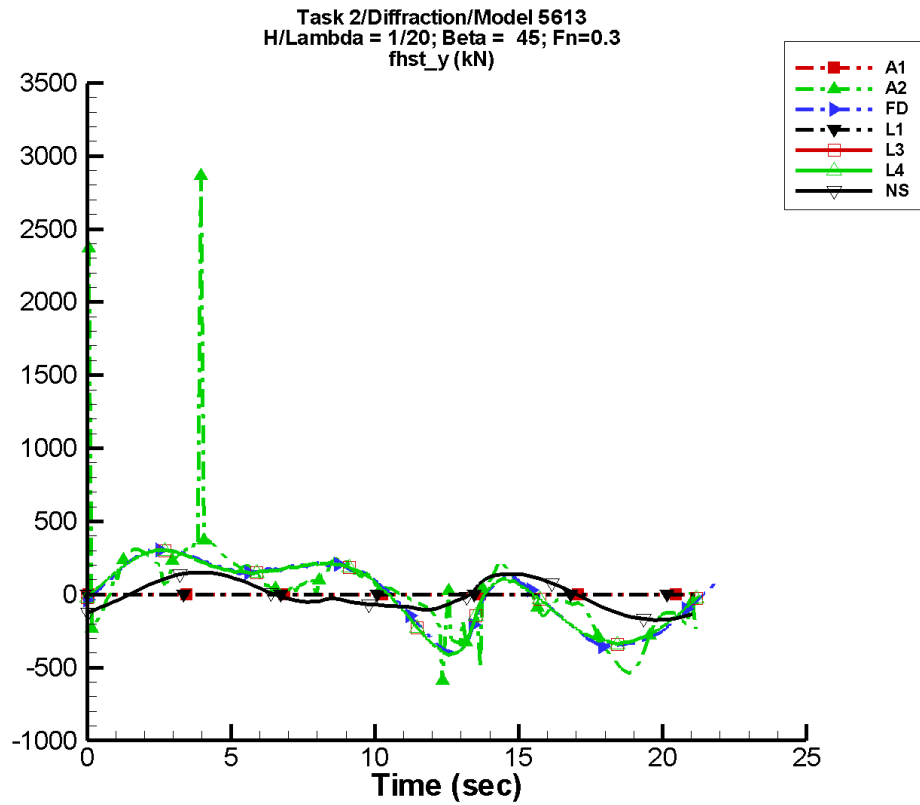
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -4.02         | 70.5          | -78               | 95.1          | 86                |
| FD   | 0.198         | 8.56          | 23                | 36.4          | 9                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -0.167        | 8.67          | 24                | 35.8          | 2                 |
| L4   | -0.167        | 8.67          | 24                | 35.8          | 2                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -0.232        | 0.807         | -12               | 27.7          | -8                |

Table G-690. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -457.           | 268.            | -441.           | 258.            |
| FD   | -52.5           | 50.4            | -51.4           | 48.9            |
| L1   | —               | —               | —               | —               |
| L3   | -45.4           | 44.7            | -45.1           | 44.6            |
| L4   | -45.4           | 44.7            | -45.1           | 44.6            |
| NF   | —               | —               | —               | —               |
| NS   | -29.2           | 28.2            | -28.1           | 27.1            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-346. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

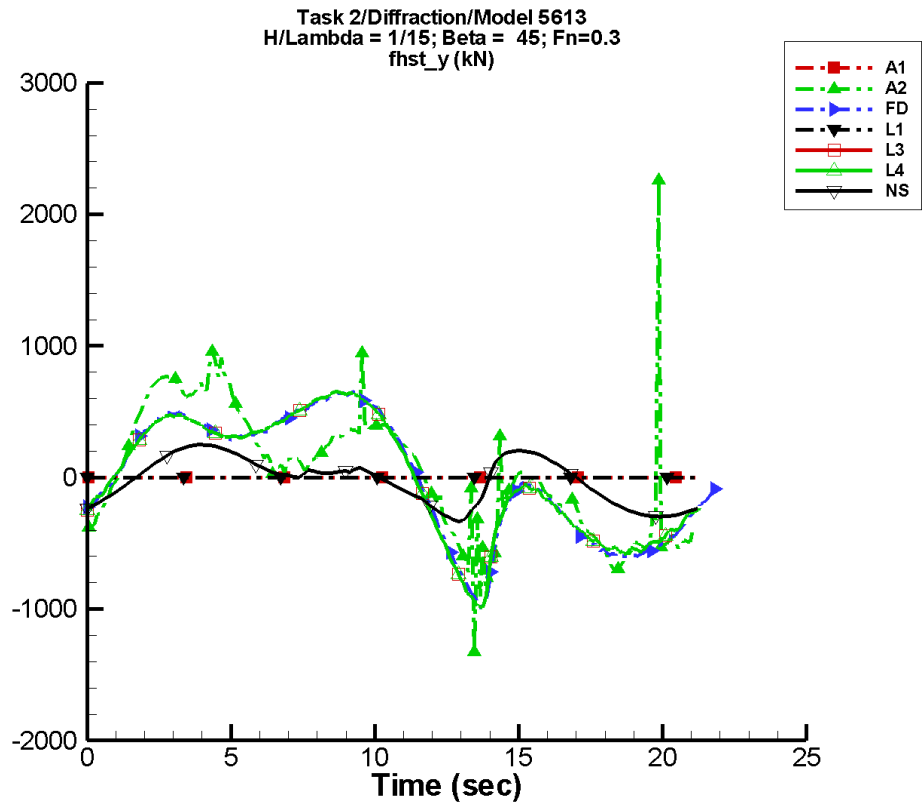
Table G-691. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 38.1          | 236.          | 5                 | 143.          | -20               |
| FD   | 0.846         | 227.          | 6                 | 77.2          | -13               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 0.948         | 227.          | 4                 | 69.6          | -26               |
| L4   | 0.948         | 227.          | 4                 | 69.6          | -26               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -8.66         | 31.4          | -14               | 128.          | -52               |

Table G-692. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -590.           | 2.87E+03        | -504.           | 1.26E+03        |
| FD   | -401.           | 311.            | -387.           | 303.            |
| L1   | —               | —               | —               | —               |
| L3   | -416.           | 303.            | -407.           | 302.            |
| L4   | -416.           | 303.            | -407.           | 302.            |
| NF   | —               | —               | —               | —               |
| NS   | -174.           | 151.            | -168.           | 144.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-347. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

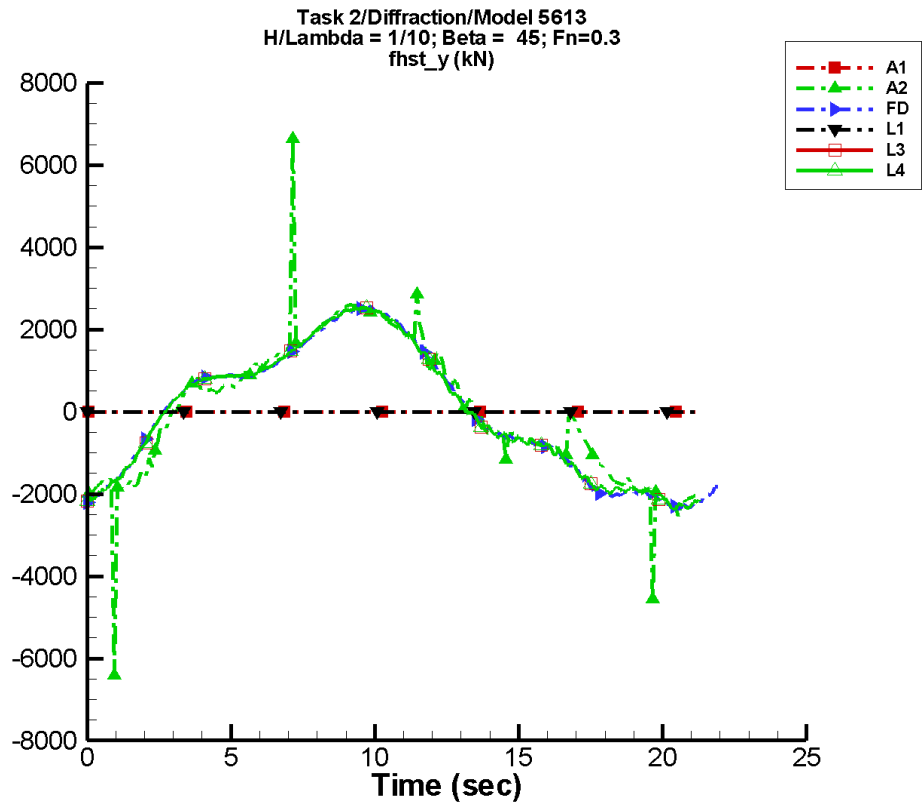
Table G-693. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 46.1          | 500.          | -6                | 193.          | -29               |
| FD   | -2.37         | 531.          | -10               | 21.7          | 132               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 3.73          | 535.          | -13               | 40.6          | 178               |
| L4   | 3.73          | 535.          | -13               | 40.6          | 178               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -21.0         | 111.          | -13               | 166.          | -70               |

Table G-694. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.32E+03       | 2.26E+03        | -693.           | 821.            |
| FD   | -987.           | 651.            | -908.           | 637.            |
| L1   | —               | —               | —               | —               |
| L3   | -990.           | 653.            | -962.           | 643.            |
| L4   | -990.           | 653.            | -962.           | 643.            |
| NF   | —               | —               | —               | —               |
| NS   | -332.           | 249.            | -299.           | 241.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-348. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

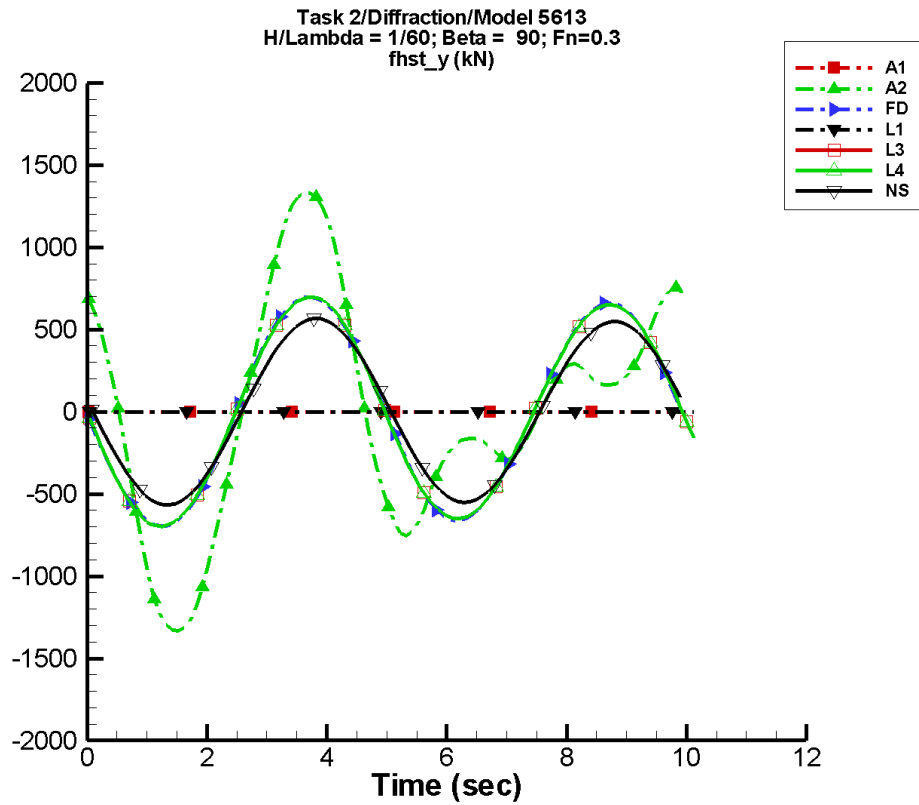
Table G-695. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 66.9          | 2.16E+03      | -61               | 236.          | -147              |
| FD   | -19.4         | 2.12E+03      | -53               | 123.          | 23                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 6.14          | 2.14E+03      | -57               | 32.6          | -33               |
| L4   | 6.14          | 2.14E+03      | -57               | 32.6          | -33               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-696. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -6.41E+03       | 6.63E+03        | -2.35E+03       | 2.54E+03        |
| FD   | -2.36E+03       | 2.58E+03        | -2.32E+03       | 2.51E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.39E+03       | 2.53E+03        | -2.31E+03       | 2.51E+03        |
| L4   | -2.39E+03       | 2.53E+03        | -2.31E+03       | 2.51E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-349. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-697. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

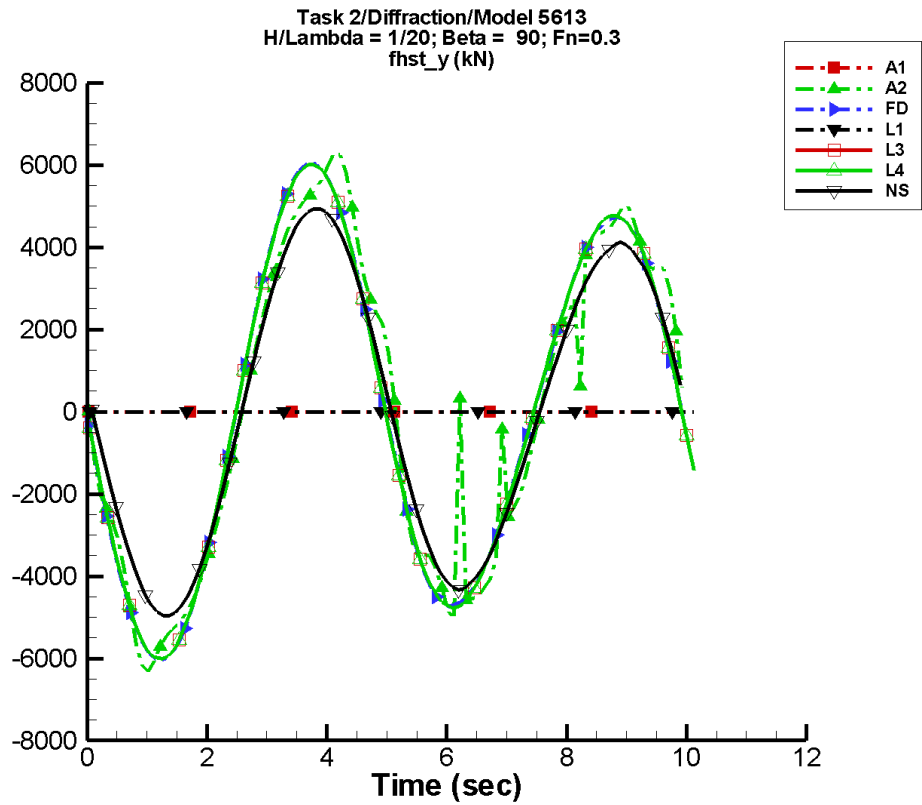
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -2.90         | 78.1          | -141              | 817.          | 158               |
| FD   | 0.415         | 17.6          | -101              | 680.          | 165               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -0.416        | 18.2          | -96               | 677.          | 172               |
| L4   | -0.416        | 18.2          | -96               | 677.          | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -0.587        | 8.02          | -93               | 560.          | 172               |

Table G-698. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.33E+03       | 1.33E+03        | -1.26E+03       | 1.26E+03        |
| FD   | -696.           | 697.            | -669.           | 668.            |
| L1   | —               | —               | —               | —               |
| L3   | -697.           | 697.            | -688.           | 687.            |
| L4   | -697.           | 697.            | -688.           | 687.            |
| NF   | —               | —               | —               | —               |
| NS   | -567.           | 567.            | -546.           | 544.            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-350. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

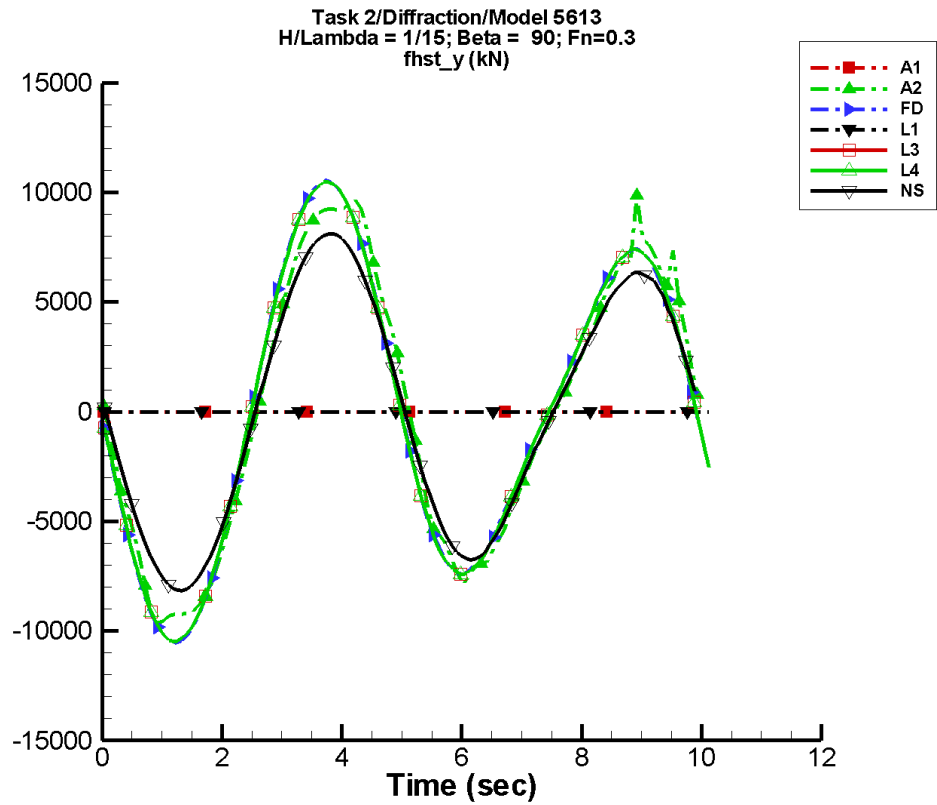
Table G-699. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 32.3          | 705.          | -103              | 5.23E+03      | 165               |
| FD   | 14.4          | 534.          | -102              | 5.42E+03      | 165               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -4.45         | 509.          | -96               | 5.42E+03      | 172               |
| L4   | -4.45         | 509.          | -96               | 5.42E+03      | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -38.9         | 311.          | -92               | 4.58E+03      | 172               |

Table G-700. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -6.33E+03       | 6.30E+03        | -5.69E+03       | 5.66E+03        |
| FD   | -6.05E+03       | 6.04E+03        | -5.81E+03       | 5.81E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -6.01E+03       | 6.01E+03        | -5.93E+03       | 5.93E+03        |
| L4   | -6.01E+03       | 6.01E+03        | -5.93E+03       | 5.93E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -4.96E+03       | 4.94E+03        | -4.77E+03       | 4.74E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-351. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

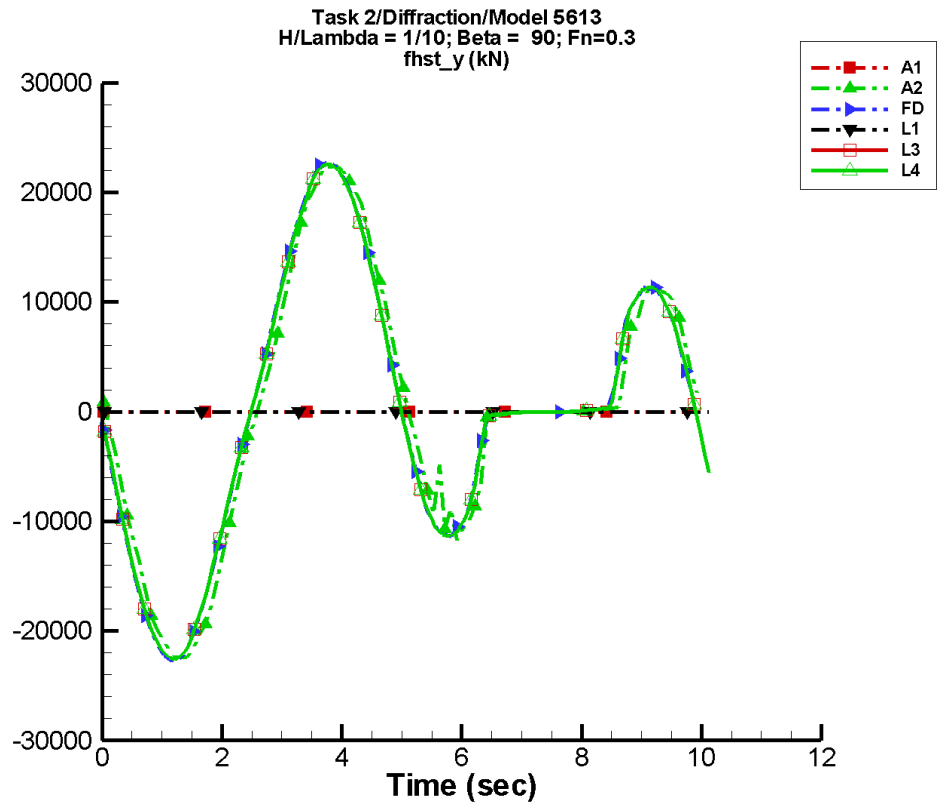
Table G-701. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 19.4          | 1.15E+03      | -102              | 8.62E+03      | 164               |
| FD   | 42.3          | 1.38E+03      | -103              | 8.88E+03      | 166               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -10.2         | 1.34E+03      | -96               | 8.88E+03      | 172               |
| L4   | -10.2         | 1.34E+03      | -96               | 8.88E+03      | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -88.4         | 707.          | -90               | 7.26E+03      | 173               |

Table G-702. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -9.64E+03       | 9.86E+03        | -9.31E+03       | 9.29E+03        |
| FD   | -1.05E+04       | 1.05E+04        | -1.01E+04       | 1.01E+04        |
| L1   | —               | —               | —               | —               |
| L3   | -1.05E+04       | 1.05E+04        | -1.03E+04       | 1.03E+04        |
| L4   | -1.05E+04       | 1.05E+04        | -1.03E+04       | 1.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -8.16E+03       | 8.12E+03        | -7.96E+03       | 7.93E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-352. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

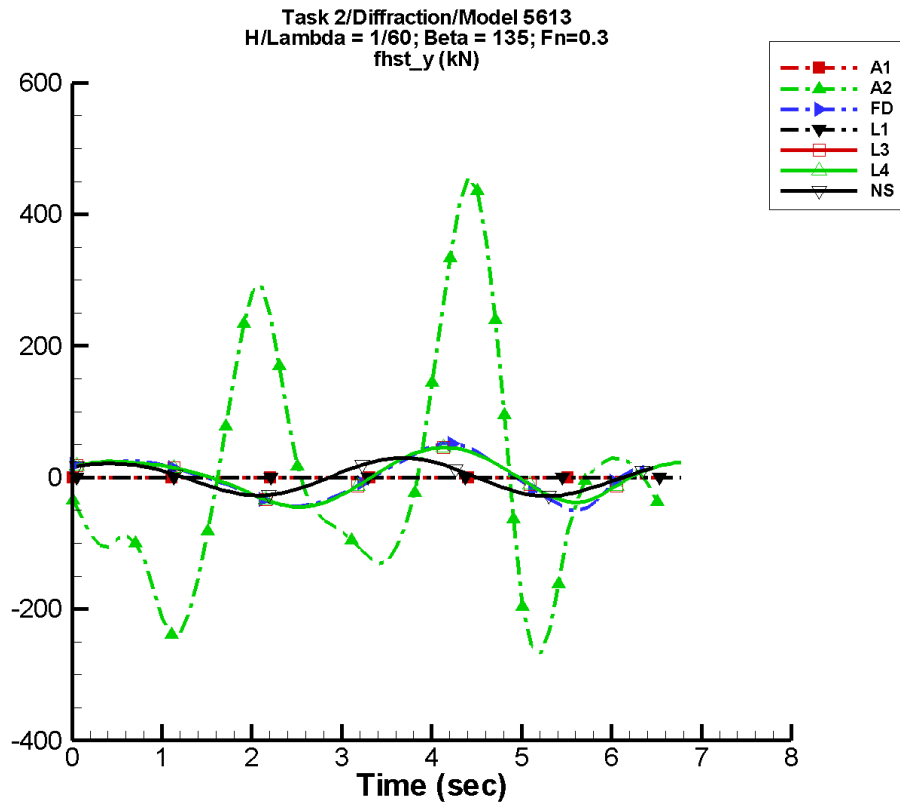
Table G-703. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -3.63         | 5.99E+03      | -102              | 1.47E+04      | 162               |
| FD   | 182.          | 5.91E+03      | -104              | 1.49E+04      | 168               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -76.9         | 5.84E+03      | -96               | 1.48E+04      | 171               |
| L4   | -76.9         | 5.84E+03      | -96               | 1.48E+04      | 171               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-704. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.27E+04       | 2.24E+04        | -2.16E+04       | 2.15E+04        |
| FD   | -2.27E+04       | 2.27E+04        | -2.17E+04       | 2.17E+04        |
| L1   | —               | —               | —               | —               |
| L3   | -2.26E+04       | 2.26E+04        | -2.22E+04       | 2.22E+04        |
| L4   | -2.26E+04       | 2.26E+04        | -2.22E+04       | 2.22E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-353. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-705. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

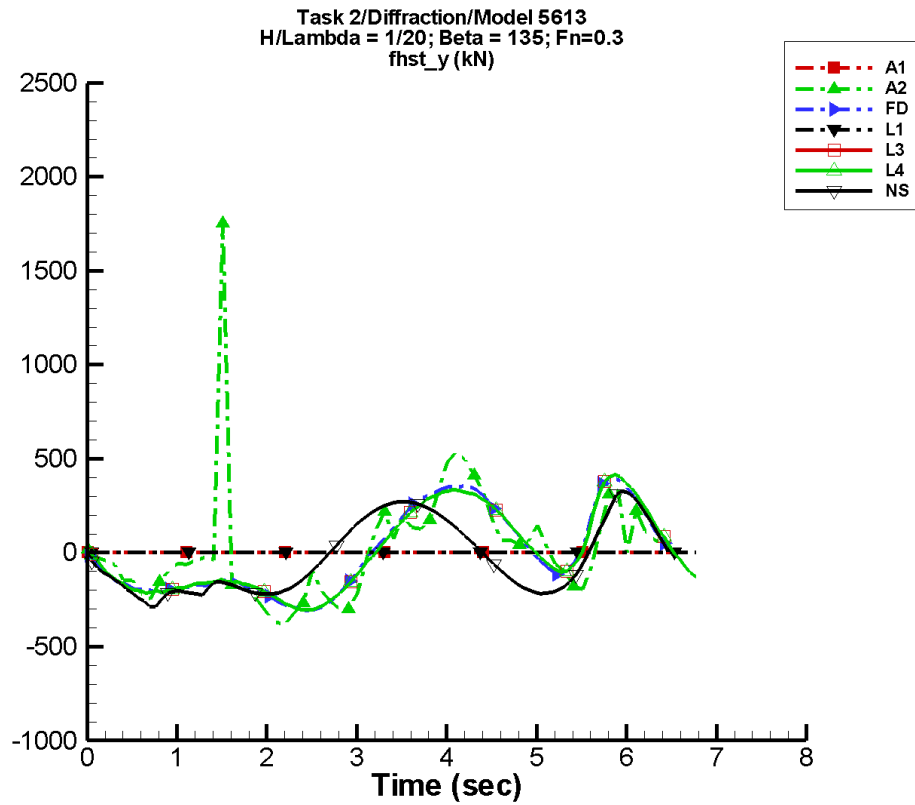
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -6.09         | 93.8          | -132              | 43.2          | -112              |
| FD   | -0.449        | 9.76          | 168               | 36.4          | 7                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | 0.217         | 8.99          | 162               | 34.1          | -4                |
| L4   | 0.217         | 8.99          | 162               | 34.1          | -4                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -0.517        | 2.63          | -104              | 26.3          | 41                |

Table G-706. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -268.           | 456.            | -181.           | 314.            |
| FD   | -49.5           | 52.1            | -39.2           | 44.6            |
| L1   | —               | —               | —               | —               |
| L3   | -44.6           | 45.4            | -43.2           | 43.8            |
| L4   | -44.6           | 45.4            | -43.2           | 43.8            |
| NF   | —               | —               | —               | —               |
| NS   | -28.3           | 29.6            | -27.1           | 28.4            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-354. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

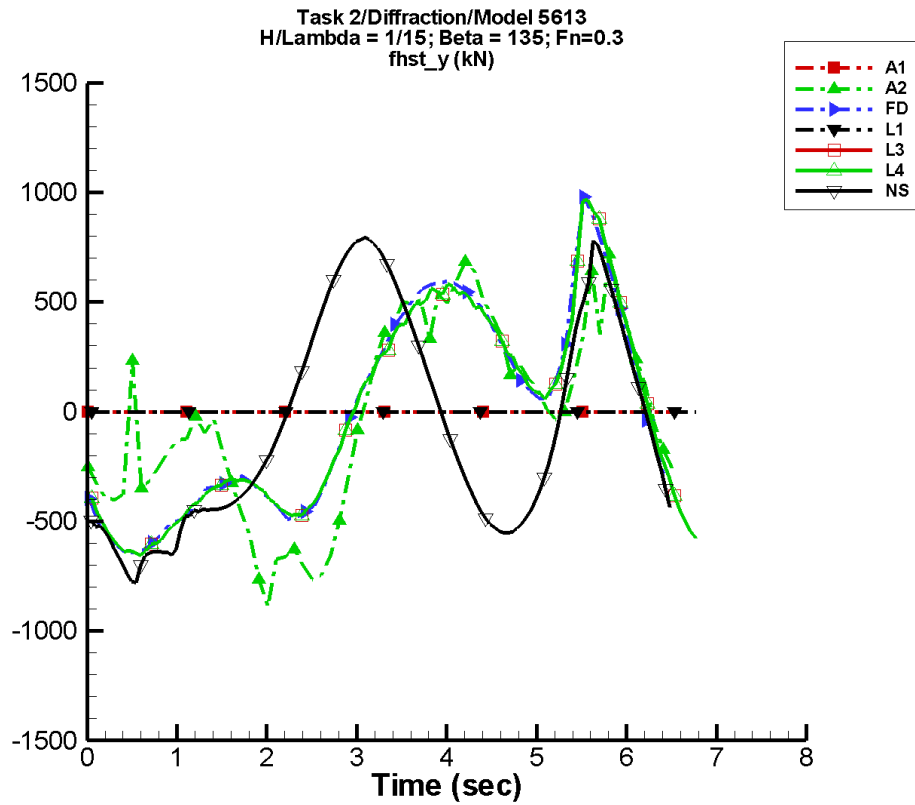
Table G-707. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 7.65          | 165.          | -171              | 119.          | -18               |
| FD   | -8.33         | 245.          | -173              | 64.2          | 44                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -4.55         | 229.          | -180              | 47.8          | 26                |
| L4   | -4.55         | 229.          | -180              | 47.8          | 26                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -33.4         | 142.          | -138              | 147.          | 101               |

Table G-708. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -379.           | 1.75E+03        | -310.           | 353.            |
| FD   | -308.           | 401.            | -276.           | 327.            |
| L1   | —               | —               | —               | —               |
| L3   | -303.           | 415.            | -299.           | 363.            |
| L4   | -303.           | 415.            | -299.           | 363.            |
| NF   | —               | —               | —               | —               |
| NS   | -287.           | 326.            | -245.           | 265.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-355. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

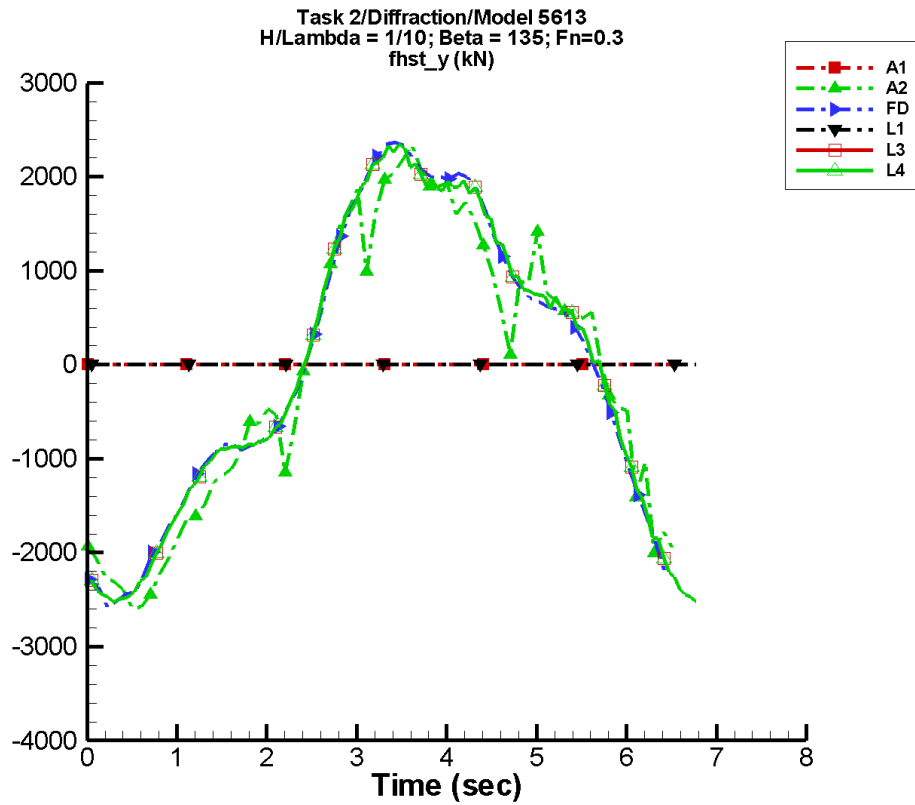
Table G-709. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -16.3         | 441.          | -177              | 195.          | -9                |
| FD   | -13.0         | 552.          | -158              | 64.2          | -157              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -11.6         | 537.          | -166              | 70.4          | -152              |
| L4   | -11.6         | 537.          | -166              | 70.4          | -152              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -64.3         | 345.          | -106              | 453.          | 147               |

Table G-710. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -889.           | 719.            | -727.           | 540.            |
| FD   | -644.           | 981.            | -592.           | 606.            |
| L1   | —               | —               | —               | —               |
| L3   | -656.           | 967.            | -628.           | 789.            |
| L4   | -656.           | 967.            | -628.           | 789.            |
| NF   | —               | —               | —               | —               |
| NS   | -779.           | 795.            | -706.           | 767.            |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-356. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

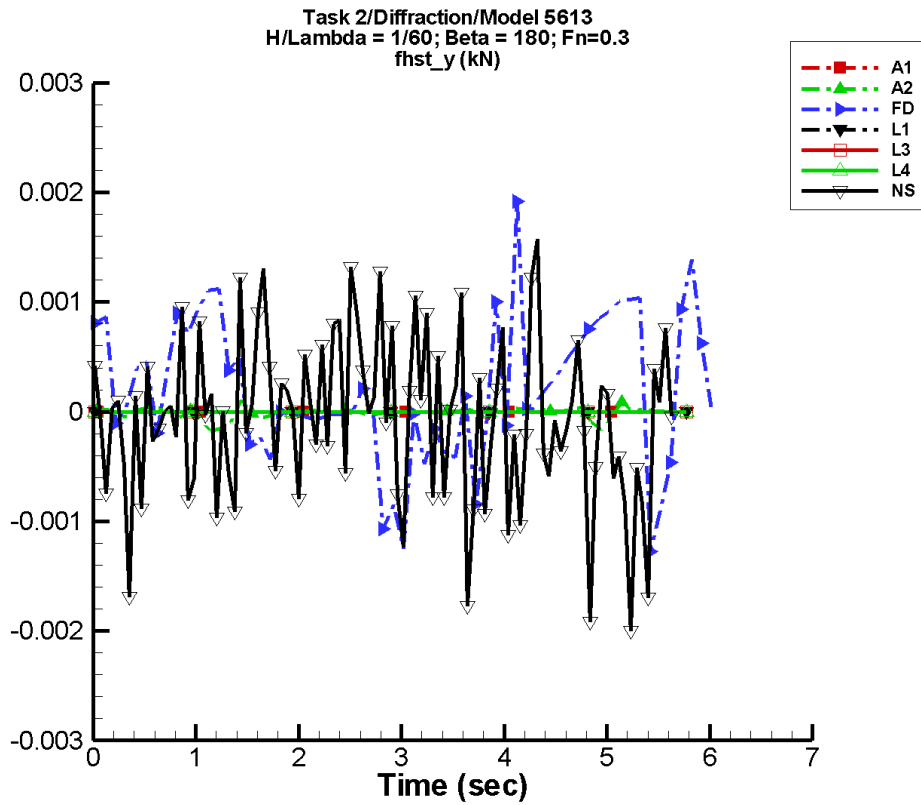
Table G-711. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -68.6         | 2.04E+03      | -127              | 181.          | -175              |
| FD   | -10.9         | 2.15E+03      | -119              | 108.          | -62               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | -27.8         | 2.12E+03      | -125              | 117.          | -66               |
| L4   | -27.8         | 2.12E+03      | -125              | 117.          | -66               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-712. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -2.59E+03       | 2.34E+03        | -2.38E+03       | 2.02E+03        |
| FD   | -2.58E+03       | 2.36E+03        | -2.40E+03       | 2.20E+03        |
| L1   | —               | —               | —               | —               |
| L3   | -2.53E+03       | 2.34E+03        | -2.46E+03       | 2.23E+03        |
| L4   | -2.53E+03       | 2.34E+03        | -2.46E+03       | 2.23E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-357. Time history of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-713. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

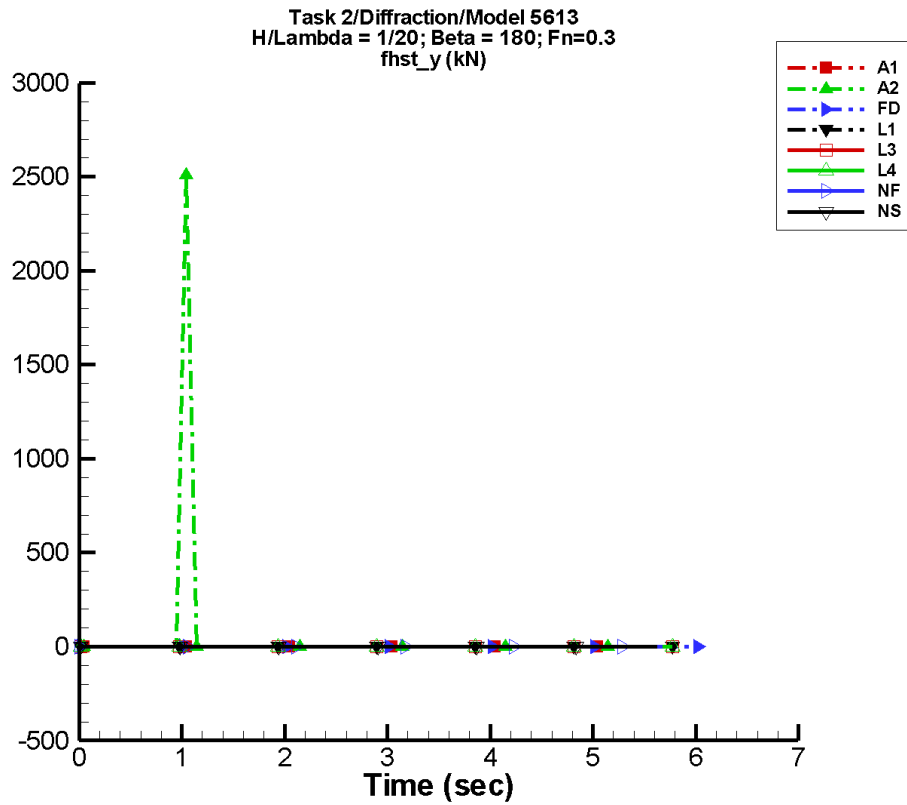
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | -8.16E-06     | 1.60E-05      | -176              | 1.36E-05      | 63                |
| FD   | 1.90E-04      | 4.48E-04      | 55                | 2.67E-04      | -173              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -7.16E-05     | 2.67E-04      | -66               | 8.67E-05      | 125               |

Table G-714. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.72E-04       | 1.10E-04        | -5.66E-05       | 1.99E-05        |
| FD   | -1.27E-03       | 1.92E-03        | -5.40E-04       | 6.75E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.00E-03       | 1.57E-03        | -7.39E-04       | 5.15E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-358. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

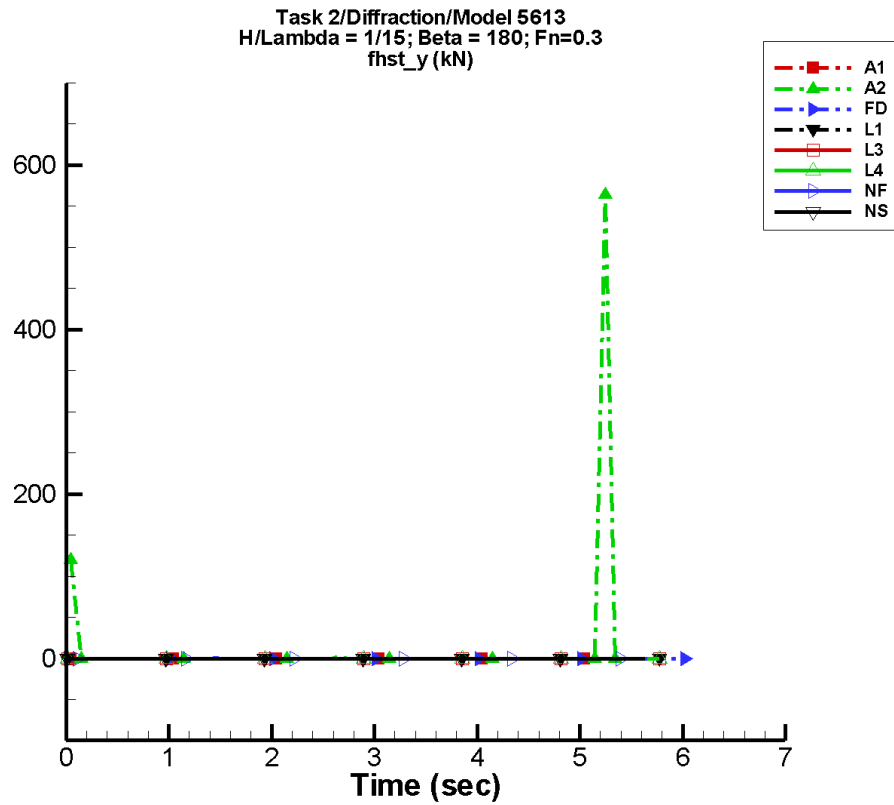
Table G-715. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 19.6          | 43.9          | 14                | 55.9          | -60               |
| FD   | 1.47E-04      | 3.86E-04      | -142              | 1.18E-03      | 40                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.48E-04     | 1.99E-04      | 12                | 3.48E-04      | -3                |

Table G-716. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -3.46E-04       | 2.51E+03        | -28.7           | 335.            |
| FD   | -1.23E-02       | 1.53E-02        | -2.46E-03       | 3.48E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.08E-03       | 2.57E-03        | -1.51E-03       | 3.19E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-359. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

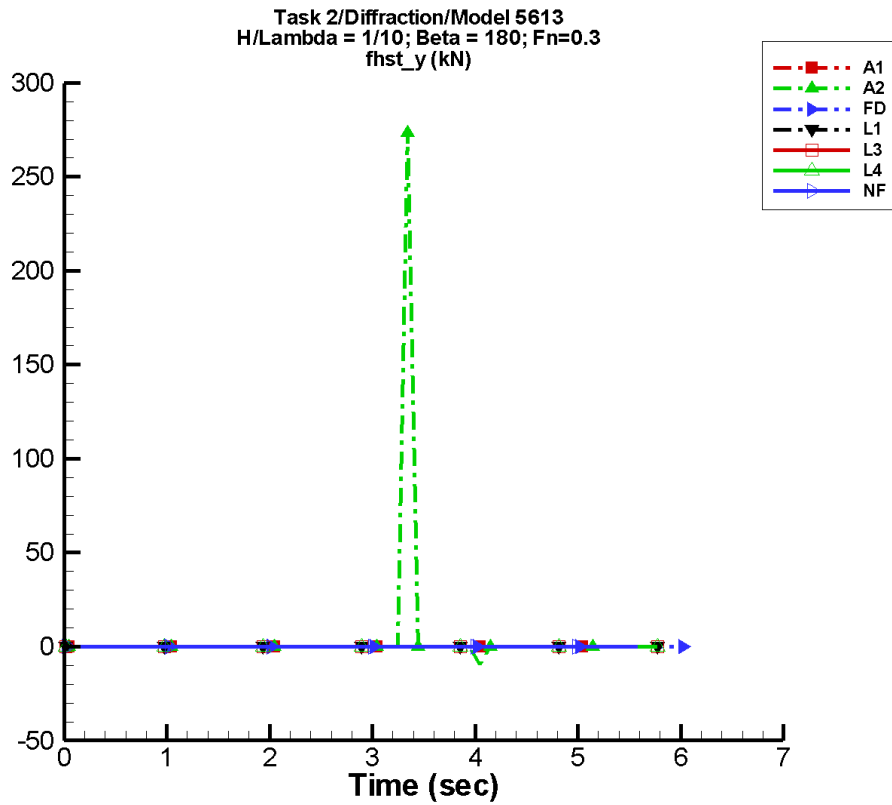
Table G-717. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 10.7          | 19.4          | 106               | 19.9          | 134               |
| FD   | 3.80E-04      | 1.09E-03      | -57               | 1.14E-03      | 146               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.35E-05     | 5.48E-04      | -87               | 6.24E-04      | 82                |

Table G-718. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -1.40E-03       | 564.            | -6.41           | 75.2            |
| FD   | -1.75E-02       | 2.22E-02        | -1.09E-03       | 3.20E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.87E-03       | 3.97E-03        | -1.14E-03       | 1.49E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-360. Time history of  $F_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

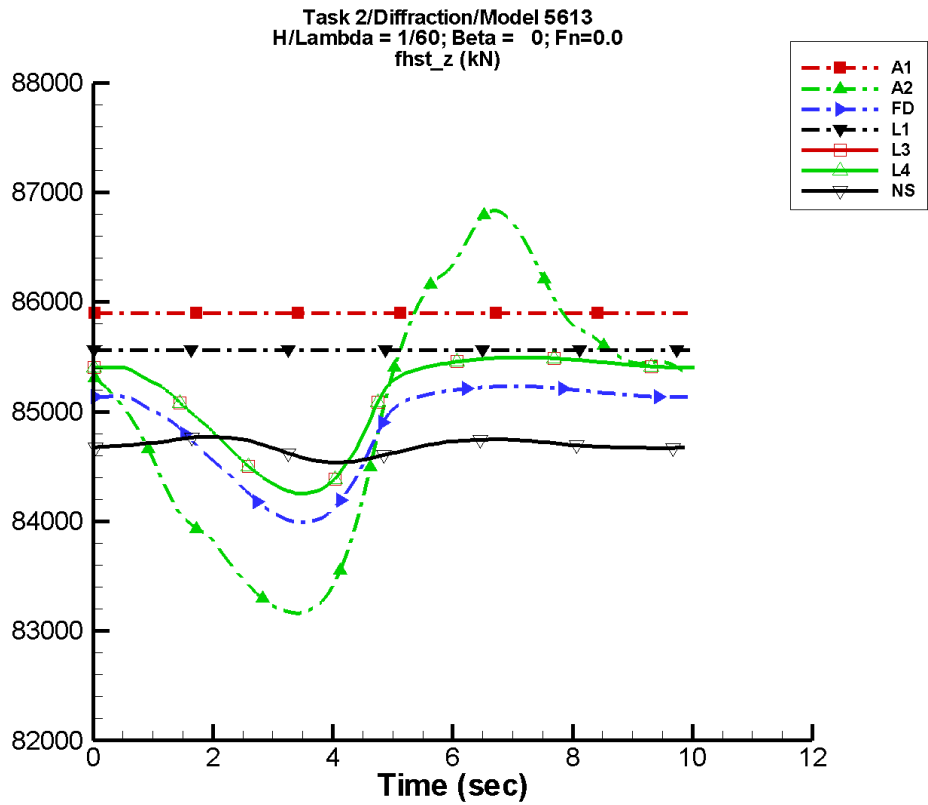
Table G-719. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | —             | —             | —                 | —             | —                 |
| A2   | 4.62          | 9.89          | -125              | 8.60          | 9                 |
| FD   | -1.48E-03     | 3.42E-03      | -104              | 6.99E-03      | -82               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-720. Minimum and maximum of  $F_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | —               | —               | —               | —               |
| A2   | -9.57           | 274.            | -4.21           | 36.5            |
| FD   | -3.78E-02       | 4.43E-02        | -1.87E-02       | 9.69E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-361. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-721. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

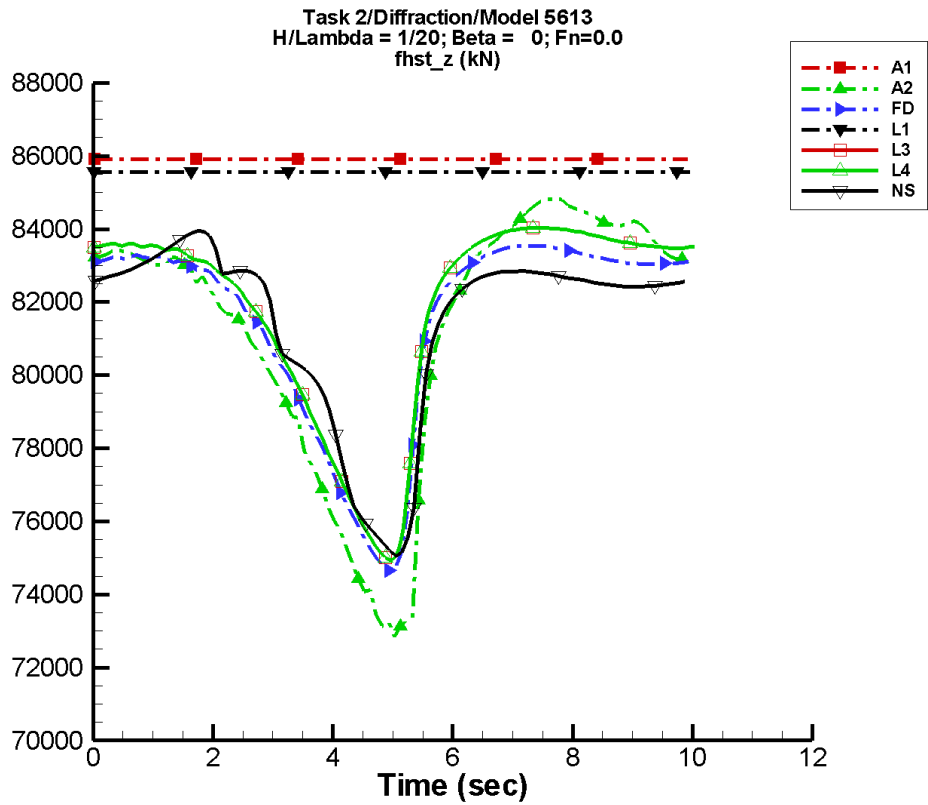
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.50E+04      | 1.53E+03      | 175               | 569.          | 10                |
| FD   | 8.49E+04      | 518.          | 149               | 287.          | 14                |
| L1   | 8.56E+04      | 2.52E-02      | 89                | 1.58E-02      | 143               |
| L3   | 8.51E+04      | 531.          | 152               | 274.          | 22                |
| L4   | 8.51E+04      | 531.          | 152               | 274.          | 22                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 36.5          | 116               | 76.7          | -41               |

Table G-722. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.32E+04        | 8.68E+04        | 8.32E+04        | 8.68E+04        |
| FD   | 8.40E+04        | 8.52E+04        | 8.40E+04        | 8.52E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| L4   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.48E+04        | 8.45E+04        | 8.48E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-362. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

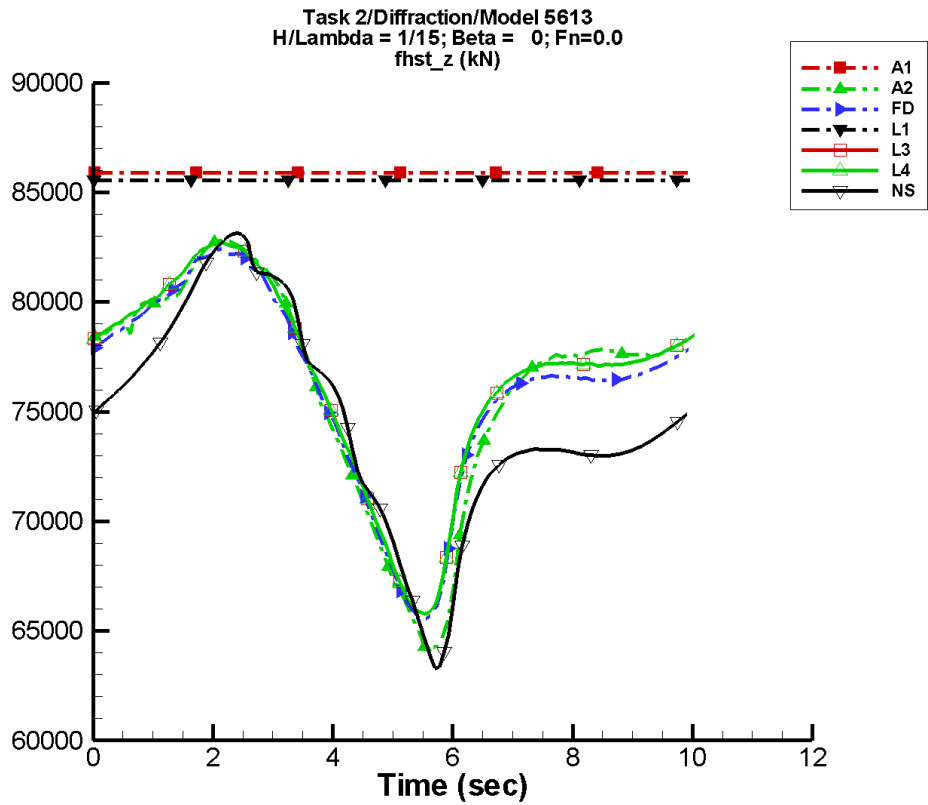
Table G-723. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.13E+04      | 4.19E+03      | 115               | 2.28E+03      | -73               |
| FD   | 8.15E+04      | 2.89E+03      | 108               | 2.06E+03      | -68               |
| L1   | 8.56E+04      | 2.52E-02      | 89                | 1.58E-02      | 143               |
| L3   | 8.19E+04      | 2.96E+03      | 113               | 2.05E+03      | -61               |
| L4   | 8.19E+04      | 2.96E+03      | 113               | 2.05E+03      | -61               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.14E+04      | 2.43E+03      | 99                | 1.97E+03      | -62               |

Table G-724. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.28E+04        | 8.48E+04        | 7.34E+04        | 8.47E+04        |
| FD   | 7.47E+04        | 8.35E+04        | 7.51E+04        | 8.35E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.49E+04        | 8.40E+04        | 7.51E+04        | 8.40E+04        |
| L4   | 7.49E+04        | 8.40E+04        | 7.51E+04        | 8.40E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.51E+04        | 8.39E+04        | 7.54E+04        | 8.37E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-363. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

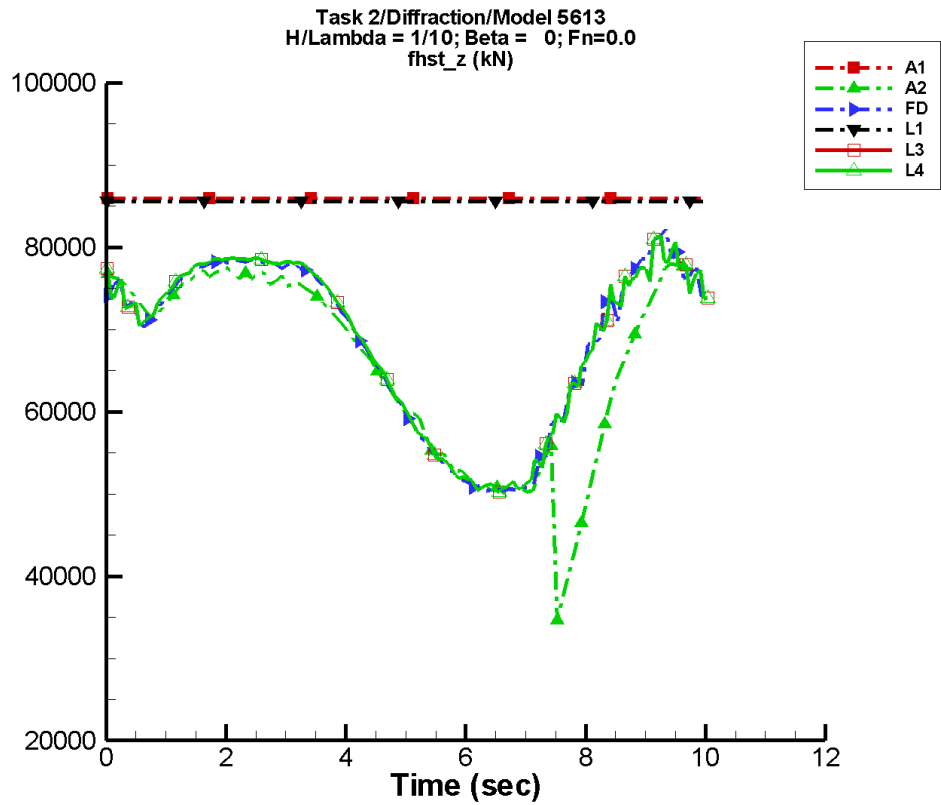
Table G-725. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 7.62E+04      | 5.80E+03      | 55                | 3.73E+03      | -115              |
| FD   | 7.62E+04      | 5.06E+03      | 49                | 3.49E+03      | -112              |
| L1   | 8.56E+04      | 2.52E-02      | 89                | 1.58E-02      | 143               |
| L3   | 7.66E+04      | 5.11E+03      | 53                | 3.50E+03      | -105              |
| L4   | 7.66E+04      | 5.11E+03      | 53                | 3.50E+03      | -105              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.46E+04      | 5.61E+03      | 29                | 3.35E+03      | -106              |

Table G-726. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 6.42E+04        | 8.28E+04        | 6.50E+04        | 8.26E+04        |
| FD   | 6.55E+04        | 8.24E+04        | 6.62E+04        | 8.22E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 6.58E+04        | 8.27E+04        | 6.59E+04        | 8.26E+04        |
| L4   | 6.58E+04        | 8.27E+04        | 6.59E+04        | 8.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.33E+04        | 8.31E+04        | 6.44E+04        | 8.30E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-364. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

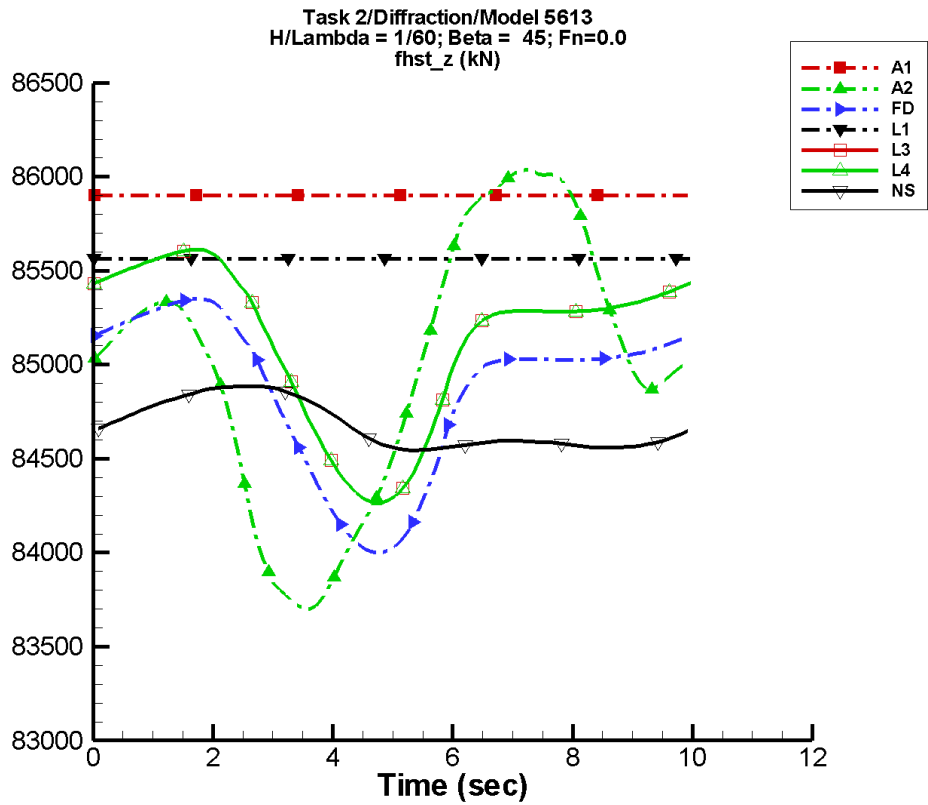
Table G-727. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 6.55E+04      | 1.43E+04      | 23                | 4.38E+03      | 128               |
| FD   | 6.83E+04      | 1.27E+04      | 33                | 6.02E+03      | 165               |
| L1   | 8.56E+04      | 2.52E-02      | 89                | 1.58E-02      | 143               |
| L3   | 6.84E+04      | 1.26E+04      | 35                | 5.87E+03      | 174               |
| L4   | 6.84E+04      | 1.26E+04      | 35                | 5.87E+03      | 174               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-728. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 3.46E+04        | 7.80E+04        | 4.52E+04        | 7.75E+04        |
| FD   | 5.01E+04        | 8.22E+04        | 5.05E+04        | 7.95E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.02E+04        | 8.14E+04        | 5.07E+04        | 7.94E+04        |
| L4   | 5.02E+04        | 8.14E+04        | 5.07E+04        | 7.94E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-365. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-729. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

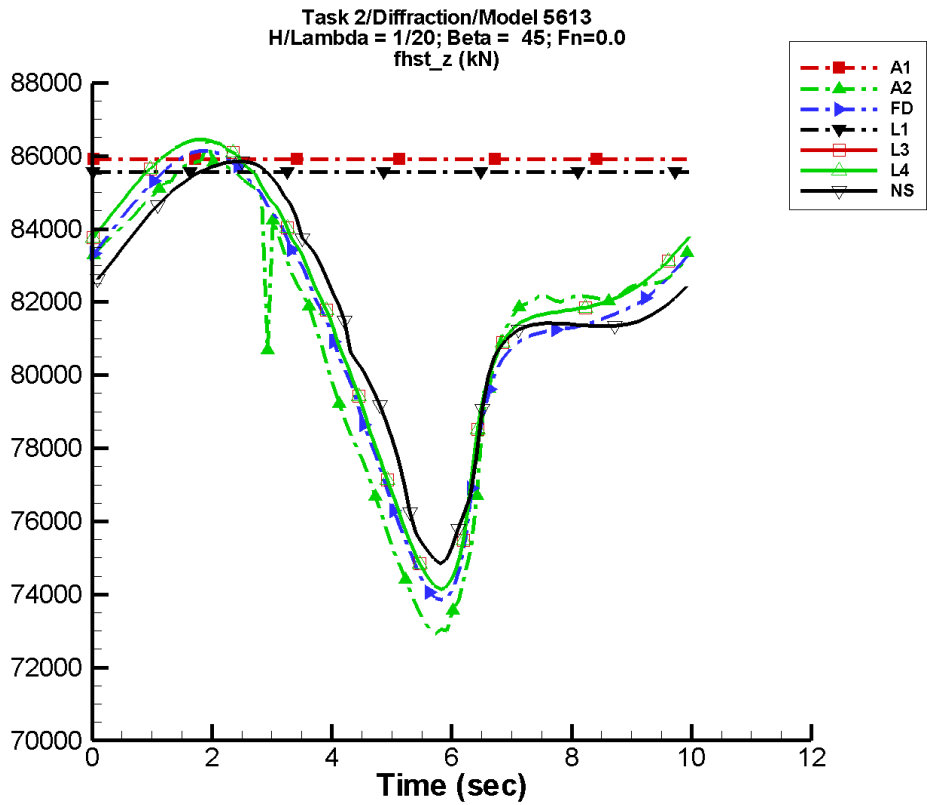
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.50E+04      | 798.          | 152               | 592.          | -33               |
| FD   | 8.49E+04      | 480.          | 82                | 325.          | -70               |
| L1   | 8.56E+04      | 5.15E-02      | 140               | 3.61E-02      | -168              |
| L3   | 8.51E+04      | 489.          | 87                | 324.          | -64               |
| L4   | 8.51E+04      | 489.          | 87                | 324.          | -64               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 156.          | 8                 | 63.6          | -82               |

Table G-730. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.37E+04        | 8.60E+04        | 8.37E+04        | 8.60E+04        |
| FD   | 8.40E+04        | 8.54E+04        | 8.40E+04        | 8.53E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| L4   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.49E+04        | 8.45E+04        | 8.49E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-366. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

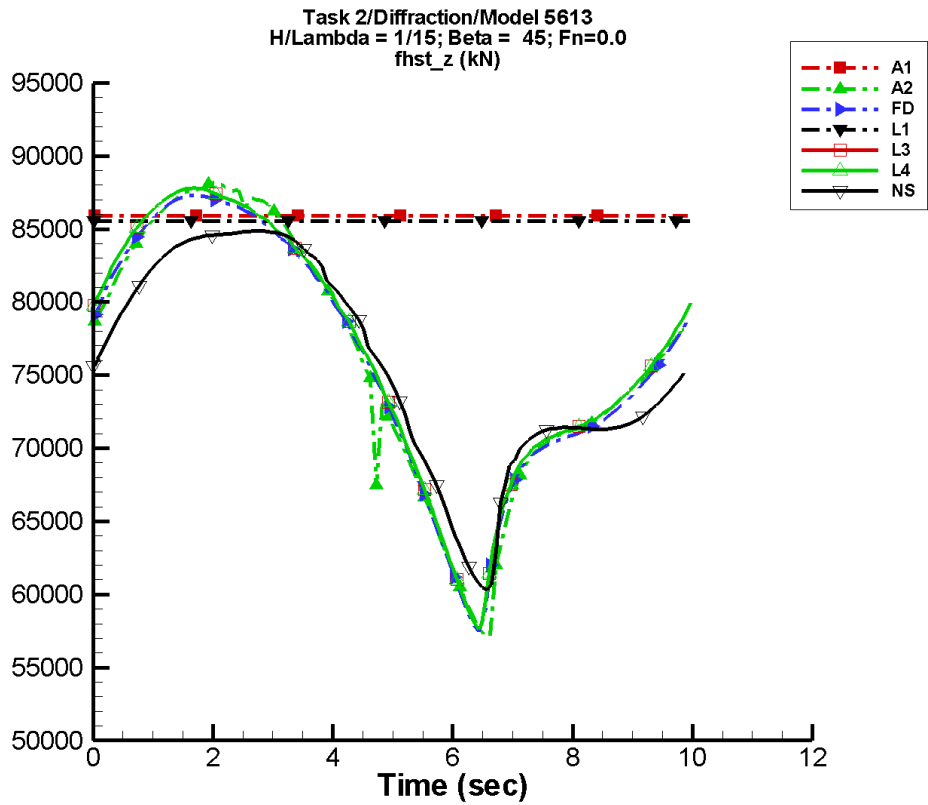
Table G-731. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.13E+04      | 4.61E+03      | 56                | 2.32E+03      | -113              |
| FD   | 8.16E+04      | 4.38E+03      | 43                | 2.00E+03      | -124              |
| L1   | 8.56E+04      | 5.15E-02      | 140               | 3.61E-02      | -168              |
| L3   | 8.19E+04      | 4.47E+03      | 47                | 1.90E+03      | -118              |
| L4   | 8.19E+04      | 4.47E+03      | 47                | 1.90E+03      | -118              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.18E+04      | 3.63E+03      | 39                | 1.85E+03      | -113              |

Table G-732. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.29E+04        | 8.64E+04        | 7.32E+04        | 8.59E+04        |
| FD   | 7.38E+04        | 8.61E+04        | 7.42E+04        | 8.61E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.41E+04        | 8.65E+04        | 7.43E+04        | 8.64E+04        |
| L4   | 7.41E+04        | 8.65E+04        | 7.43E+04        | 8.64E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.48E+04        | 8.58E+04        | 7.52E+04        | 8.59E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-367. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

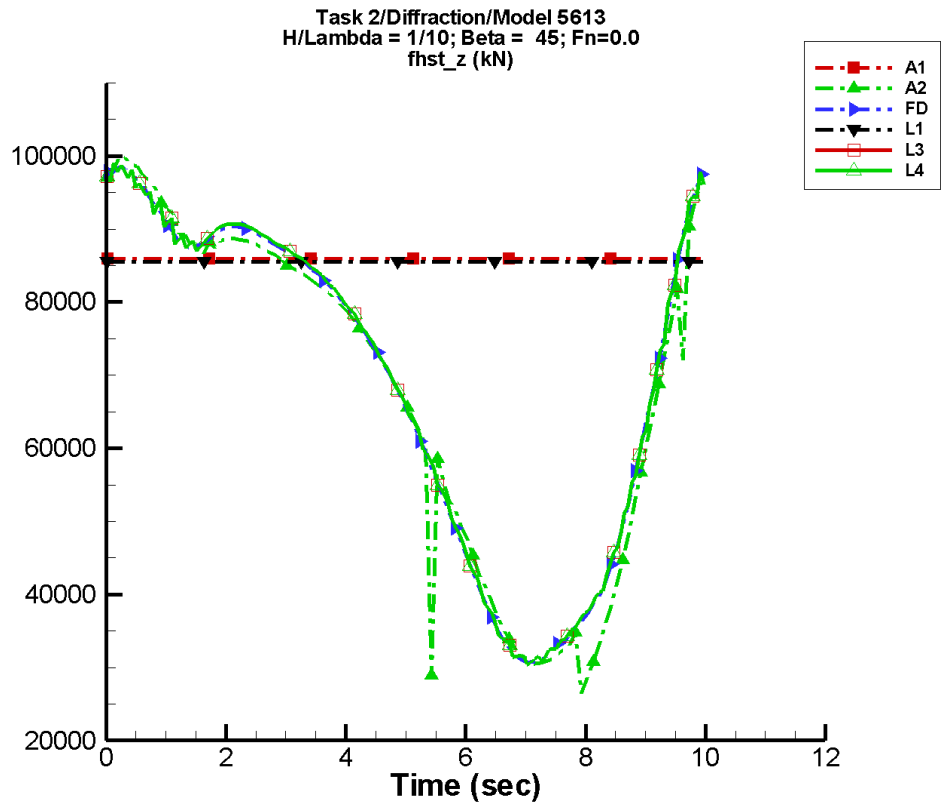
Table G-733. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 7.62E+04      | 1.20E+04      | 20                | 2.36E+03      | -148              |
| FD   | 7.63E+04      | 1.14E+04      | 17                | 1.99E+03      | -171              |
| L1   | 8.56E+04      | 5.15E-02      | 140               | 3.61E-02      | -168              |
| L3   | 7.65E+04      | 1.19E+04      | 21                | 1.83E+03      | -177              |
| L4   | 7.65E+04      | 1.19E+04      | 21                | 1.83E+03      | -177              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.58E+04      | 9.43E+03      | 12                | 2.00E+03      | -148              |

Table G-734. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 5.71E+04        | 8.82E+04        | 5.95E+04        | 8.81E+04        |
| FD   | 5.75E+04        | 8.73E+04        | 6.00E+04        | 8.71E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.76E+04        | 8.78E+04        | 5.90E+04        | 8.77E+04        |
| L4   | 5.76E+04        | 8.78E+04        | 5.90E+04        | 8.77E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.03E+04        | 8.49E+04        | 6.15E+04        | 8.48E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-368. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

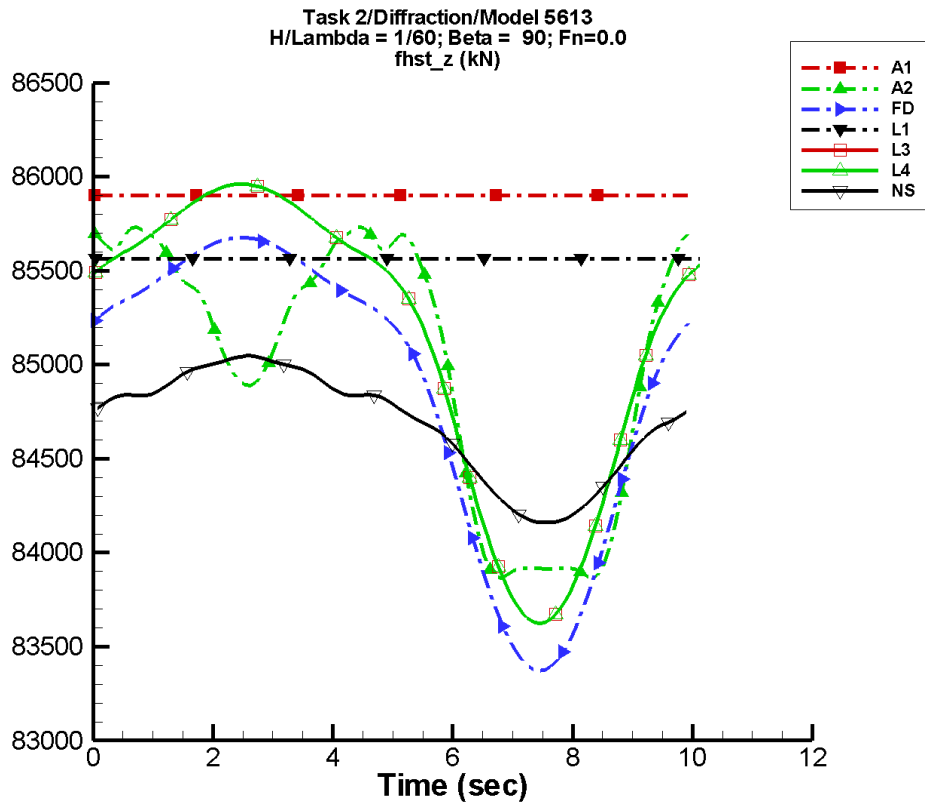
Table G-735. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 6.71E+04      | 3.02E+04      | 15                | 1.13E+04      | 78                |
| FD   | 6.86E+04      | 2.98E+04      | 13                | 9.85E+03      | 83                |
| L1   | 8.56E+04      | 5.15E-02      | 140               | 3.61E-02      | -168              |
| L3   | 6.87E+04      | 2.99E+04      | 16                | 9.85E+03      | 90                |
| L4   | 6.87E+04      | 2.99E+04      | 16                | 9.85E+03      | 90                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-736. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 2.64E+04        | 1.00E+05        | 3.11E+04        | 9.84E+04        |
| FD   | 3.07E+04        | 9.88E+04        | 3.14E+04        | 9.83E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 3.04E+04        | 9.95E+04        | 3.11E+04        | 9.78E+04        |
| L4   | 3.04E+04        | 9.95E+04        | 3.11E+04        | 9.78E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-369. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-737. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

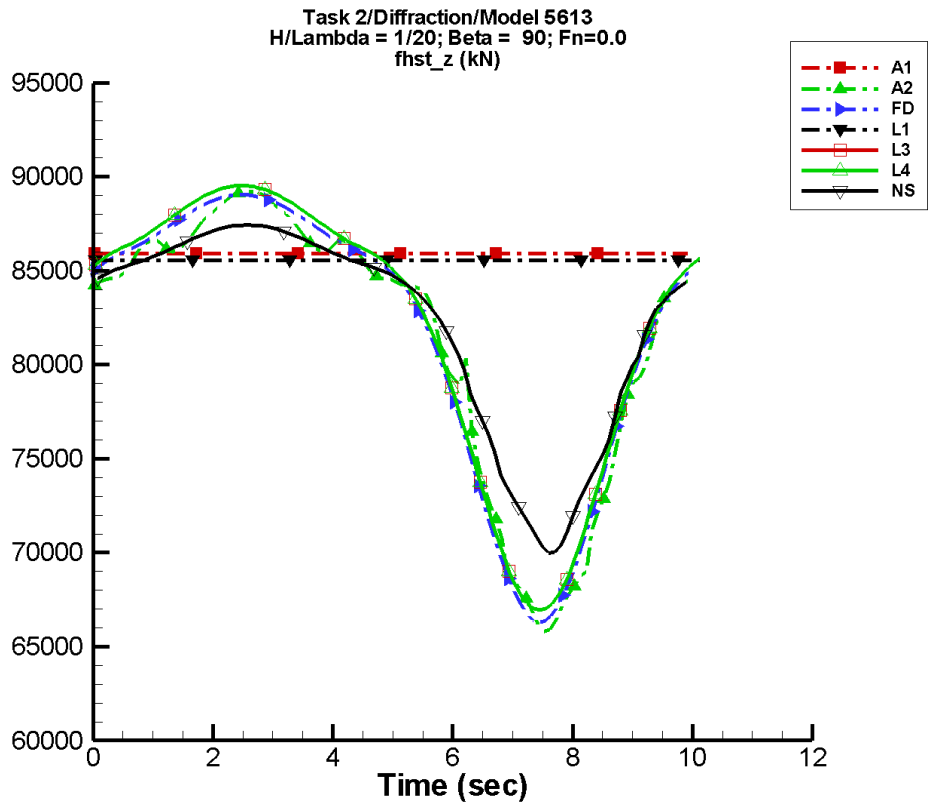
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.50E+04      | 701.          | -8                | 647.          | 73                |
| FD   | 8.49E+04      | 1.03E+03      | -9                | 338.          | 72                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 8.51E+04      | 1.04E+03      | -5                | 316.          | 85                |
| L4   | 8.51E+04      | 1.04E+03      | -5                | 316.          | 85                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 382.          | -5                | 81.8          | 86                |

Table G-738. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.39E+04        | 8.57E+04        | 8.39E+04        | 8.57E+04        |
| FD   | 8.34E+04        | 8.57E+04        | 8.34E+04        | 8.57E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.36E+04        | 8.60E+04        | 8.36E+04        | 8.60E+04        |
| L4   | 8.36E+04        | 8.60E+04        | 8.36E+04        | 8.60E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.42E+04        | 8.50E+04        | 8.42E+04        | 8.50E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-370. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

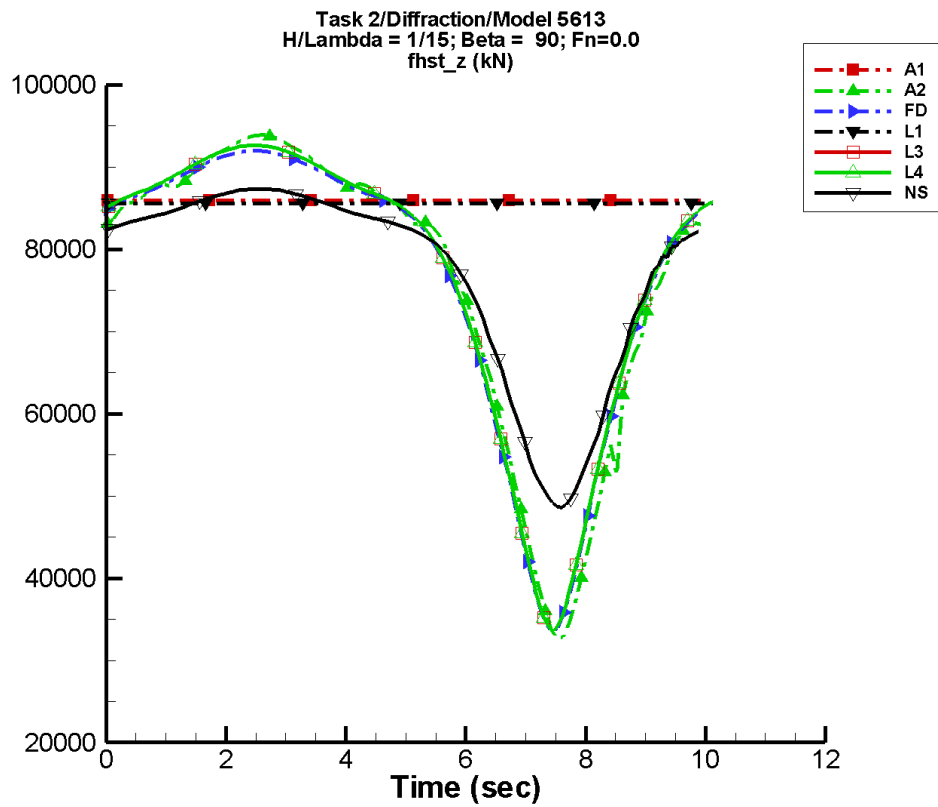
Table G-739. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.12E+04      | 9.18E+03      | -10               | 3.44E+03      | 76                |
| FD   | 8.14E+04      | 9.74E+03      | -9                | 3.45E+03      | 71                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 8.19E+04      | 9.71E+03      | -5                | 3.15E+03      | 85                |
| L4   | 8.19E+04      | 9.71E+03      | -5                | 3.15E+03      | 85                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.20E+04      | 6.99E+03      | -6                | 2.68E+03      | 82                |

Table G-740. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 6.58E+04        | 8.92E+04        | 6.67E+04        | 8.91E+04        |
| FD   | 6.63E+04        | 8.90E+04        | 6.66E+04        | 8.90E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 6.70E+04        | 8.95E+04        | 6.71E+04        | 8.95E+04        |
| L4   | 6.70E+04        | 8.95E+04        | 6.71E+04        | 8.95E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.00E+04        | 8.74E+04        | 7.08E+04        | 8.74E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-371. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

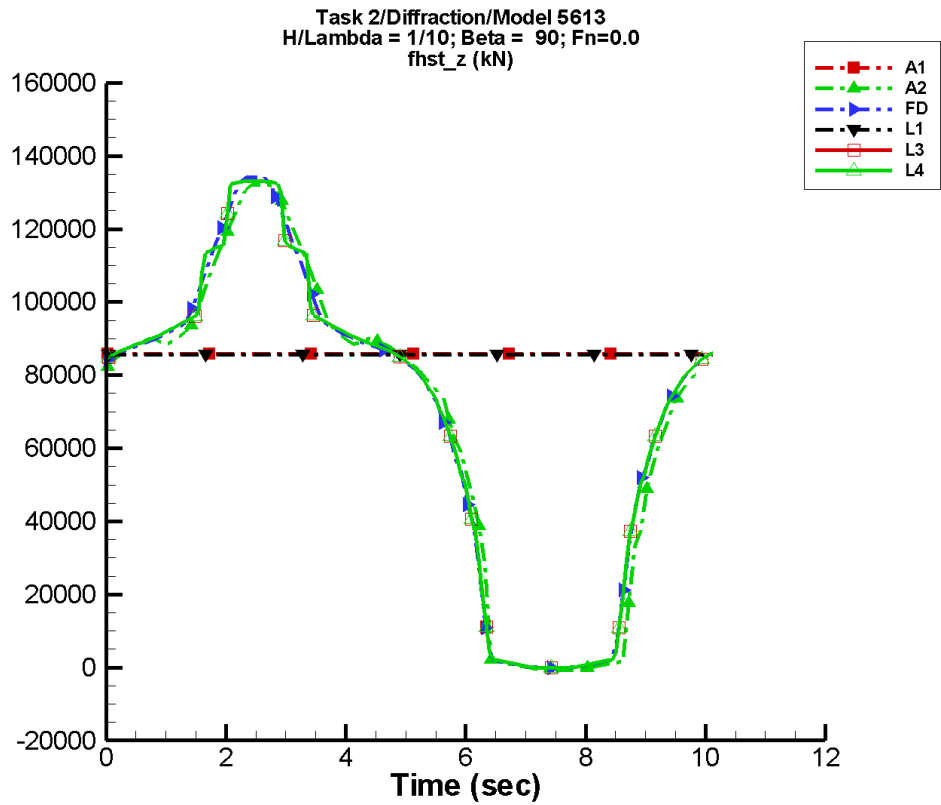
Table G-741. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 7.58E+04      | 2.24E+04      | -10               | 9.29E+03      | 75                |
| FD   | 7.56E+04      | 2.22E+04      | -10               | 9.81E+03      | 69                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 7.65E+04      | 2.21E+04      | -6                | 9.02E+03      | 85                |
| L4   | 7.65E+04      | 2.21E+04      | -6                | 9.02E+03      | 85                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.67E+04      | 1.45E+04      | -5                | 6.54E+03      | 84                |

Table G-742. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 3.26E+04        | 9.39E+04        | 3.59E+04        | 9.35E+04        |
| FD   | 3.33E+04        | 9.20E+04        | 3.57E+04        | 9.18E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 3.37E+04        | 9.26E+04        | 3.50E+04        | 9.26E+04        |
| L4   | 3.37E+04        | 9.26E+04        | 3.50E+04        | 9.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 4.86E+04        | 8.73E+04        | 4.96E+04        | 8.73E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-372. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

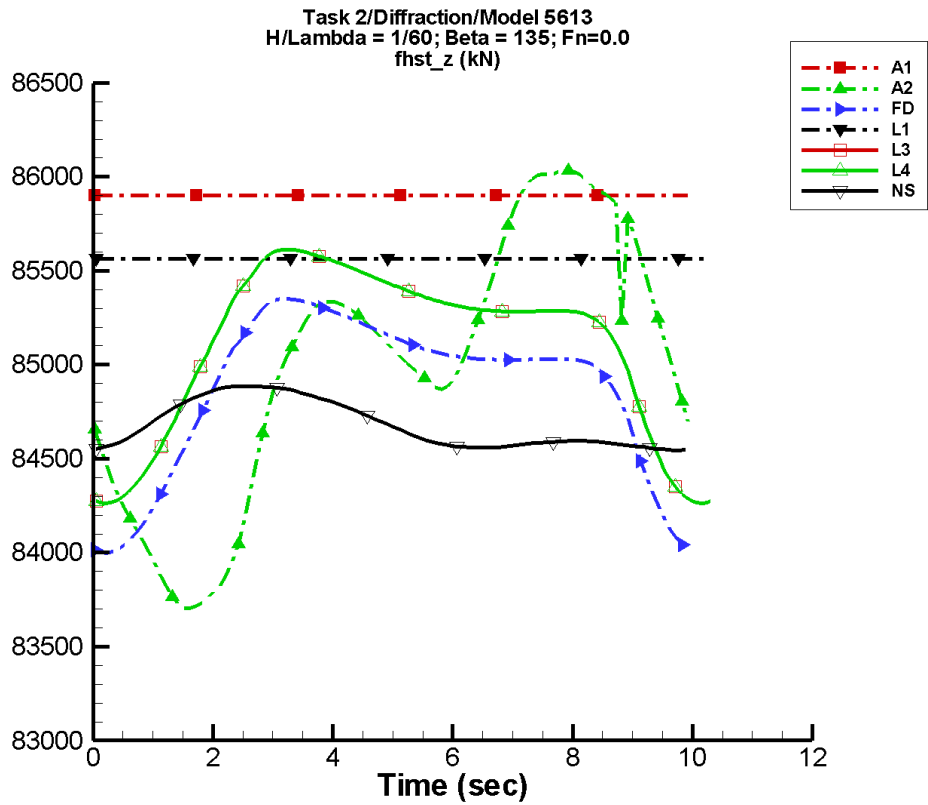
Table G-743. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 6.71E+04      | 5.70E+04      | -9                | 1.18E+04      | 82                |
| FD   | 6.79E+04      | 5.79E+04      | -9                | 1.02E+04      | 71                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 6.88E+04      | 5.88E+04      | -6                | 9.46E+03      | 94                |
| L4   | 6.88E+04      | 5.88E+04      | -6                | 9.46E+03      | 94                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-744. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | -660.           | 1.32E+05        | -1.04E+03       | 1.30E+05        |
| FD   | -0.00           | 1.34E+05        | -437.           | 1.32E+05        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 0.00            | 1.33E+05        | -90.2           | 1.34E+05        |
| L4   | 0.00            | 1.33E+05        | -90.2           | 1.34E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-373. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-745. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

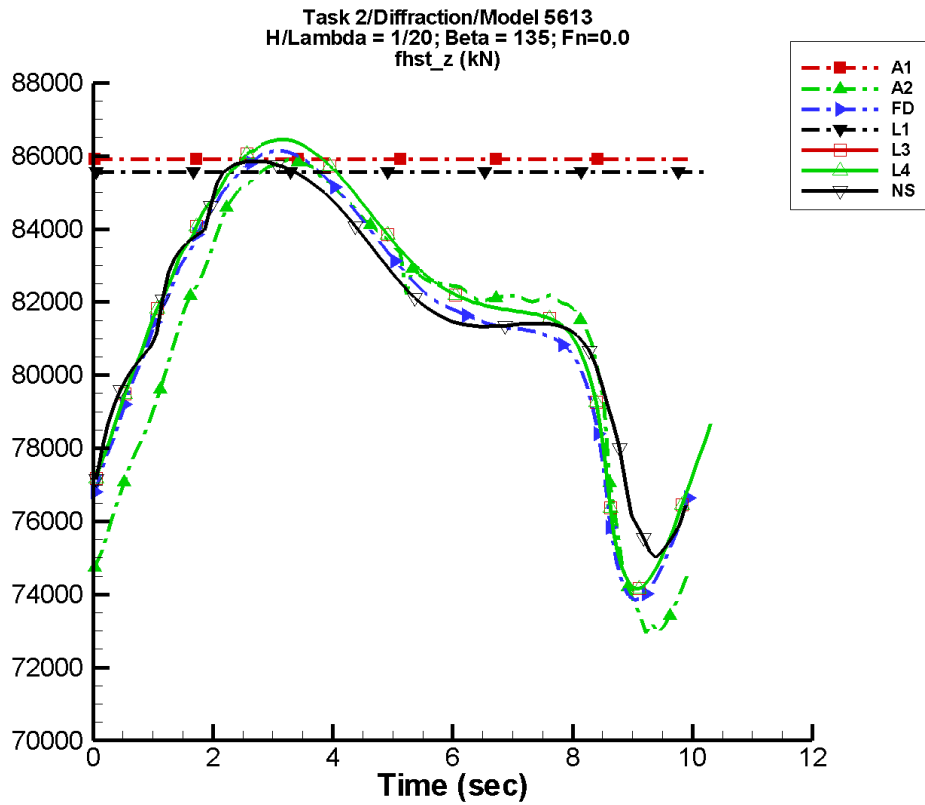
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.50E+04      | 802.          | -169              | 555.          | 180               |
| FD   | 8.49E+04      | 494.          | -96               | 302.          | -140              |
| L1   | 8.56E+04      | 6.07E-03      | 131               | 1.14E-02      | 38                |
| L3   | 8.51E+04      | 488.          | -94               | 305.          | -136              |
| L4   | 8.51E+04      | 488.          | -94               | 305.          | -136              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 160.          | -16               | 70.5          | -111              |

Table G-746. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.37E+04        | 8.60E+04        | 8.37E+04        | 8.60E+04        |
| FD   | 8.40E+04        | 8.54E+04        | 8.40E+04        | 8.53E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| L4   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.49E+04        | 8.46E+04        | 8.49E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-374. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

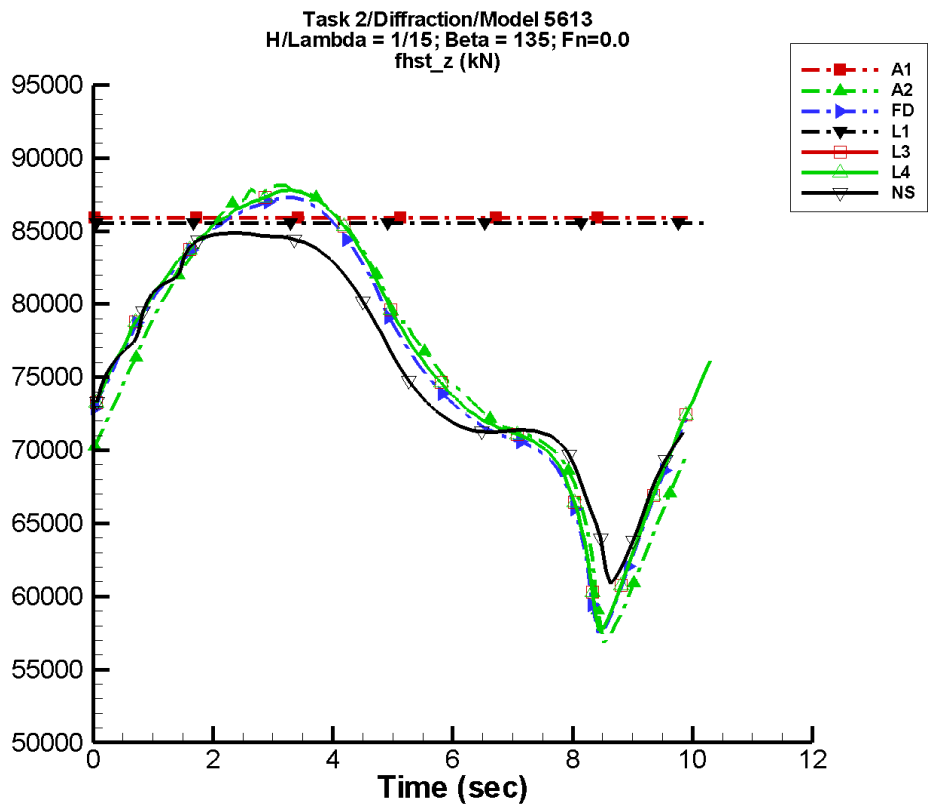
Table G-747. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.13E+04      | 4.48E+03      | -69               | 2.41E+03      | -96               |
| FD   | 8.16E+04      | 4.27E+03      | -56               | 1.77E+03      | -92               |
| L1   | 8.56E+04      | 6.07E-03      | 131               | 1.14E-02      | 38                |
| L3   | 8.19E+04      | 4.36E+03      | -55               | 1.94E+03      | -84               |
| L4   | 8.19E+04      | 4.36E+03      | -55               | 1.94E+03      | -84               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.18E+04      | 3.51E+03      | -45               | 1.88E+03      | -84               |

Table G-748. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.29E+04        | 8.60E+04        | 7.33E+04        | 8.58E+04        |
| FD   | 7.38E+04        | 8.61E+04        | 7.42E+04        | 8.61E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.41E+04        | 8.65E+04        | 7.43E+04        | 8.64E+04        |
| L4   | 7.41E+04        | 8.65E+04        | 7.43E+04        | 8.64E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.50E+04        | 8.59E+04        | 7.54E+04        | 8.58E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-375. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

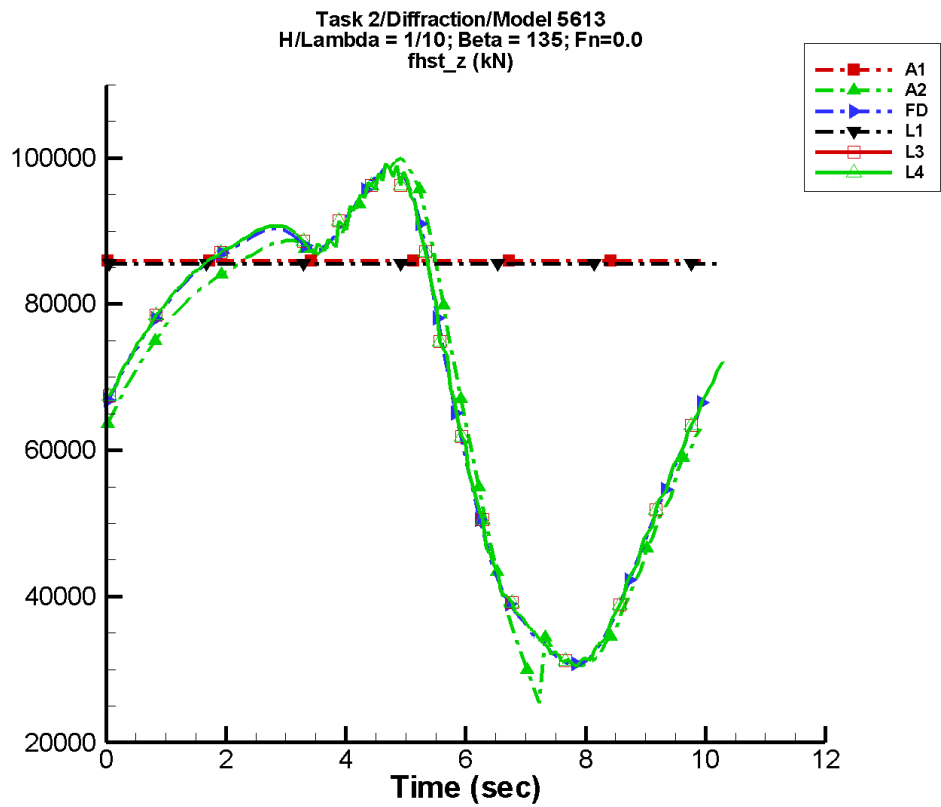
Table G-749. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 7.62E+04      | 1.17E+04      | -35               | 2.31E+03      | -54               |
| FD   | 7.63E+04      | 1.10E+04      | -31               | 1.60E+03      | -56               |
| L1   | 8.56E+04      | 6.07E-03      | 131               | 1.14E-02      | 38                |
| L3   | 7.65E+04      | 1.15E+04      | -29               | 1.94E+03      | -41               |
| L4   | 7.65E+04      | 1.15E+04      | -29               | 1.94E+03      | -41               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.58E+04      | 9.15E+03      | -17               | 2.07E+03      | -45               |

Table G-750. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 5.69E+04        | 8.81E+04        | 5.93E+04        | 8.79E+04        |
| FD   | 5.75E+04        | 8.73E+04        | 6.00E+04        | 8.72E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.76E+04        | 8.78E+04        | 5.89E+04        | 8.77E+04        |
| L4   | 5.76E+04        | 8.78E+04        | 5.89E+04        | 8.77E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.09E+04        | 8.49E+04        | 6.24E+04        | 8.49E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-376. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

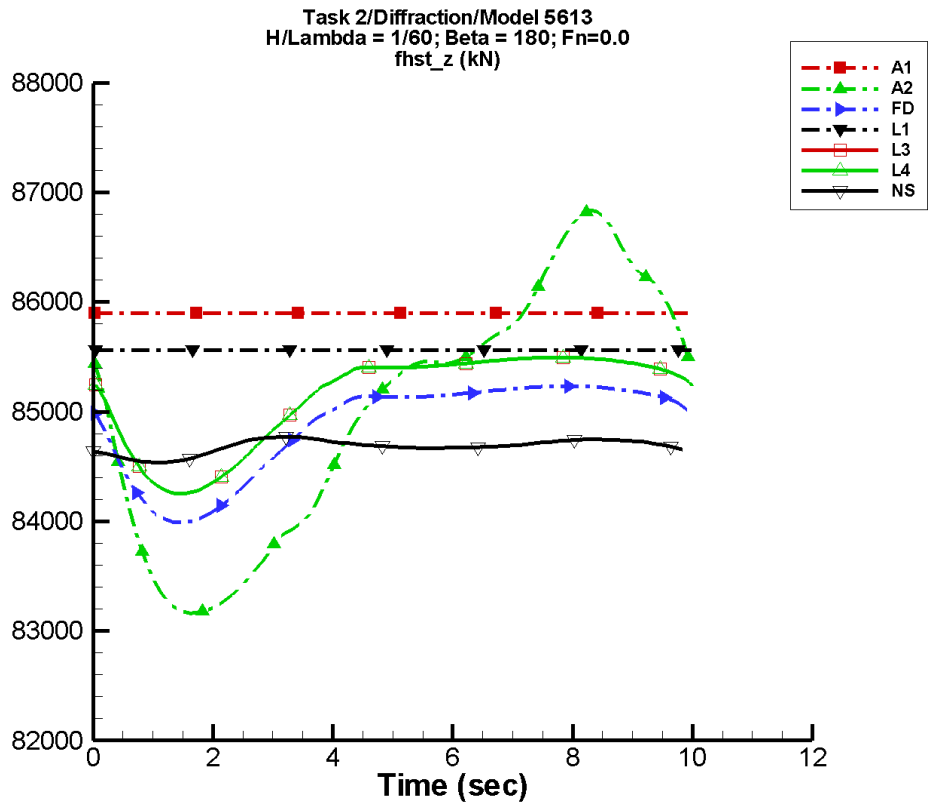
Table G-751. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 6.76E+04      | 3.07E+04      | -30               | 1.09E+04      | 74                |
| FD   | 6.84E+04      | 3.04E+04      | -28               | 1.04E+04      | 68                |
| L1   | 8.56E+04      | 6.07E-03      | 131               | 1.14E-02      | 38                |
| L3   | 6.87E+04      | 3.02E+04      | -24               | 1.01E+04      | 76                |
| L4   | 6.87E+04      | 3.02E+04      | -24               | 1.01E+04      | 76                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-752. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 2.54E+04        | 1.00E+05        | 3.07E+04        | 9.84E+04        |
| FD   | 3.06E+04        | 9.86E+04        | 3.12E+04        | 9.74E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 3.04E+04        | 9.92E+04        | 3.11E+04        | 9.79E+04        |
| L4   | 3.04E+04        | 9.92E+04        | 3.11E+04        | 9.79E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-377. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G-753. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

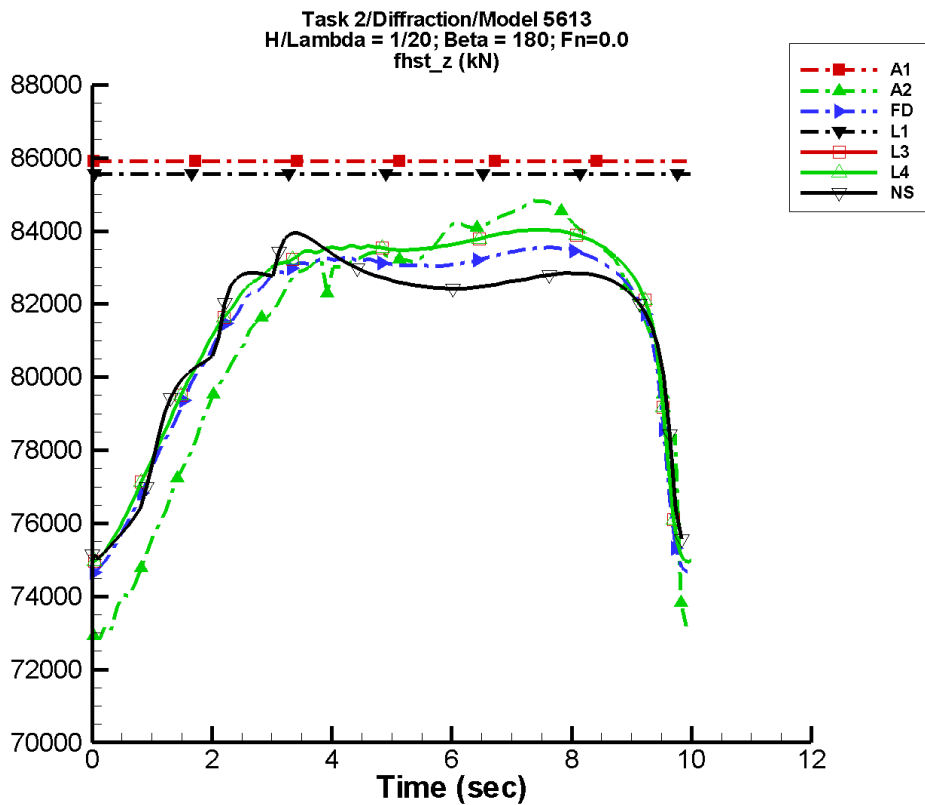
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.50E+04      | 1.52E+03      | 174               | 601.          | 148               |
| FD   | 8.49E+04      | 535.          | -165              | 280.          | 139               |
| L1   | 8.56E+04      | 2.09E-02      | 137               | 1.98E-02      | 120               |
| L3   | 8.51E+04      | 539.          | -161              | 272.          | 145               |
| L4   | 8.51E+04      | 539.          | -161              | 272.          | 145               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 42.0          | -125              | 79.0          | -160              |

Table G-754. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.32E+04        | 8.68E+04        | 8.32E+04        | 8.68E+04        |
| FD   | 8.40E+04        | 8.52E+04        | 8.40E+04        | 8.52E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| L4   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.48E+04        | 8.45E+04        | 8.48E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-378. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

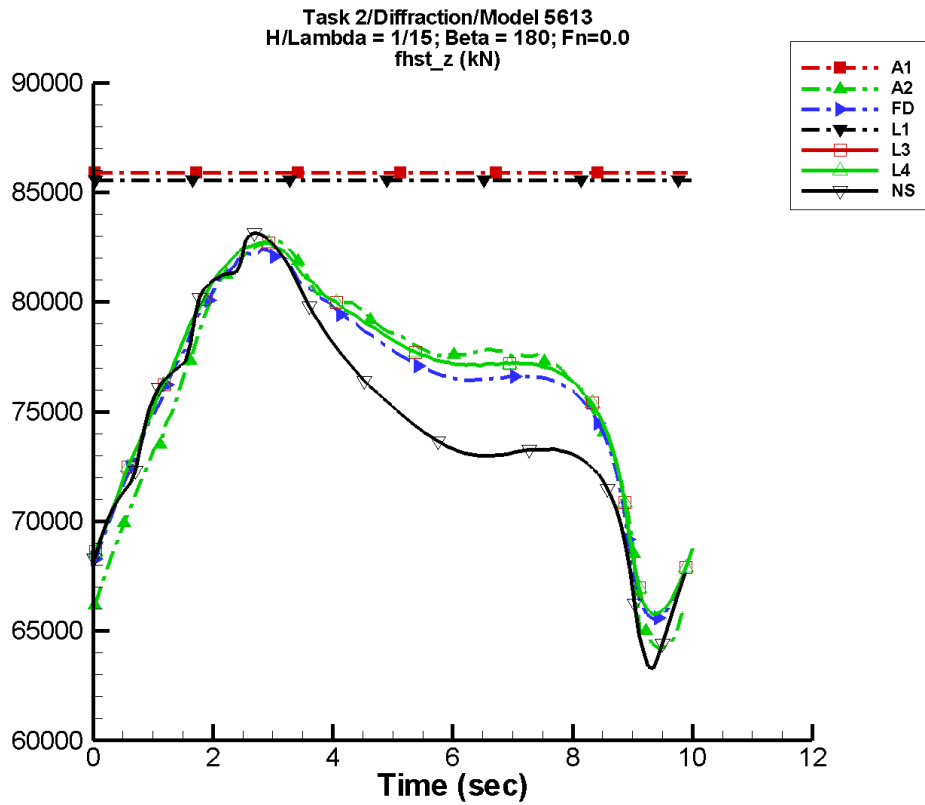
Table G-755. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.13E+04      | 4.17E+03      | -128              | 2.51E+03      | -136              |
| FD   | 8.14E+04      | 3.00E+03      | -119              | 1.88E+03      | -140              |
| L1   | 8.56E+04      | 2.09E-02      | 137               | 1.98E-02      | 120               |
| L3   | 8.18E+04      | 3.08E+03      | -118              | 1.86E+03      | -131              |
| L4   | 8.18E+04      | 3.08E+03      | -118              | 1.86E+03      | -131              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.14E+04      | 2.55E+03      | -103              | 2.18E+03      | -129              |

Table G-756. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.28E+04        | 8.48E+04        | 7.30E+04        | 8.47E+04        |
| FD   | 7.46E+04        | 8.35E+04        | 7.48E+04        | 8.36E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.49E+04        | 8.40E+04        | 7.50E+04        | 8.40E+04        |
| L4   | 7.49E+04        | 8.40E+04        | 7.50E+04        | 8.40E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.51E+04        | 8.39E+04        | 7.51E+04        | 8.37E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-379. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

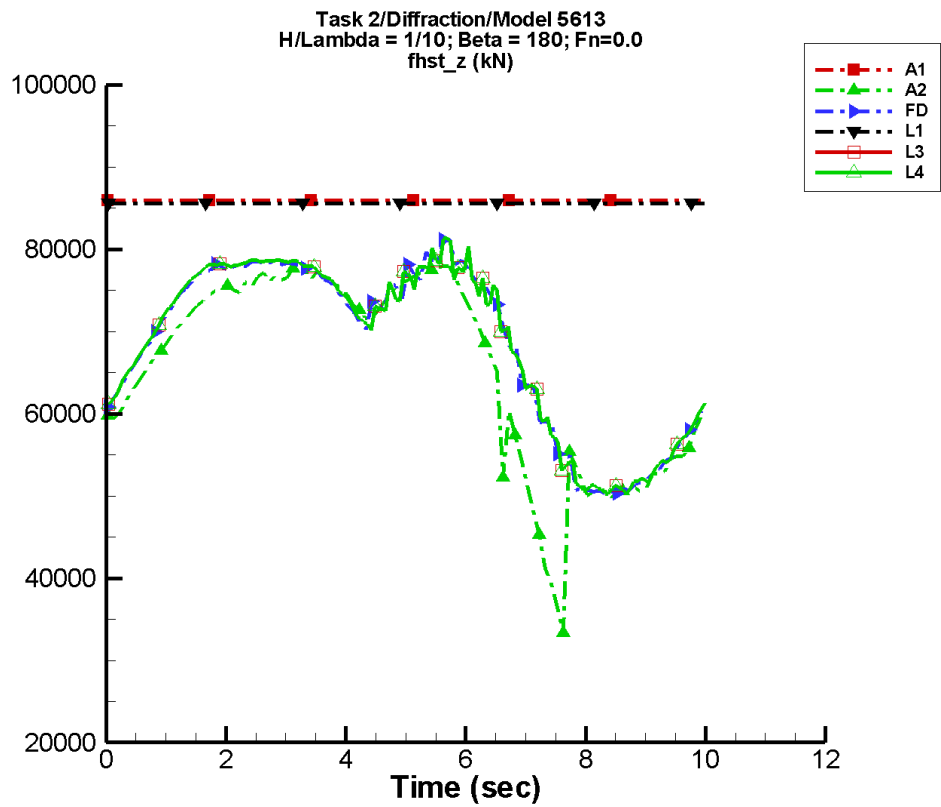
Table G-757. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 7.62E+04      | 5.77E+03      | -70               | 3.86E+03      | -97               |
| FD   | 7.62E+04      | 5.04E+03      | -61               | 3.13E+03      | -100              |
| L1   | 8.56E+04      | 2.09E-02      | 137               | 1.98E-02      | 120               |
| L3   | 7.66E+04      | 5.02E+03      | -60               | 3.21E+03      | -92               |
| L4   | 7.66E+04      | 5.02E+03      | -60               | 3.21E+03      | -92               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.47E+04      | 5.56E+03      | -34               | 3.30E+03      | -85               |

Table G-758. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 6.42E+04        | 8.28E+04        | 6.48E+04        | 8.26E+04        |
| FD   | 6.56E+04        | 8.24E+04        | 6.62E+04        | 8.22E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 6.58E+04        | 8.27E+04        | 6.59E+04        | 8.26E+04        |
| L4   | 6.58E+04        | 8.27E+04        | 6.59E+04        | 8.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.33E+04        | 8.31E+04        | 6.44E+04        | 8.28E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-380. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

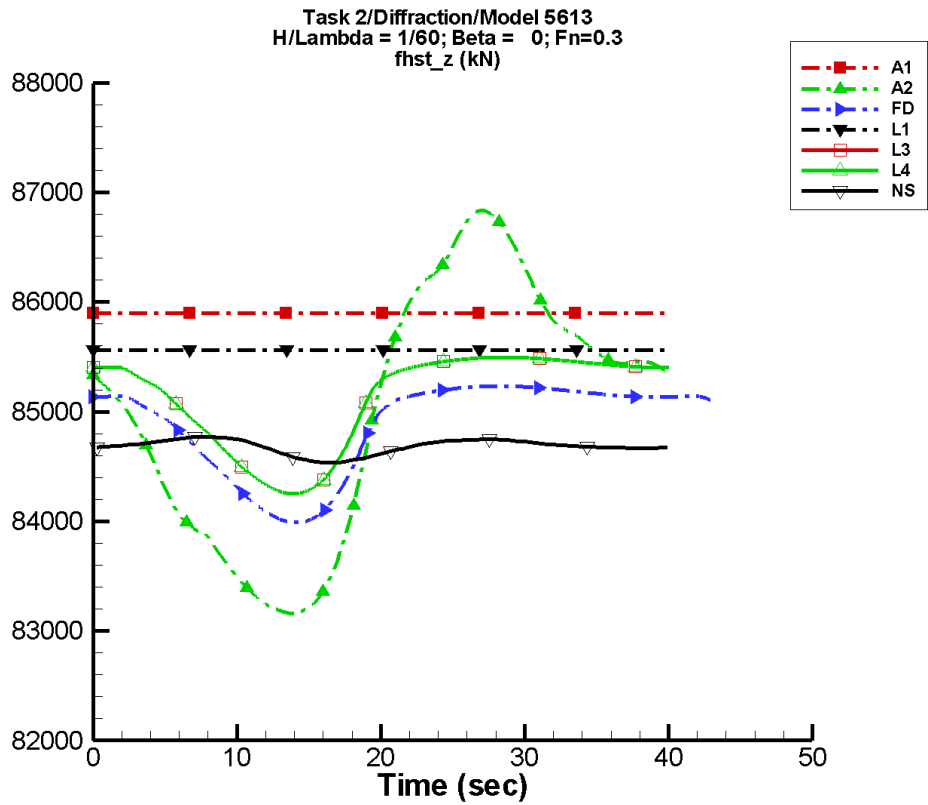
Table G-759. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 6.53E+04      | 1.49E+04      | -40               | 4.30E+03      | 29                |
| FD   | 6.84E+04      | 1.29E+04      | -51               | 6.51E+03      | -17               |
| L1   | 8.56E+04      | 2.09E-02      | 137               | 1.98E-02      | 120               |
| L3   | 6.85E+04      | 1.29E+04      | -46               | 6.44E+03      | -11               |
| L4   | 6.85E+04      | 1.29E+04      | -46               | 6.44E+03      | -11               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-760. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 3.33E+04        | 7.80E+04        | 4.41E+04        | 7.75E+04        |
| FD   | 5.02E+04        | 8.15E+04        | 5.05E+04        | 7.91E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.02E+04        | 8.14E+04        | 5.07E+04        | 7.94E+04        |
| L4   | 5.02E+04        | 8.14E+04        | 5.07E+04        | 7.94E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-381. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-761. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

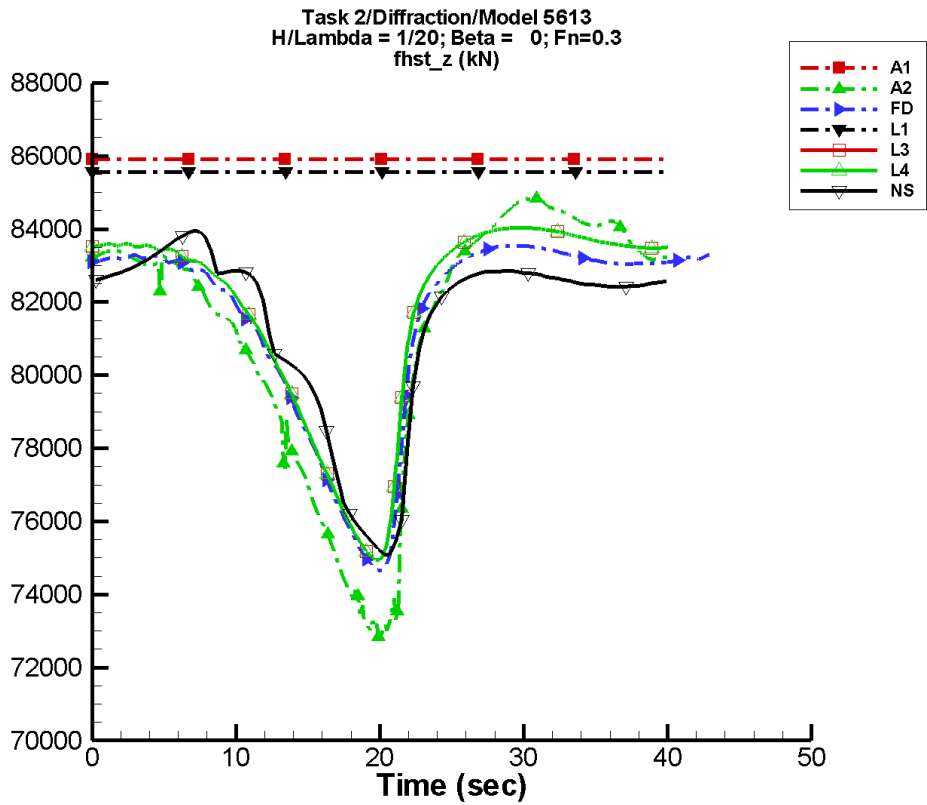
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 0.128         | -148              | 9.66E-02      | -176              |
| A2   | 8.50E+04      | 1.52E+03      | 178               | 567.          | 16                |
| FD   | 8.49E+04      | 527.          | 155               | 288.          | 22                |
| L1   | 8.56E+04      | 0.395         | -56               | 0.318         | -6                |
| L3   | 8.51E+04      | 522.          | 156               | 281.          | 30                |
| L4   | 8.51E+04      | 522.          | 156               | 281.          | 30                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 36.5          | 115               | 76.8          | -42               |

Table G-762. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.32E+04        | 8.68E+04        | 8.32E+04        | 8.68E+04        |
| FD   | 8.40E+04        | 8.52E+04        | 8.40E+04        | 8.52E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| L4   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.48E+04        | 8.45E+04        | 8.48E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-382. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

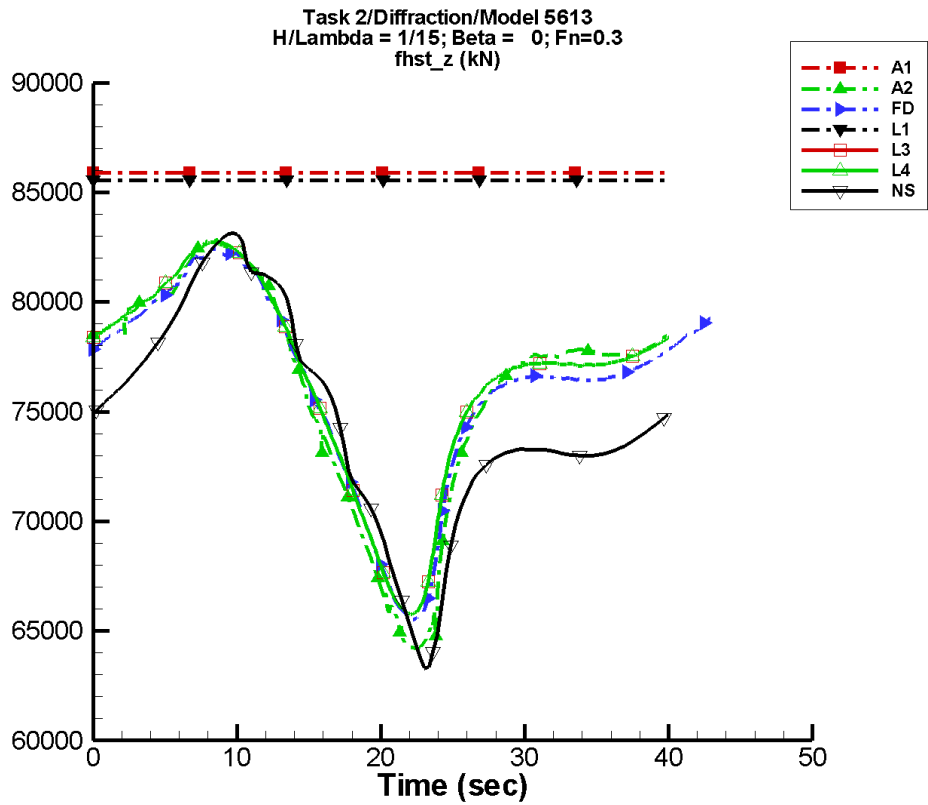
Table G-763. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 0.128         | -148              | 9.66E-02      | -176              |
| A2   | 8.12E+04      | 4.19E+03      | 122               | 2.28E+03      | -59               |
| FD   | 8.15E+04      | 2.96E+03      | 112               | 1.97E+03      | -61               |
| L1   | 8.56E+04      | 0.395         | -56               | 0.318         | -6                |
| L3   | 8.19E+04      | 3.01E+03      | 117               | 2.06E+03      | -55               |
| L4   | 8.19E+04      | 3.01E+03      | 117               | 2.06E+03      | -55               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.14E+04      | 2.43E+03      | 99                | 1.97E+03      | -62               |

Table G-764. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.28E+04        | 8.48E+04        | 7.30E+04        | 8.48E+04        |
| FD   | 7.46E+04        | 8.35E+04        | 7.47E+04        | 8.35E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.49E+04        | 8.40E+04        | 7.50E+04        | 8.40E+04        |
| L4   | 7.49E+04        | 8.40E+04        | 7.50E+04        | 8.40E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.51E+04        | 8.39E+04        | 7.54E+04        | 8.37E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-383. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

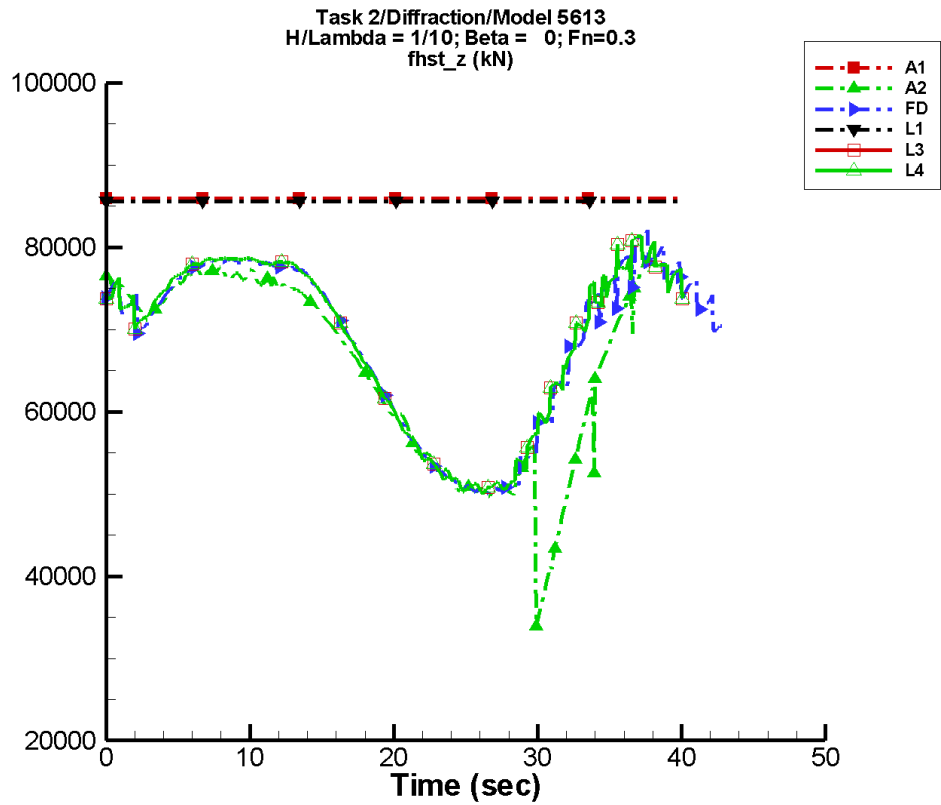
Table G-765. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 0.128         | -148              | 9.66E-02      | -176              |
| A2   | 7.62E+04      | 5.83E+03      | 62                | 3.75E+03      | -101              |
| FD   | 7.62E+04      | 5.02E+03      | 53                | 3.20E+03      | -101              |
| L1   | 8.56E+04      | 0.395         | -56               | 0.318         | -6                |
| L3   | 7.66E+04      | 5.09E+03      | 58                | 3.58E+03      | -99               |
| L4   | 7.66E+04      | 5.09E+03      | 58                | 3.58E+03      | -99               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.46E+04      | 5.61E+03      | 29                | 3.35E+03      | -107              |

Table G-766. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 6.42E+04        | 8.29E+04        | 6.42E+04        | 8.28E+04        |
| FD   | 6.55E+04        | 8.24E+04        | 6.56E+04        | 8.24E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 6.58E+04        | 8.27E+04        | 6.58E+04        | 8.27E+04        |
| L4   | 6.58E+04        | 8.27E+04        | 6.58E+04        | 8.27E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.33E+04        | 8.31E+04        | 6.44E+04        | 8.30E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-384. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

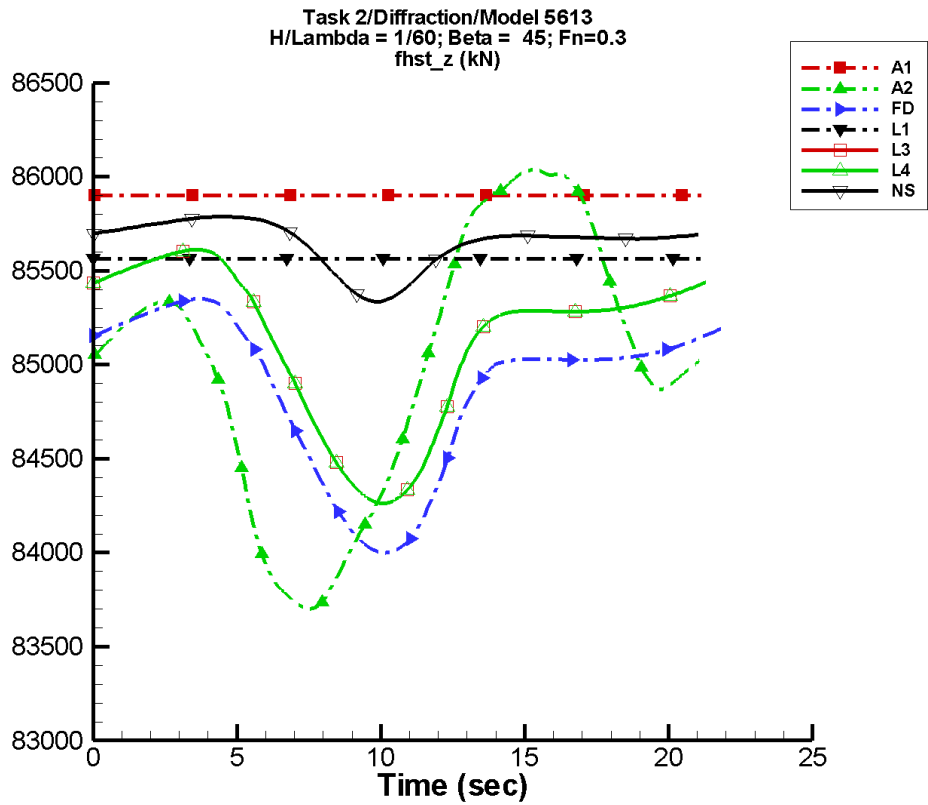
Table G-767. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 0.128         | -148              | 9.66E-02      | -176              |
| A2   | 6.55E+04      | 1.43E+04      | 30                | 4.25E+03      | 142               |
| FD   | 6.83E+04      | 1.26E+04      | 40                | 6.16E+03      | -179              |
| L1   | 8.56E+04      | 0.395         | -56               | 0.318         | -6                |
| L3   | 6.84E+04      | 1.26E+04      | 40                | 5.91E+03      | -178              |
| L4   | 6.84E+04      | 1.26E+04      | 40                | 5.91E+03      | -178              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-768. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 3.39E+04        | 7.81E+04        | 3.74E+04        | 7.80E+04        |
| FD   | 5.01E+04        | 8.21E+04        | 5.04E+04        | 8.11E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.00E+04        | 8.14E+04        | 5.03E+04        | 8.13E+04        |
| L4   | 5.00E+04        | 8.14E+04        | 5.03E+04        | 8.13E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-385. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-769. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

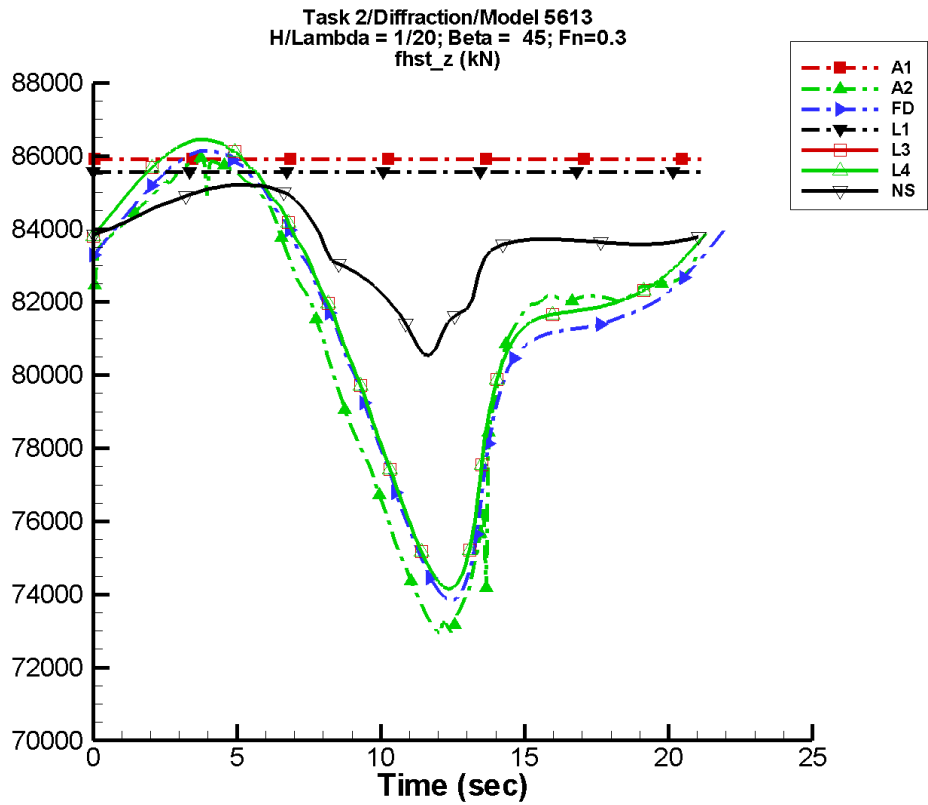
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.81E-02      | -34               | 2.64E-02      | 146               |
| A2   | 8.50E+04      | 798.          | 159               | 592.          | -18               |
| FD   | 8.49E+04      | 480.          | 95                | 311.          | -46               |
| L1   | 8.56E+04      | 4.21E-02      | 36                | 4.82E-02      | 2                 |
| L3   | 8.51E+04      | 489.          | 92                | 304.          | -52               |
| L4   | 8.51E+04      | 489.          | 92                | 304.          | -52               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.56E+04      | 117.          | 82                | 105.          | -63               |

Table G-770. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.37E+04        | 8.60E+04        | 8.37E+04        | 8.60E+04        |
| FD   | 8.40E+04        | 8.54E+04        | 8.40E+04        | 8.53E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| L4   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.53E+04        | 8.58E+04        | 8.54E+04        | 8.58E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-386. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

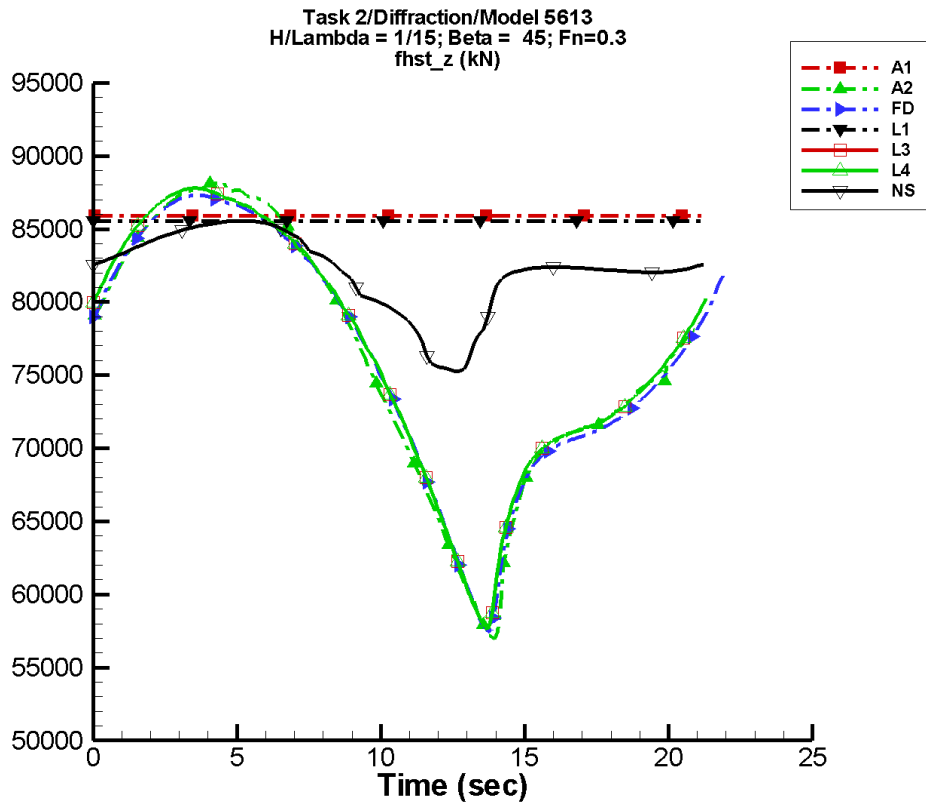
Table G-771. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.81E-02      | -34               | 2.64E-02      | 146               |
| A2   | 8.13E+04      | 4.61E+03      | 63                | 2.36E+03      | -99               |
| FD   | 8.15E+04      | 4.39E+03      | 56                | 1.81E+03      | -94               |
| L1   | 8.56E+04      | 4.21E-02      | 36                | 4.82E-02      | 2                 |
| L3   | 8.19E+04      | 4.41E+03      | 53                | 1.82E+03      | -101              |
| L4   | 8.19E+04      | 4.41E+03      | 53                | 1.82E+03      | -101              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.36E+04      | 1.27E+03      | 51                | 919.          | -96               |

Table G-772. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.29E+04        | 8.60E+04        | 7.31E+04        | 8.58E+04        |
| FD   | 7.38E+04        | 8.61E+04        | 7.39E+04        | 8.61E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.41E+04        | 8.65E+04        | 7.42E+04        | 8.64E+04        |
| L4   | 7.41E+04        | 8.65E+04        | 7.42E+04        | 8.64E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.05E+04        | 8.52E+04        | 8.10E+04        | 8.52E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-387. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

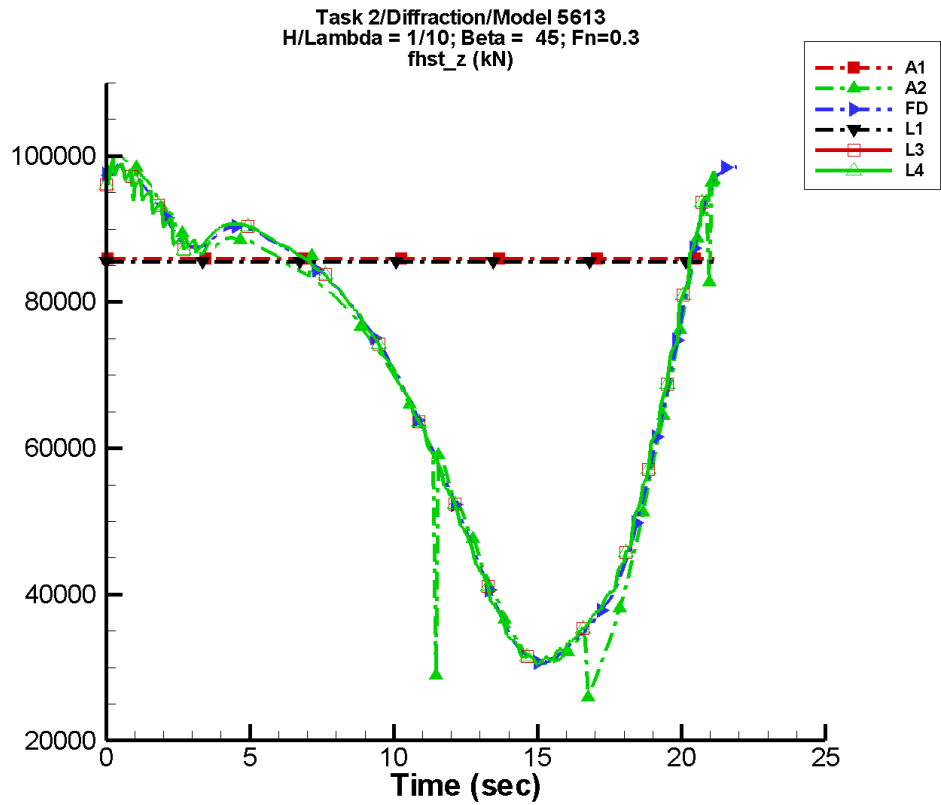
Table G-773. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.81E-02      | -34               | 2.64E-02      | 146               |
| A2   | 7.63E+04      | 1.20E+04      | 27                | 2.30E+03      | -136              |
| FD   | 7.61E+04      | 1.14E+04      | 30                | 1.56E+03      | -139              |
| L1   | 8.56E+04      | 4.21E-02      | 36                | 4.82E-02      | 2                 |
| L3   | 7.66E+04      | 1.15E+04      | 27                | 1.62E+03      | -147              |
| L4   | 7.66E+04      | 1.15E+04      | 27                | 1.62E+03      | -147              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.21E+04      | 3.01E+03      | 45                | 1.89E+03      | -111              |

Table G-774. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 5.69E+04        | 8.82E+04        | 5.78E+04        | 8.80E+04        |
| FD   | 5.75E+04        | 8.73E+04        | 5.83E+04        | 8.73E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.76E+04        | 8.78E+04        | 5.80E+04        | 8.78E+04        |
| L4   | 5.76E+04        | 8.78E+04        | 5.80E+04        | 8.78E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.52E+04        | 8.55E+04        | 7.55E+04        | 8.56E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-388. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

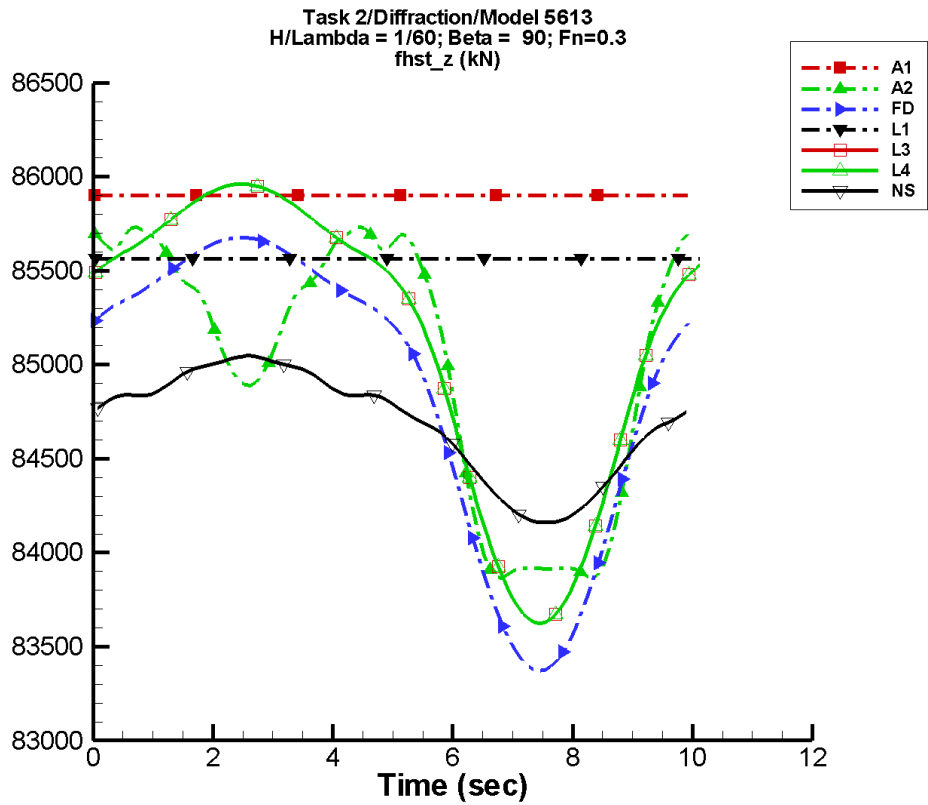
Table G-775. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.81E-02      | -34               | 2.64E-02      | 146               |
| A2   | 6.74E+04      | 3.01E+04      | 22                | 1.14E+04      | 93                |
| FD   | 6.86E+04      | 3.02E+04      | 26                | 1.04E+04      | 110               |
| L1   | 8.56E+04      | 4.21E-02      | 36                | 4.82E-02      | 2                 |
| L3   | 6.86E+04      | 3.00E+04      | 22                | 1.03E+04      | 103               |
| L4   | 6.86E+04      | 3.00E+04      | 22                | 1.03E+04      | 103               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-776. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 2.59E+04        | 1.00E+05        | 2.99E+04        | 9.95E+04        |
| FD   | 3.07E+04        | 9.88E+04        | 3.08E+04        | 9.83E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 3.04E+04        | 9.93E+04        | 3.09E+04        | 9.83E+04        |
| L4   | 3.04E+04        | 9.93E+04        | 3.09E+04        | 9.83E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-389. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-777. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

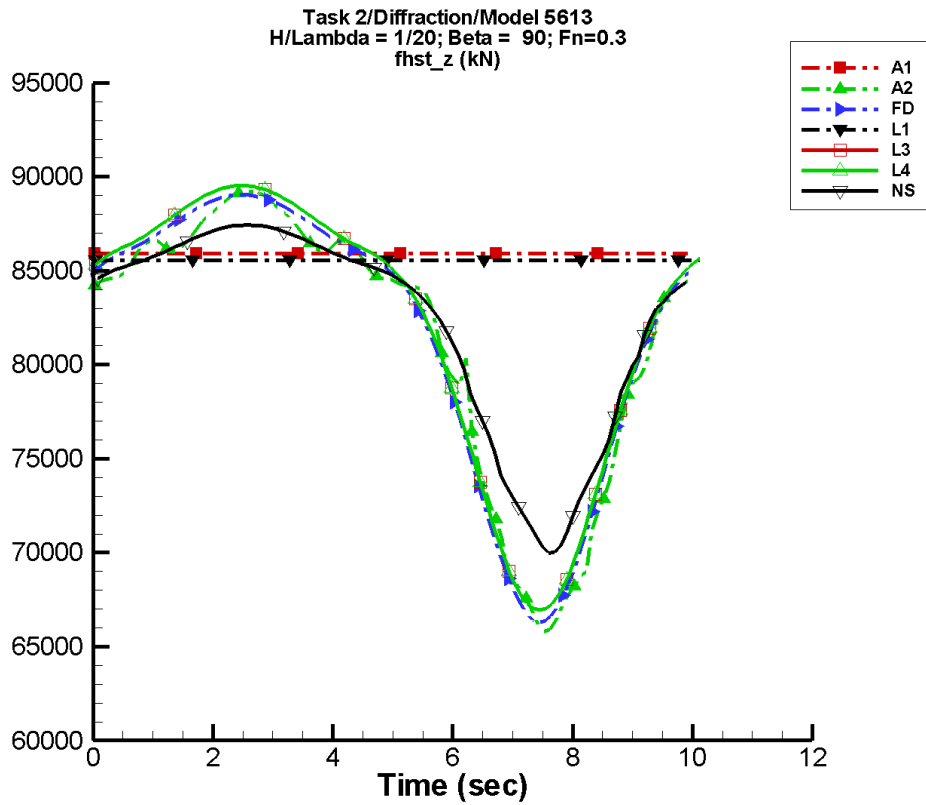
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.50E+04      | 701.          | -8                | 647.          | 73                |
| FD   | 8.49E+04      | 1.03E+03      | -9                | 338.          | 72                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 8.51E+04      | 1.04E+03      | -5                | 316.          | 85                |
| L4   | 8.51E+04      | 1.04E+03      | -5                | 316.          | 85                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 382.          | -5                | 81.8          | 86                |

Table G-778. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.39E+04        | 8.57E+04        | 8.39E+04        | 8.57E+04        |
| FD   | 8.34E+04        | 8.57E+04        | 8.34E+04        | 8.57E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.36E+04        | 8.60E+04        | 8.36E+04        | 8.60E+04        |
| L4   | 8.36E+04        | 8.60E+04        | 8.36E+04        | 8.60E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.42E+04        | 8.50E+04        | 8.42E+04        | 8.50E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-390. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

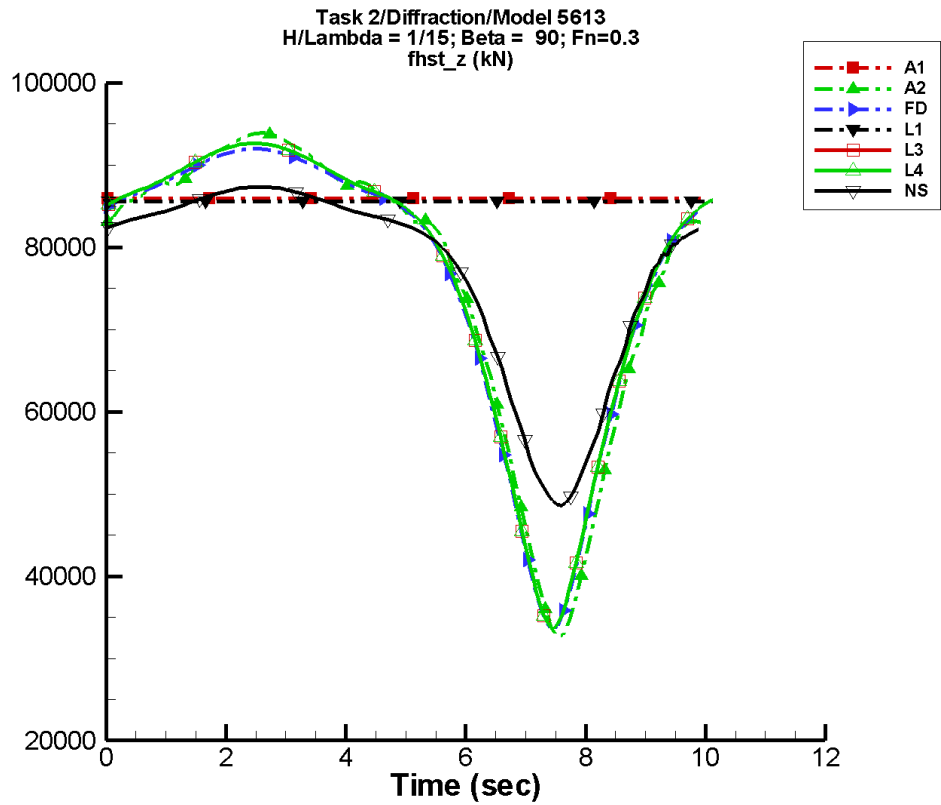
Table G-779. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 8.12E+04      | 9.18E+03      | -10               | 3.44E+03      | 76                |
| FD   | 8.14E+04      | 9.74E+03      | -9                | 3.45E+03      | 71                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 8.19E+04      | 9.71E+03      | -5                | 3.15E+03      | 85                |
| L4   | 8.19E+04      | 9.71E+03      | -5                | 3.15E+03      | 85                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.20E+04      | 6.99E+03      | -6                | 2.68E+03      | 82                |

Table G-780. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 6.58E+04        | 8.92E+04        | 6.67E+04        | 8.91E+04        |
| FD   | 6.63E+04        | 8.90E+04        | 6.66E+04        | 8.90E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 6.70E+04        | 8.95E+04        | 6.71E+04        | 8.95E+04        |
| L4   | 6.70E+04        | 8.95E+04        | 6.71E+04        | 8.95E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.00E+04        | 8.74E+04        | 7.08E+04        | 8.74E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-391. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

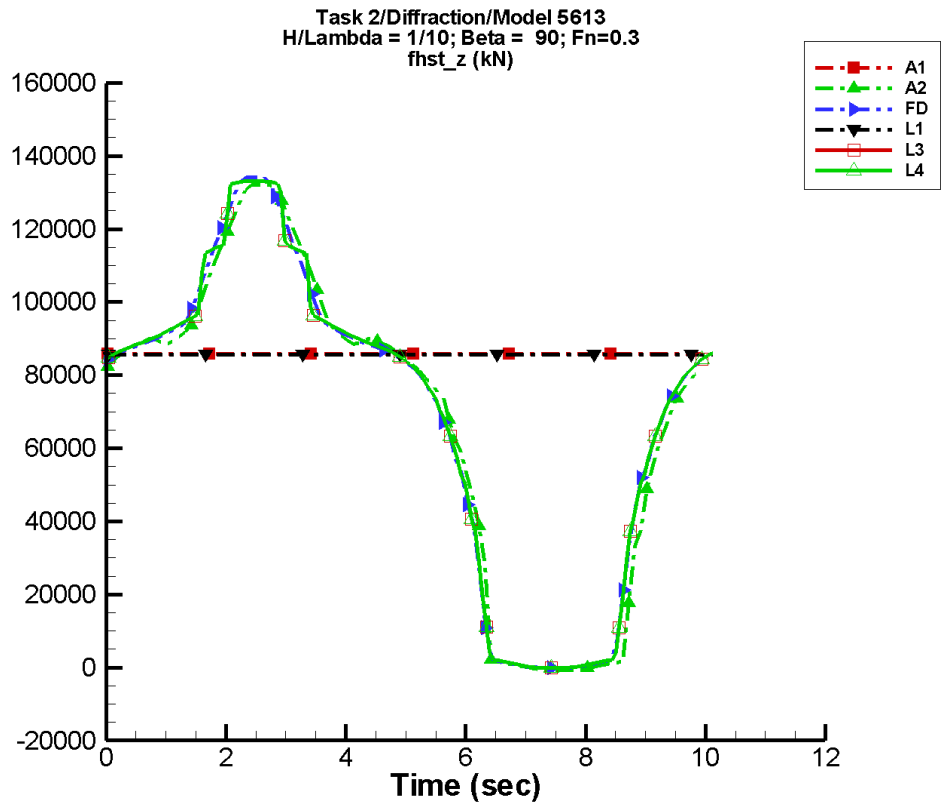
Table G-781. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 7.59E+04      | 2.23E+04      | -10               | 9.25E+03      | 76                |
| FD   | 7.56E+04      | 2.22E+04      | -10               | 9.81E+03      | 69                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 7.65E+04      | 2.21E+04      | -6                | 9.02E+03      | 85                |
| L4   | 7.65E+04      | 2.21E+04      | -6                | 9.02E+03      | 85                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.67E+04      | 1.45E+04      | -5                | 6.54E+03      | 84                |

Table G-782. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 3.26E+04        | 9.39E+04        | 3.58E+04        | 9.35E+04        |
| FD   | 3.33E+04        | 9.20E+04        | 3.57E+04        | 9.18E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 3.37E+04        | 9.26E+04        | 3.50E+04        | 9.26E+04        |
| L4   | 3.37E+04        | 9.26E+04        | 3.50E+04        | 9.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 4.86E+04        | 8.73E+04        | 4.96E+04        | 8.73E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-392. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

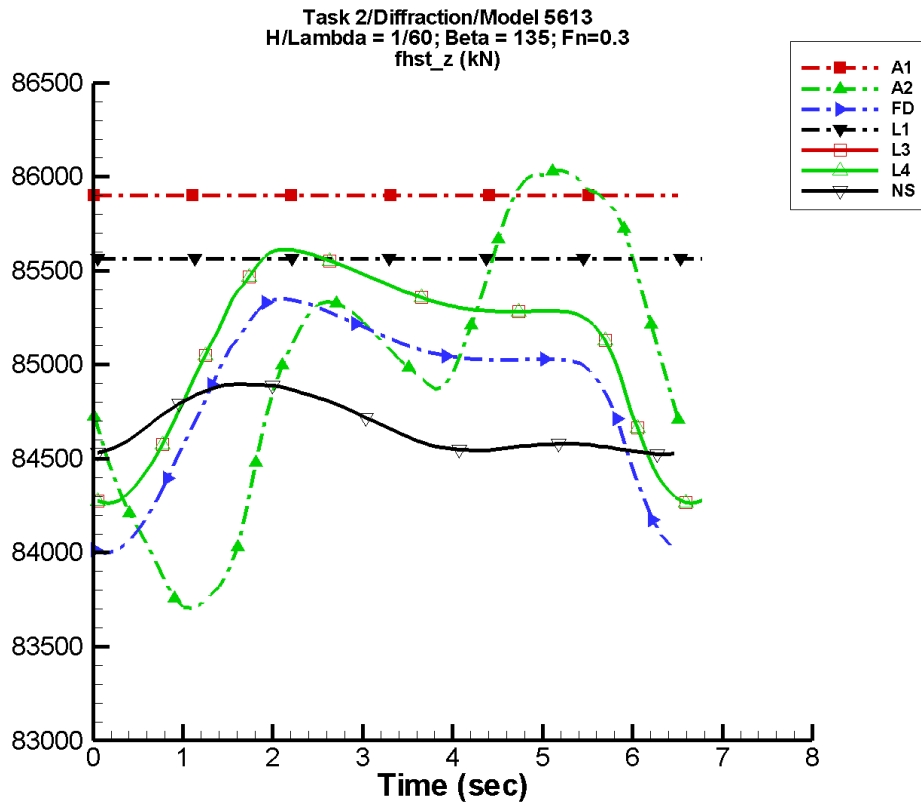
Table G-783. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.36E-02      | 144               | 4.45E-03      | -90               |
| A2   | 6.71E+04      | 5.70E+04      | -9                | 1.18E+04      | 82                |
| FD   | 6.79E+04      | 5.79E+04      | -9                | 1.02E+04      | 71                |
| L1   | 8.56E+04      | 2.40E-02      | -144              | 1.75E-02      | 165               |
| L3   | 6.88E+04      | 5.88E+04      | -6                | 9.46E+03      | 94                |
| L4   | 6.88E+04      | 5.88E+04      | -6                | 9.46E+03      | 94                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-784. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | -660.           | 1.32E+05        | -1.04E+03       | 1.30E+05        |
| FD   | -0.00           | 1.34E+05        | -437.           | 1.32E+05        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 0.00            | 1.33E+05        | -90.3           | 1.34E+05        |
| L4   | 0.00            | 1.33E+05        | -90.3           | 1.34E+05        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-393. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-785. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

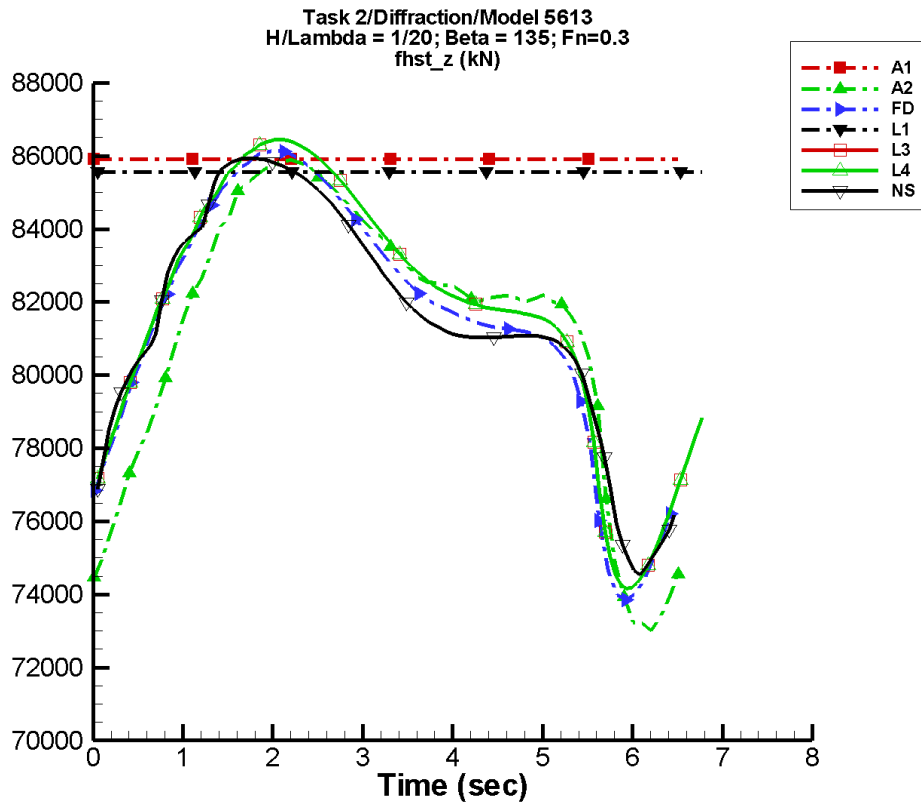
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.45E-02      | 26                | 8.88E-03      | 153               |
| A2   | 8.50E+04      | 819.          | -170              | 562.          | 177               |
| FD   | 8.49E+04      | 491.          | -88               | 322.          | -122              |
| L1   | 8.56E+04      | 4.55E-02      | -173              | 4.27E-03      | 110               |
| L3   | 8.51E+04      | 494.          | -94               | 313.          | -132              |
| L4   | 8.51E+04      | 494.          | -94               | 313.          | -132              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 174.          | -17               | 75.4          | -110              |

Table G-786. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.37E+04        | 8.60E+04        | 8.38E+04        | 8.60E+04        |
| FD   | 8.40E+04        | 8.54E+04        | 8.40E+04        | 8.53E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| L4   | 8.43E+04        | 8.56E+04        | 8.43E+04        | 8.56E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.49E+04        | 8.45E+04        | 8.49E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-394. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

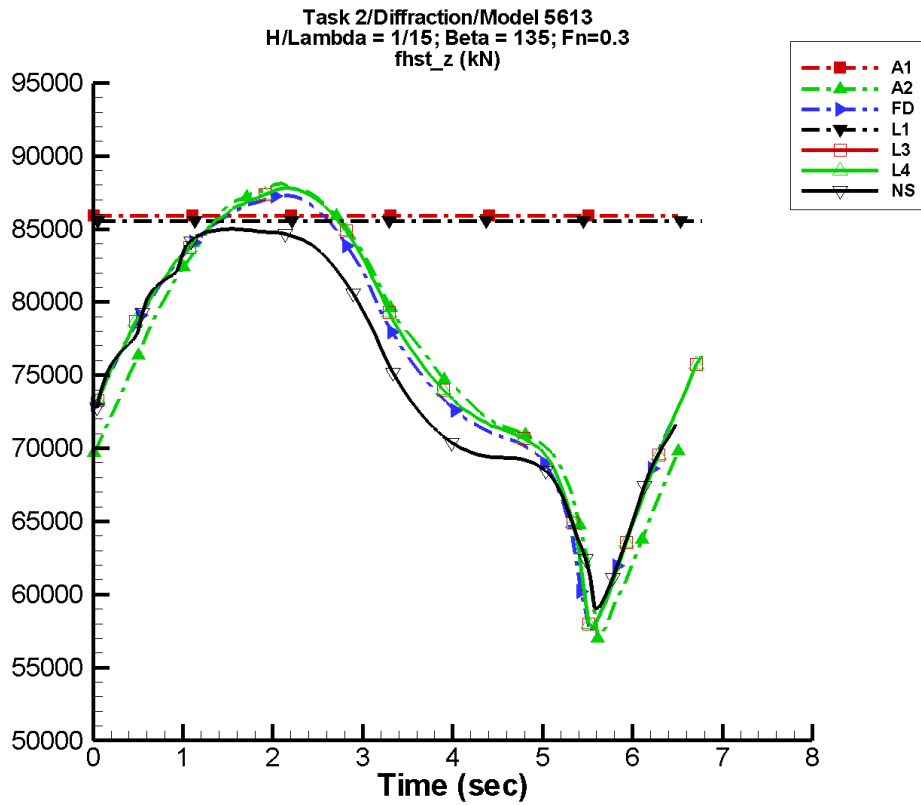
Table G-787. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.45E-02      | 26                | 8.88E-03      | 153               |
| A2   | 8.13E+04      | 4.46E+03      | -70               | 2.36E+03      | -97               |
| FD   | 8.16E+04      | 4.31E+03      | -47               | 1.87E+03      | -70               |
| L1   | 8.56E+04      | 4.55E-02      | -173              | 4.27E-03      | 110               |
| L3   | 8.19E+04      | 4.28E+03      | -54               | 1.80E+03      | -80               |
| L4   | 8.19E+04      | 4.28E+03      | -54               | 1.80E+03      | -80               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.16E+04      | 3.78E+03      | -43               | 1.92E+03      | -81               |

Table G-788. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.30E+04        | 8.59E+04        | 7.38E+04        | 8.57E+04        |
| FD   | 7.38E+04        | 8.61E+04        | 7.48E+04        | 8.60E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.42E+04        | 8.65E+04        | 7.44E+04        | 8.64E+04        |
| L4   | 7.42E+04        | 8.65E+04        | 7.44E+04        | 8.64E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.45E+04        | 8.59E+04        | 7.50E+04        | 8.59E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-395. Time history of  $F_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

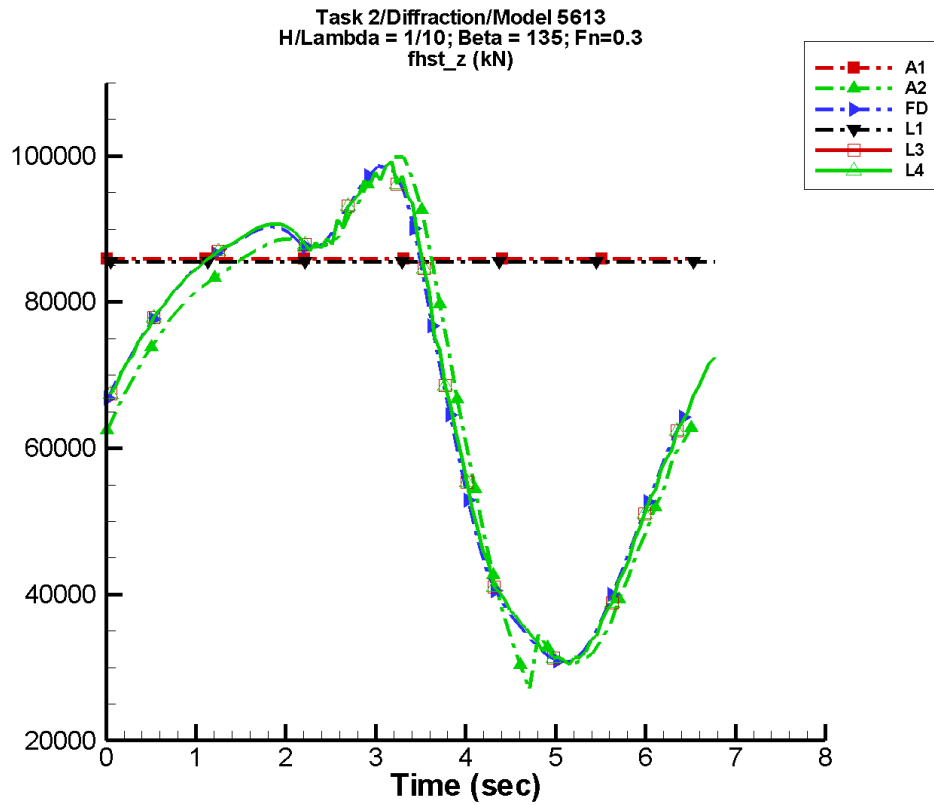
Table G-789. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.45E-02      | 26                | 8.88E-03      | 153               |
| A2   | 7.62E+04      | 1.16E+04      | -35               | 2.23E+03      | -55               |
| FD   | 7.62E+04      | 1.13E+04      | -22               | 1.78E+03      | -22               |
| L1   | 8.56E+04      | 4.55E-02      | -173              | 4.27E-03      | 110               |
| L3   | 7.66E+04      | 1.14E+04      | -28               | 1.61E+03      | -30               |
| L4   | 7.66E+04      | 1.14E+04      | -28               | 1.61E+03      | -30               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.51E+04      | 1.03E+04      | -15               | 1.86E+03      | -34               |

Table G-790. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 5.70E+04        | 8.81E+04        | 6.12E+04        | 8.77E+04        |
| FD   | 5.75E+04        | 8.73E+04        | 6.16E+04        | 8.70E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.78E+04        | 8.78E+04        | 6.00E+04        | 8.76E+04        |
| L4   | 5.78E+04        | 8.78E+04        | 6.00E+04        | 8.76E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 5.90E+04        | 8.50E+04        | 6.06E+04        | 8.50E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-396. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

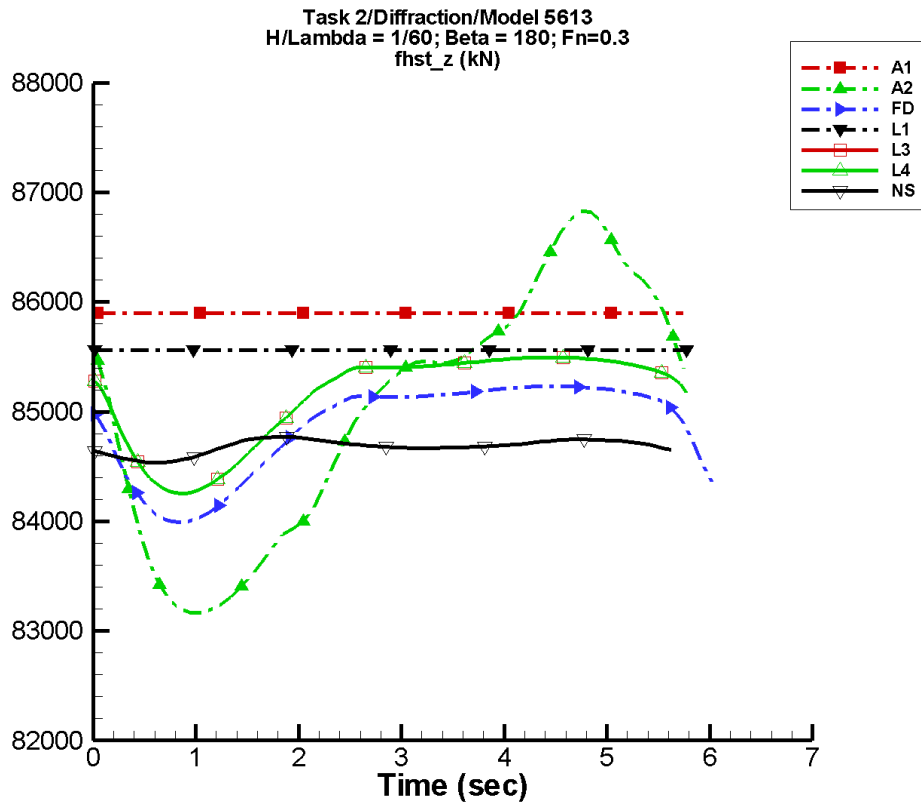
Table G-791. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.45E-02      | 26                | 8.88E-03      | 153               |
| A2   | 6.77E+04      | 3.08E+04      | -31               | 1.06E+04      | 72                |
| FD   | 6.84E+04      | 3.04E+04      | -20               | 9.85E+03      | 87                |
| L1   | 8.56E+04      | 4.55E-02      | -173              | 4.27E-03      | 110               |
| L3   | 6.84E+04      | 3.01E+04      | -24               | 9.58E+03      | 73                |
| L4   | 6.84E+04      | 3.01E+04      | -24               | 9.58E+03      | 73                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-792. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 2.70E+04        | 9.98E+04        | 3.10E+04        | 9.67E+04        |
| FD   | 3.07E+04        | 9.86E+04        | 3.22E+04        | 9.58E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 3.03E+04        | 9.92E+04        | 3.14E+04        | 9.73E+04        |
| L4   | 3.03E+04        | 9.92E+04        | 3.14E+04        | 9.73E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-397. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-793. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

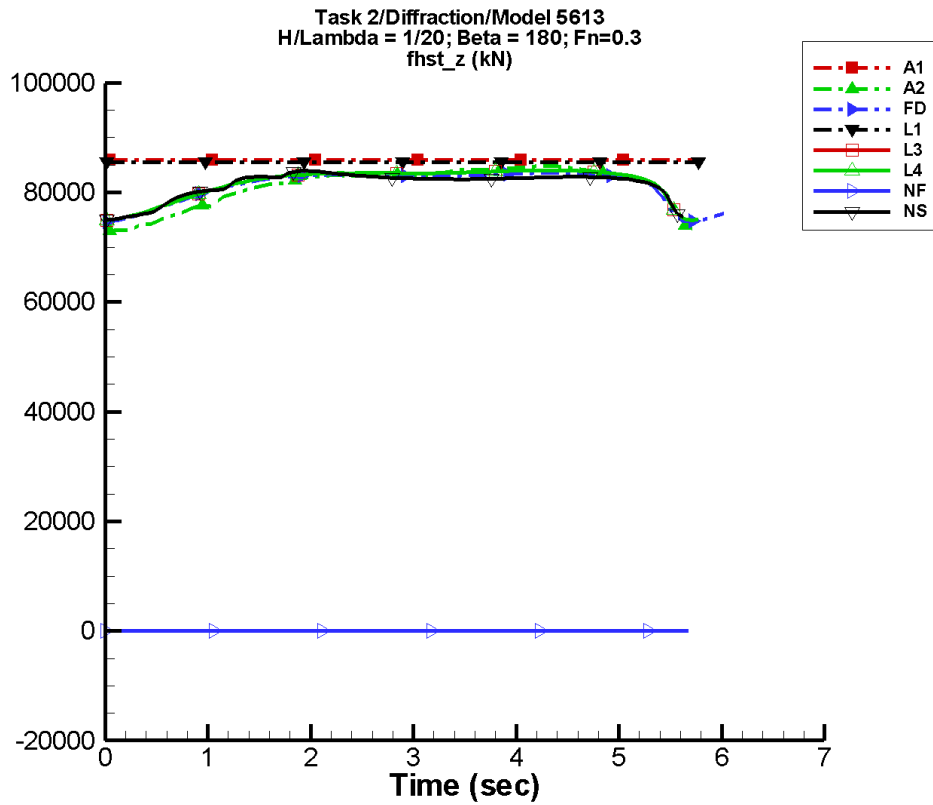
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.42E-02      | 168               | 5.18E-03      | -165              |
| A2   | 8.50E+04      | 1.51E+03      | 168               | 601.          | 137               |
| FD   | 8.49E+04      | 522.          | 166               | 282.          | 77                |
| L1   | 8.56E+04      | 1.15E-02      | 73                | 1.02E-02      | 105               |
| L3   | 8.51E+04      | 534.          | -172              | 266.          | 120               |
| L4   | 8.51E+04      | 534.          | -172              | 266.          | 120               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.47E+04      | 42.0          | -125              | 79.1          | -161              |

Table G-794. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 8.32E+04        | 8.68E+04        | 8.32E+04        | 8.66E+04        |
| FD   | 8.40E+04        | 8.52E+04        | 8.41E+04        | 8.52E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| L4   | 8.43E+04        | 8.55E+04        | 8.43E+04        | 8.55E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 8.45E+04        | 8.48E+04        | 8.45E+04        | 8.48E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-398. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

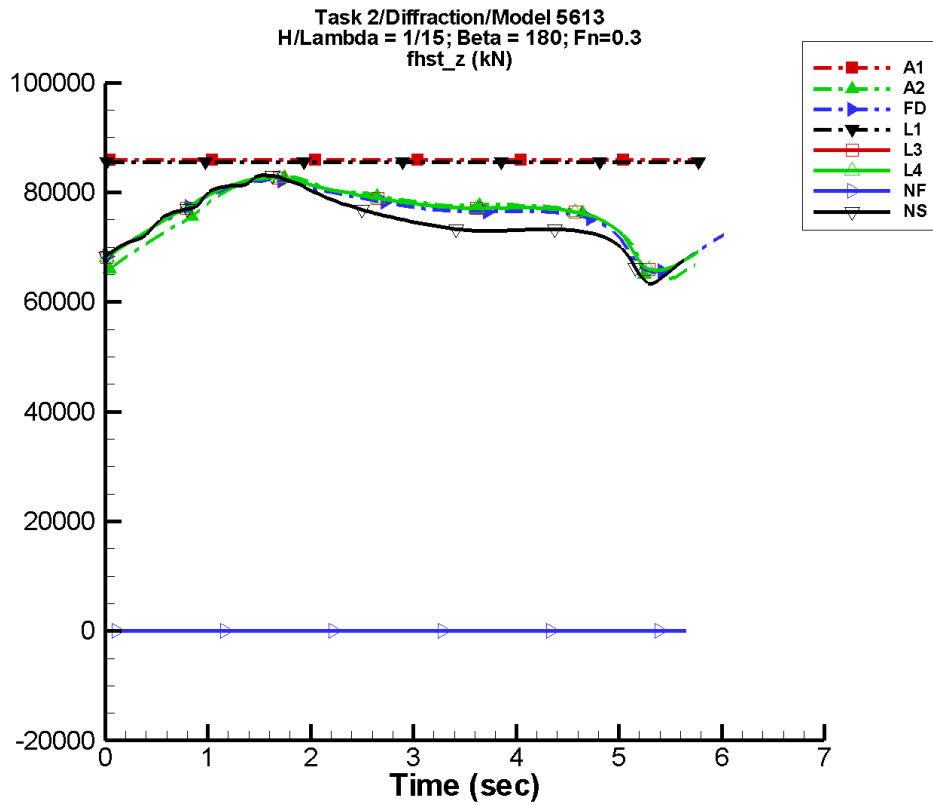
Table G-795. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.42E-02      | 168               | 5.18E-03      | -165              |
| A2   | 8.12E+04      | 4.22E+03      | -134              | 2.51E+03      | -147              |
| FD   | 8.14E+04      | 3.09E+03      | -150              | 2.13E+03      | 161               |
| L1   | 8.56E+04      | 1.15E-02      | 73                | 1.02E-02      | 105               |
| L3   | 8.19E+04      | 3.07E+03      | -131              | 1.93E+03      | -156              |
| L4   | 8.19E+04      | 3.07E+03      | -131              | 1.93E+03      | -156              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.14E+04      | 2.54E+03      | -103              | 2.17E+03      | -130              |

Table G-796. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 7.30E+04        | 8.48E+04        | 7.31E+04        | 8.45E+04        |
| FD   | 7.47E+04        | 8.35E+04        | 7.50E+04        | 8.35E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 7.49E+04        | 8.40E+04        | 7.50E+04        | 8.40E+04        |
| L4   | 7.49E+04        | 8.40E+04        | 7.50E+04        | 8.40E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 7.51E+04        | 8.39E+04        | 7.51E+04        | 8.37E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-399. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

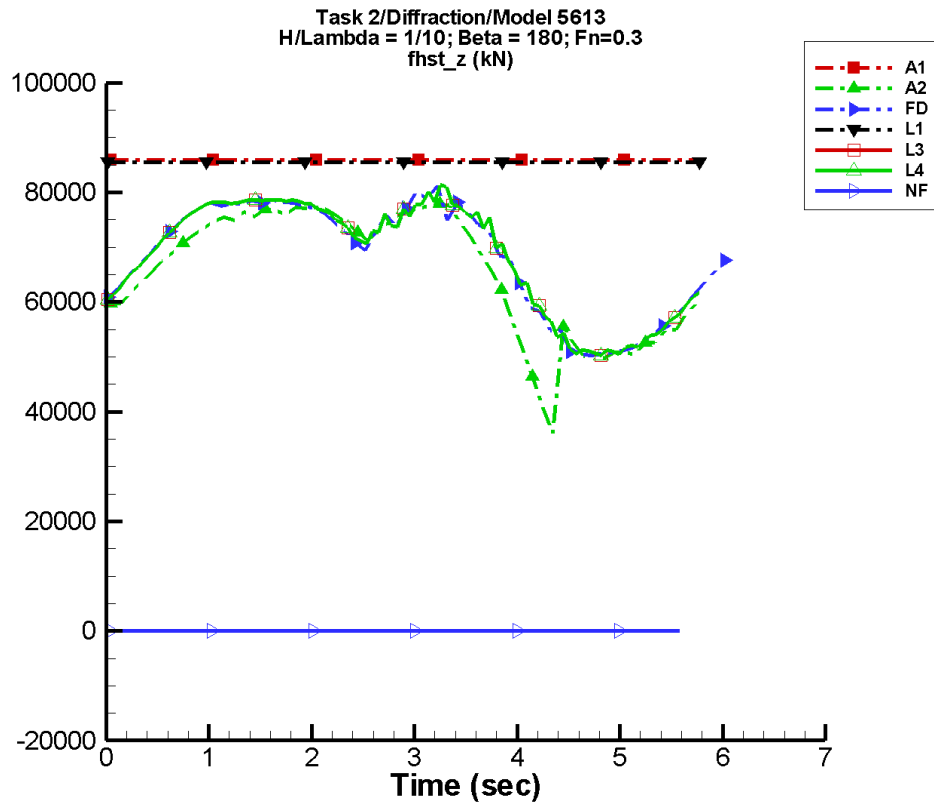
Table G-797. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.42E-02      | 168               | 5.18E-03      | -165              |
| A2   | 7.62E+04      | 5.75E+03      | -76               | 3.82E+03      | -108              |
| FD   | 7.62E+04      | 5.04E+03      | -91               | 3.36E+03      | -157              |
| L1   | 8.56E+04      | 1.15E-02      | 73                | 1.02E-02      | 105               |
| L3   | 7.67E+04      | 4.84E+03      | -72               | 3.24E+03      | -118              |
| L4   | 7.67E+04      | 4.84E+03      | -72               | 3.24E+03      | -118              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.47E+04      | 5.55E+03      | -34               | 3.30E+03      | -86               |

Table G-798. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 6.42E+04        | 8.28E+04        | 6.62E+04        | 8.26E+04        |
| FD   | 6.56E+04        | 8.24E+04        | 6.76E+04        | 8.18E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 6.58E+04        | 8.27E+04        | 6.65E+04        | 8.25E+04        |
| L4   | 6.58E+04        | 8.27E+04        | 6.65E+04        | 8.25E+04        |
| NF   | —               | —               | —               | —               |
| NS   | 6.33E+04        | 8.31E+04        | 6.44E+04        | 8.28E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-400. Time history of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

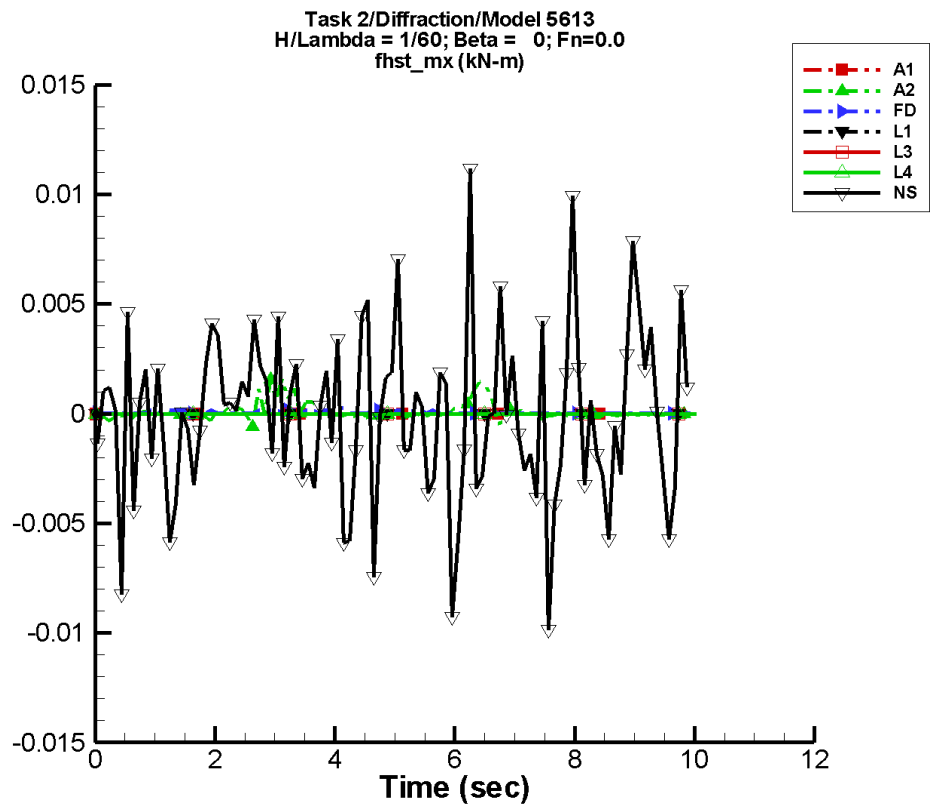
Table G-799. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.59E+04      | 1.42E-02      | 168               | 5.18E-03      | -165              |
| A2   | 6.57E+04      | 1.47E+04      | -47               | 4.11E+03      | 11                |
| FD   | 6.84E+04      | 1.26E+04      | -79               | 6.29E+03      | -74               |
| L1   | 8.56E+04      | 1.15E-02      | 73                | 1.02E-02      | 105               |
| L3   | 6.86E+04      | 1.28E+04      | -57               | 6.33E+03      | -33               |
| L4   | 6.86E+04      | 1.28E+04      | -57               | 6.33E+03      | -33               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-800. Minimum and maximum of  $F_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | 8.59E+04        | 8.59E+04        | 8.59E+04        | 8.59E+04        |
| A2   | 3.61E+04        | 7.79E+04        | 4.81E+04        | 7.68E+04        |
| FD   | 5.03E+04        | 8.12E+04        | 5.11E+04        | 7.83E+04        |
| L1   | 8.56E+04        | 8.56E+04        | 8.56E+04        | 8.56E+04        |
| L3   | 5.01E+04        | 8.14E+04        | 5.07E+04        | 7.88E+04        |
| L4   | 5.01E+04        | 8.14E+04        | 5.07E+04        | 7.88E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-401. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–801. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

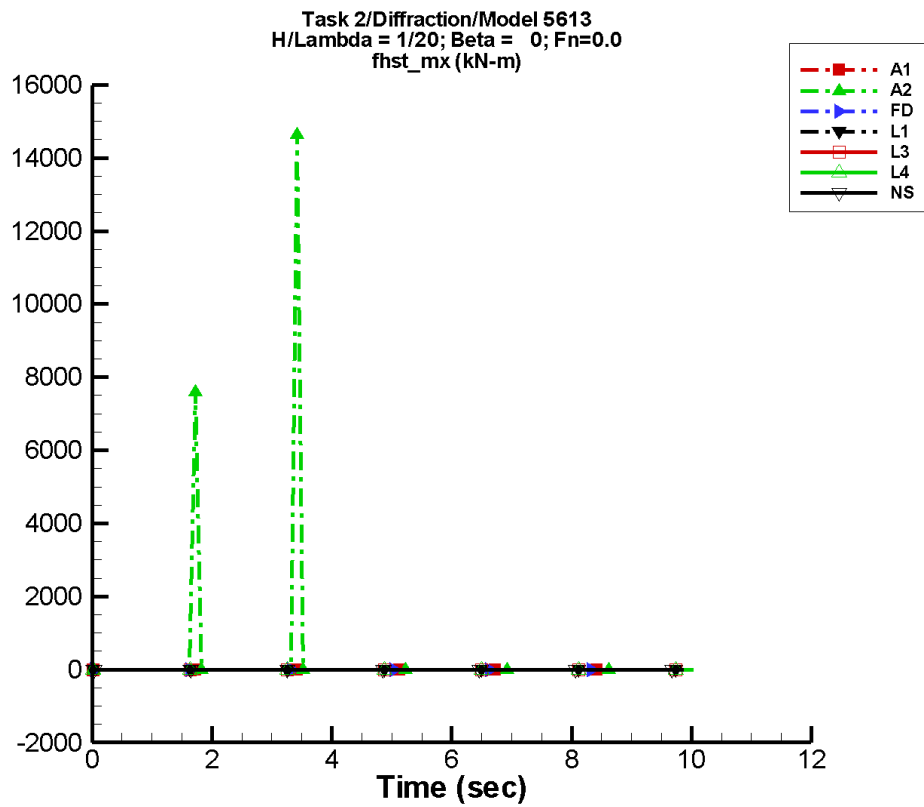
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 7.49E-05        | 1.37E-04        | -76               | 1.12E-04        | -104              |
| FD   | 6.13E-05        | 4.05E-05        | -33               | 3.90E-06        | 118               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.80E-04       | 2.61E-04        | 20                | 4.94E-04        | -152              |

Table G–802. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.03E-04         | 1.57E-03          | -1.39E-04         | 8.03E-04          |
| FD   | 3.05E-05          | 2.81E-04          | 2.72E-05          | 1.28E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.87E-03         | 1.12E-02          | -2.03E-03         | 1.77E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-402. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

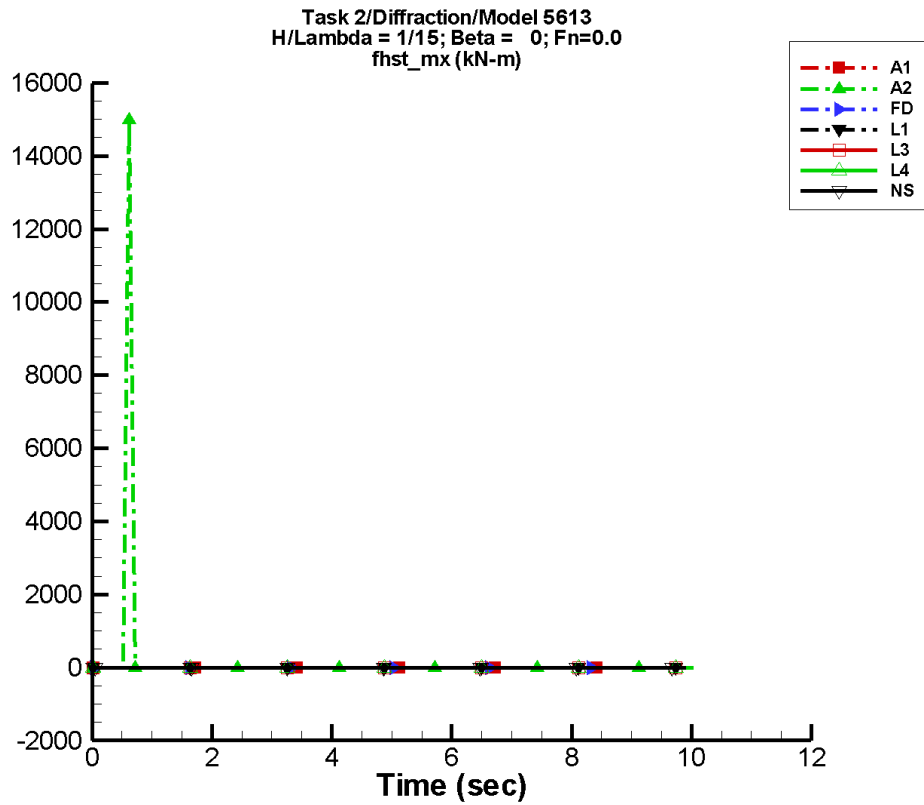
Table G-803. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 269.            | 447.            | -6                | 182.            | -102              |
| FD   | -2.68E-05       | 8.82E-05        | 22                | 2.71E-05        | -103              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.48E-04       | 1.27E-03        | 125               | 2.00E-03        | 81                |

Table G-804. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.46E-02         | 1.48E+04          | -227.             | 1.98E+03          |
| FD   | -4.07E-04         | 2.81E-04          | -1.48E-04         | 1.49E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.24E-02         | 1.60E-02          | -5.45E-03         | 4.87E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-403. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

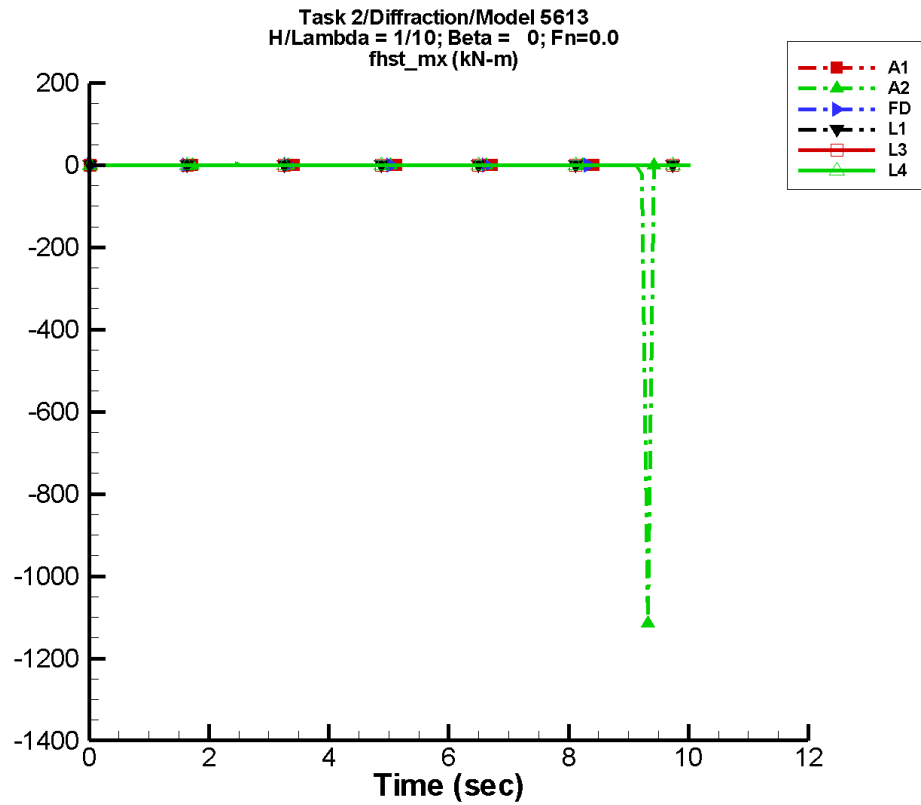
Table G–805. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 78.9            | 169.            | 70                | 196.            | 45                |
| FD   | -3.22E-05       | 1.76E-04        | 93                | 1.52E-04        | -160              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.96E-04        | 1.56E-03        | -13               | 1.00E-03        | -136              |

Table G–806. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.63E-03         | 1.50E+04          | -171.             | 2.00E+03          |
| FD   | -7.19E-04         | 3.43E-04          | -4.08E-04         | 3.01E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.58E-02         | 1.65E-02          | -8.83E-03         | 5.34E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-404. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

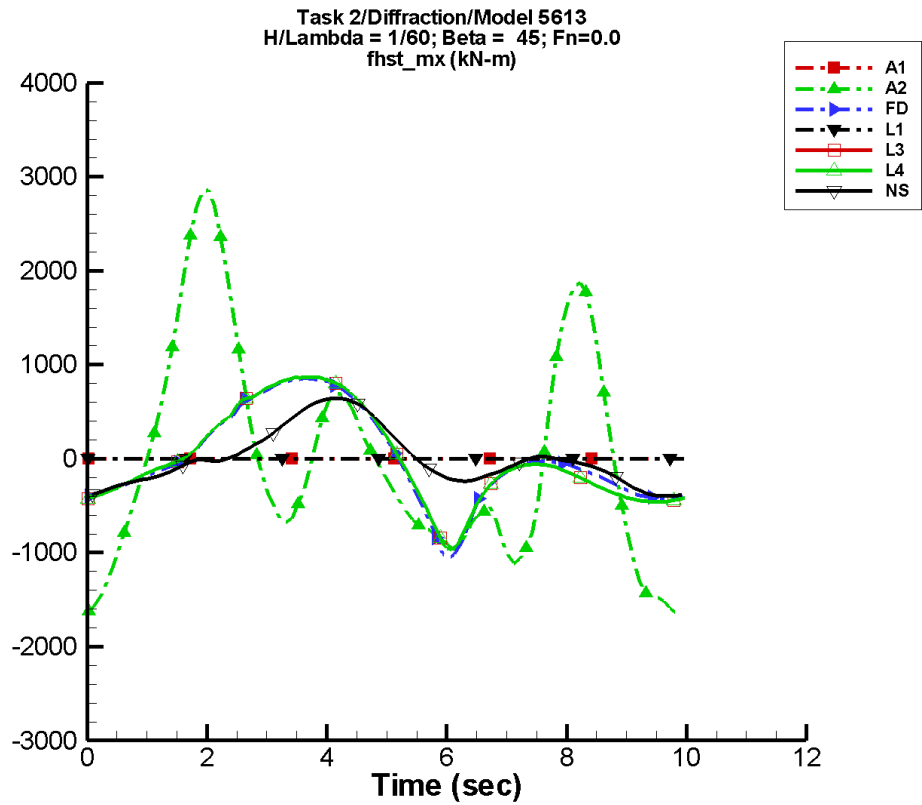
Table G-807. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -5.12           | 15.0            | -38               | 26.3            | -18               |
| FD   | 1.00E-05        | 2.09E-04        | 104               | 1.35E-04        | -162              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-808. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.11E+03         | 912.              | -147.             | 117.              |
| FD   | -5.57E-04         | 5.31E-04          | -3.26E-04         | 3.48E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-405. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–809. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

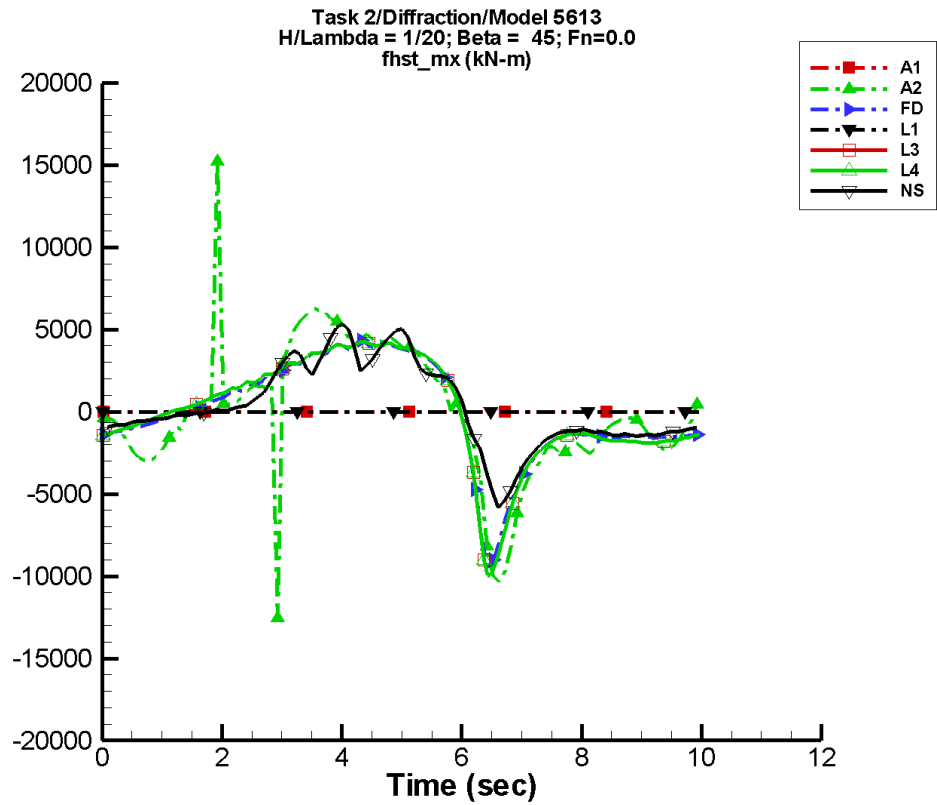
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 30.2            | 676.            | -4                | 992.            | -99               |
| FD   | 15.4            | 468.            | -34               | 430.            | -172              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.17           | 538.            | -31               | 383.            | -168              |
| L4   | -1.17           | 538.            | -31               | 383.            | -168              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 5.69            | 328.            | -61               | 176.            | -176              |

Table G–810. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.64E+03         | 2.87E+03          | -1.57E+03         | 2.76E+03          |
| FD   | -1.07E+03         | 860.              | -848.             | 838.              |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -963.             | 870.              | -884.             | 864.              |
| L4   | -963.             | 870.              | -884.             | 864.              |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -397.             | 644.              | -388.             | 622.              |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-406. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

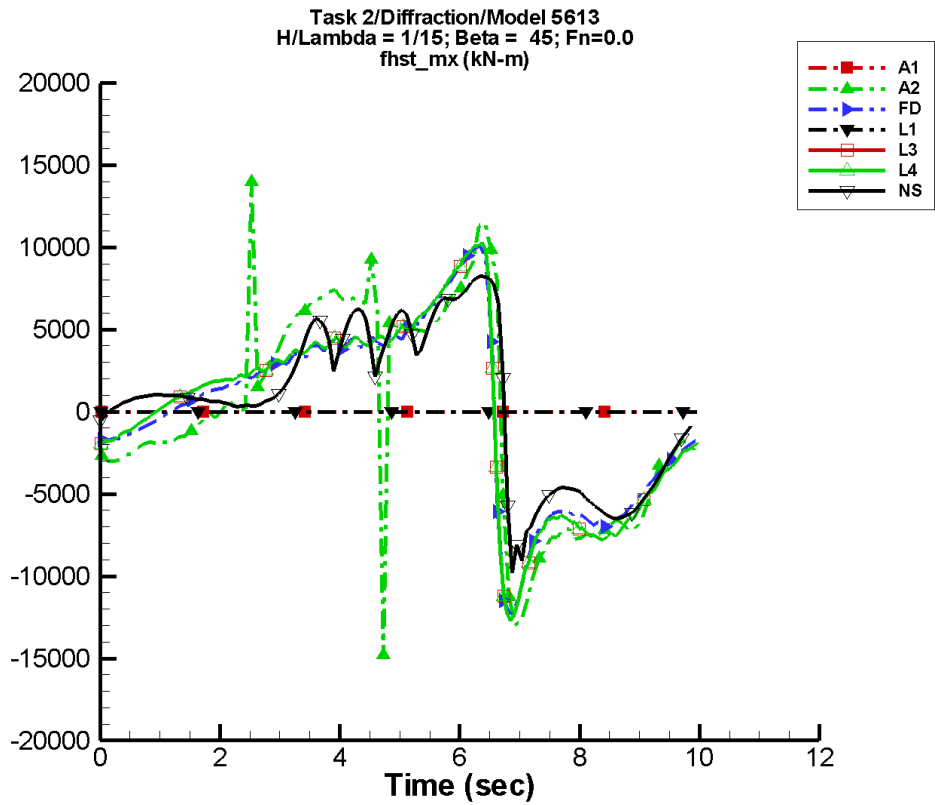
Table G–811. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -46.7           | 3.65E+03        | -38               | 2.37E+03        | 144               |
| FD   | -6.36           | 3.16E+03        | -39               | 1.97E+03        | 124               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -117.           | 3.53E+03        | -32               | 2.01E+03        | 126               |
| L4   | -117.           | 3.53E+03        | -32               | 2.01E+03        | 126               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 274.            | 2.76E+03        | -43               | 1.60E+03        | 133               |

Table G–812. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.61E+04         | 1.52E+04          | -7.49E+03         | 5.81E+03          |
| FD   | -9.46E+03         | 4.37E+03          | -6.71E+03         | 4.10E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.00E+04         | 4.27E+03          | -8.52E+03         | 4.12E+03          |
| L4   | -1.00E+04         | 4.27E+03          | -8.52E+03         | 4.12E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.87E+03         | 5.36E+03          | -4.30E+03         | 4.01E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-407. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

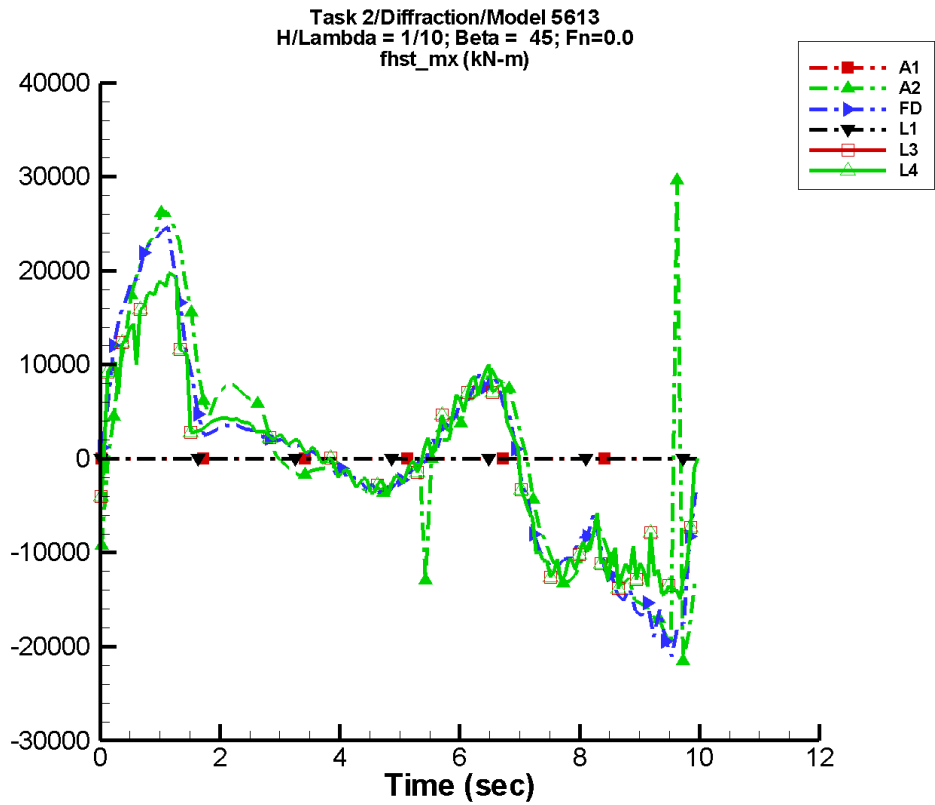
Table G–813. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -155.           | 6.62E+03        | -60               | 2.18E+03        | 63                |
| FD   | -157.           | 5.87E+03        | -59               | 3.01E+03        | 37                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 49.2            | 6.01E+03        | -56               | 3.09E+03        | 34                |
| L4   | 49.2            | 6.01E+03        | -56               | 3.09E+03        | 34                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 511.            | 4.75E+03        | -59               | 3.10E+03        | 51                |

Table G–814. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.48E+04         | 1.40E+04          | -1.01E+04         | 8.74E+03          |
| FD   | -1.23E+04         | 1.01E+04          | -9.21E+03         | 8.86E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.27E+04         | 1.03E+04          | -1.12E+04         | 9.99E+03          |
| L4   | -1.27E+04         | 1.03E+04          | -1.12E+04         | 9.99E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.79E+03         | 8.24E+03          | -7.15E+03         | 8.15E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-408. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

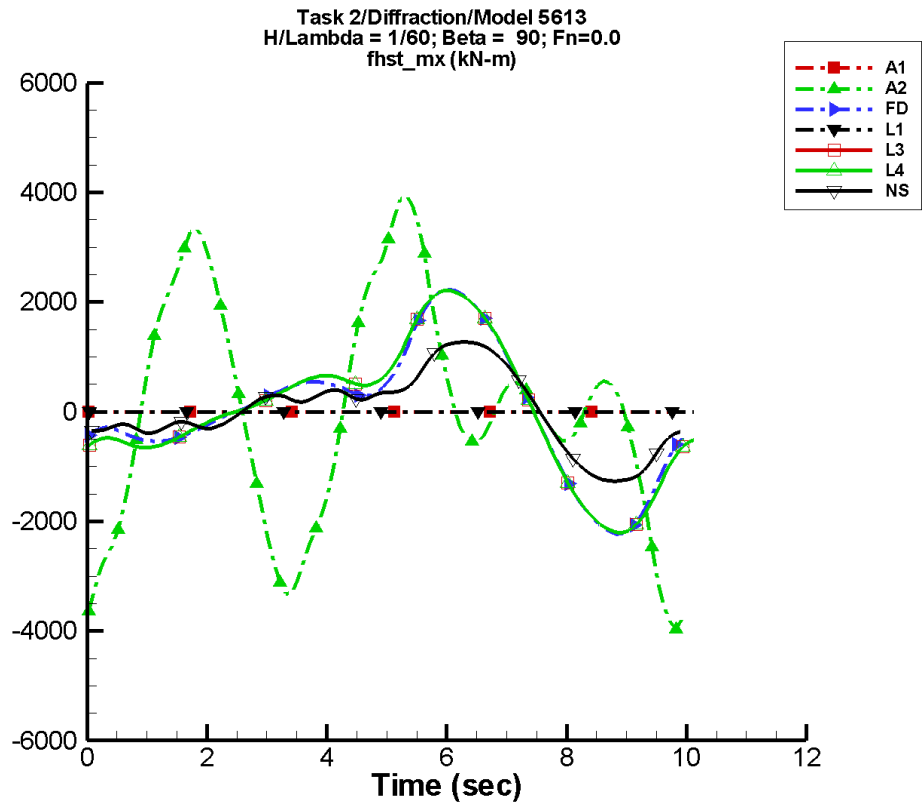
Table G–815. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 653.            | 7.07E+03        | 4                 | 1.12E+04        | -8                |
| FD   | 387.            | 6.76E+03        | -4                | 1.00E+04        | -7                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 359.            | 5.62E+03        | -5                | 8.33E+03        | -2                |
| L4   | 359.            | 5.62E+03        | -5                | 8.33E+03        | -2                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–816. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.15E+04         | 2.97E+04          | -1.45E+04         | 2.37E+04          |
| FD   | -2.11E+04         | 2.51E+04          | -1.79E+04         | 2.21E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.50E+04         | 1.97E+04          | -1.38E+04         | 1.86E+04          |
| L4   | -1.50E+04         | 1.97E+04          | -1.38E+04         | 1.86E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-409. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–817. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

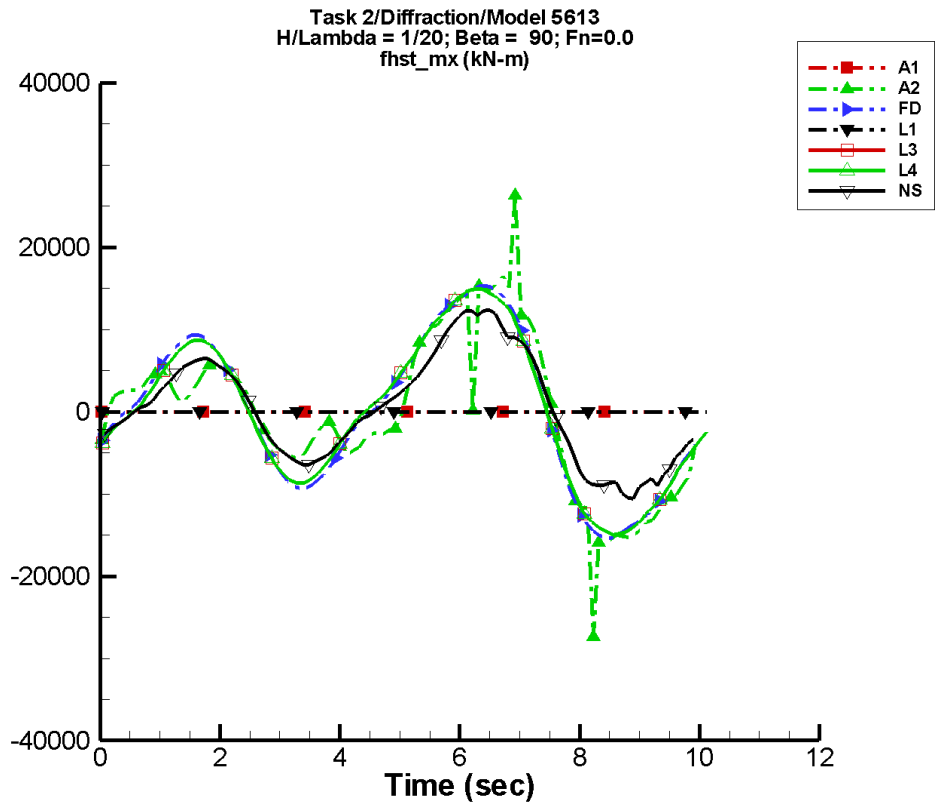
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 28.6            | 1.08E+03        | -86               | 1.52E+03        | -30               |
| FD   | 23.0            | 1.24E+03        | -100              | 785.            | -18               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 7.55            | 1.36E+03        | -95               | 745.            | -5                |
| L4   | 7.55            | 1.36E+03        | -95               | 745.            | -5                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.86           | 742.            | -97               | 446.            | -1                |

Table G–818. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.97E+03         | 3.94E+03          | -3.41E+03         | 3.42E+03          |
| FD   | -2.23E+03         | 2.23E+03          | -2.13E+03         | 2.13E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -2.21E+03         | 2.21E+03          | -2.18E+03         | 2.18E+03          |
| L4   | -2.21E+03         | 2.21E+03          | -2.18E+03         | 2.18E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.27E+03         | 1.28E+03          | -1.24E+03         | 1.25E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-410. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

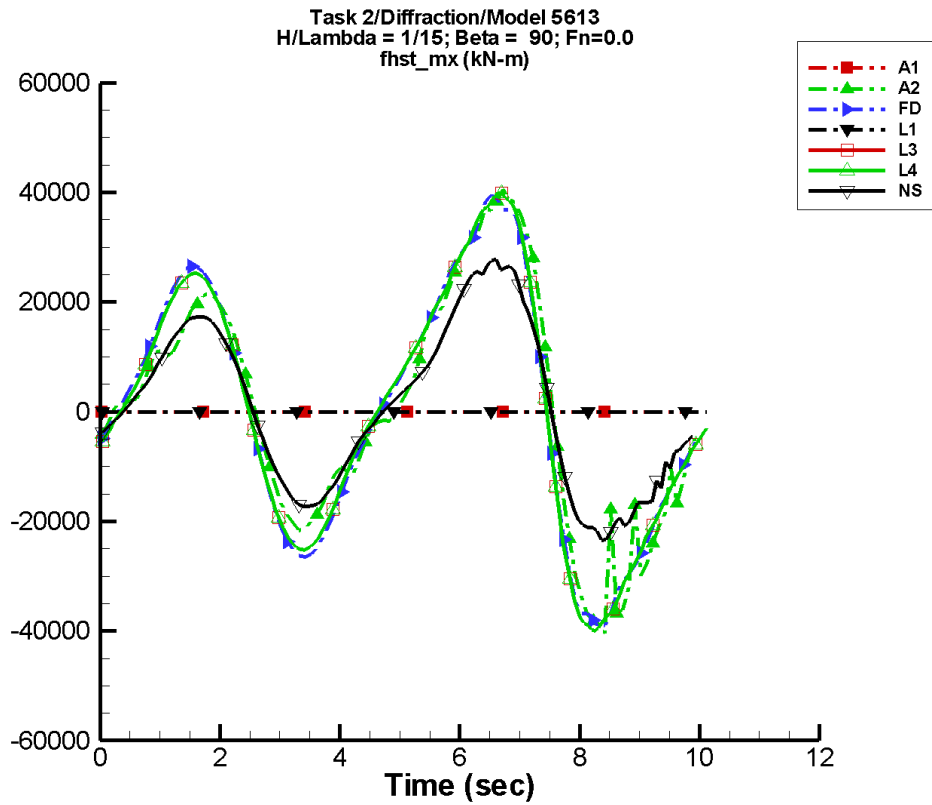
Table G–819. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -139.           | 5.14E+03        | -99               | 1.04E+04        | -14               |
| FD   | 12.7            | 4.98E+03        | -99               | 1.15E+04        | -17               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -80.2           | 5.27E+03        | -95               | 1.10E+04        | -9                |
| L4   | -80.2           | 5.27E+03        | -95               | 1.10E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 333.            | 3.79E+03        | -99               | 8.04E+03        | -10               |

Table G–820. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.74E+04         | 2.63E+04          | -1.63E+04         | 1.55E+04          |
| FD   | -1.53E+04         | 1.53E+04          | -1.47E+04         | 1.47E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.50E+04         | 1.50E+04          | -1.47E+04         | 1.47E+04          |
| L4   | -1.50E+04         | 1.50E+04          | -1.47E+04         | 1.47E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.05E+04         | 1.23E+04          | -9.47E+03         | 1.18E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-411. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

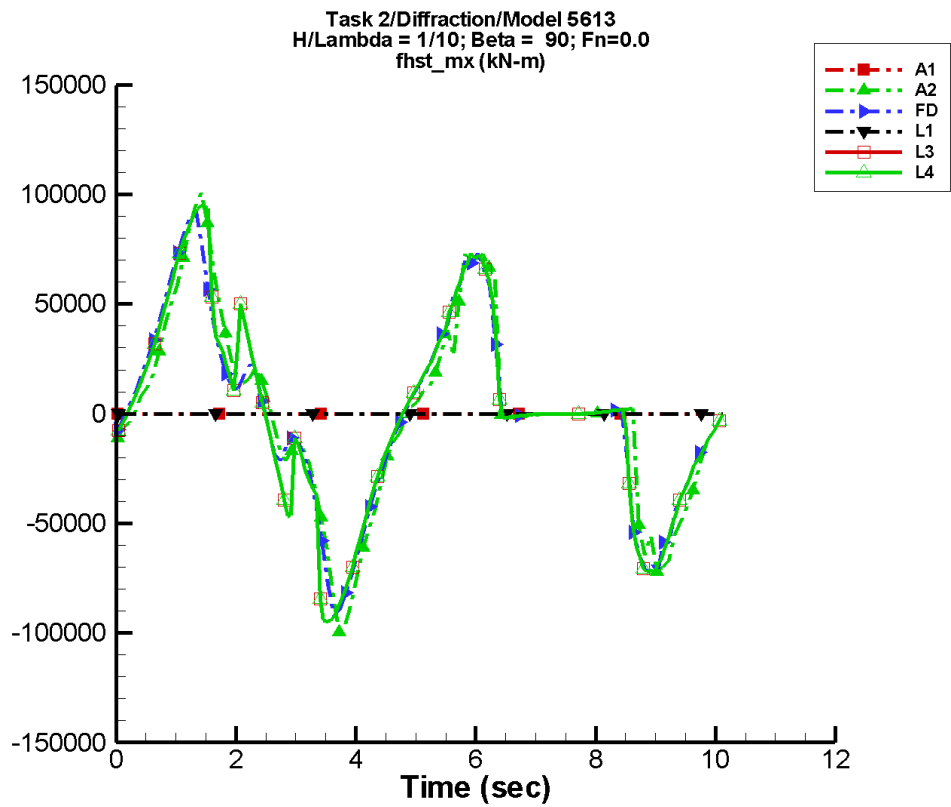
Table G–821. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 349.            | 8.87E+03        | -103              | 2.57E+04        | -16               |
| FD   | 66.6            | 7.79E+03        | -102              | 2.90E+04        | -18               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -289.           | 8.47E+03        | -95               | 2.87E+04        | -9                |
| L4   | -289.           | 8.47E+03        | -95               | 2.87E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 579.            | 5.19E+03        | -101              | 1.90E+04        | -9                |

Table G–822. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -4.04E+04         | 4.05E+04          | -3.48E+04         | 3.75E+04          |
| FD   | -3.96E+04         | 3.96E+04          | -3.68E+04         | 3.70E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -3.99E+04         | 3.99E+04          | -3.89E+04         | 3.89E+04          |
| L4   | -3.99E+04         | 3.99E+04          | -3.89E+04         | 3.89E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.35E+04         | 2.78E+04          | -2.18E+04         | 2.65E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-412. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

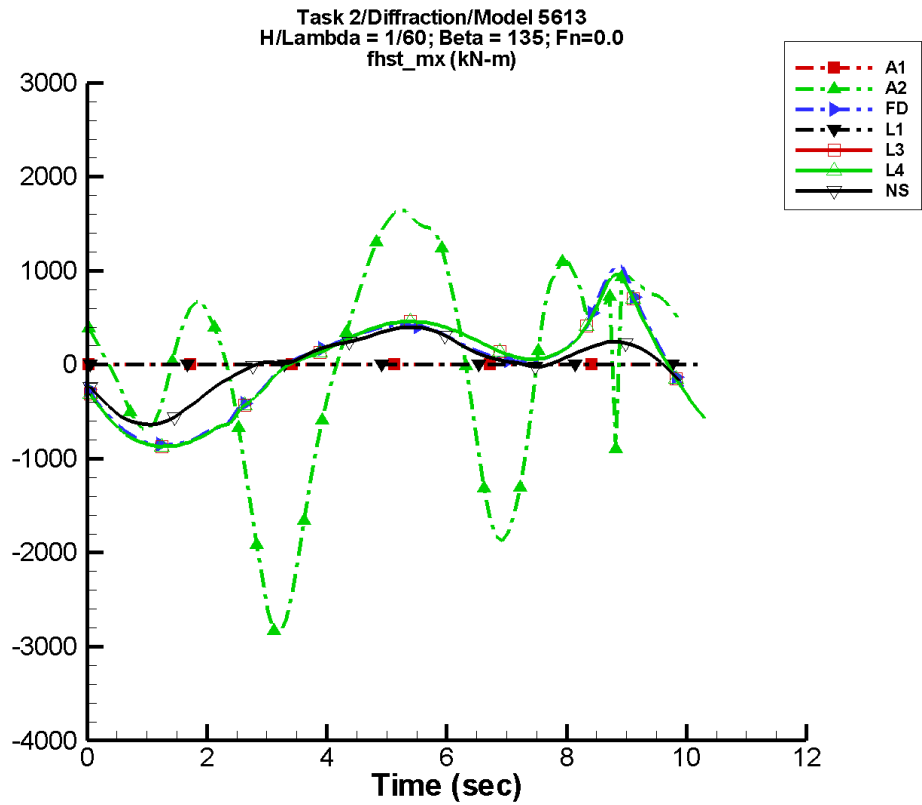
Table G-823. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -156.           | 3.70E+03        | 64                | 5.32E+04        | -17               |
| FD   | -770.           | 3.37E+03        | 39                | 5.26E+04        | -12               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 226.            | 3.22E+03        | 65                | 5.54E+04        | -9                |
| L4   | 226.            | 3.22E+03        | 65                | 5.54E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-824. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.96E+04         | 1.01E+05          | -7.52E+04         | 7.57E+04          |
| FD   | -9.20E+04         | 9.37E+04          | -7.11E+04         | 7.14E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.49E+04         | 9.49E+04          | -8.73E+04         | 8.75E+04          |
| L4   | -9.49E+04         | 9.49E+04          | -8.73E+04         | 8.75E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-413. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–825. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

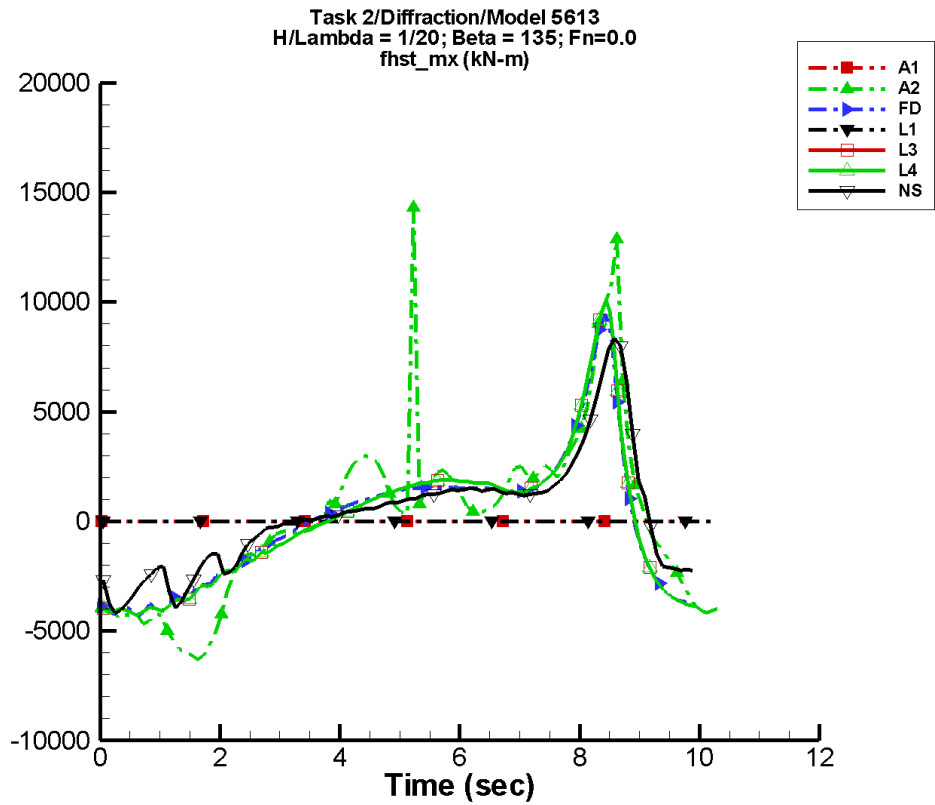
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -7.90           | 433.            | 175               | 628.            | 66                |
| FD   | -15.8           | 493.            | -156              | 377.            | 139               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 2.13            | 533.            | -154              | 378.            | 144               |
| L4   | 2.13            | 533.            | -154              | 378.            | 144               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.02           | 347.            | -124              | 198.            | 166               |

Table G–826. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.86E+03         | 1.65E+03          | -2.44E+03         | 1.57E+03          |
| FD   | -862.             | 1.06E+03          | -839.             | 848.              |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -870.             | 963.              | -865.             | 886.              |
| L4   | -870.             | 963.              | -865.             | 886.              |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -639.             | 398.              | -618.             | 388.              |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-414. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

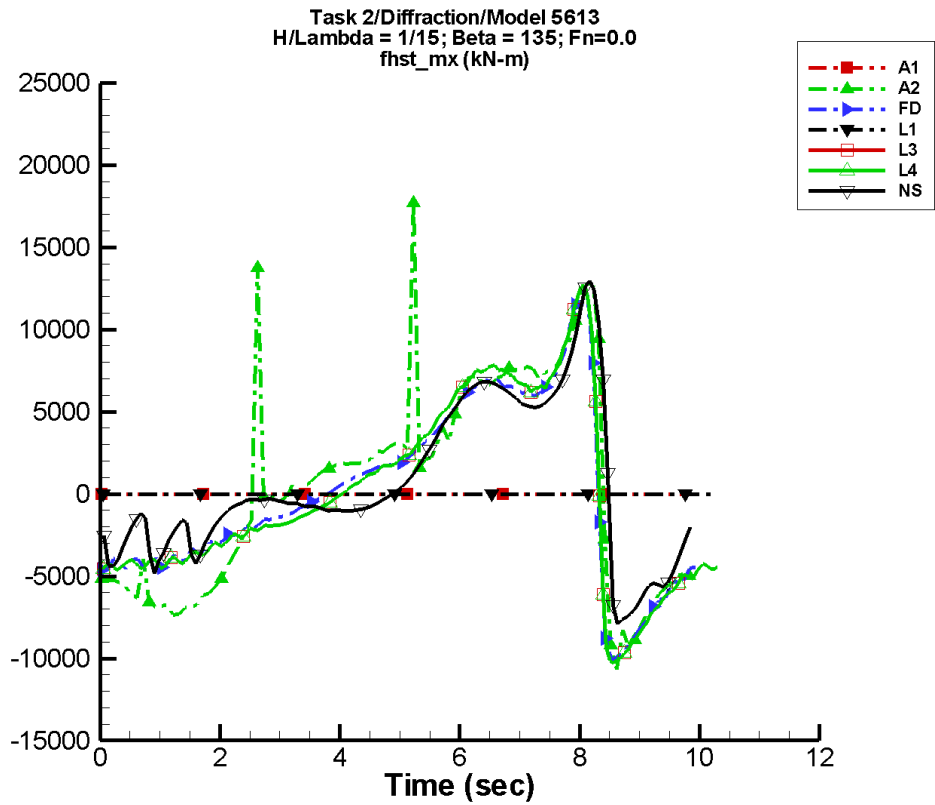
Table G-827. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 224.            | 3.81E+03        | -154              | 2.54E+03        | -179              |
| FD   | -80.5           | 2.94E+03        | -152              | 1.57E+03        | -163              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 43.6            | 3.25E+03        | -155              | 1.80E+03        | -154              |
| L4   | 43.6            | 3.25E+03        | -155              | 1.80E+03        | -154              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 269.            | 2.42E+03        | -156              | 1.75E+03        | -149              |

Table G-828. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.31E+03         | 1.43E+04          | -5.74E+03         | 7.92E+03          |
| FD   | -4.35E+03         | 9.46E+03          | -4.10E+03         | 6.68E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -4.27E+03         | 1.00E+04          | -4.12E+03         | 8.52E+03          |
| L4   | -4.27E+03         | 1.00E+04          | -4.12E+03         | 8.52E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.19E+03         | 8.36E+03          | -3.35E+03         | 6.34E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-415. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

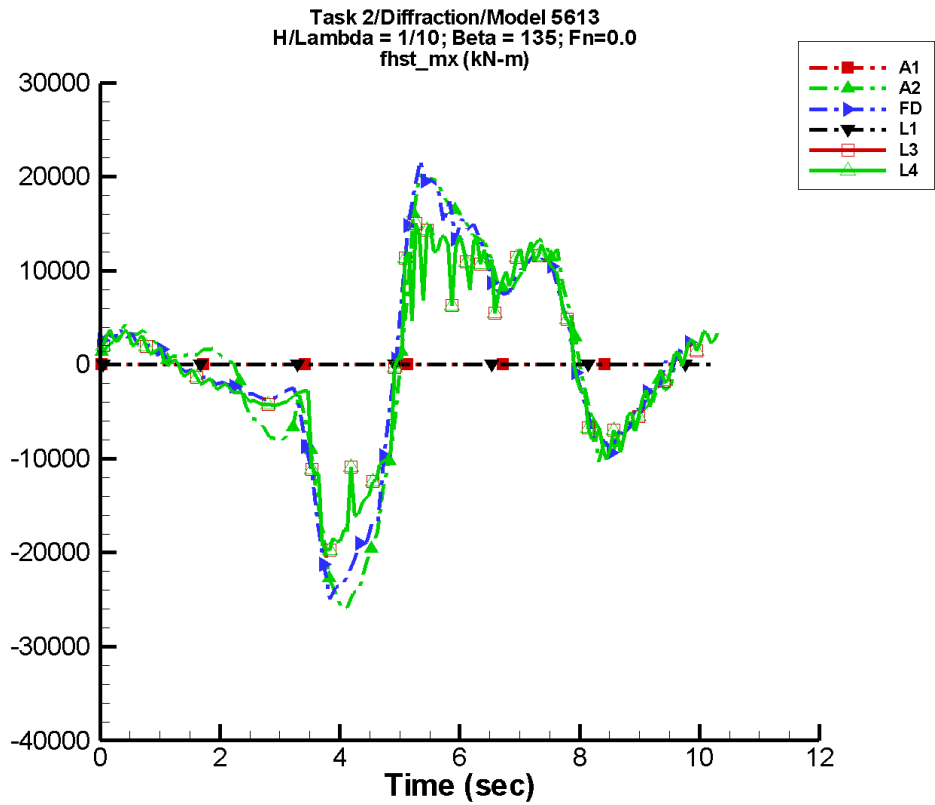
Table G-829. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 395.            | 6.76E+03        | -134              | 2.29E+03        | -98               |
| FD   | 86.7            | 5.37E+03        | -138              | 2.46E+03        | -74               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -28.8           | 5.96E+03        | -135              | 3.17E+03        | -61               |
| L4   | -28.8           | 5.96E+03        | -135              | 3.17E+03        | -61               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 558.            | 4.45E+03        | -146              | 2.79E+03        | -66               |

Table G-830. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.07E+04         | 1.77E+04          | -8.34E+03         | 9.98E+03          |
| FD   | -1.01E+04         | 1.22E+04          | -8.88E+03         | 9.18E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.03E+04         | 1.27E+04          | -9.99E+03         | 1.12E+04          |
| L4   | -1.03E+04         | 1.27E+04          | -9.99E+03         | 1.12E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.93E+03         | 1.30E+04          | -7.15E+03         | 1.06E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-416. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

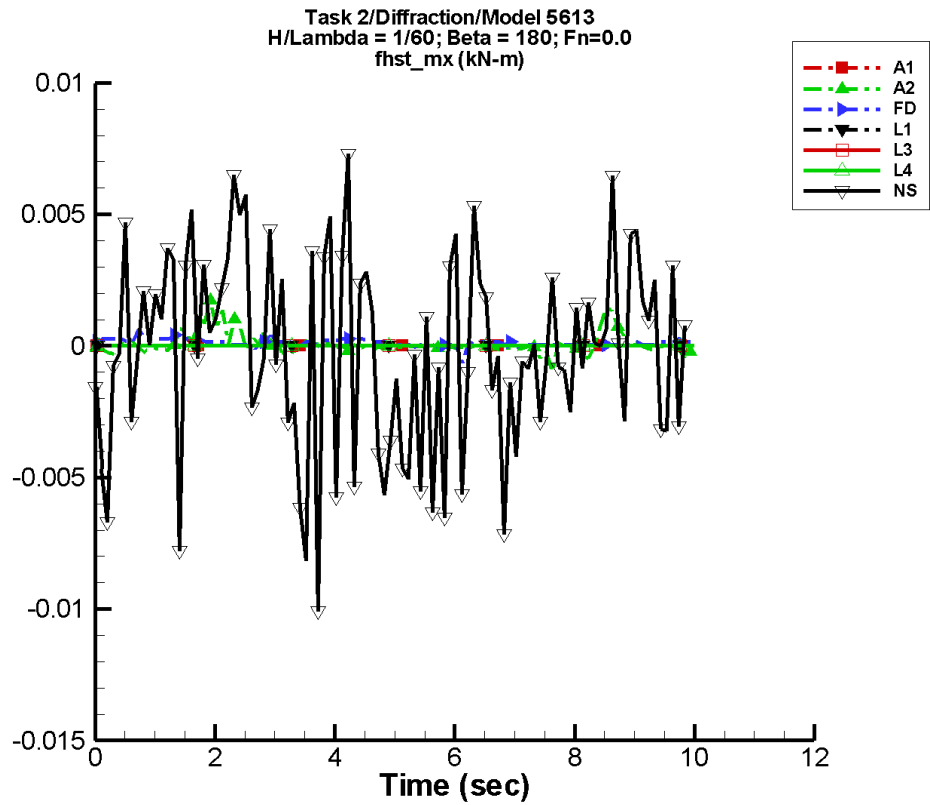
Table G–831. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -349.           | 7.54E+03        | 175               | 1.08E+04        | -15               |
| FD   | -20.7           | 6.93E+03        | 178               | 1.02E+04        | -20               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -116.           | 5.94E+03        | -177              | 8.52E+03        | -15               |
| L4   | -116.           | 5.94E+03        | -177              | 8.52E+03        | -15               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–832. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.59E+04         | 2.02E+04          | -2.35E+04         | 1.84E+04          |
| FD   | -2.49E+04         | 2.17E+04          | -2.23E+04         | 1.83E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.98E+04         | 1.50E+04          | -1.82E+04         | 1.37E+04          |
| L4   | -1.98E+04         | 1.50E+04          | -1.82E+04         | 1.37E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-417. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-833. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

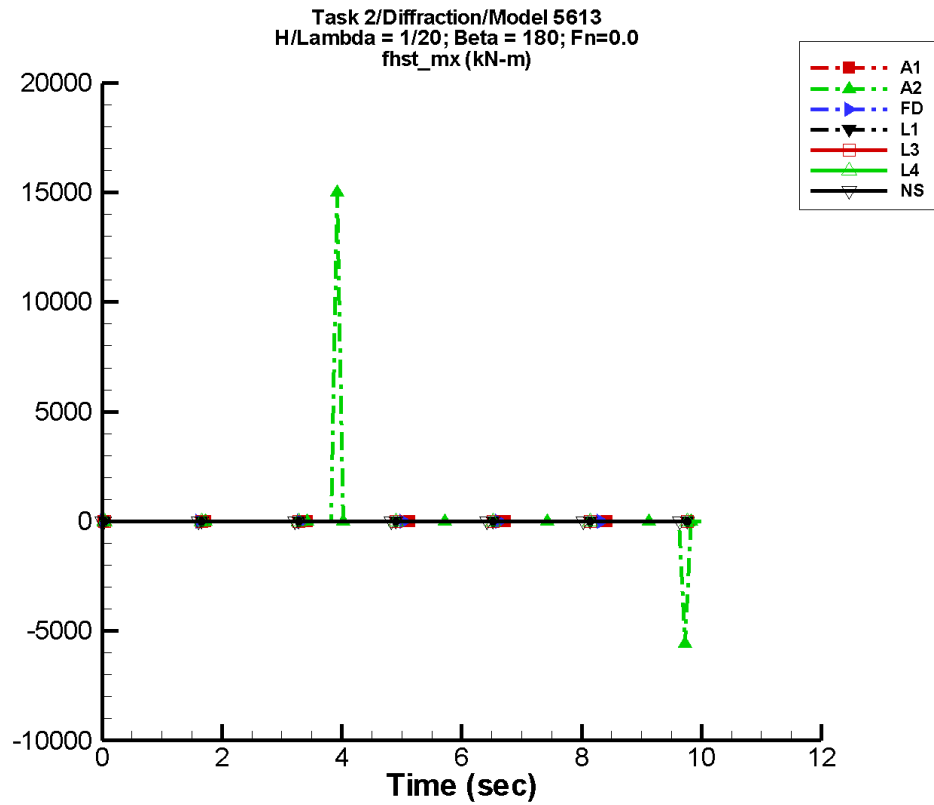
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 8.11E-05        | 2.18E-04        | 17                | 1.99E-04        | -95               |
| FD   | 1.18E-04        | 8.96E-05        | 34                | 3.90E-05        | 34                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.55E-04       | 1.13E-03        | 59                | 8.73E-04        | -97               |

Table G-834. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.98E-04         | 1.74E-03          | -2.90E-04         | 1.01E-03          |
| FD   | -6.57E-04         | 6.56E-04          | -4.99E-05         | 2.98E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.01E-02         | 7.61E-03          | -3.45E-03         | 4.26E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-418. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

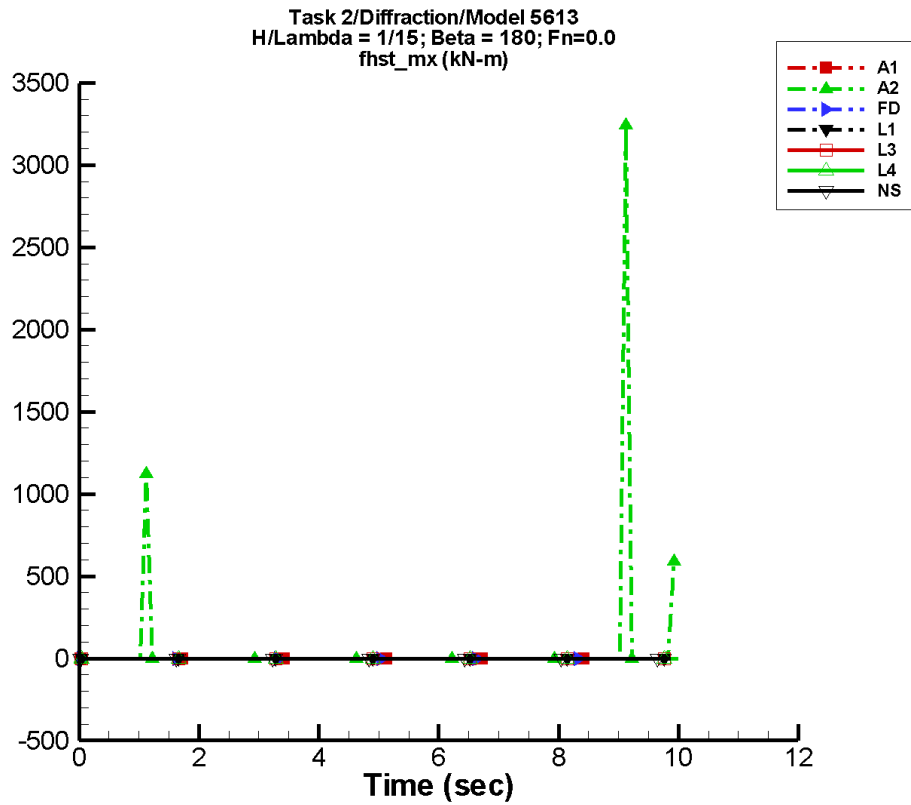
Table G–835. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 202.            | 457.            | -38               | 185.            | -135              |
| FD   | -1.07E-02       | 9.19E-03        | -25               | 1.47E-02        | 73                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.06E-04        | 7.05E-04        | 31                | 1.74E-03        | 99                |

Table G–836. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.57E+03         | 1.50E+04          | -778.             | 2.00E+03          |
| FD   | -5.48E-02         | 7.47E-03          | -4.97E-02         | 1.57E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.62E-03         | 1.06E-02          | -3.50E-03         | 3.64E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-419. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

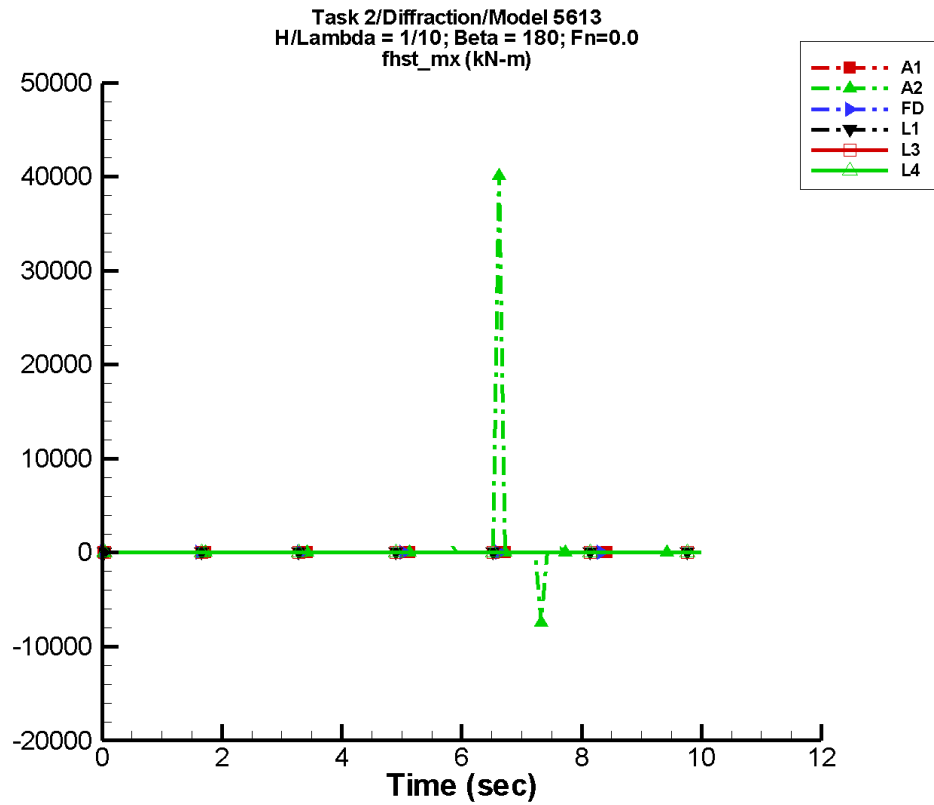
Table G–837. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 39.3            | 69.6            | 105               | 54.8            | 135               |
| FD   | -1.09E-02       | 4.55E-03        | 155               | 9.22E-03        | 67                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.30E-04       | 1.58E-03        | 9                 | 1.14E-03        | -76               |

Table G–838. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.36E-03         | 3.24E+03          | -36.7             | 428.              |
| FD   | -5.03E-02         | 6.41E-03          | -3.15E-02         | 6.79E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.46E-02         | 1.64E-02          | -6.31E-03         | 6.80E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-420. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

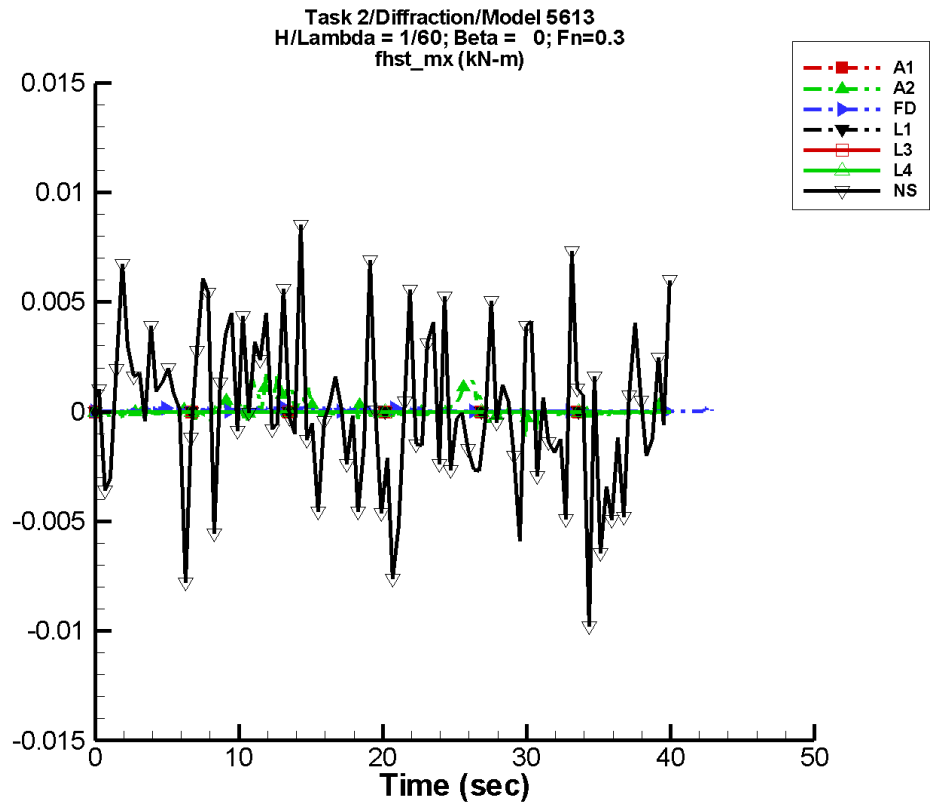
Table G–839. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 395.            | 631.            | -158              | 766.            | -16               |
| FD   | -4.73E-03       | 8.22E-04        | -129              | 3.94E-03        | -117              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–840. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.45E+03         | 4.01E+04          | -1.24E+03         | 5.31E+03          |
| FD   | -8.60E-02         | 8.79E-02          | -1.81E-02         | 1.37E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-421. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-841. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

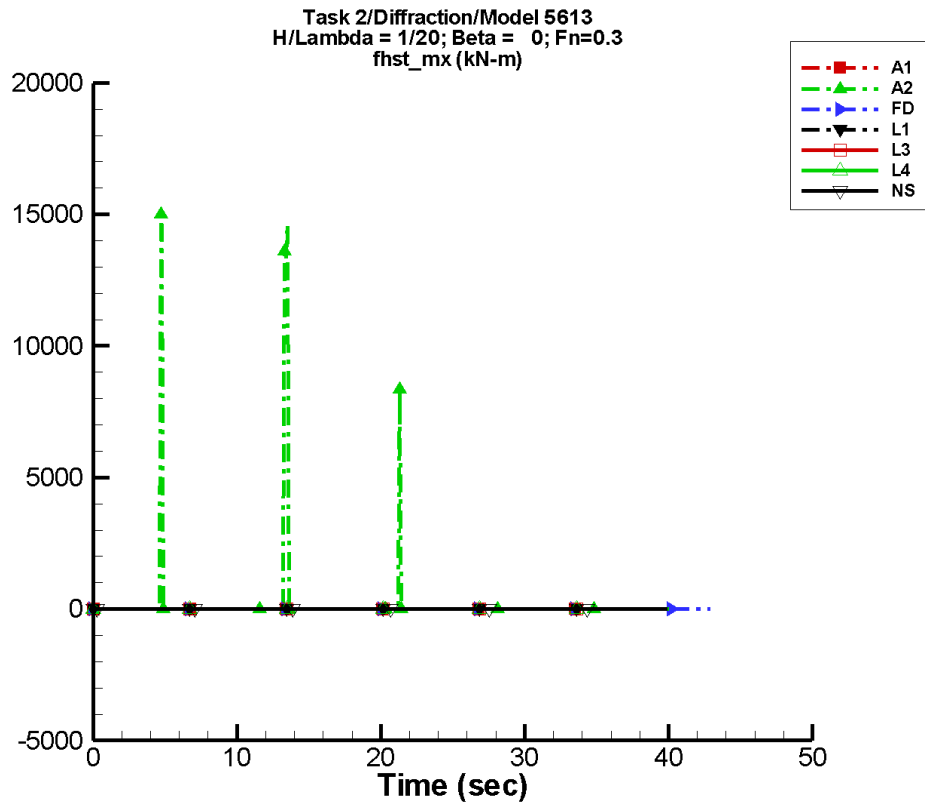
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 8.71E-05        | 1.49E-04        | -49               | 9.96E-05        | -110              |
| FD   | 6.42E-05        | 4.19E-05        | -26               | 4.79E-06        | 77                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.57E-04       | 8.66E-04        | -13               | 8.33E-04        | -64               |

Table G-842. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.19E-03         | 4.99E-03          | -3.31E-04         | 1.33E-03          |
| FD   | 3.05E-05          | 2.81E-04          | 2.52E-05          | 1.55E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.01E-02         | 1.18E-02          | -2.85E-03         | 2.98E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-422. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

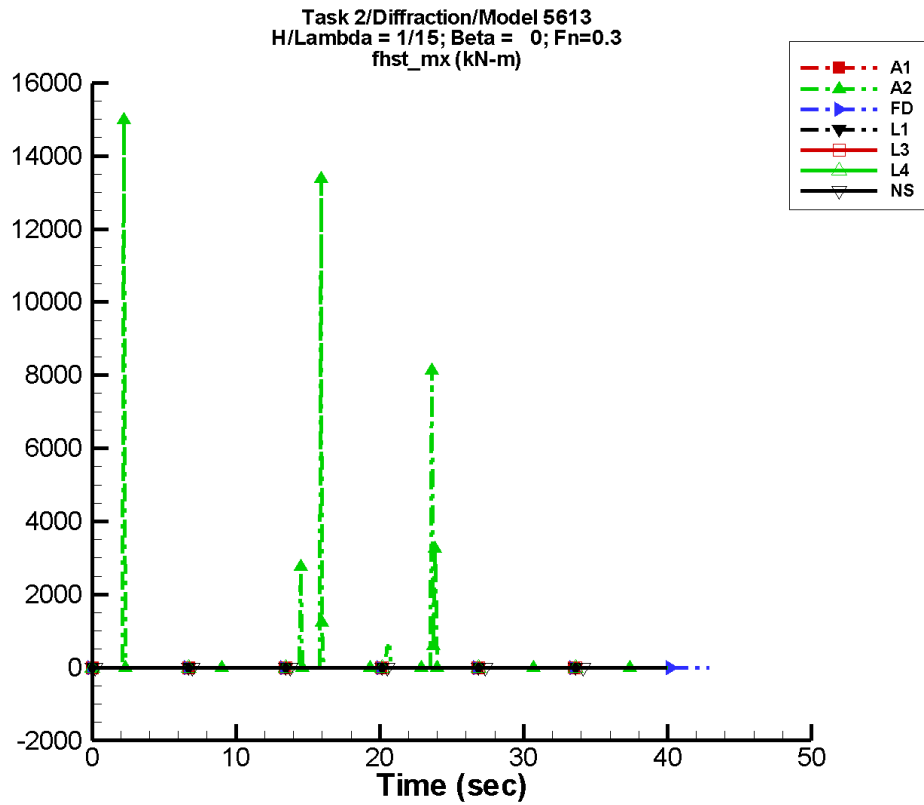
Table G-843. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 189.            | 254.            | -6                | 21.7            | -27               |
| FD   | -2.39E-05       | 7.51E-05        | 29                | 2.98E-05        | -84               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.66E-05       | 4.79E-04        | -85               | 1.27E-03        | 61                |

Table G-844. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.33             | 1.50E+04          | -408.             | 5.40E+03          |
| FD   | -4.07E-04         | 2.81E-04          | -1.82E-04         | 1.73E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.35E-02         | 1.07E-02          | -7.61E-03         | 2.87E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-423. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

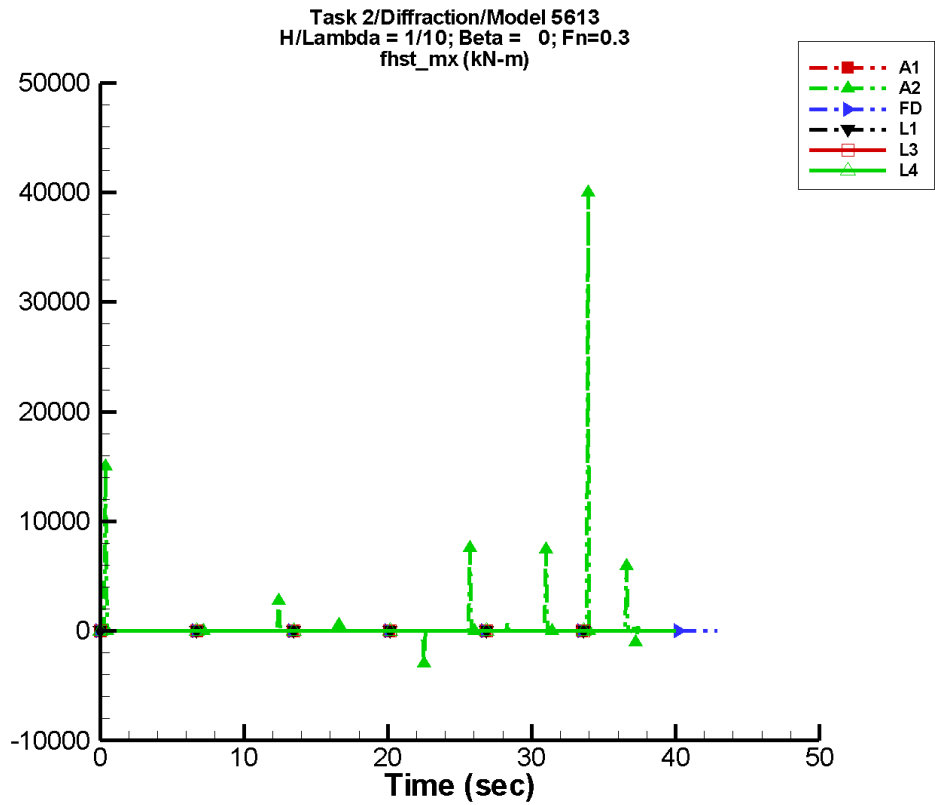
Table G-845. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 125.            | 60.9            | -59               | 149.            | 76                |
| FD   | -2.52E-05       | 1.77E-04        | 102               | 1.44E-04        | -158              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.62E-04       | 1.98E-03        | -20               | 3.06E-03        | -148              |

Table G-846. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -8.30E-03         | 1.50E+04          | -171.             | 2.00E+03          |
| FD   | -6.57E-04         | 4.68E-04          | -4.83E-04         | 3.59E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.79E-02         | 1.93E-02          | -9.29E-03         | 5.83E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-424. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

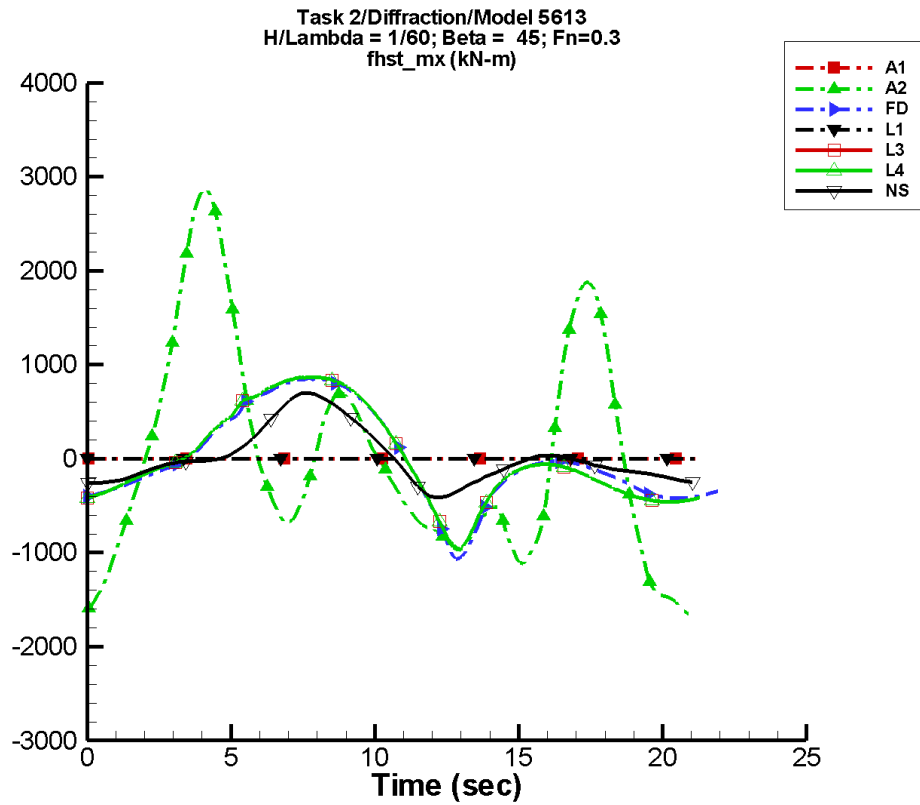
Table G-847. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 182.            | 283.            | 141               | 209.            | -160              |
| FD   | -3.49E-06       | 2.38E-04        | 112               | 1.34E-04        | -144              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-848. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.97E+03         | 4.00E+04          | -471.             | 5.33E+03          |
| FD   | -5.94E-04         | 6.56E-04          | -3.42E-04         | 4.54E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-425. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-849. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

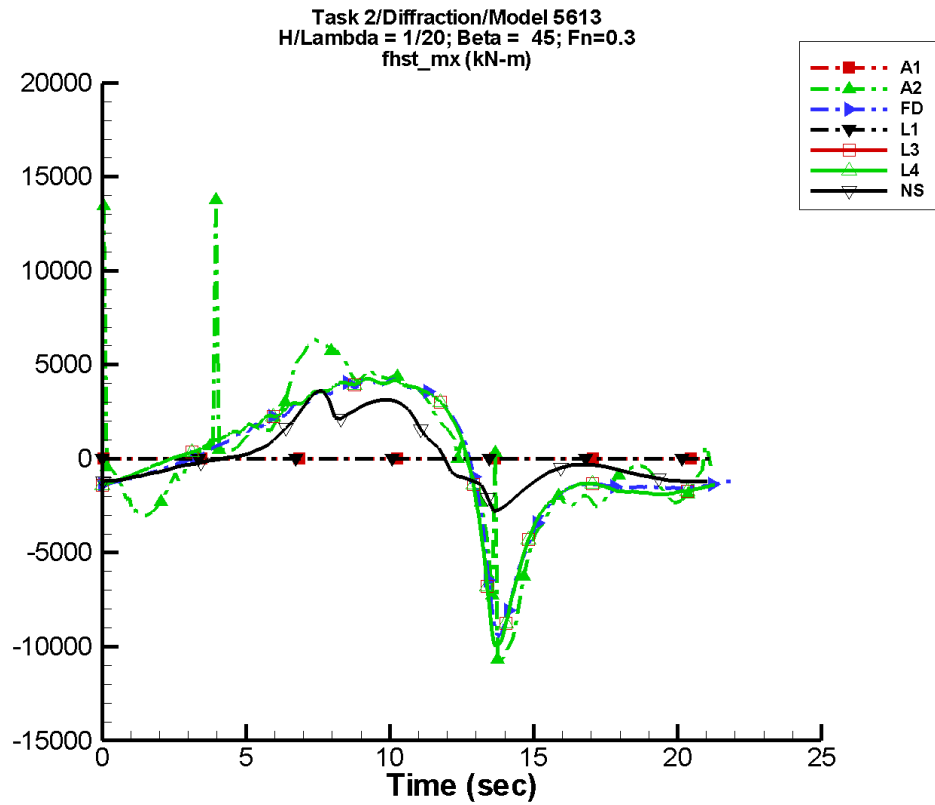
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 42.2            | 692.            | 5                 | 1.00E+03        | -83               |
| FD   | 0.795           | 476.            | -21               | 384.            | -146              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 4.19            | 525.            | -27               | 354.            | -152              |
| L4   | 4.19            | 525.            | -27               | 354.            | -152              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.56            | 244.            | -36               | 243.            | -158              |

Table G-850. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.65E+03         | 2.87E+03          | -1.62E+03         | 2.77E+03          |
| FD   | -1.07E+03         | 858.              | -1.00E+03         | 850.              |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -962.             | 870.              | -947.             | 867.              |
| L4   | -962.             | 870.              | -947.             | 867.              |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -414.             | 701.              | -370.             | 655.              |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-426. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

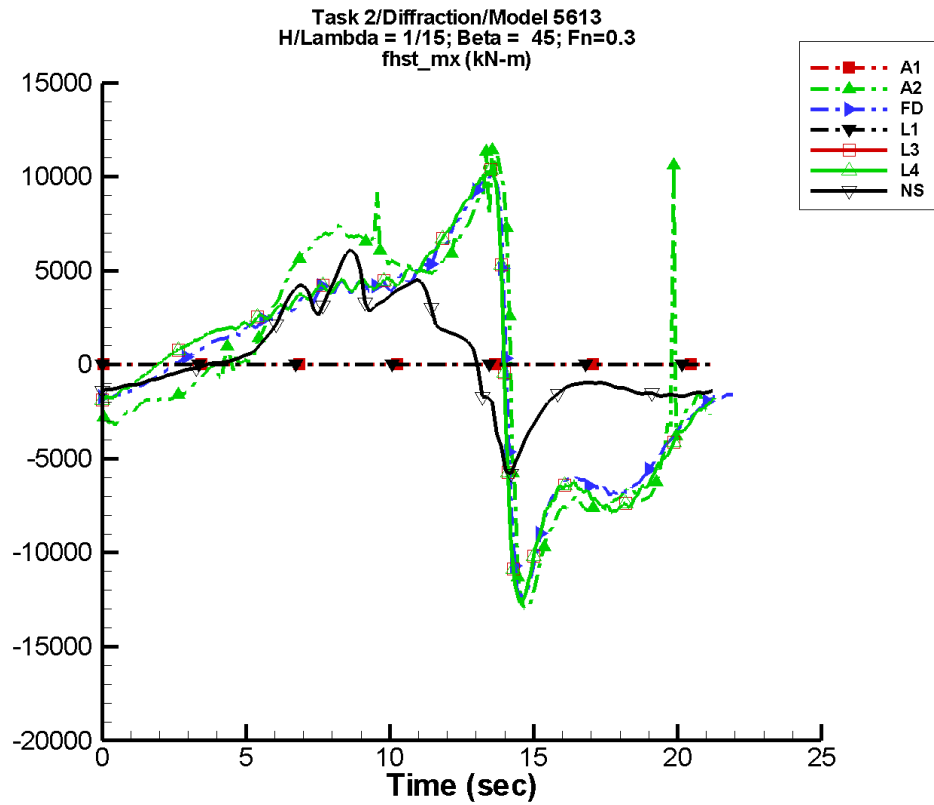
Table G–851. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 151.            | 3.64E+03        | -29               | 2.59E+03        | 158               |
| FD   | -9.93           | 3.11E+03        | -27               | 1.74E+03        | 153               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 33.8            | 3.35E+03        | -28               | 1.70E+03        | 147               |
| L4   | 33.8            | 3.35E+03        | -28               | 1.70E+03        | 147               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 111.            | 1.74E+03        | -44               | 1.09E+03        | 165               |

Table G–852. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.61E+04         | 1.39E+04          | -9.28E+03         | 7.42E+03          |
| FD   | -9.44E+03         | 4.36E+03          | -8.49E+03         | 4.09E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.00E+04         | 4.27E+03          | -9.64E+03         | 4.20E+03          |
| L4   | -1.00E+04         | 4.27E+03          | -9.64E+03         | 4.20E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.80E+03         | 3.60E+03          | -2.13E+03         | 2.95E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-427. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

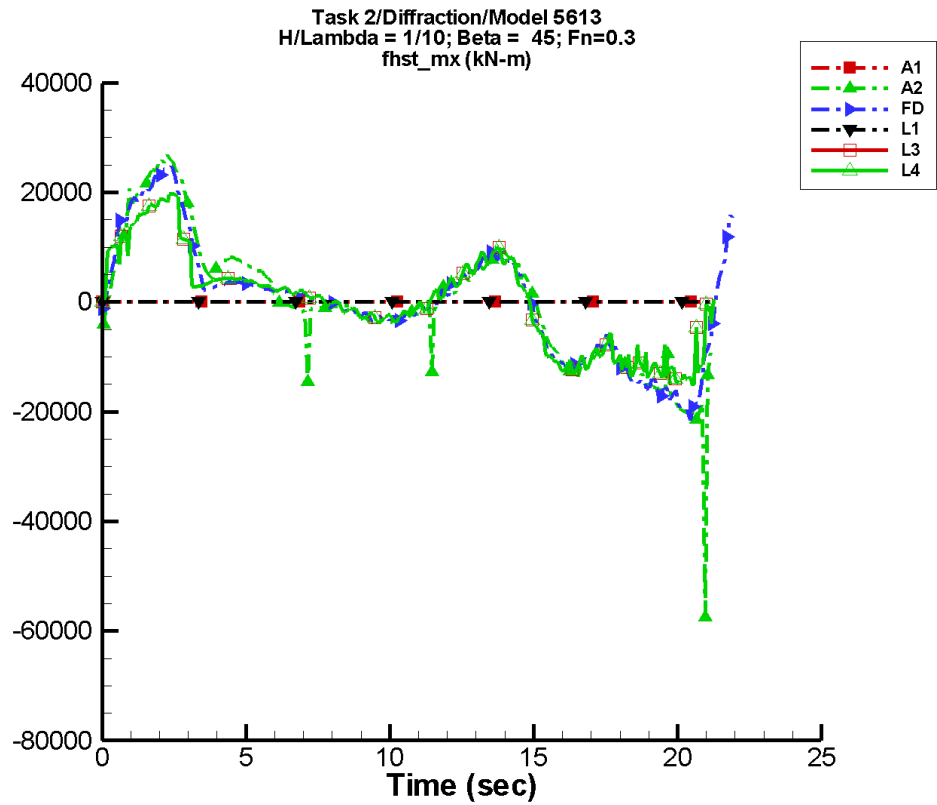
Table G-853. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -12.2           | 6.69E+03        | -55               | 2.74E+03        | 85                |
| FD   | 4.44            | 5.76E+03        | -46               | 2.60E+03        | 68                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -34.8           | 6.03E+03        | -48               | 2.90E+03        | 55                |
| L4   | -34.8           | 6.03E+03        | -48               | 2.90E+03        | 55                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 320.            | 2.95E+03        | -45               | 1.54E+03        | 144               |

Table G-854. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.30E+04         | 1.14E+04          | -1.23E+04         | 1.03E+04          |
| FD   | -1.23E+04         | 1.01E+04          | -1.17E+04         | 1.00E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.27E+04         | 1.04E+04          | -1.23E+04         | 1.02E+04          |
| L4   | -1.27E+04         | 1.04E+04          | -1.23E+04         | 1.02E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.80E+03         | 6.11E+03          | -4.55E+03         | 4.95E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-428. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

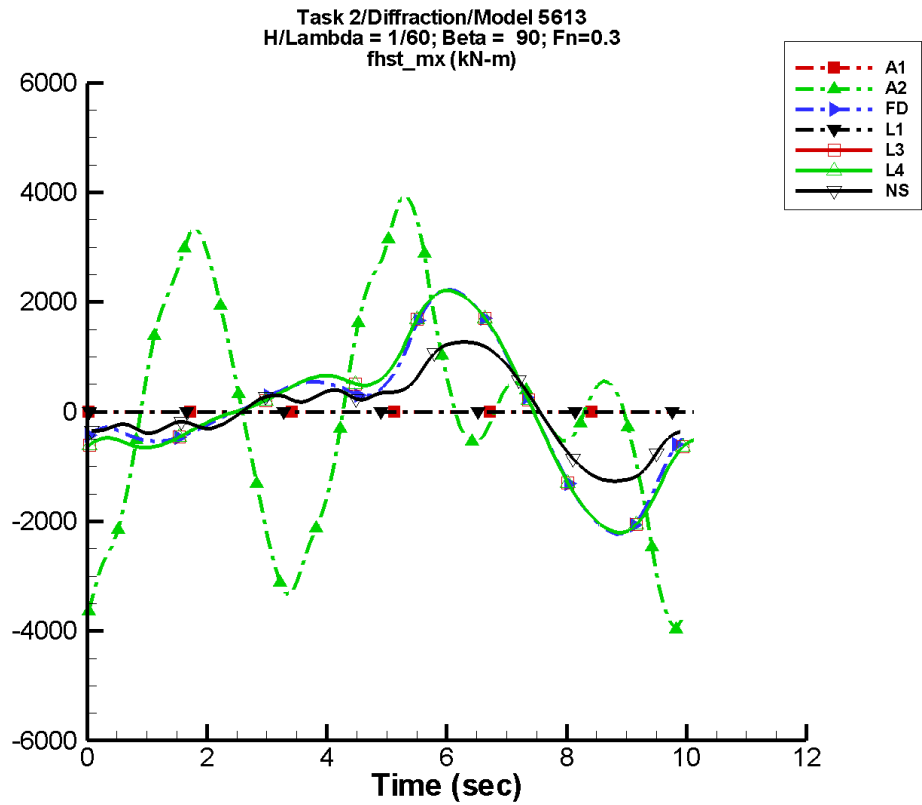
Table G–855. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 174.            | 7.01E+03        | 5                 | 1.19E+04        | 5                 |
| FD   | 408.            | 6.66E+03        | 7                 | 1.02E+04        | 21                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 114.            | 5.59E+03        | 2                 | 8.87E+03        | 16                |
| L4   | 114.            | 5.59E+03        | 2                 | 8.87E+03        | 16                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–856. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.75E+04         | 2.72E+04          | -2.31E+04         | 2.54E+04          |
| FD   | -2.16E+04         | 2.51E+04          | -1.92E+04         | 2.37E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.52E+04         | 1.98E+04          | -1.40E+04         | 1.92E+04          |
| L4   | -1.52E+04         | 1.98E+04          | -1.40E+04         | 1.92E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-429. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-857. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

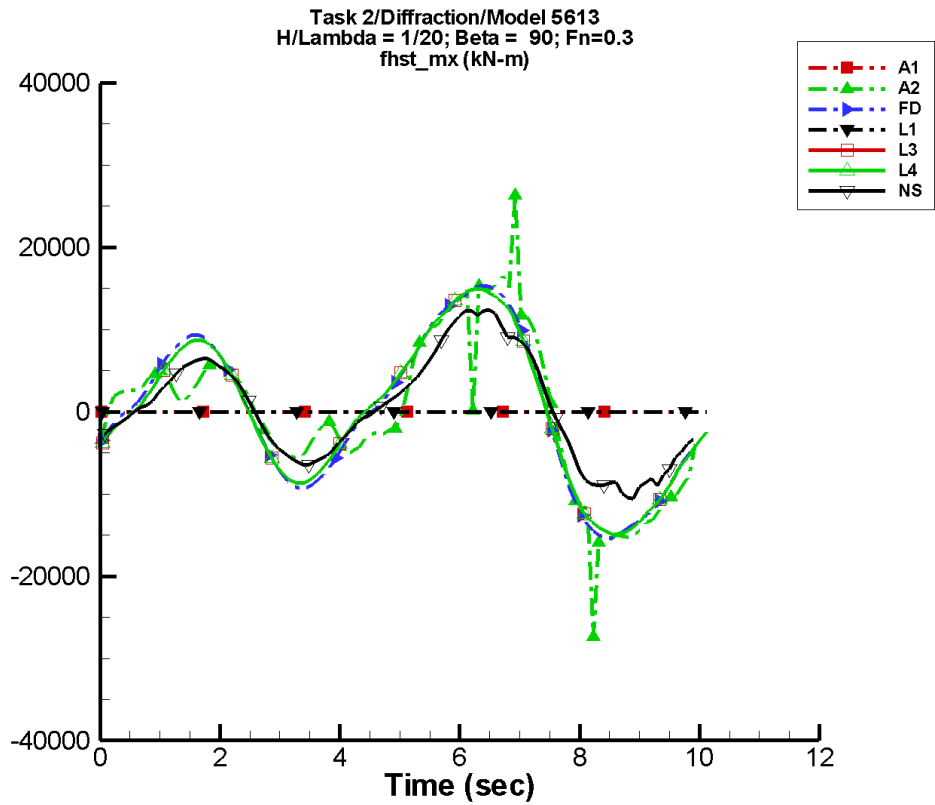
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 28.6            | 1.08E+03        | -86               | 1.52E+03        | -30               |
| FD   | 23.0            | 1.24E+03        | -100              | 785.            | -18               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 7.53            | 1.36E+03        | -95               | 745.            | -5                |
| L4   | 7.53            | 1.36E+03        | -95               | 745.            | -5                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.86           | 742.            | -97               | 446.            | -1                |

Table G-858. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.97E+03         | 3.94E+03          | -3.41E+03         | 3.42E+03          |
| FD   | -2.23E+03         | 2.23E+03          | -2.13E+03         | 2.13E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -2.21E+03         | 2.21E+03          | -2.18E+03         | 2.18E+03          |
| L4   | -2.21E+03         | 2.21E+03          | -2.18E+03         | 2.18E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.27E+03         | 1.28E+03          | -1.24E+03         | 1.25E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-430. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

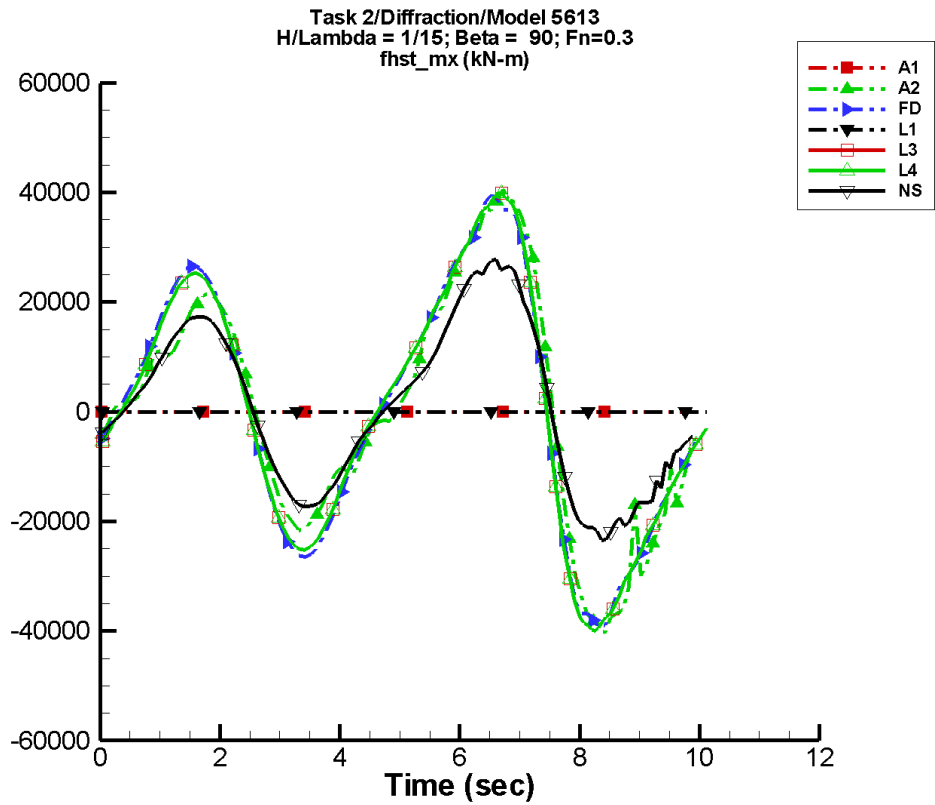
Table G–859. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -139.           | 5.14E+03        | -99               | 1.04E+04        | -14               |
| FD   | 12.7            | 4.98E+03        | -99               | 1.15E+04        | -17               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -80.2           | 5.27E+03        | -95               | 1.10E+04        | -9                |
| L4   | -80.2           | 5.27E+03        | -95               | 1.10E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 333.            | 3.79E+03        | -99               | 8.04E+03        | -10               |

Table G–860. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.74E+04         | 2.63E+04          | -1.63E+04         | 1.55E+04          |
| FD   | -1.53E+04         | 1.53E+04          | -1.47E+04         | 1.47E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.50E+04         | 1.50E+04          | -1.47E+04         | 1.47E+04          |
| L4   | -1.50E+04         | 1.50E+04          | -1.47E+04         | 1.47E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.05E+04         | 1.23E+04          | -9.47E+03         | 1.18E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-431. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

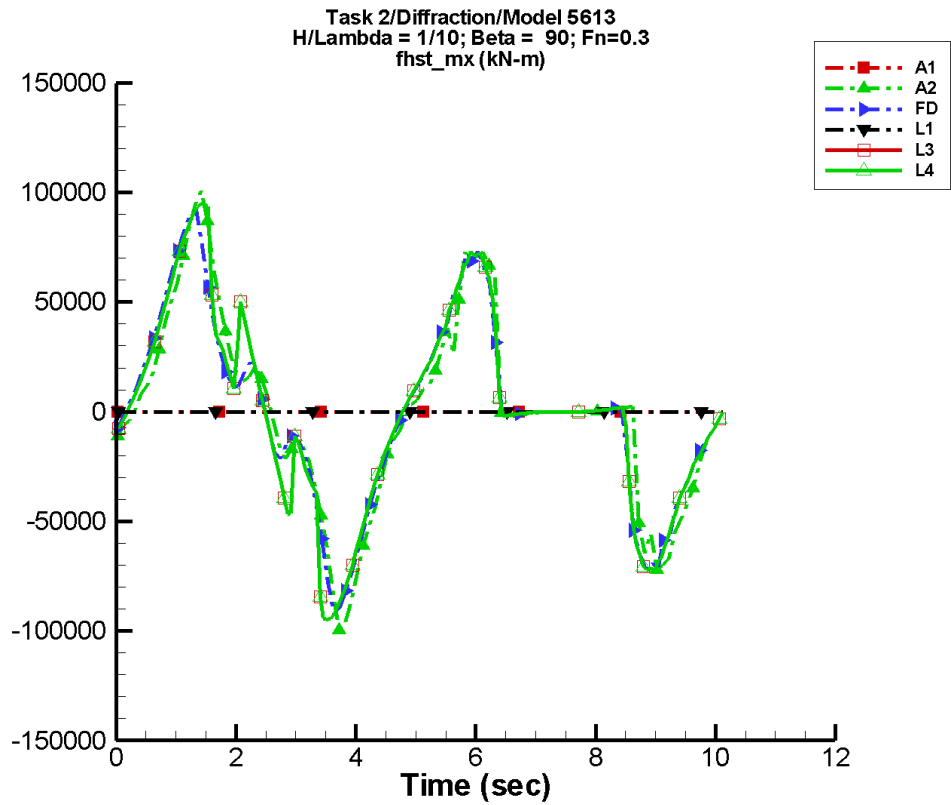
Table G-861. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 142.            | 9.08E+03        | -101              | 2.61E+04        | -16               |
| FD   | 66.5            | 7.79E+03        | -102              | 2.90E+04        | -18               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -290.           | 8.47E+03        | -95               | 2.87E+04        | -9                |
| L4   | -290.           | 8.47E+03        | -95               | 2.87E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 579.            | 5.19E+03        | -101              | 1.90E+04        | -9                |

Table G-862. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -4.04E+04         | 4.05E+04          | -3.71E+04         | 3.75E+04          |
| FD   | -3.96E+04         | 3.96E+04          | -3.68E+04         | 3.70E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -3.99E+04         | 3.99E+04          | -3.89E+04         | 3.89E+04          |
| L4   | -3.99E+04         | 3.99E+04          | -3.89E+04         | 3.89E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.35E+04         | 2.78E+04          | -2.18E+04         | 2.65E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-432. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

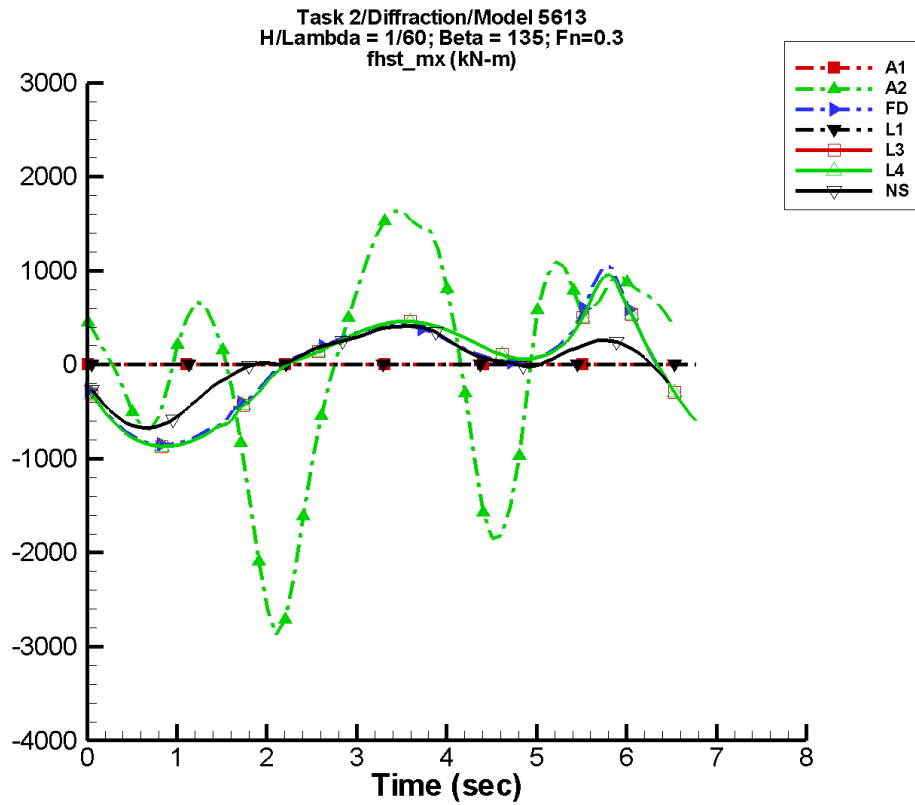
Table G-863. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -156.           | 3.70E+03        | 64                | 5.32E+04        | -17               |
| FD   | -770.           | 3.37E+03        | 39                | 5.26E+04        | -12               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 226.            | 3.22E+03        | 65                | 5.54E+04        | -9                |
| L4   | 226.            | 3.22E+03        | 65                | 5.54E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-864. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.96E+04         | 1.01E+05          | -7.52E+04         | 7.57E+04          |
| FD   | -9.20E+04         | 9.37E+04          | -7.11E+04         | 7.14E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.49E+04         | 9.49E+04          | -8.73E+04         | 8.75E+04          |
| L4   | -9.49E+04         | 9.49E+04          | -8.73E+04         | 8.75E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-433. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-865. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

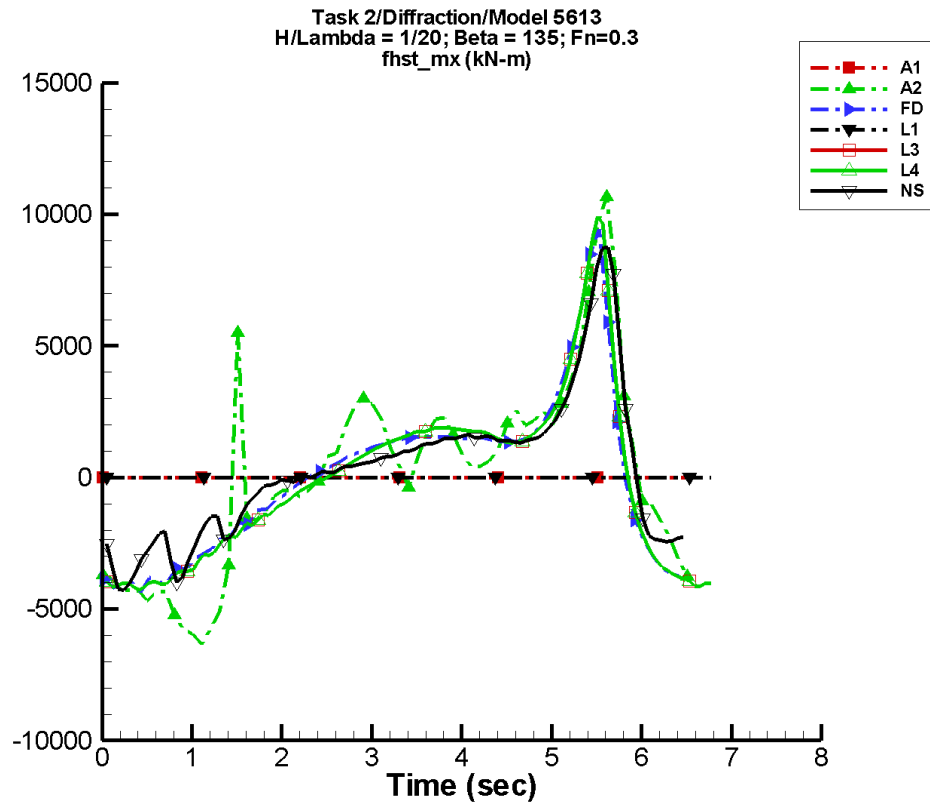
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 32.3            | 408.            | 171               | 567.            | 66                |
| FD   | -8.02           | 499.            | -149              | 405.            | 160               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -5.31           | 537.            | -152              | 363.            | 150               |
| L4   | -5.31           | 537.            | -152              | 363.            | 150               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.36           | 363.            | -124              | 206.            | 167               |

Table G-866. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.87E+03         | 1.63E+03          | -2.05E+03         | 1.50E+03          |
| FD   | -847.             | 1.04E+03          | -820.             | 697.              |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -870.             | 960.              | -858.             | 801.              |
| L4   | -870.             | 960.              | -858.             | 801.              |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -670.             | 410.              | -649.             | 403.              |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-434. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

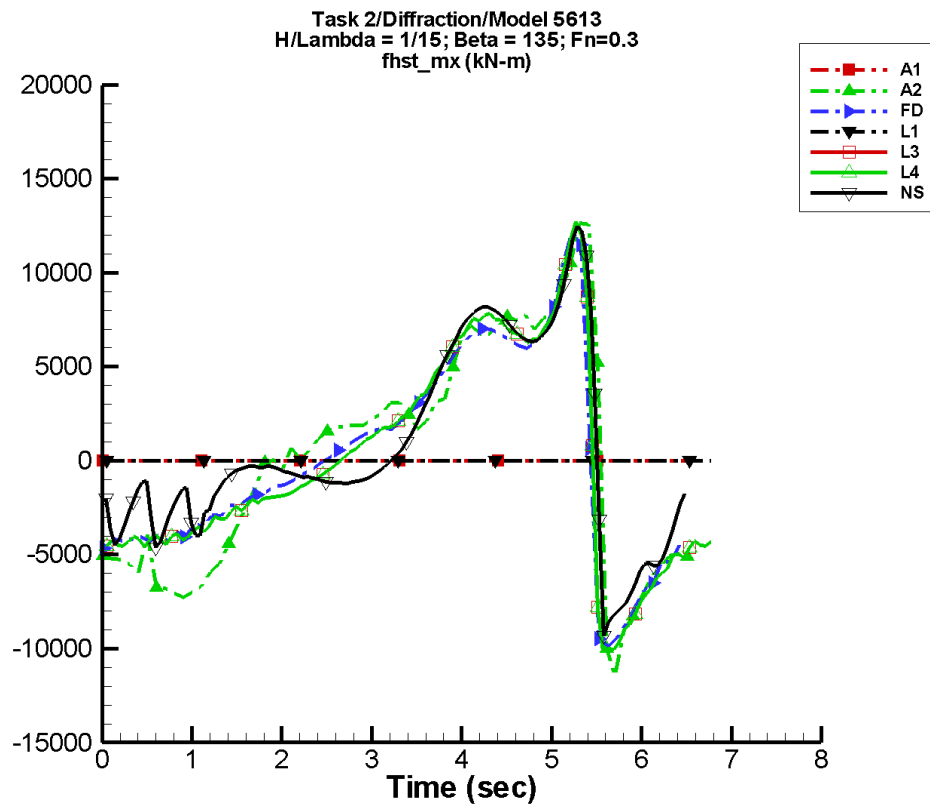
Table G-867. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 134.            | 3.43E+03        | -155              | 2.67E+03        | -170              |
| FD   | 40.7            | 3.02E+03        | -145              | 1.85E+03        | -137              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -8.78           | 3.23E+03        | -154              | 1.68E+03        | -146              |
| L4   | -8.78           | 3.23E+03        | -154              | 1.68E+03        | -146              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 281.            | 2.52E+03        | -156              | 1.79E+03        | -145              |

Table G-868. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.33E+03         | 1.07E+04          | -5.27E+03         | 5.97E+03          |
| FD   | -4.37E+03         | 9.43E+03          | -4.08E+03         | 5.27E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -4.26E+03         | 9.92E+03          | -4.13E+03         | 7.35E+03          |
| L4   | -4.26E+03         | 9.92E+03          | -4.13E+03         | 7.35E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.29E+03         | 8.75E+03          | -3.40E+03         | 6.67E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-435. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

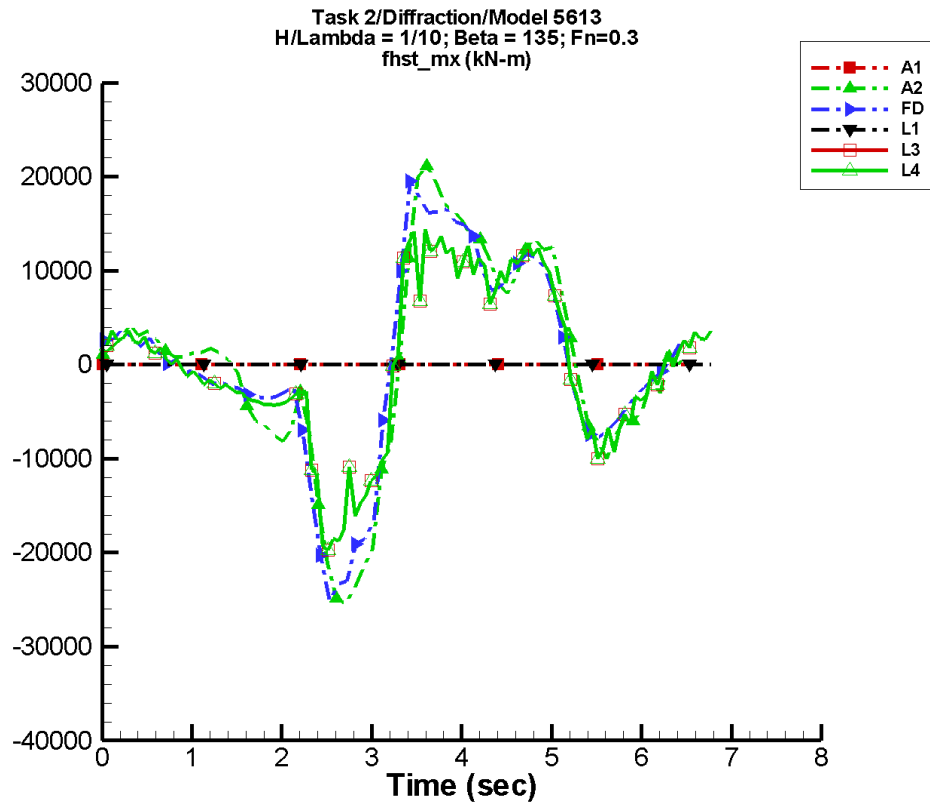
Table G-869. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 158.            | 6.54E+03        | -138              | 2.27E+03        | -99               |
| FD   | 97.6            | 5.45E+03        | -129              | 2.69E+03        | -51               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 71.9            | 5.84E+03        | -136              | 2.81E+03        | -56               |
| L4   | 71.9            | 5.84E+03        | -136              | 2.81E+03        | -56               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 622.            | 4.82E+03        | -144              | 3.24E+03        | -57               |

Table G-870. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.14E+04         | 1.26E+04          | -7.14E+03         | 8.88E+03          |
| FD   | -9.88E+03         | 1.22E+04          | -7.45E+03         | 7.90E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.01E+04         | 1.27E+04          | -9.25E+03         | 9.64E+03          |
| L4   | -1.01E+04         | 1.27E+04          | -9.25E+03         | 9.64E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.31E+03         | 1.25E+04          | -7.76E+03         | 1.04E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-436. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

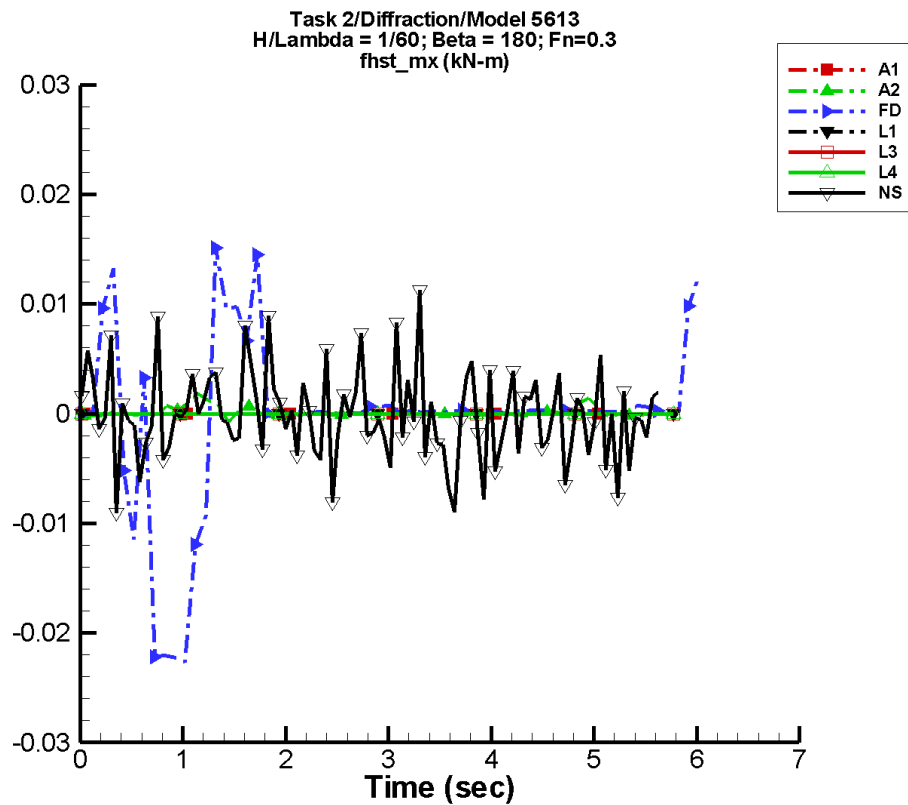
Table G-871. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -83.9           | 7.47E+03        | 175               | 1.07E+04        | -17               |
| FD   | -192.           | 7.40E+03        | -175              | 9.45E+03        | 0                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 74.1            | 5.68E+03        | -177              | 7.48E+03        | -15               |
| L4   | 74.1            | 5.68E+03        | -177              | 7.48E+03        | -15               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-872. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.54E+04         | 2.12E+04          | -1.97E+04         | 1.65E+04          |
| FD   | -2.51E+04         | 1.96E+04          | -1.90E+04         | 1.56E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.97E+04         | 1.44E+04          | -1.67E+04         | 1.26E+04          |
| L4   | -1.97E+04         | 1.44E+04          | -1.67E+04         | 1.26E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-437. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-873. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

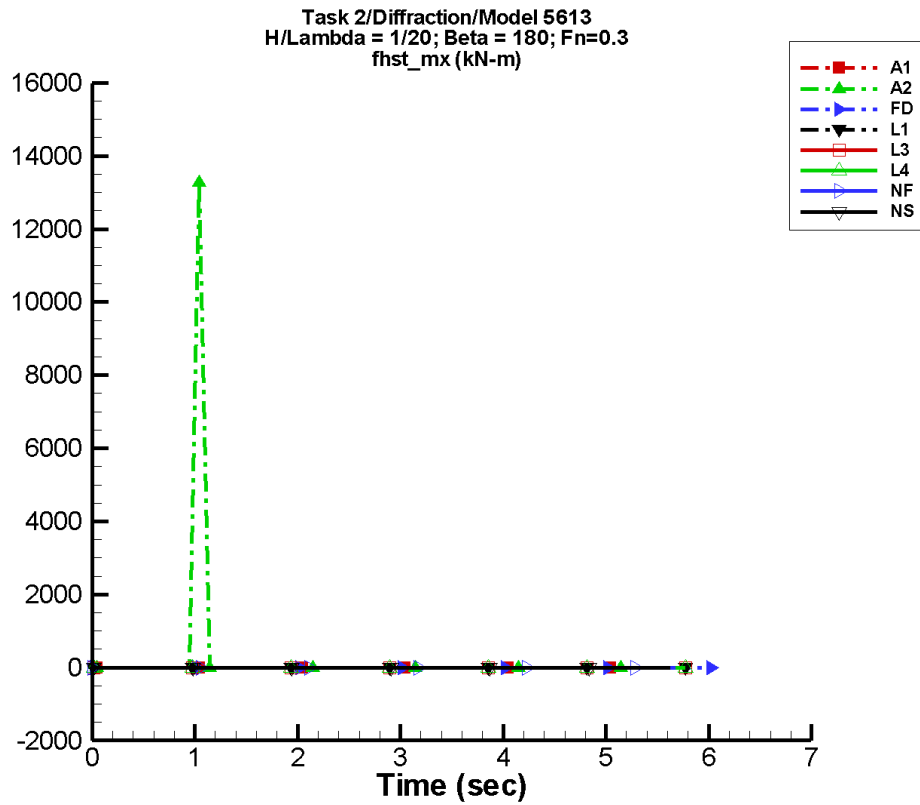
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 9.71E-05        | 1.70E-04        | 25                | 2.45E-04        | -103              |
| FD   | -1.34E-04       | 1.47E-03        | -179              | 3.21E-03        | 86                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.93E-04       | 1.00E-03        | -22               | 4.98E-04        | -104              |

Table G-874. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.61E-04         | 1.82E-03          | -1.55E-04         | 6.79E-04          |
| FD   | -2.27E-02         | 1.51E-02          | -1.26E-02         | 8.74E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.02E-03         | 1.13E-02          | -2.17E-03         | 3.85E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-438. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

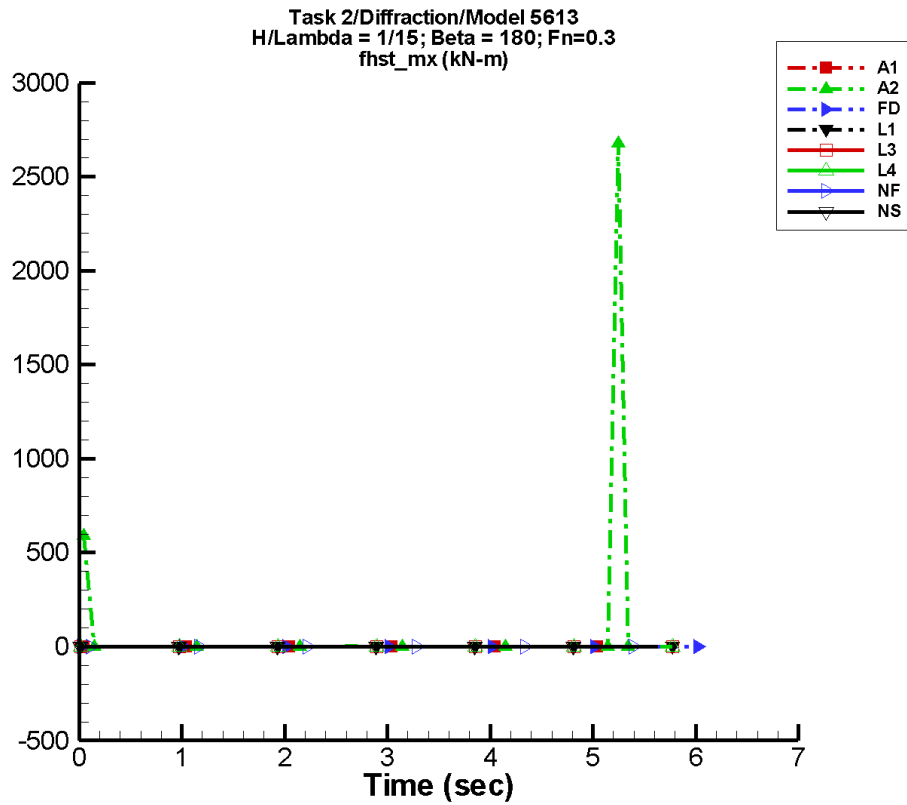
Table G-875. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 104.            | 232.            | 14                | 296.            | -60               |
| FD   | 3.37E-04        | 1.90E-03        | -31               | 2.89E-03        | -136              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.14E-05       | 1.21E-03        | 133               | 1.21E-03        | 146               |

Table G-876. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.58E-03         | 1.33E+04          | -152.             | 1.77E+03          |
| FD   | -2.50E-02         | 2.55E-02          | -4.38E-03         | 5.61E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.07E-02         | 1.32E-02          | -2.29E-03         | 5.06E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-439. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

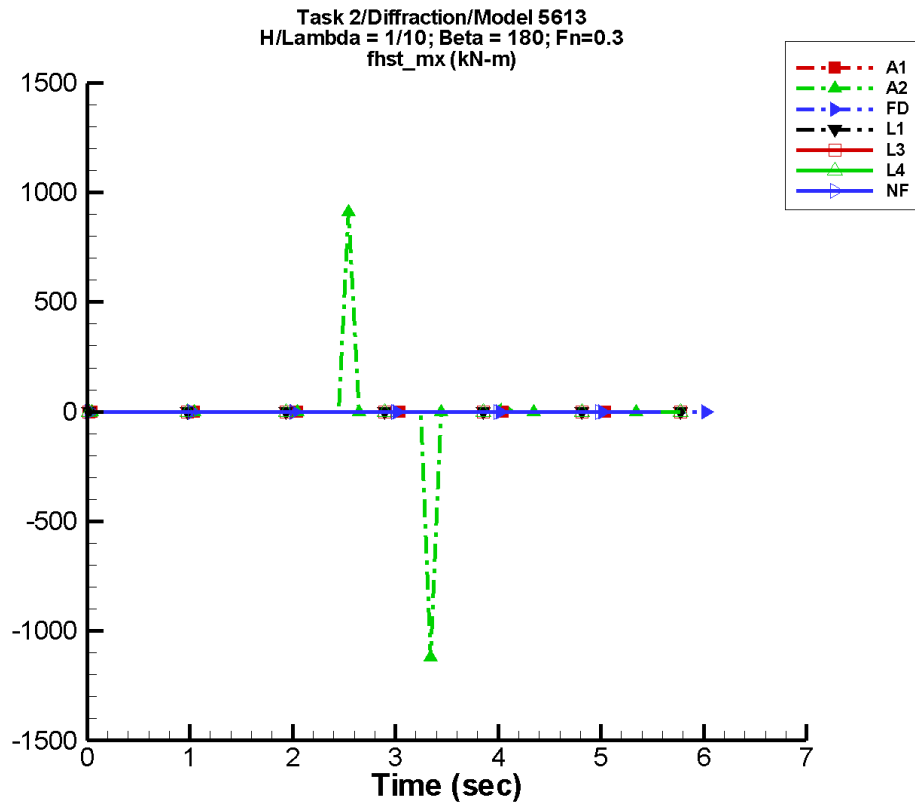
Table G-877. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 51.1            | 92.7            | 106               | 94.6            | 133               |
| FD   | -2.44E-03       | 4.82E-03        | 106               | 6.30E-03        | -53               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.03E-04       | 1.67E-03        | 37                | 1.48E-03        | -95               |

Table G-878. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.36E-03         | 2.68E+03          | -30.4             | 357.              |
| FD   | -8.97E-02         | 4.75E-02          | -2.37E-02         | 9.83E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.59E-02         | 1.38E-02          | -6.33E-03         | 4.09E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-440. Time history of  $M_x^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

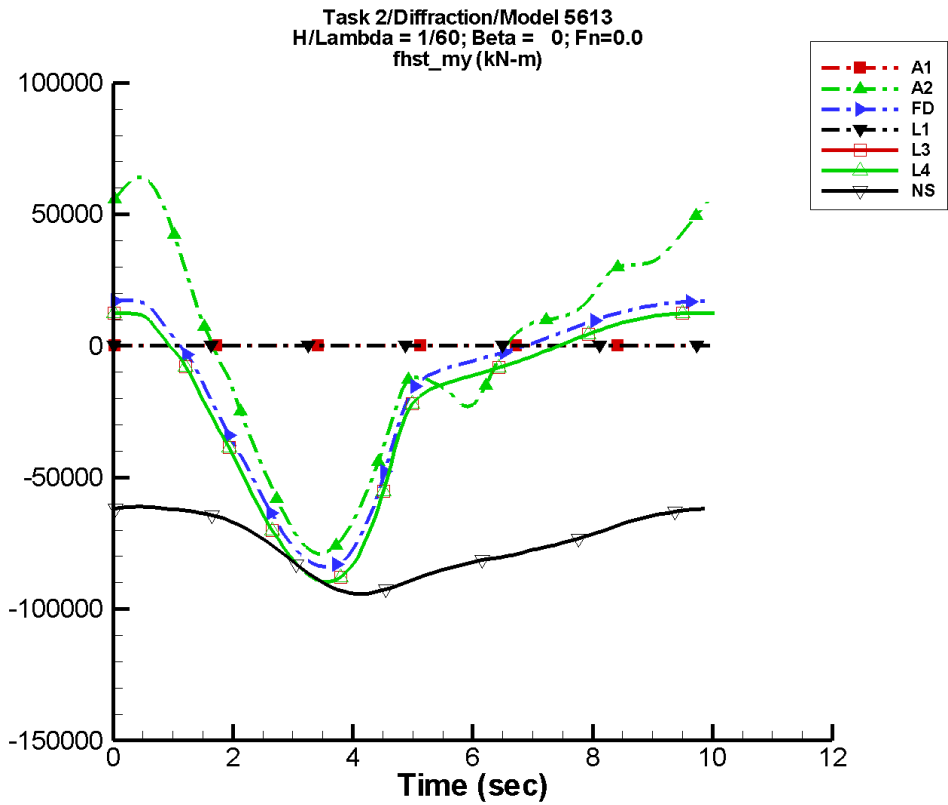
Table G-879. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.39           | 30.9            | 5                 | 49.4            | 152               |
| FD   | 7.76E-03        | 3.10E-02        | 80                | 3.51E-02        | 100               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-880. Minimum and maximum of  $M_x^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.12E+03         | 912.              | -156.             | 131.              |
| FD   | -0.173            | 0.264             | -6.28E-02         | 0.130             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-441. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–881. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

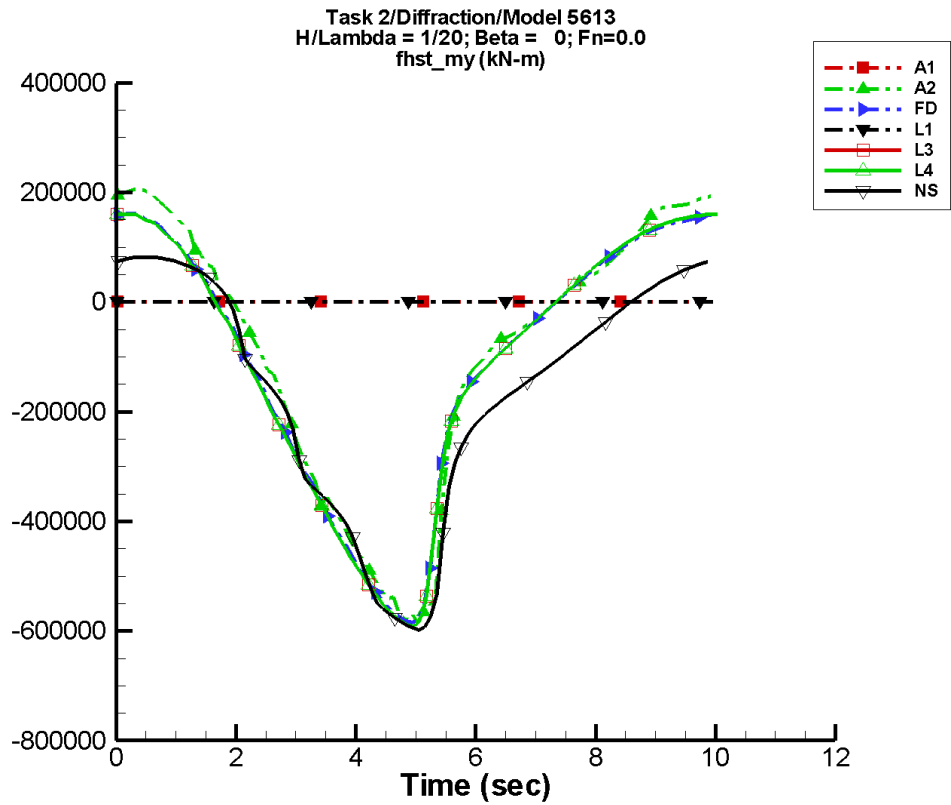
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.64E+03       | 5.22E+04        | 115               | 2.44E+04        | 39                |
| FD   | -1.71E+04       | 4.21E+04        | 132               | 2.01E+04        | 22                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.19E+04       | 4.33E+04        | 136               | 1.94E+04        | 30                |
| L4   | -2.19E+04       | 4.33E+04        | 136               | 1.94E+04        | 30                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.53E+04       | 1.47E+04        | 92                | 3.78E+03        | -16               |

Table G–882. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.90E+04         | 6.40E+04          | -7.65E+04         | 6.10E+04          |
| FD   | -8.40E+04         | 1.73E+04          | -8.26E+04         | 1.74E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.96E+04         | 1.26E+04          | -8.91E+04         | 1.25E+04          |
| L4   | -8.96E+04         | 1.26E+04          | -8.91E+04         | 1.25E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.43E+04         | -6.11E+04         | -9.37E+04         | -6.14E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-442. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

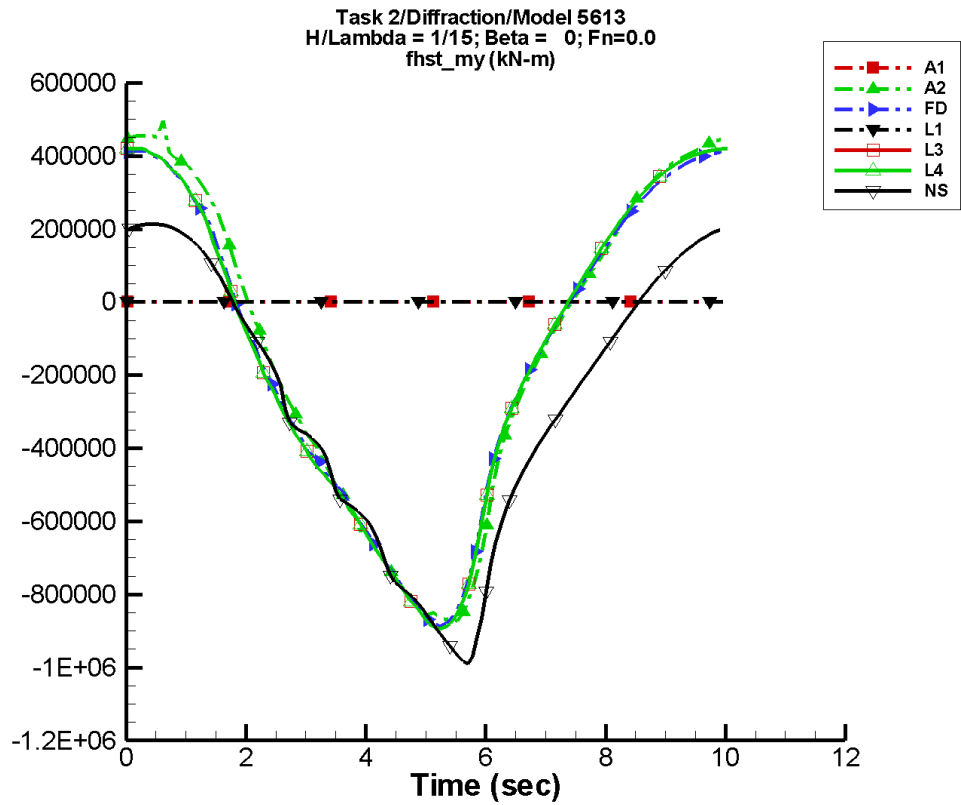
Table G–883. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.78E+04       | 3.27E+05        | 102               | 8.87E+04        | -42               |
| FD   | -1.08E+05       | 3.14E+05        | 102               | 8.96E+04        | -49               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.11E+05       | 3.17E+05        | 106               | 8.87E+04        | -42               |
| L4   | -1.11E+05       | 3.17E+05        | 106               | 8.87E+04        | -42               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.60E+05       | 2.82E+05        | 98                | 8.65E+04        | -43               |

Table G–884. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.84E+05         | 2.05E+05          | -5.66E+05         | 2.00E+05          |
| FD   | -5.85E+05         | 1.62E+05          | -5.68E+05         | 1.61E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.92E+05         | 1.61E+05          | -5.86E+05         | 1.61E+05          |
| L4   | -5.92E+05         | 1.61E+05          | -5.86E+05         | 1.61E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.98E+05         | 8.19E+04          | -5.88E+05         | 8.05E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-443. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

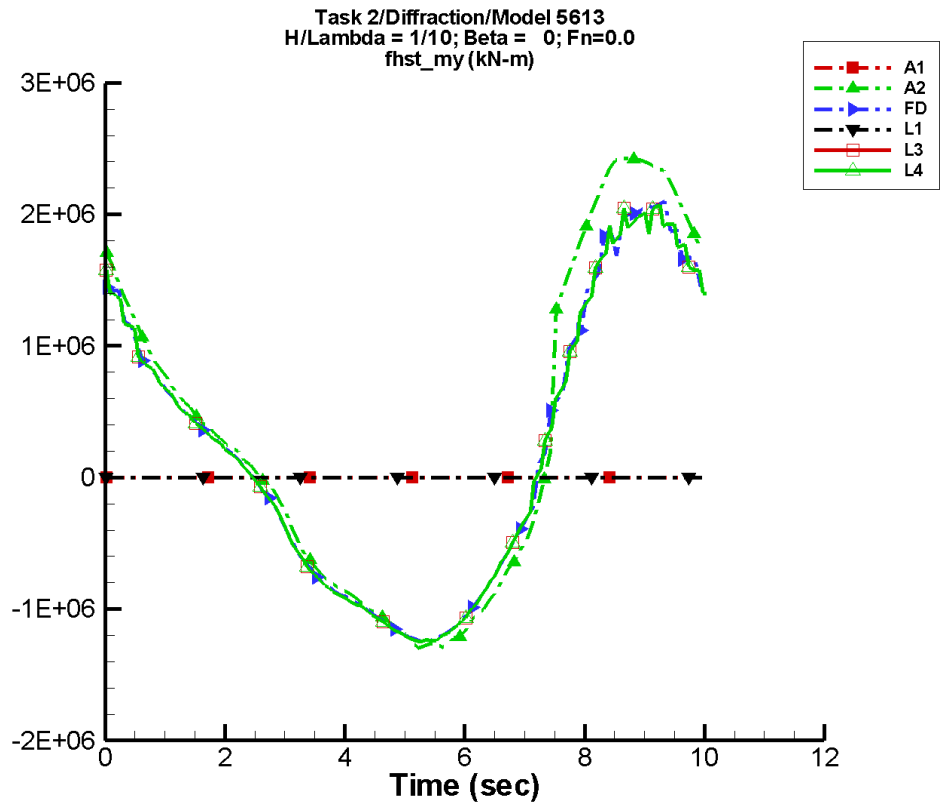
Table G–885. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.23E+05       | 6.32E+05        | 91                | 6.25E+04        | -78               |
| FD   | -1.37E+05       | 6.06E+05        | 92                | 5.97E+04        | -99               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.40E+05       | 6.12E+05        | 96                | 5.57E+04        | -93               |
| L4   | -1.40E+05       | 6.12E+05        | 96                | 5.57E+04        | -93               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.74E+05       | 5.25E+05        | 84                | 5.36E+04        | -99               |

Table G–886. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -8.72E+05         | 4.96E+05          | -8.60E+05         | 4.56E+05          |
| FD   | -8.87E+05         | 4.14E+05          | -8.65E+05         | 4.14E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.95E+05         | 4.20E+05          | -8.85E+05         | 4.20E+05          |
| L4   | -8.95E+05         | 4.20E+05          | -8.85E+05         | 4.20E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.91E+05         | 2.14E+05          | -9.58E+05         | 2.11E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-444. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

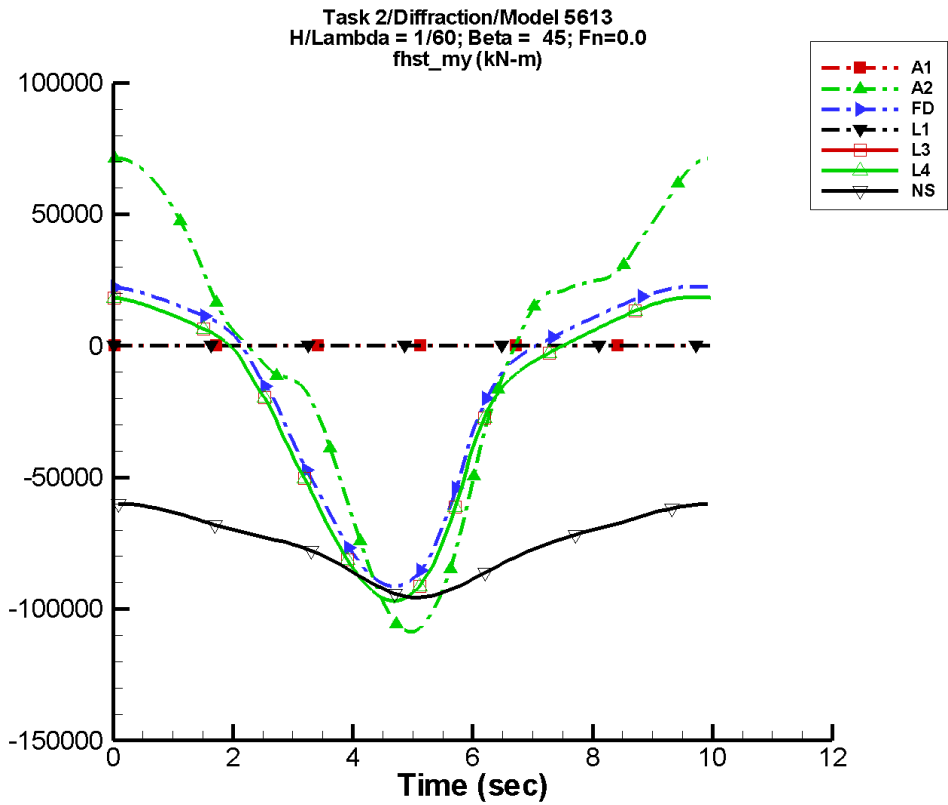
Table G–887. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 3.04E+05        | 1.65E+06        | 100               | 5.73E+05        | 177               |
| FD   | 1.71E+05        | 1.46E+06        | 95                | 3.84E+05        | 166               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.66E+05        | 1.45E+06        | 99                | 3.81E+05        | 174               |
| L4   | 1.66E+05        | 1.45E+06        | 99                | 3.81E+05        | 174               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–888. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.30E+06         | 2.42E+06          | -1.27E+06         | 2.40E+06          |
| FD   | -1.24E+06         | 2.10E+06          | -1.22E+06         | 2.02E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.25E+06         | 2.07E+06          | -1.24E+06         | 1.99E+06          |
| L4   | -1.25E+06         | 2.07E+06          | -1.24E+06         | 1.99E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-445. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-889. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

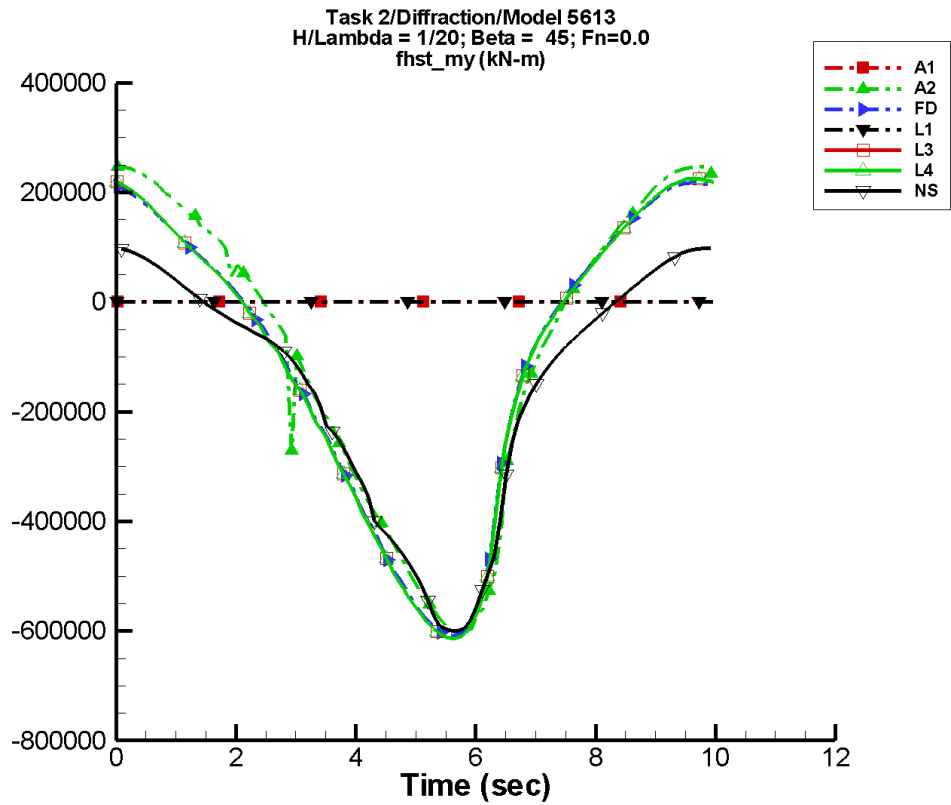
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -3.13E+03       | 7.44E+04        | 93                | 1.13E+04        | -83               |
| FD   | -1.70E+04       | 5.11E+04        | 97                | 1.88E+04        | -72               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.17E+04       | 5.21E+04        | 101               | 1.89E+04        | -66               |
| L4   | -2.17E+04       | 5.21E+04        | 101               | 1.89E+04        | -66               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.51E+04       | 1.57E+04        | 86                | 2.12E+03        | -115              |

Table G-890. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.09E+05         | 7.14E+04          | -1.06E+05         | 7.15E+04          |
| FD   | -9.15E+04         | 2.26E+04          | -9.00E+04         | 2.24E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.70E+04         | 1.86E+04          | -9.64E+04         | 1.85E+04          |
| L4   | -9.70E+04         | 1.86E+04          | -9.64E+04         | 1.85E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.56E+04         | -6.00E+04         | -9.50E+04         | -6.00E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-446. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

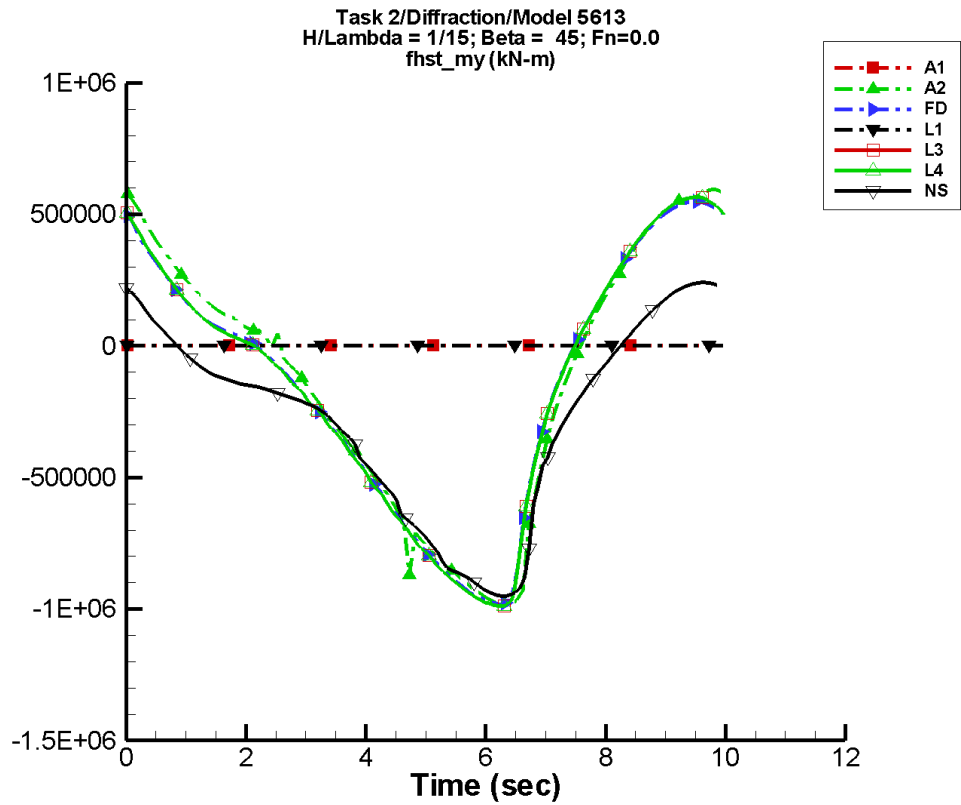
Table G–891. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.48E+04       | 3.87E+05        | 81                | 8.30E+04        | -139              |
| FD   | -1.03E+05       | 3.72E+05        | 83                | 1.00E+05        | -140              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.08E+05       | 3.77E+05        | 87                | 9.53E+04        | -136              |
| L4   | -1.08E+05       | 3.77E+05        | 87                | 9.53E+04        | -136              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.54E+05       | 2.95E+05        | 83                | 8.52E+04        | -132              |

Table G–892. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.05E+05         | 2.47E+05          | -5.93E+05         | 2.47E+05          |
| FD   | -6.09E+05         | 2.18E+05          | -6.01E+05         | 2.14E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -6.13E+05         | 2.25E+05          | -6.09E+05         | 2.24E+05          |
| L4   | -6.13E+05         | 2.25E+05          | -6.09E+05         | 2.24E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.00E+05         | 9.85E+04          | -5.87E+05         | 9.51E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-447. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

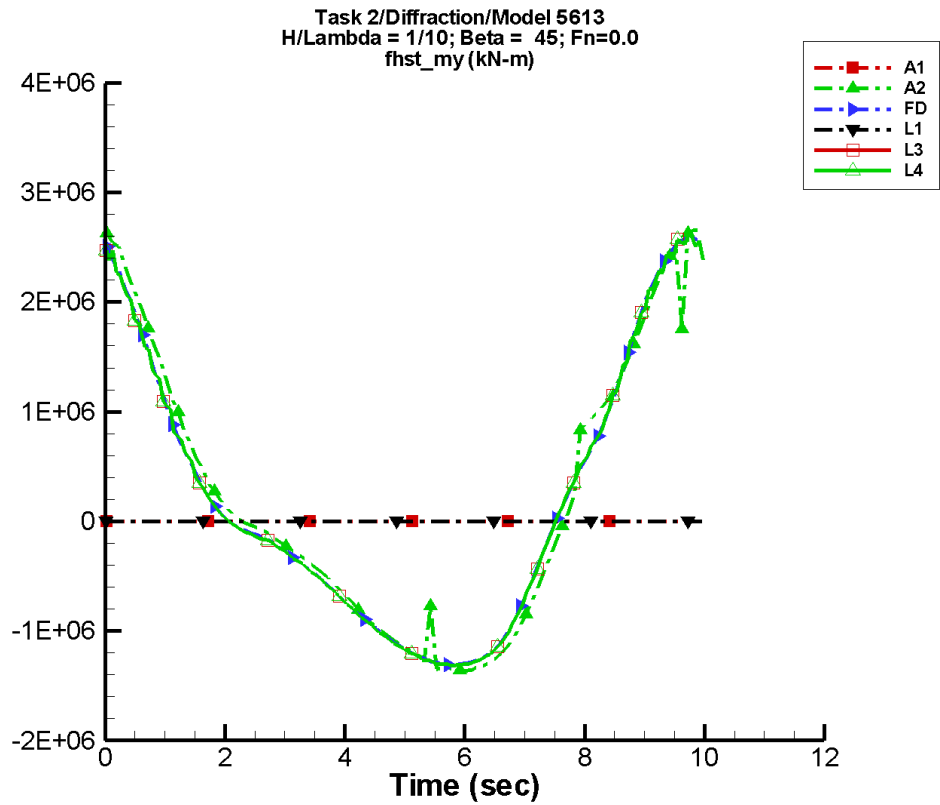
Table G–893. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.24E+05       | 6.79E+05        | 79                | 2.03E+05        | 178               |
| FD   | -1.37E+05       | 6.48E+05        | 81                | 2.19E+05        | 178               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.46E+05       | 6.56E+05        | 83                | 2.20E+05        | -179              |
| L4   | -1.46E+05       | 6.56E+05        | 83                | 2.20E+05        | -179              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.73E+05       | 4.77E+05        | 79                | 1.89E+05        | -176              |

Table G–894. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.85E+05         | 5.94E+05          | -9.69E+05         | 5.75E+05          |
| FD   | -9.81E+05         | 5.48E+05          | -9.65E+05         | 5.39E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.90E+05         | 5.66E+05          | -9.89E+05         | 5.61E+05          |
| L4   | -9.90E+05         | 5.66E+05          | -9.89E+05         | 5.61E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.51E+05         | 2.42E+05          | -9.47E+05         | 2.36E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-448. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

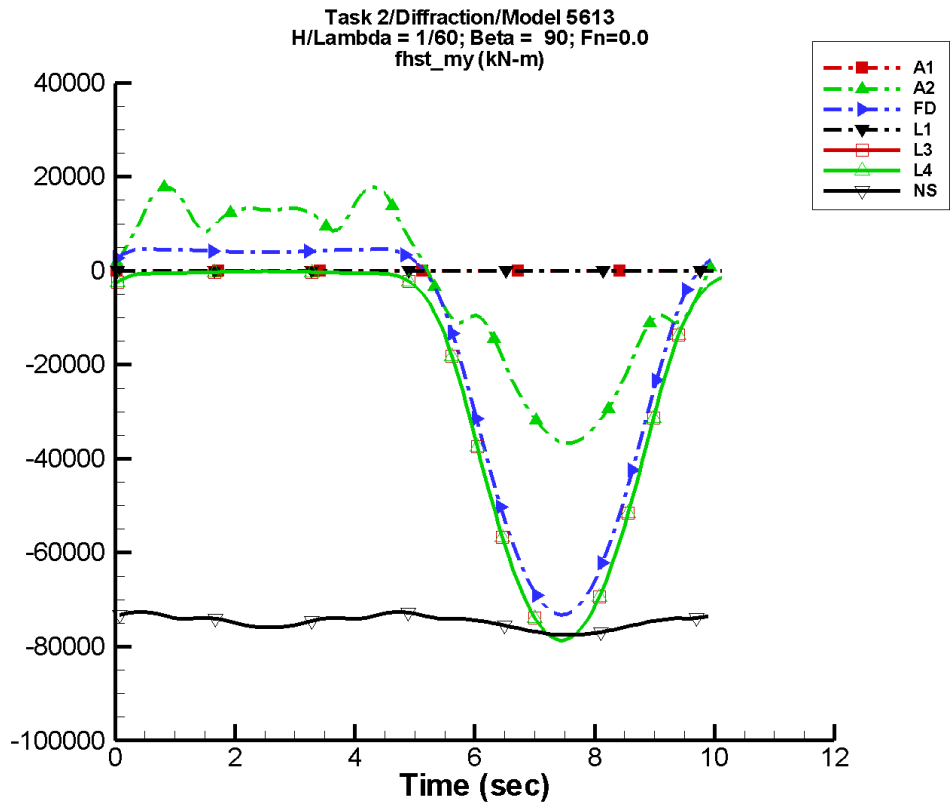
Table G–895. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.13E+05        | 1.69E+06        | 83                | 5.81E+05        | 120               |
| FD   | 1.90E+05        | 1.64E+06        | 83                | 5.41E+05        | 120               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.79E+05        | 1.64E+06        | 87                | 5.44E+05        | 127               |
| L4   | 1.79E+05        | 1.64E+06        | 87                | 5.44E+05        | 127               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–896. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.37E+06         | 2.66E+06          | -1.34E+06         | 2.56E+06          |
| FD   | -1.31E+06         | 2.60E+06          | -1.30E+06         | 2.51E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.32E+06         | 2.61E+06          | -1.31E+06         | 2.54E+06          |
| L4   | -1.32E+06         | 2.61E+06          | -1.31E+06         | 2.54E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-449. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–897. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

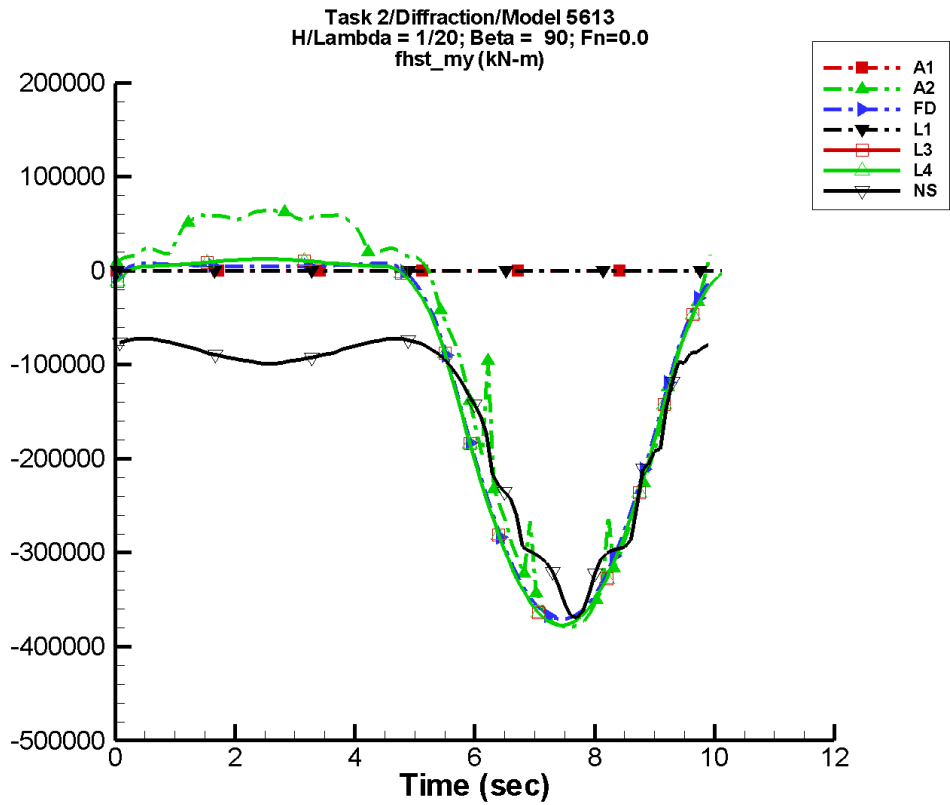
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.91E+03       | 2.30E+04        | -8                | 8.42E+03        | 74                |
| FD   | -1.71E+04       | 3.50E+04        | -9                | 1.82E+04        | 73                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.19E+04       | 3.57E+04        | -5                | 1.75E+04        | 84                |
| L4   | -2.19E+04       | 3.57E+04        | -5                | 1.75E+04        | 84                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.47E+04       | 931.            | -3                | 1.65E+03        | 81                |

Table G–898. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.67E+04         | 1.79E+04          | -3.57E+04         | 1.55E+04          |
| FD   | -7.33E+04         | 4.60E+03          | -7.27E+04         | 4.55E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -7.86E+04         | -99.4             | -7.82E+04         | -115.             |
| L4   | -7.86E+04         | -99.4             | -7.82E+04         | -115.             |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.75E+04         | -7.26E+04         | -7.74E+04         | -7.29E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-450. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

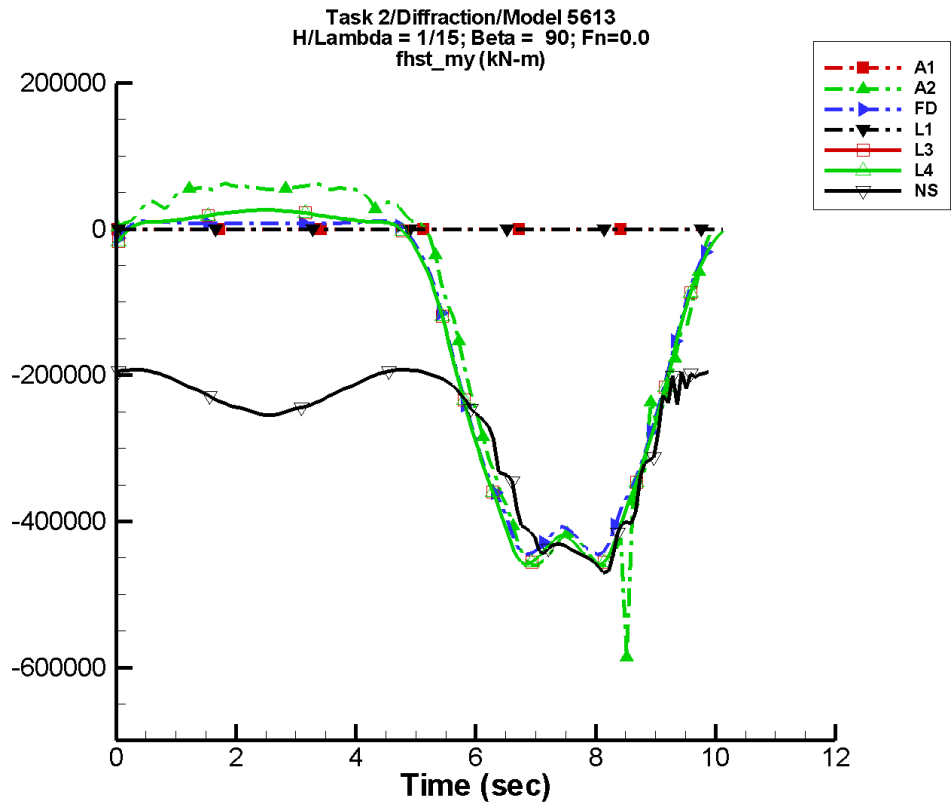
Table G–899. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.19E+04       | 2.02E+05        | -9                | 7.70E+04        | 74                |
| FD   | -1.07E+05       | 1.80E+05        | -8                | 8.44E+04        | 74                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.08E+05       | 1.87E+05        | -5                | 8.01E+04        | 83                |
| L4   | -1.08E+05       | 1.87E+05        | -5                | 8.01E+04        | 83                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.49E+05       | 1.08E+05        | -7                | 7.32E+04        | 79                |

Table G–900. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.79E+05         | 6.40E+04          | -3.72E+05         | 6.16E+04          |
| FD   | -3.71E+05         | 8.02E+03          | -3.70E+05         | 7.30E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -3.77E+05         | 1.27E+04          | -3.76E+05         | 1.26E+04          |
| L4   | -3.77E+05         | 1.27E+04          | -3.76E+05         | 1.26E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.70E+05         | -7.20E+04         | -3.45E+05         | -7.35E+04         |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-451. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

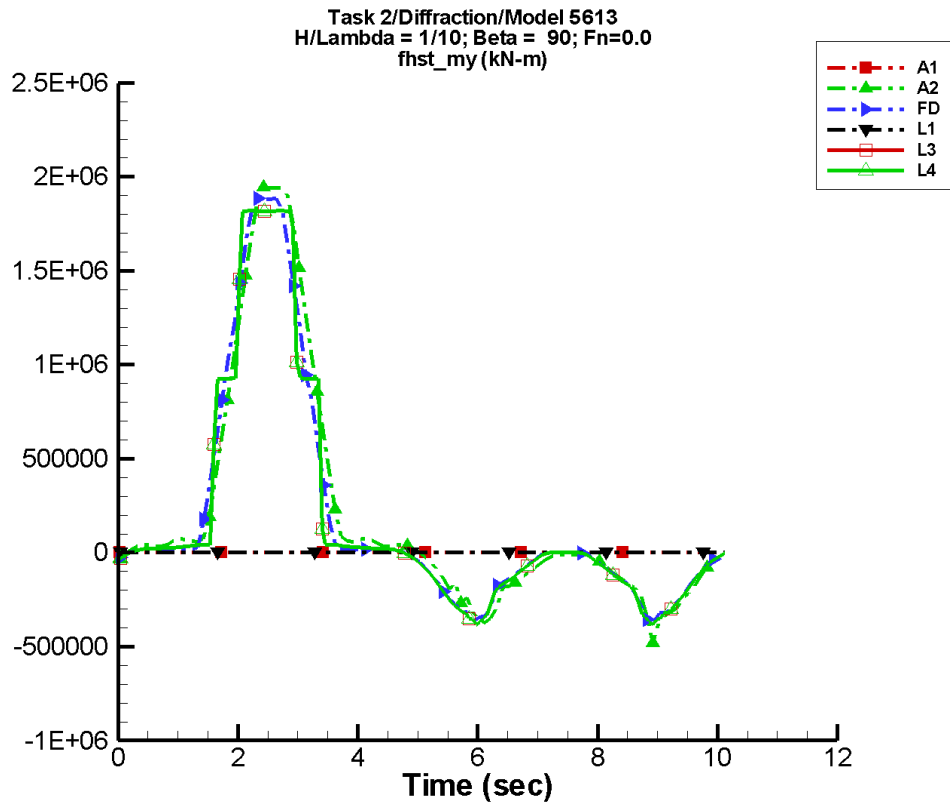
Table G-901. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.23E+05       | 2.66E+05        | -8                | 9.90E+04        | 74                |
| FD   | -1.40E+05       | 2.30E+05        | -7                | 9.47E+04        | 77                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.42E+05       | 2.47E+05        | -4                | 9.22E+04        | 83                |
| L4   | -1.42E+05       | 2.47E+05        | -4                | 9.22E+04        | 83                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.72E+05       | 8.74E+04        | -9                | 8.25E+04        | 79                |

Table G-902. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.86E+05         | 6.23E+04          | -4.54E+05         | 5.88E+04          |
| FD   | -4.46E+05         | 1.08E+04          | -4.30E+05         | 9.83E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -4.59E+05         | 2.61E+04          | -4.52E+05         | 2.59E+04          |
| L4   | -4.59E+05         | 2.61E+04          | -4.52E+05         | 2.59E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.70E+05         | -1.93E+05         | -4.54E+05         | -1.93E+05         |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-452. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

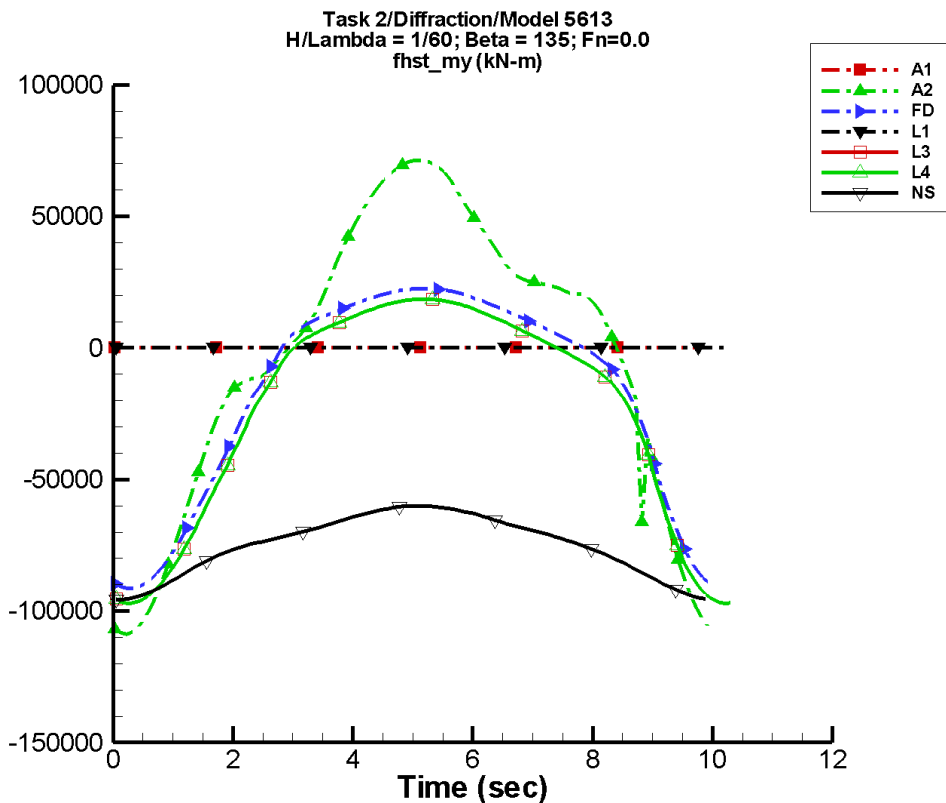
Table G-903. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.87E+05        | 5.86E+05        | -10               | 4.52E+05        | -112              |
| FD   | 1.76E+05        | 5.86E+05        | -9                | 4.92E+05        | -105              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.91E+05        | 6.08E+05        | -6                | 5.24E+05        | -105              |
| L4   | 1.91E+05        | 6.08E+05        | -6                | 5.24E+05        | -105              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-904. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -4.81E+05         | 1.95E+06          | -3.23E+05         | 1.86E+06          |
| FD   | -3.71E+05         | 1.88E+06          | -3.02E+05         | 1.80E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -3.82E+05         | 1.82E+06          | -3.44E+05         | 1.86E+06          |
| L4   | -3.82E+05         | 1.82E+06          | -3.44E+05         | 1.86E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-453. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-905. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

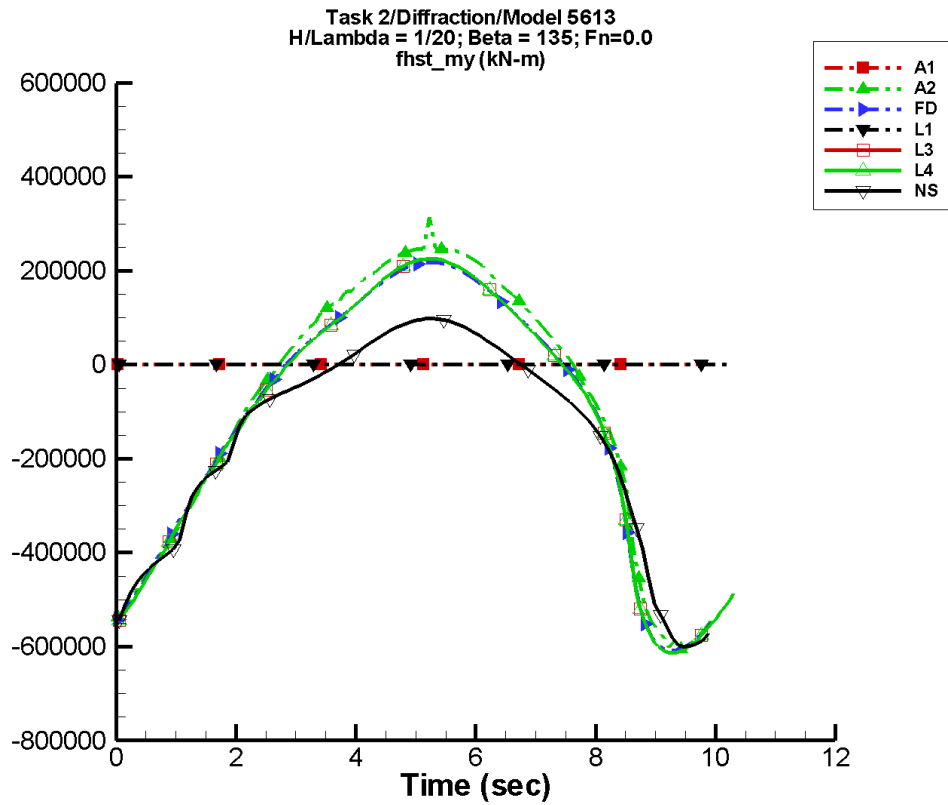
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.91E+03       | 7.40E+04        | -106              | 1.64E+04        | -116              |
| FD   | -1.73E+04       | 5.17E+04        | -111              | 1.71E+04        | -138              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.17E+04       | 5.18E+04        | -109              | 1.76E+04        | -134              |
| L4   | -2.17E+04       | 5.18E+04        | -109              | 1.76E+04        | -134              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.51E+04       | 1.57E+04        | -93               | 2.80E+03        | -84               |

Table G-906. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.09E+05         | 7.14E+04          | -1.08E+05         | 7.00E+04          |
| FD   | -9.15E+04         | 2.26E+04          | -9.09E+04         | 2.24E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.70E+04         | 1.86E+04          | -9.64E+04         | 1.85E+04          |
| L4   | -9.70E+04         | 1.86E+04          | -9.64E+04         | 1.85E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.55E+04         | -6.00E+04         | -9.55E+04         | -6.02E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-454. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

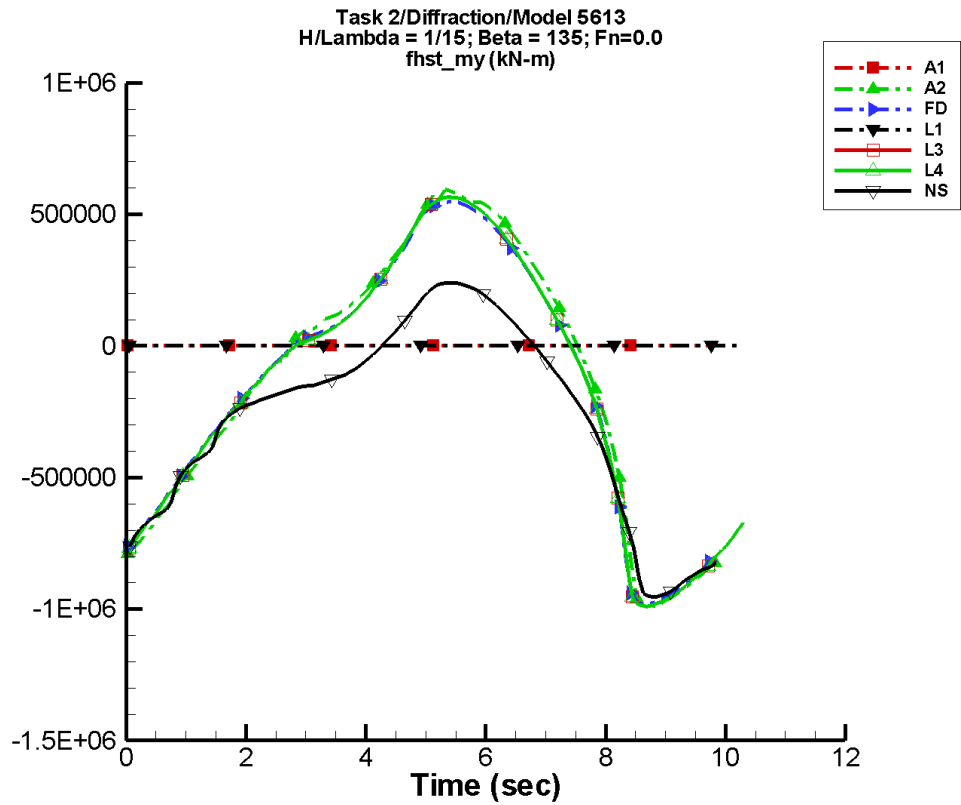
Table G-907. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.11E+04       | 3.80E+05        | -96               | 8.71E+04        | -69               |
| FD   | -1.05E+05       | 3.62E+05        | -98               | 8.50E+04        | -72               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.08E+05       | 3.71E+05        | -95               | 9.14E+04        | -66               |
| L4   | -1.08E+05       | 3.71E+05        | -95               | 9.14E+04        | -66               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.51E+05       | 2.88E+05        | -90               | 8.80E+04        | -68               |

Table G-908. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.04E+05         | 3.14E+05          | -5.91E+05         | 2.55E+05          |
| FD   | -6.08E+05         | 2.18E+05          | -6.02E+05         | 2.14E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -6.13E+05         | 2.25E+05          | -6.09E+05         | 2.24E+05          |
| L4   | -6.13E+05         | 2.25E+05          | -6.09E+05         | 2.24E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.00E+05         | 9.84E+04          | -5.86E+05         | 9.50E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-455. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

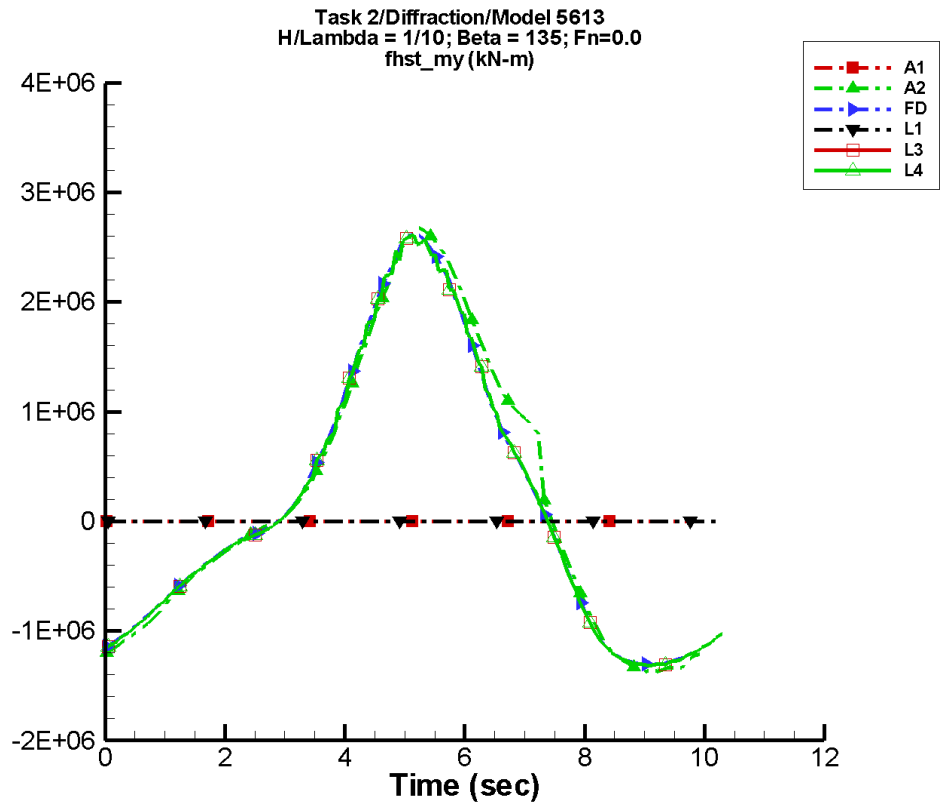
Table G-909. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.23E+05       | 6.69E+05        | -95               | 1.99E+05        | -26               |
| FD   | -1.37E+05       | 6.36E+05        | -96               | 2.00E+05        | -30               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.43E+05       | 6.53E+05        | -92               | 2.15E+05        | -22               |
| L4   | -1.43E+05       | 6.53E+05        | -92               | 2.15E+05        | -22               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.72E+05       | 4.72E+05        | -86               | 1.82E+05        | -20               |

Table G-910. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.89E+05         | 5.96E+05          | -9.69E+05         | 5.71E+05          |
| FD   | -9.81E+05         | 5.49E+05          | -9.65E+05         | 5.39E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.90E+05         | 5.66E+05          | -9.88E+05         | 5.61E+05          |
| L4   | -9.90E+05         | 5.66E+05          | -9.88E+05         | 5.61E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.54E+05         | 2.41E+05          | -9.42E+05         | 2.35E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-456. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

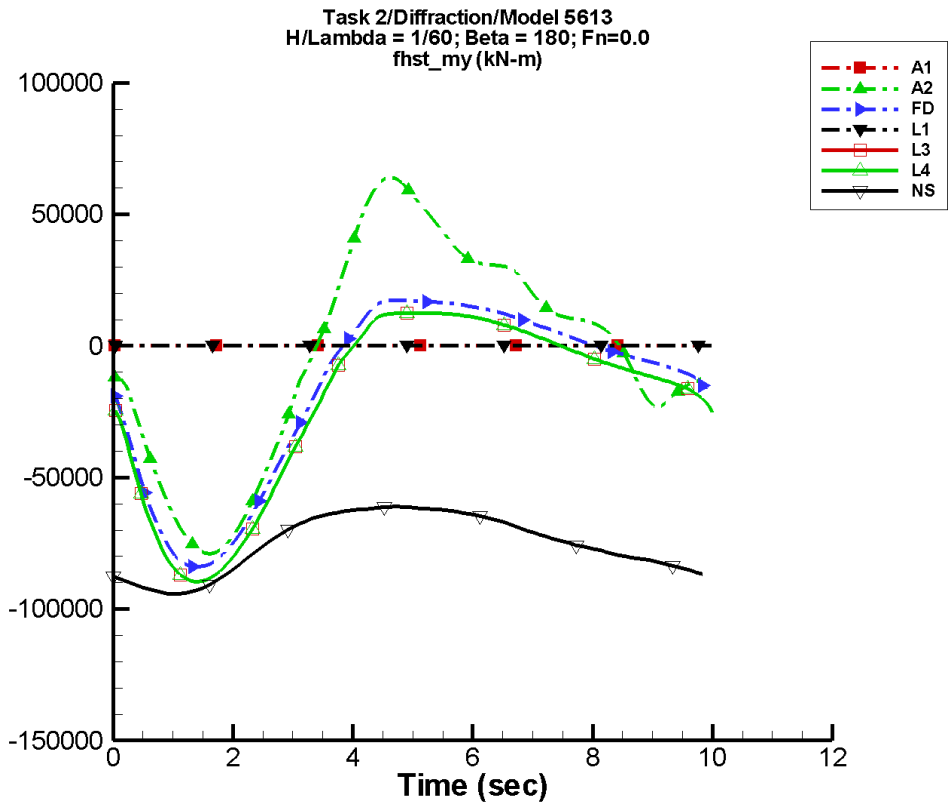
Table G-911. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.22E+05        | 1.72E+06        | -99               | 5.43E+05        | 25                |
| FD   | 1.79E+05        | 1.64E+06        | -98               | 5.56E+05        | 32                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.79E+05        | 1.63E+06        | -95               | 5.42E+05        | 39                |
| L4   | 1.79E+05        | 1.63E+06        | -95               | 5.42E+05        | 39                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-912. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.37E+06         | 2.68E+06          | -1.35E+06         | 2.57E+06          |
| FD   | -1.31E+06         | 2.62E+06          | -1.30E+06         | 2.52E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.32E+06         | 2.61E+06          | -1.31E+06         | 2.55E+06          |
| L4   | -1.32E+06         | 2.61E+06          | -1.31E+06         | 2.55E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-457. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-913. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

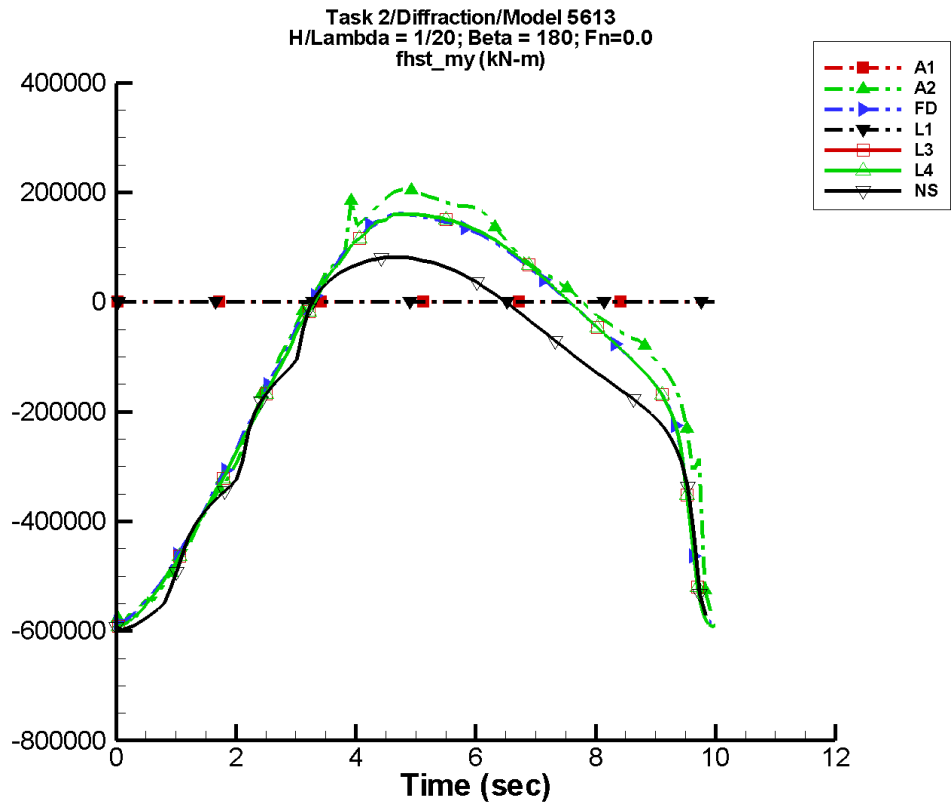
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.65E+03       | 5.13E+04        | -129              | 2.55E+04        | 115               |
| FD   | -1.66E+04       | 4.31E+04        | -148              | 1.94E+04        | 131               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.19E+04       | 4.38E+04        | -144              | 1.91E+04        | 136               |
| L4   | -2.19E+04       | 4.38E+04        | -144              | 1.91E+04        | 136               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.53E+04       | 1.50E+04        | -101              | 4.09E+03        | 174               |

Table G-914. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.90E+04         | 6.42E+04          | -7.66E+04         | 6.09E+04          |
| FD   | -8.40E+04         | 1.73E+04          | -8.26E+04         | 1.72E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.96E+04         | 1.26E+04          | -8.91E+04         | 1.25E+04          |
| L4   | -8.96E+04         | 1.26E+04          | -8.91E+04         | 1.25E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.43E+04         | -6.11E+04         | -9.37E+04         | -6.14E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-458. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

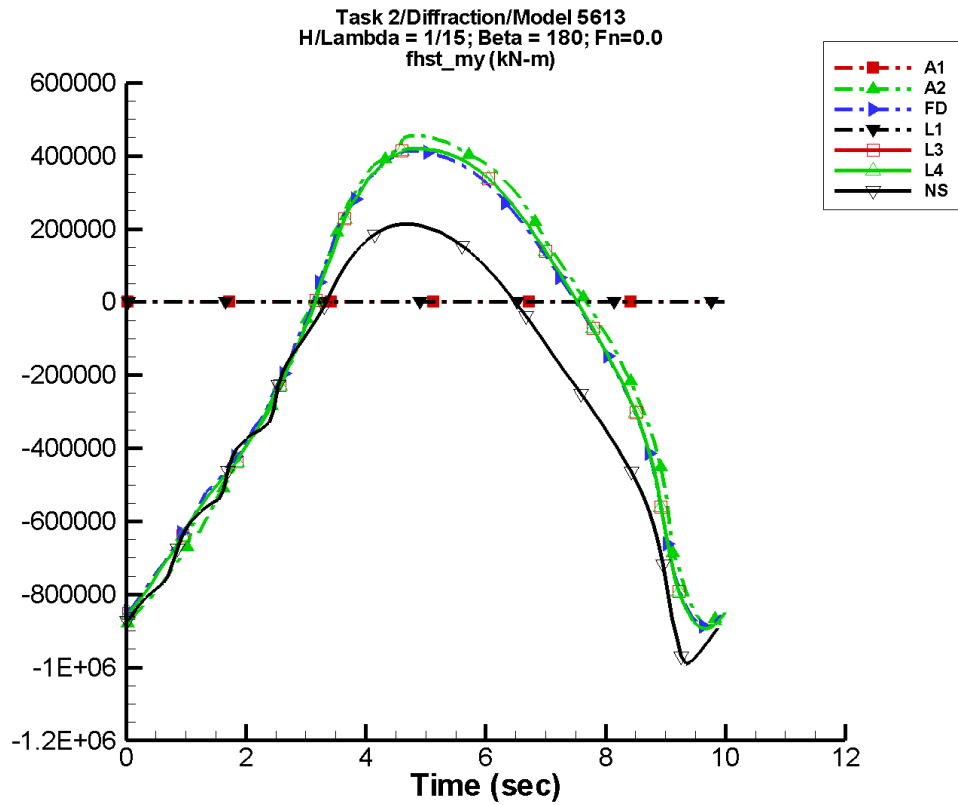
Table G-915. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.54E+04       | 3.28E+05        | -116              | 9.62E+04        | -163              |
| FD   | -1.11E+05       | 3.19E+05        | -116              | 8.03E+04        | -159              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.12E+05       | 3.23E+05        | -113              | 7.85E+04        | -151              |
| L4   | -1.12E+05       | 3.23E+05        | -113              | 7.85E+04        | -151              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.60E+05       | 2.87E+05        | -104              | 9.17E+04        | -146              |

Table G-916. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.84E+05         | 2.05E+05          | -5.77E+05         | 1.98E+05          |
| FD   | -5.85E+05         | 1.62E+05          | -5.82E+05         | 1.58E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.92E+05         | 1.61E+05          | -5.90E+05         | 1.60E+05          |
| L4   | -5.92E+05         | 1.61E+05          | -5.90E+05         | 1.60E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.98E+05         | 8.19E+04          | -5.95E+05         | 8.05E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-459. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

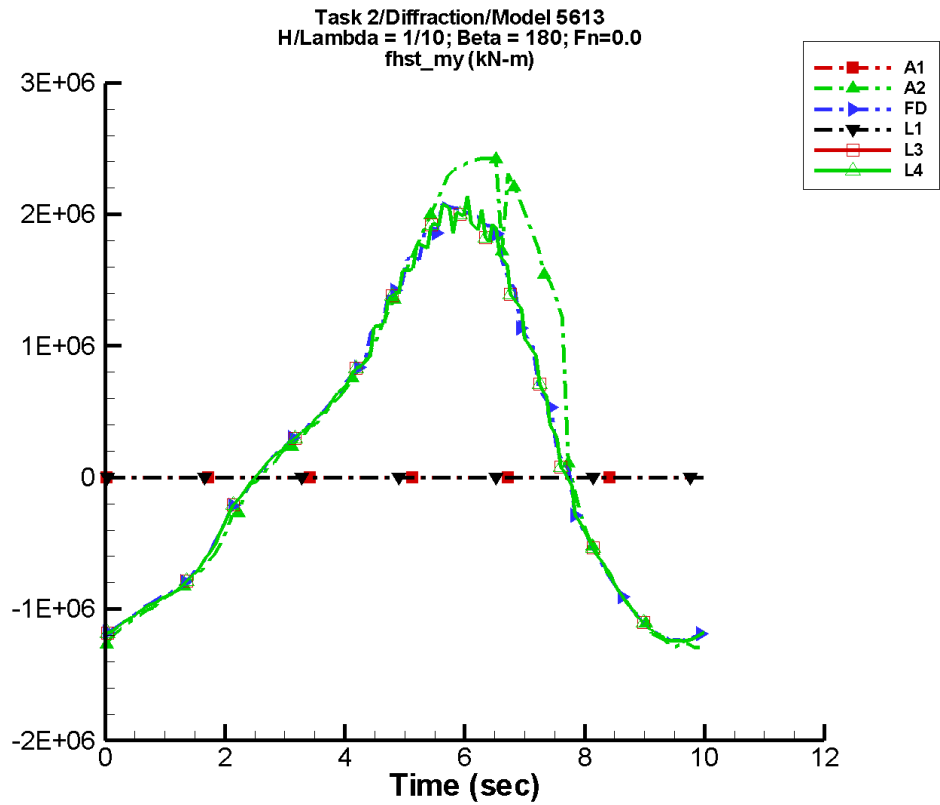
Table G-917. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.22E+05       | 6.22E+05        | -106              | 6.70E+04        | -120              |
| FD   | -1.40E+05       | 5.92E+05        | -106              | 4.66E+04        | -120              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.39E+05       | 6.00E+05        | -104              | 4.53E+04        | -110              |
| L4   | -1.39E+05       | 6.00E+05        | -104              | 4.53E+04        | -110              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.71E+05       | 5.15E+05        | -89               | 5.75E+04        | -85               |

Table G-918. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -8.88E+05         | 4.56E+05          | -8.70E+05         | 4.48E+05          |
| FD   | -8.86E+05         | 4.14E+05          | -8.65E+05         | 4.09E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.94E+05         | 4.20E+05          | -8.85E+05         | 4.19E+05          |
| L4   | -8.94E+05         | 4.20E+05          | -8.85E+05         | 4.19E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.91E+05         | 2.14E+05          | -9.58E+05         | 2.11E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-460. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

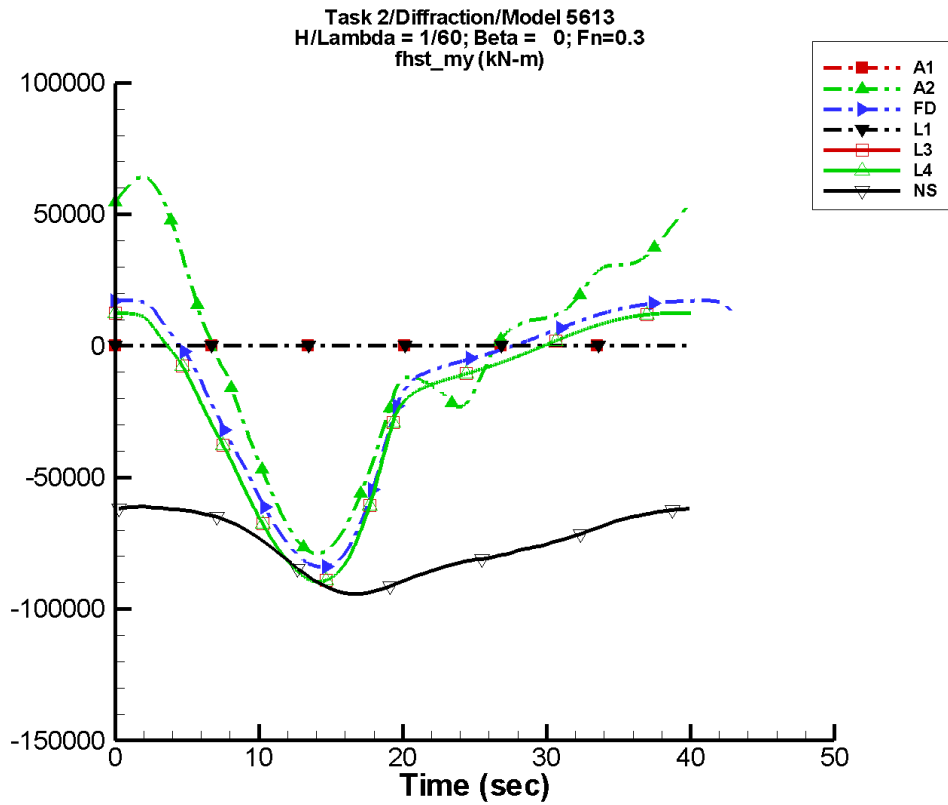
Table G-919. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.97E+05        | 1.66E+06        | -117              | 5.34E+05        | -25               |
| FD   | 1.83E+05        | 1.49E+06        | -111              | 4.09E+05        | -19               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.70E+05        | 1.48E+06        | -107              | 4.07E+05        | -13               |
| L4   | 1.70E+05        | 1.48E+06        | -107              | 4.07E+05        | -13               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-920. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.29E+06         | 2.42E+06          | -1.27E+06         | 2.37E+06          |
| FD   | -1.24E+06         | 2.10E+06          | -1.22E+06         | 2.02E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.25E+06         | 2.14E+06          | -1.24E+06         | 2.00E+06          |
| L4   | -1.25E+06         | 2.14E+06          | -1.24E+06         | 2.00E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-461. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-921. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

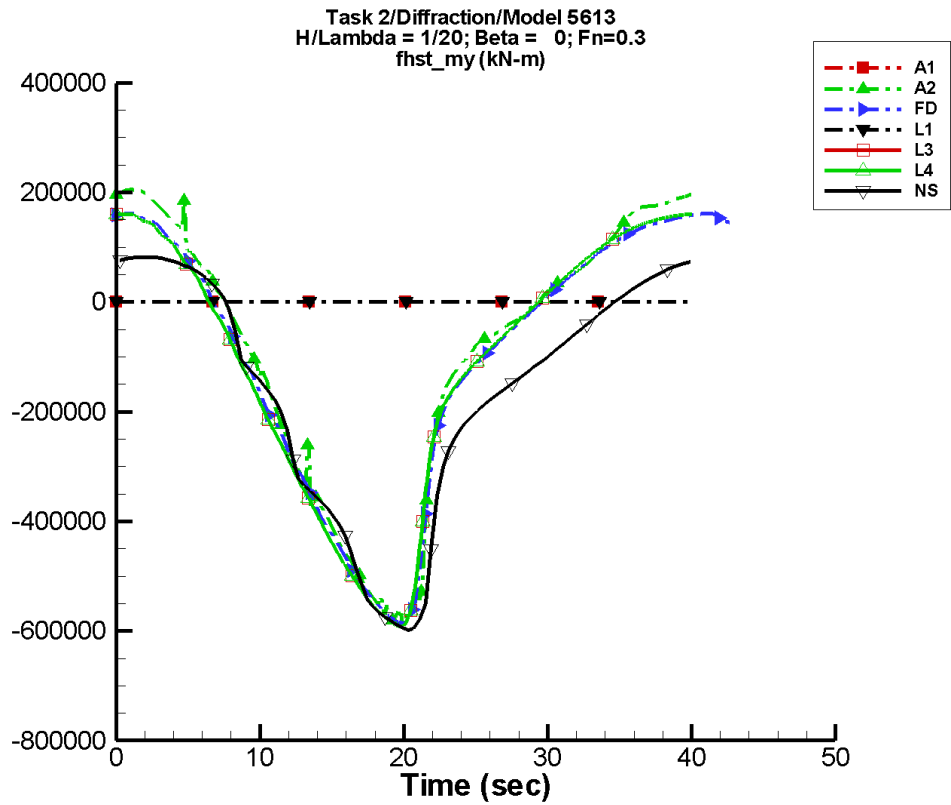
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.61E+03       | 5.22E+04        | 118               | 2.43E+04        | 45                |
| FD   | -1.70E+04       | 4.27E+04        | 138               | 2.00E+04        | 30                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.23E+04       | 4.27E+04        | 139               | 1.99E+04        | 38                |
| L4   | -2.23E+04       | 4.27E+04        | 139               | 1.99E+04        | 38                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.53E+04       | 1.47E+04        | 92                | 3.79E+03        | -17               |

Table G-922. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.90E+04         | 6.42E+04          | -7.89E+04         | 6.39E+04          |
| FD   | -8.40E+04         | 1.73E+04          | -8.40E+04         | 1.73E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.96E+04         | 1.26E+04          | -8.96E+04         | 1.26E+04          |
| L4   | -8.96E+04         | 1.26E+04          | -8.96E+04         | 1.26E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.43E+04         | -6.11E+04         | -9.37E+04         | -6.13E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-462. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

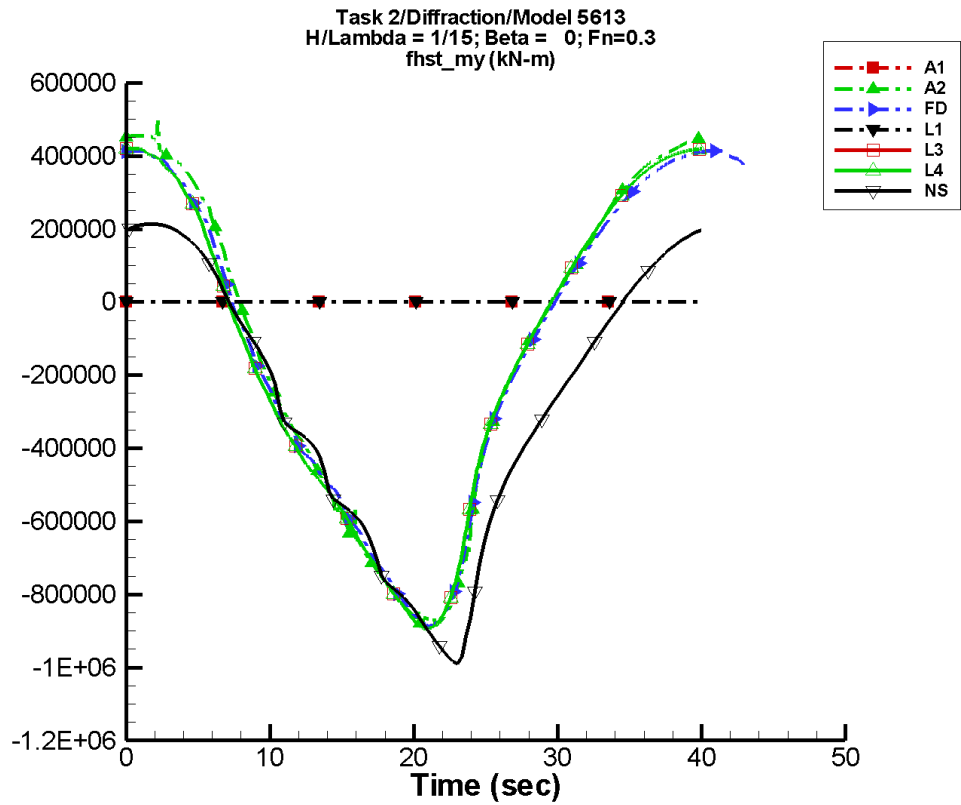
Table G-923. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.68E+04       | 3.25E+05        | 108               | 8.82E+04        | -29               |
| FD   | -1.08E+05       | 3.17E+05        | 108               | 8.36E+04        | -42               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.09E+05       | 3.18E+05        | 110               | 8.85E+04        | -36               |
| L4   | -1.09E+05       | 3.18E+05        | 110               | 8.85E+04        | -36               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.60E+05       | 2.82E+05        | 97                | 8.67E+04        | -44               |

Table G-924. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.84E+05         | 2.05E+05          | -5.76E+05         | 2.05E+05          |
| FD   | -5.85E+05         | 1.62E+05          | -5.84E+05         | 1.62E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.92E+05         | 1.61E+05          | -5.91E+05         | 1.61E+05          |
| L4   | -5.92E+05         | 1.61E+05          | -5.91E+05         | 1.61E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.98E+05         | 8.18E+04          | -5.88E+05         | 8.06E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-463. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

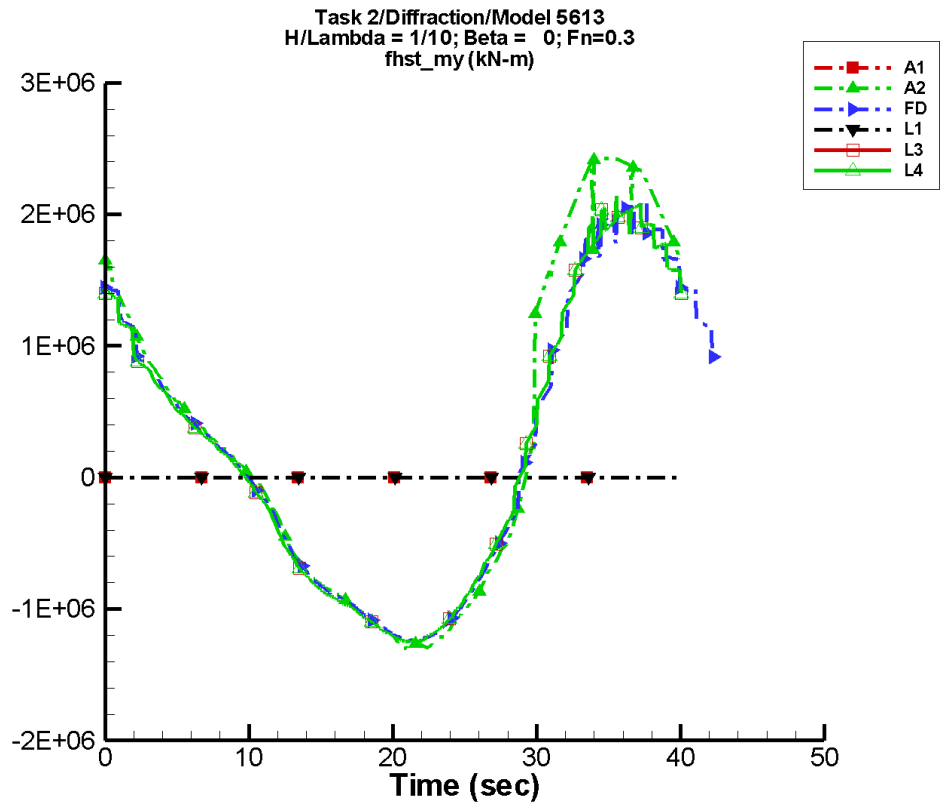
Table G-925. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.25E+05       | 6.33E+05        | 98                | 5.97E+04        | -65               |
| FD   | -1.37E+05       | 5.97E+05        | 97                | 4.32E+04        | -86               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.38E+05       | 6.15E+05        | 100               | 5.82E+04        | -89               |
| L4   | -1.38E+05       | 6.15E+05        | 100               | 5.82E+04        | -89               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.75E+05       | 5.25E+05        | 84                | 5.35E+04        | -99               |

Table G-926. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -8.89E+05         | 4.96E+05          | -8.78E+05         | 4.56E+05          |
| FD   | -8.87E+05         | 4.14E+05          | -8.85E+05         | 4.15E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.95E+05         | 4.20E+05          | -8.94E+05         | 4.20E+05          |
| L4   | -8.95E+05         | 4.20E+05          | -8.94E+05         | 4.20E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.91E+05         | 2.14E+05          | -9.58E+05         | 2.11E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-464. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

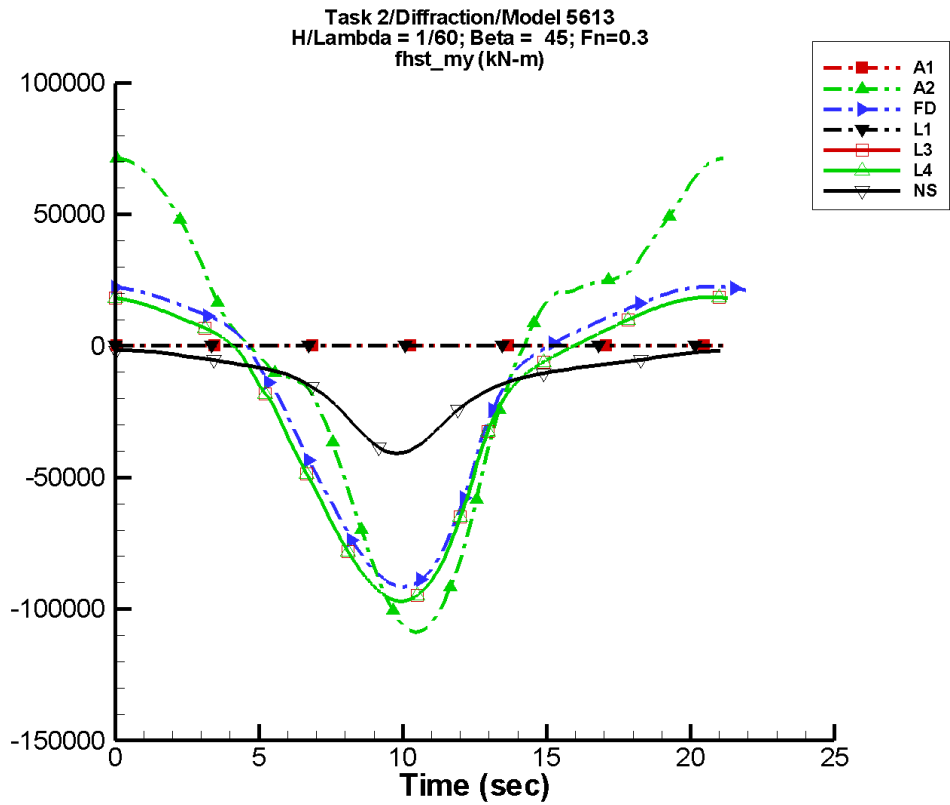
Table G-927. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 3.04E+05        | 1.64E+06        | 106               | 5.70E+05        | -168              |
| FD   | 1.76E+05        | 1.47E+06        | 101               | 3.88E+05        | -178              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.64E+05        | 1.45E+06        | 102               | 3.78E+05        | -178              |
| L4   | 1.64E+05        | 1.45E+06        | 102               | 3.78E+05        | -178              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-928. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.30E+06         | 2.42E+06          | -1.29E+06         | 2.43E+06          |
| FD   | -1.24E+06         | 2.10E+06          | -1.24E+06         | 2.06E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.25E+06         | 2.14E+06          | -1.24E+06         | 2.06E+06          |
| L4   | -1.25E+06         | 2.14E+06          | -1.24E+06         | 2.06E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-465. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-929. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

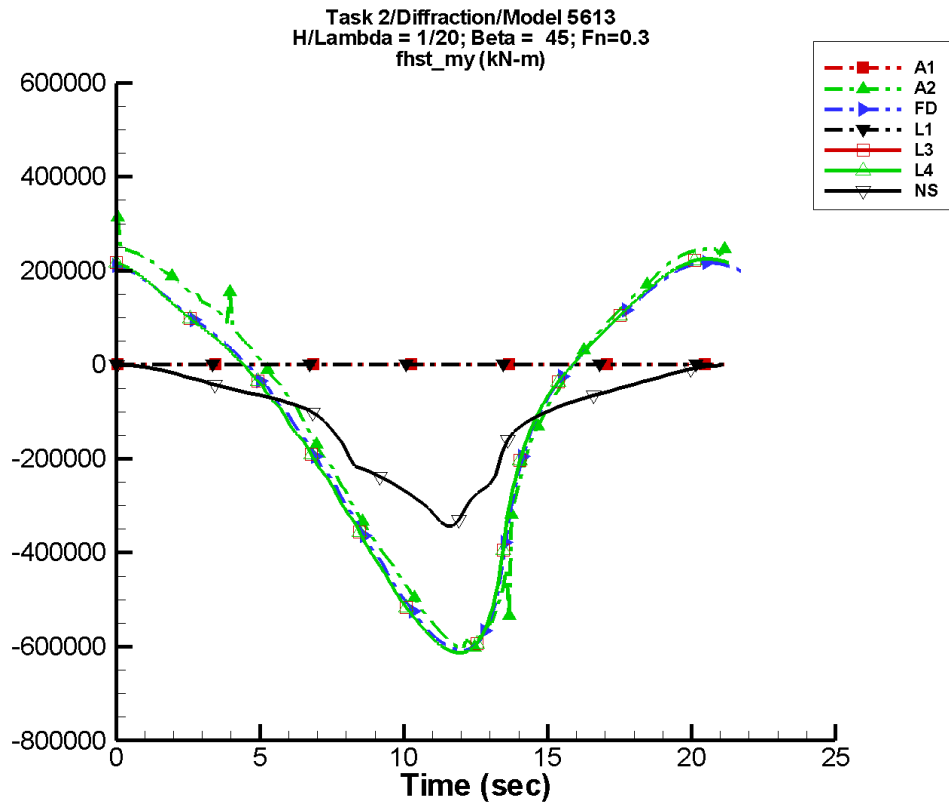
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -3.32E+03       | 7.43E+04        | 101               | 1.11E+04        | -67               |
| FD   | -1.68E+04       | 5.10E+04        | 110               | 1.78E+04        | -48               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.20E+04       | 5.20E+04        | 106               | 1.75E+04        | -53               |
| L4   | -2.20E+04       | 5.20E+04        | 106               | 1.75E+04        | -53               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.35E+04       | 1.47E+04        | 99                | 5.77E+03        | -62               |

Table G-930. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.09E+05         | 7.14E+04          | -1.08E+05         | 7.15E+04          |
| FD   | -9.15E+04         | 2.27E+04          | -9.12E+04         | 2.26E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.70E+04         | 1.86E+04          | -9.69E+04         | 1.86E+04          |
| L4   | -9.70E+04         | 1.86E+04          | -9.69E+04         | 1.86E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.09E+04         | -1.70E+03         | -3.96E+04         | -1.68E+03         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-466. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

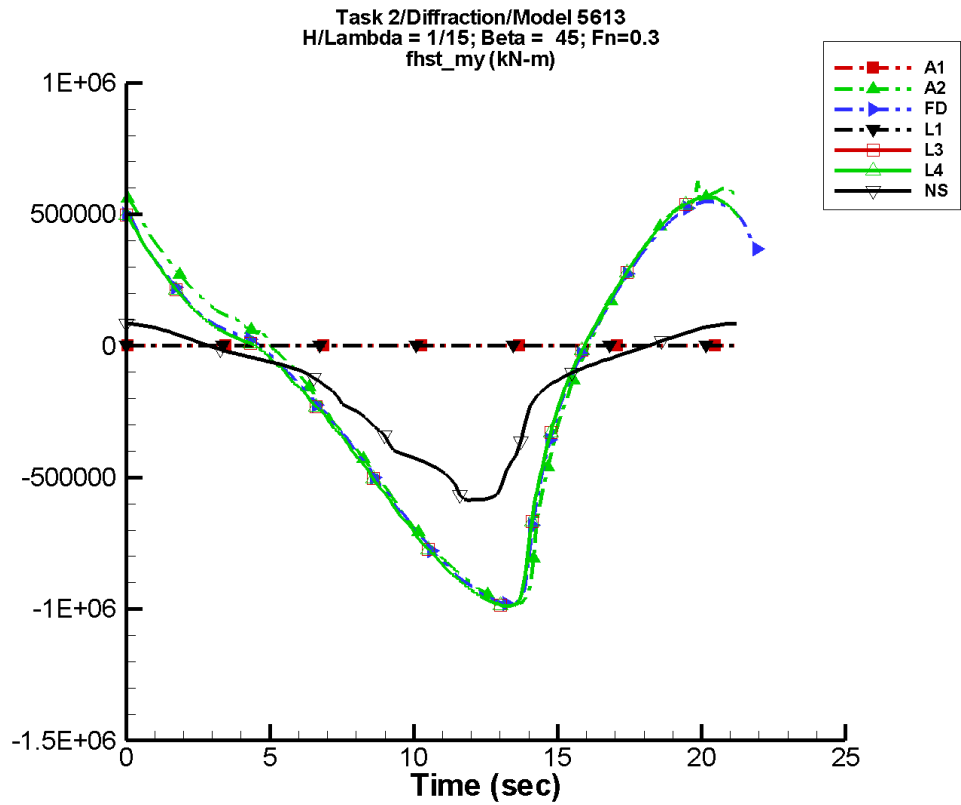
Table G-931. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.31E+04       | 3.87E+05        | 88                | 8.58E+04        | -125              |
| FD   | -1.06E+05       | 3.70E+05        | 96                | 8.92E+04        | -113              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.08E+05       | 3.75E+05        | 93                | 8.70E+04        | -121              |
| L4   | -1.08E+05       | 3.75E+05        | 93                | 8.70E+04        | -121              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.12E+05       | 1.36E+05        | 87                | 4.11E+04        | -107              |

Table G-932. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.05E+05         | 3.14E+05          | -5.97E+05         | 2.85E+05          |
| FD   | -6.09E+05         | 2.18E+05          | -6.06E+05         | 2.17E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -6.13E+05         | 2.25E+05          | -6.12E+05         | 2.25E+05          |
| L4   | -6.13E+05         | 2.25E+05          | -6.12E+05         | 2.25E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.44E+05         | -886.             | -3.23E+05         | -793.             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-467. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

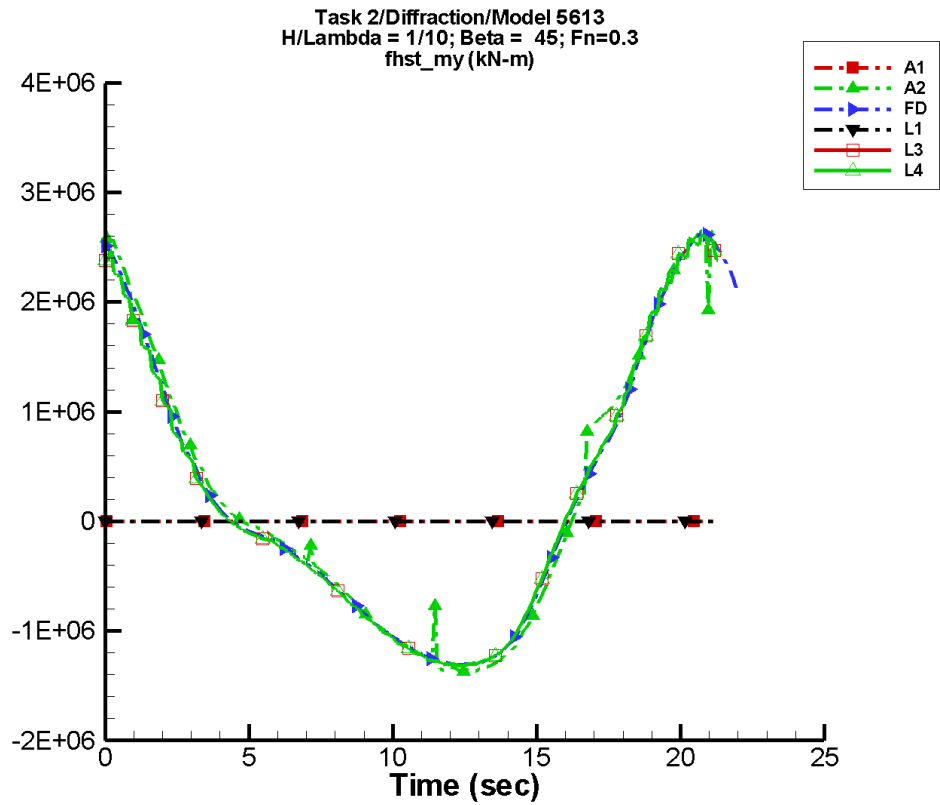
Table G-933. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.21E+05       | 6.75E+05        | 87                | 2.05E+05        | -168              |
| FD   | -1.42E+05       | 6.46E+05        | 93                | 2.07E+05        | -156              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.41E+05       | 6.52E+05        | 90                | 2.14E+05        | -164              |
| L4   | -1.41E+05       | 6.52E+05        | 90                | 2.14E+05        | -164              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.50E+05       | 2.74E+05        | 84                | 7.99E+04        | -128              |

Table G-934. Minimum and maximum of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.85E+05         | 6.25E+05          | -9.84E+05         | 5.89E+05          |
| FD   | -9.81E+05         | 5.49E+05          | -9.81E+05         | 5.46E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.90E+05         | 5.66E+05          | -9.88E+05         | 5.65E+05          |
| L4   | -9.90E+05         | 5.66E+05          | -9.88E+05         | 5.65E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.85E+05         | 8.44E+04          | -5.80E+05         | 8.39E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-468. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

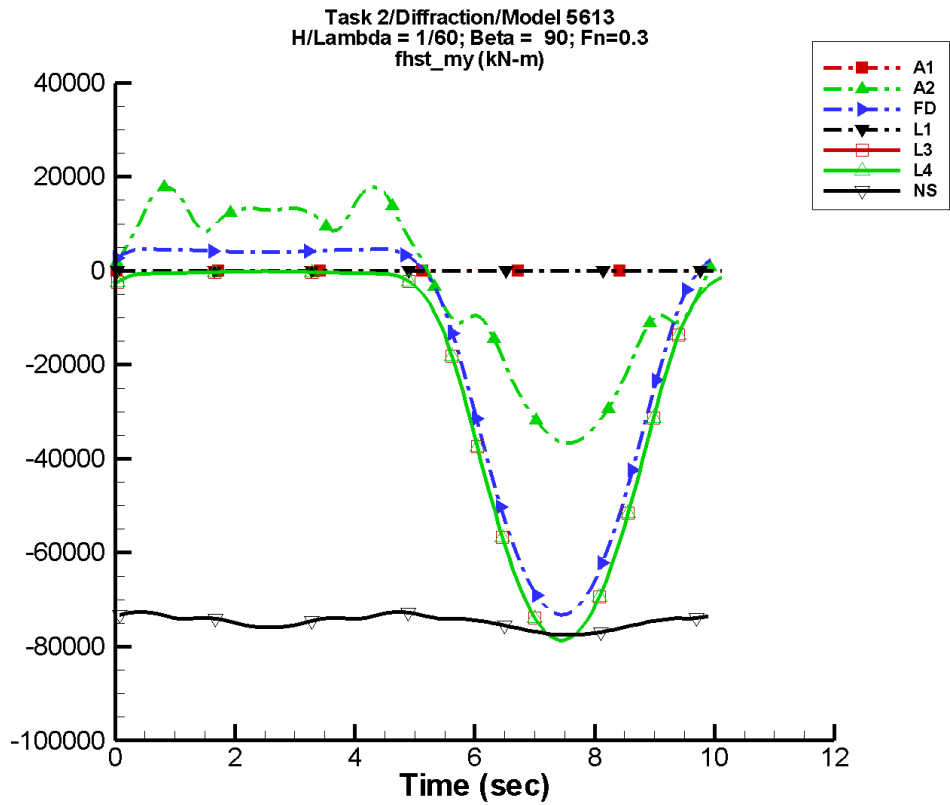
Table G-935. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.16E+05        | 1.70E+06        | 91                | 5.83E+05        | 137               |
| FD   | 1.90E+05        | 1.63E+06        | 95                | 5.73E+05        | 145               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.73E+05        | 1.63E+06        | 92                | 5.66E+05        | 137               |
| L4   | 1.73E+05        | 1.63E+06        | 92                | 5.66E+05        | 137               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-936. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.37E+06         | 2.66E+06          | -1.36E+06         | 2.57E+06          |
| FD   | -1.31E+06         | 2.63E+06          | -1.30E+06         | 2.59E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.32E+06         | 2.61E+06          | -1.31E+06         | 2.58E+06          |
| L4   | -1.32E+06         | 2.61E+06          | -1.31E+06         | 2.58E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-469. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-937. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

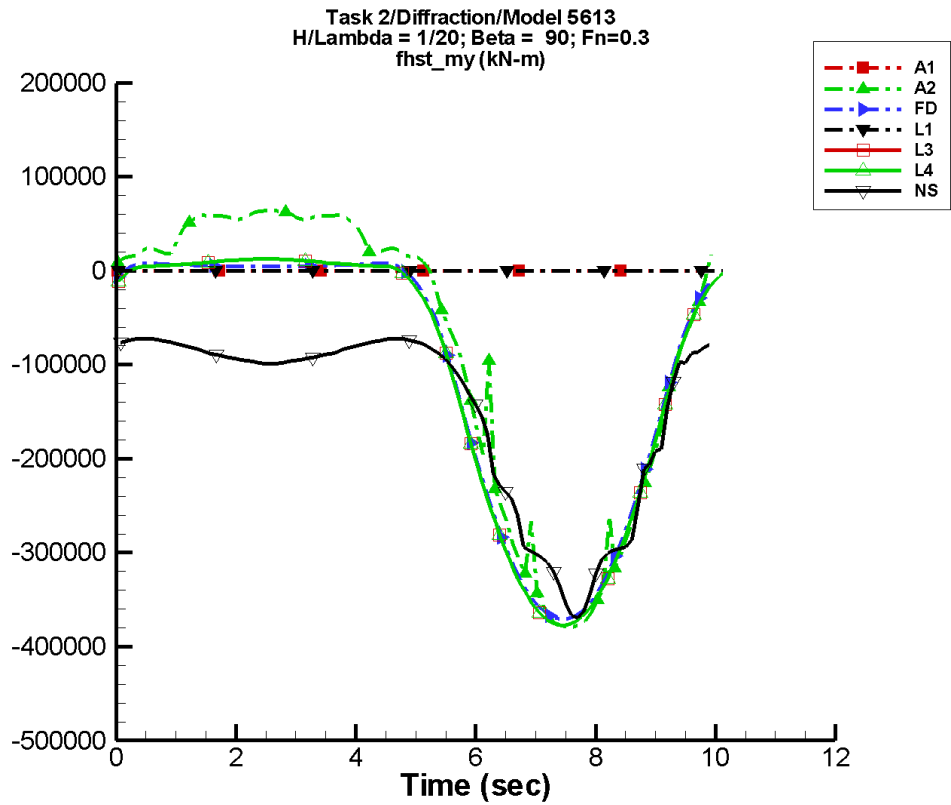
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.91E+03       | 2.30E+04        | -8                | 8.42E+03        | 74                |
| FD   | -1.71E+04       | 3.50E+04        | -9                | 1.82E+04        | 73                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.19E+04       | 3.57E+04        | -5                | 1.75E+04        | 84                |
| L4   | -2.19E+04       | 3.57E+04        | -5                | 1.75E+04        | 84                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.47E+04       | 931.            | -3                | 1.65E+03        | 81                |

Table G-938. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.67E+04         | 1.79E+04          | -3.57E+04         | 1.55E+04          |
| FD   | -7.33E+04         | 4.60E+03          | -7.27E+04         | 4.55E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -7.86E+04         | -98.9             | -7.82E+04         | -115.             |
| L4   | -7.86E+04         | -98.9             | -7.82E+04         | -115.             |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.75E+04         | -7.26E+04         | -7.74E+04         | -7.29E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-470. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

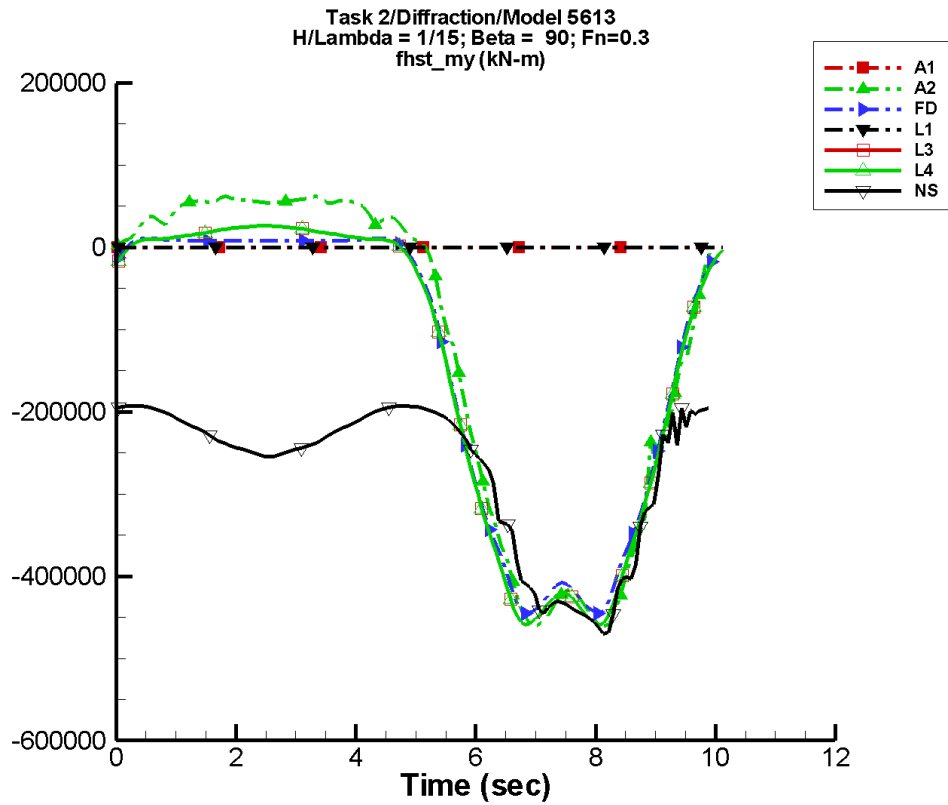
Table G-939. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.19E+04       | 2.02E+05        | -9                | 7.70E+04        | 74                |
| FD   | -1.07E+05       | 1.80E+05        | -8                | 8.44E+04        | 74                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.08E+05       | 1.87E+05        | -5                | 8.01E+04        | 83                |
| L4   | -1.08E+05       | 1.87E+05        | -5                | 8.01E+04        | 83                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.49E+05       | 1.08E+05        | -7                | 7.32E+04        | 79                |

Table G-940. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.79E+05         | 6.40E+04          | -3.72E+05         | 6.16E+04          |
| FD   | -3.71E+05         | 8.02E+03          | -3.70E+05         | 7.30E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -3.77E+05         | 1.27E+04          | -3.76E+05         | 1.26E+04          |
| L4   | -3.77E+05         | 1.27E+04          | -3.76E+05         | 1.26E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.70E+05         | -7.20E+04         | -3.45E+05         | -7.35E+04         |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-471. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

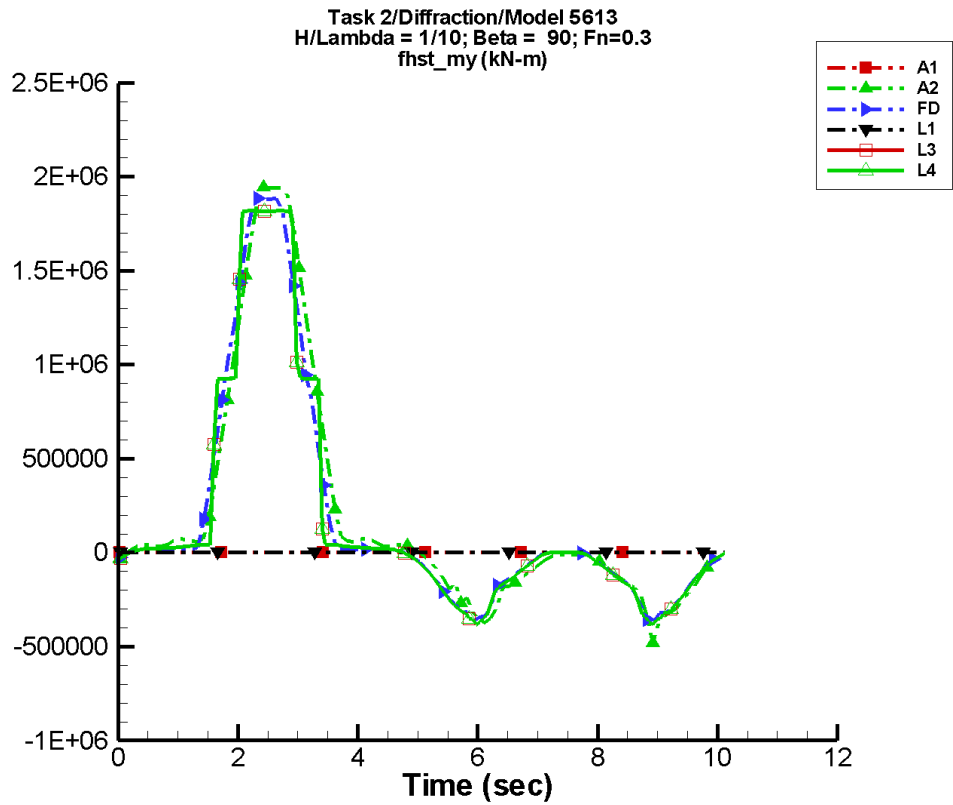
Table G-941. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.21E+05       | 2.63E+05        | -8                | 9.75E+04        | 75                |
| FD   | -1.40E+05       | 2.30E+05        | -7                | 9.47E+04        | 77                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.42E+05       | 2.47E+05        | -4                | 9.22E+04        | 83                |
| L4   | -1.42E+05       | 2.47E+05        | -4                | 9.22E+04        | 83                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.72E+05       | 8.74E+04        | -9                | 8.25E+04        | 79                |

Table G-942. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -4.61E+05         | 6.23E+04          | -4.43E+05         | 5.90E+04          |
| FD   | -4.46E+05         | 1.08E+04          | -4.30E+05         | 9.83E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -4.59E+05         | 2.61E+04          | -4.52E+05         | 2.59E+04          |
| L4   | -4.59E+05         | 2.61E+04          | -4.52E+05         | 2.59E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.70E+05         | -1.93E+05         | -4.54E+05         | -1.93E+05         |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-472. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

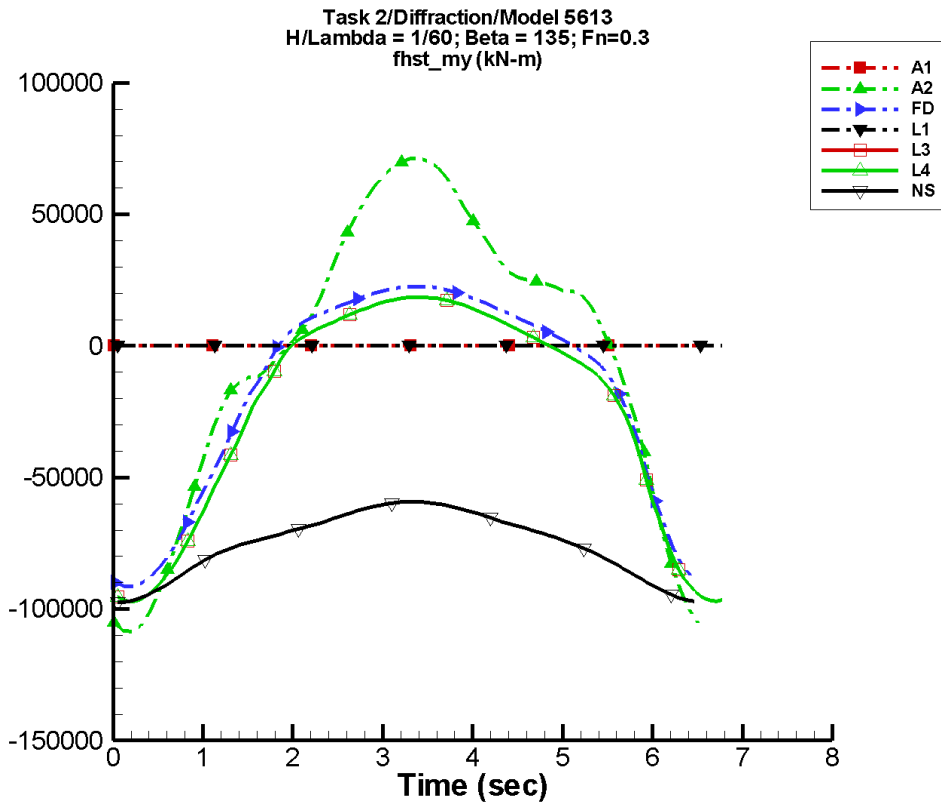
Table G-943. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.87E+05        | 5.86E+05        | -10               | 4.52E+05        | -112              |
| FD   | 1.76E+05        | 5.86E+05        | -9                | 4.92E+05        | -105              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.91E+05        | 6.08E+05        | -6                | 5.24E+05        | -105              |
| L4   | 1.91E+05        | 6.08E+05        | -6                | 5.24E+05        | -105              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-944. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -4.81E+05         | 1.95E+06          | -3.23E+05         | 1.86E+06          |
| FD   | -3.71E+05         | 1.88E+06          | -3.02E+05         | 1.80E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -3.82E+05         | 1.82E+06          | -3.44E+05         | 1.86E+06          |
| L4   | -3.82E+05         | 1.82E+06          | -3.44E+05         | 1.86E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-473. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-945. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

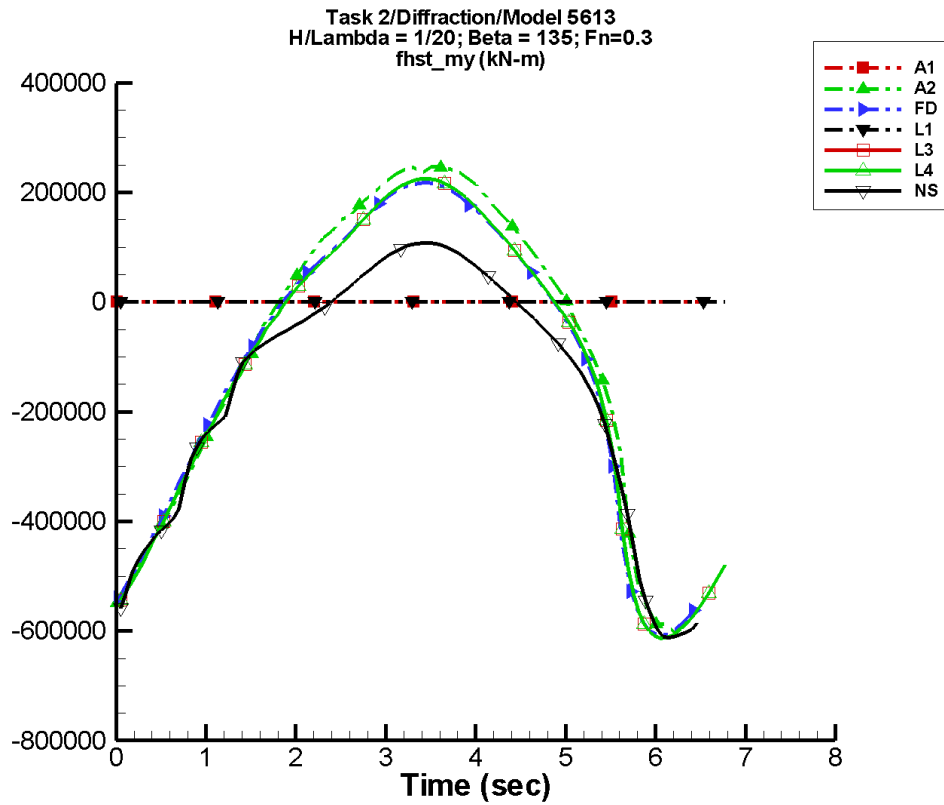
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.79E+03       | 7.37E+04        | -107              | 1.64E+04        | -119              |
| FD   | -1.69E+04       | 5.17E+04        | -103              | 1.86E+04        | -120              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.21E+04       | 5.22E+04        | -108              | 1.81E+04        | -130              |
| L4   | -2.21E+04       | 5.22E+04        | -108              | 1.81E+04        | -130              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.53E+04       | 1.68E+04        | -92               | 3.08E+03        | -83               |

Table G-946. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.09E+05         | 7.13E+04          | -1.07E+05         | 6.84E+04          |
| FD   | -9.14E+04         | 2.26E+04          | -9.09E+04         | 2.20E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.70E+04         | 1.86E+04          | -9.67E+04         | 1.83E+04          |
| L4   | -9.70E+04         | 1.86E+04          | -9.67E+04         | 1.83E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.74E+04         | -5.92E+04         | -9.73E+04         | -5.94E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-474. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

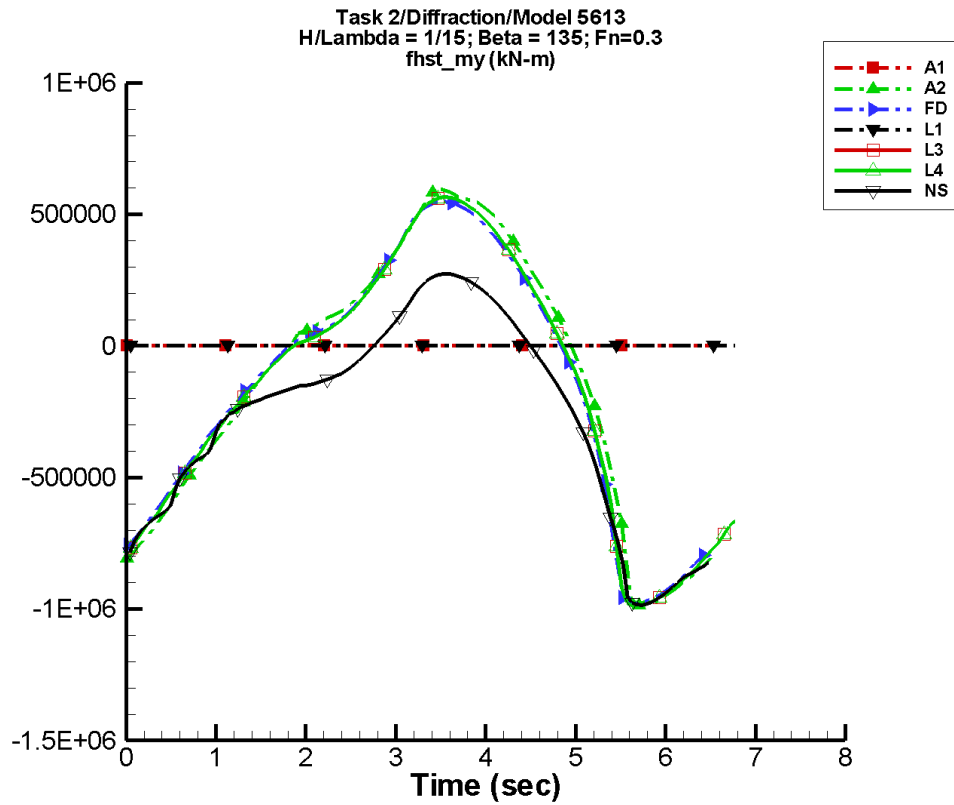
Table G-947. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.24E+04       | 3.78E+05        | -97               | 8.63E+04        | -71               |
| FD   | -1.04E+05       | 3.63E+05        | -89               | 9.34E+04        | -53               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.08E+05       | 3.67E+05        | -95               | 8.96E+04        | -61               |
| L4   | -1.08E+05       | 3.67E+05        | -95               | 8.96E+04        | -61               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.54E+05       | 3.01E+05        | -90               | 9.13E+04        | -65               |

Table G-948. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.03E+05         | 2.47E+05          | -5.71E+05         | 2.40E+05          |
| FD   | -6.08E+05         | 2.18E+05          | -5.84E+05         | 2.09E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -6.13E+05         | 2.25E+05          | -6.07E+05         | 2.22E+05          |
| L4   | -6.13E+05         | 2.25E+05          | -6.07E+05         | 2.22E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.12E+05         | 1.08E+05          | -6.04E+05         | 1.05E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-475. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

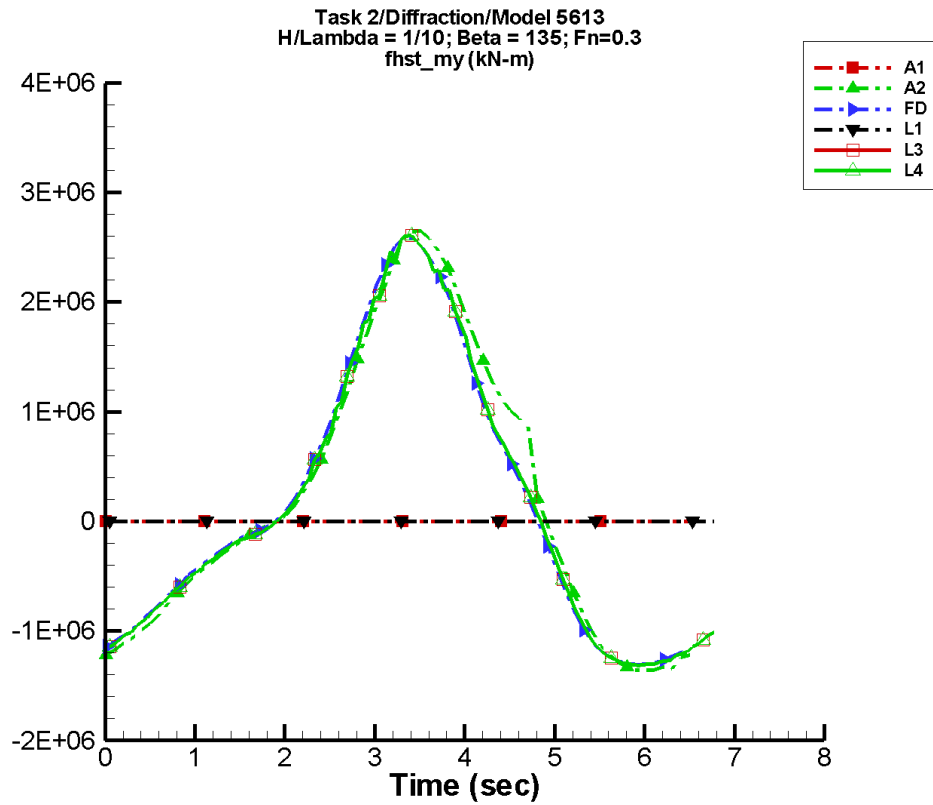
Table G-949. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.21E+05       | 6.68E+05        | -96               | 1.97E+05        | -28               |
| FD   | -1.41E+05       | 6.40E+05        | -87               | 2.07E+05        | -10               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.41E+05       | 6.49E+05        | -92               | 2.09E+05        | -19               |
| L4   | -1.41E+05       | 6.49E+05        | -92               | 2.09E+05        | -19               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.73E+05       | 4.98E+05        | -86               | 1.96E+05        | -16               |

Table G-950. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.85E+05         | 5.96E+05          | -9.31E+05         | 5.59E+05          |
| FD   | -9.81E+05         | 5.49E+05          | -9.33E+05         | 5.22E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.90E+05         | 5.66E+05          | -9.77E+05         | 5.55E+05          |
| L4   | -9.90E+05         | 5.66E+05          | -9.77E+05         | 5.55E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.85E+05         | 2.73E+05          | -9.71E+05         | 2.67E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-476. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

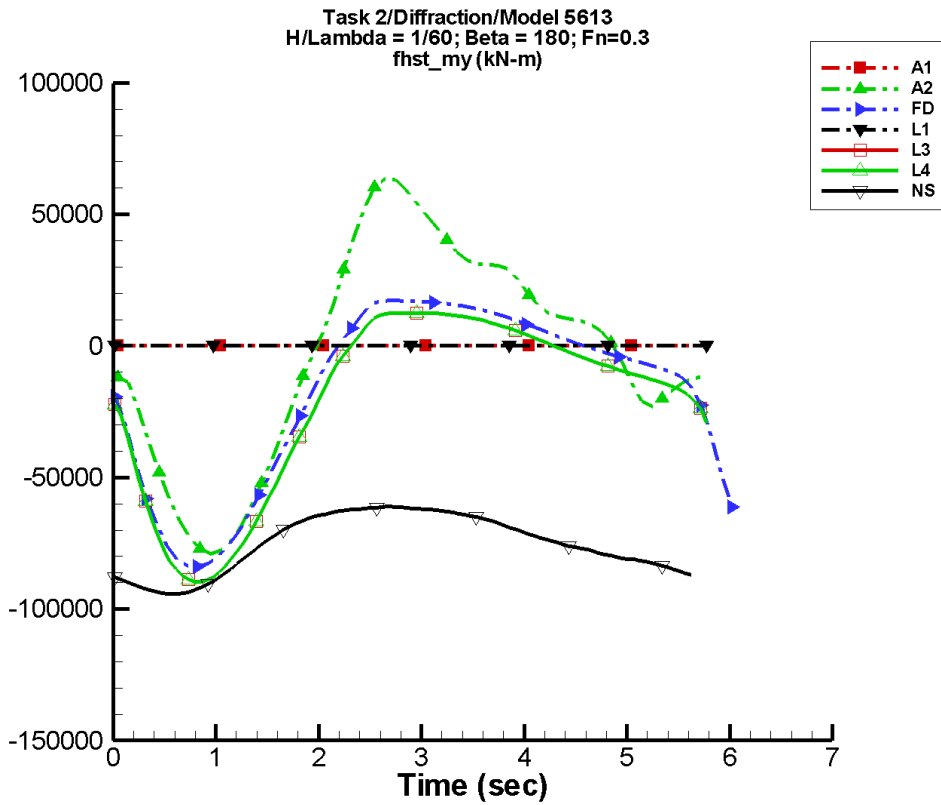
Table G-951. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.24E+05        | 1.72E+06        | -99               | 5.39E+05        | 24                |
| FD   | 1.81E+05        | 1.65E+06        | -89               | 5.28E+05        | 49                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.67E+05        | 1.63E+06        | -94               | 5.40E+05        | 36                |
| L4   | 1.67E+05        | 1.63E+06        | -94               | 5.40E+05        | 36                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-952. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.36E+06         | 2.65E+06          | -1.32E+06         | 2.46E+06          |
| FD   | -1.31E+06         | 2.59E+06          | -1.28E+06         | 2.41E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.31E+06         | 2.61E+06          | -1.30E+06         | 2.50E+06          |
| L4   | -1.31E+06         | 2.61E+06          | -1.30E+06         | 2.50E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-477. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-953. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

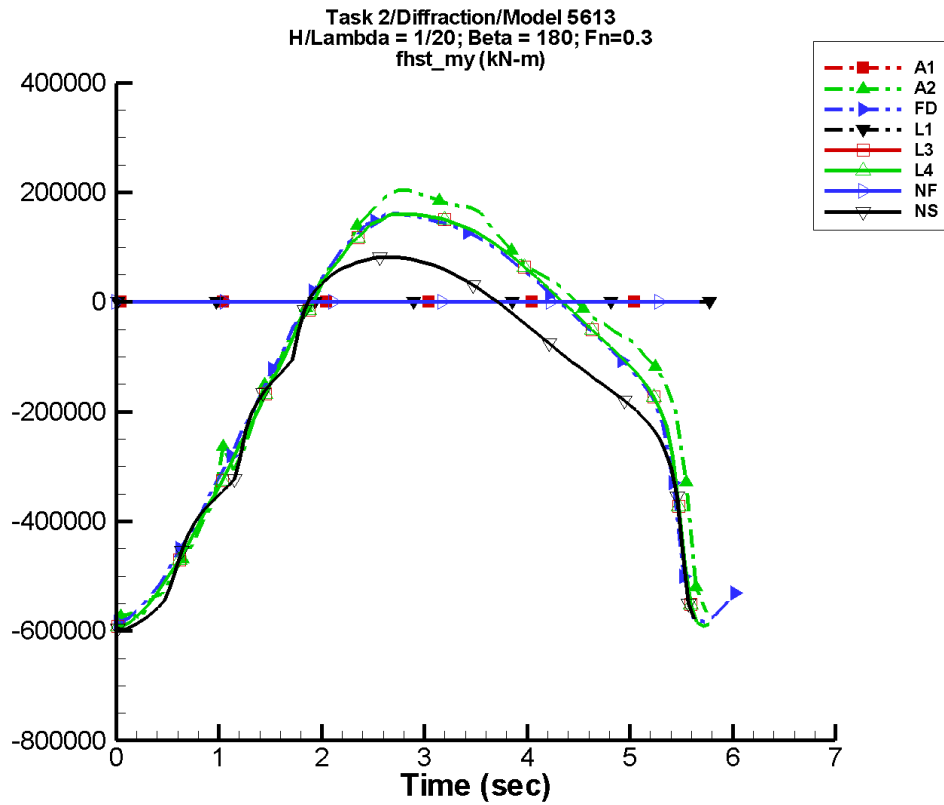
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.50E+03       | 5.12E+04        | -135              | 2.56E+04        | 103               |
| FD   | -1.65E+04       | 4.22E+04        | -177              | 1.98E+04        | 69                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.22E+04       | 4.36E+04        | -155              | 1.87E+04        | 112               |
| L4   | -2.22E+04       | 4.36E+04        | -155              | 1.87E+04        | 112               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.53E+04       | 1.50E+04        | -102              | 4.10E+03        | 173               |

Table G-954. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.90E+04         | 6.37E+04          | -7.20E+04         | 5.53E+04          |
| FD   | -8.40E+04         | 1.73E+04          | -7.92E+04         | 1.69E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.96E+04         | 1.26E+04          | -8.79E+04         | 1.26E+04          |
| L4   | -8.96E+04         | 1.26E+04          | -8.79E+04         | 1.26E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.43E+04         | -6.11E+04         | -9.37E+04         | -6.14E+04         |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-478. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

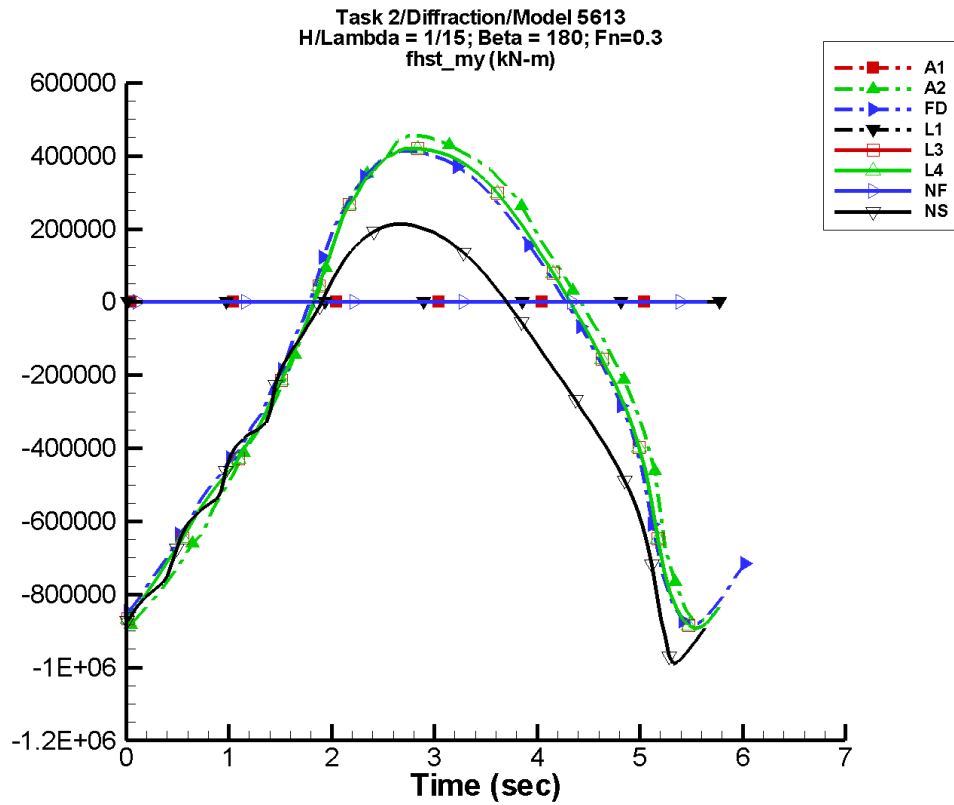
Table G-955. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -8.71E+04       | 3.29E+05        | -122              | 9.41E+04        | -172              |
| FD   | -1.10E+05       | 3.23E+05        | -146              | 9.33E+04        | 144               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.11E+05       | 3.23E+05        | -125              | 8.24E+04        | -175              |
| L4   | -1.11E+05       | 3.23E+05        | -125              | 8.24E+04        | -175              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.60E+05       | 2.87E+05        | -104              | 9.18E+04        | -147              |

Table G-956. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.78E+05         | 2.05E+05          | -5.74E+05         | 1.94E+05          |
| FD   | -5.85E+05         | 1.61E+05          | -5.72E+05         | 1.54E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.91E+05         | 1.61E+05          | -5.89E+05         | 1.59E+05          |
| L4   | -5.91E+05         | 1.61E+05          | -5.89E+05         | 1.59E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.98E+05         | 8.18E+04          | -5.97E+05         | 8.05E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-479. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

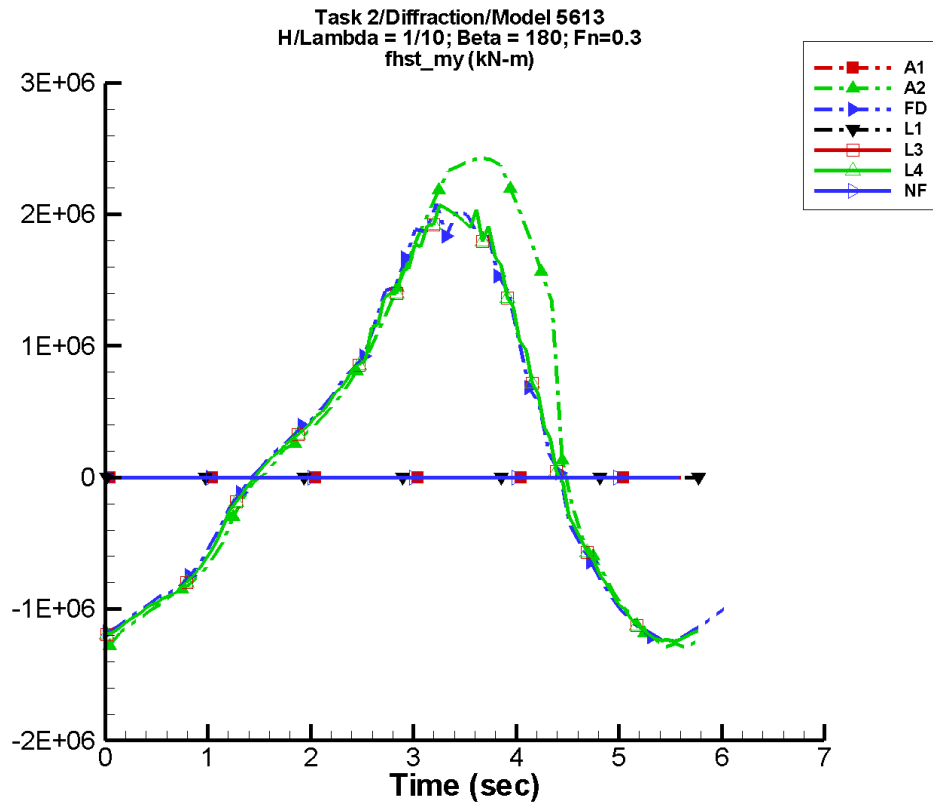
Table G-957. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.25E+05       | 6.24E+05        | -113              | 5.94E+04        | -133              |
| FD   | -1.40E+05       | 5.98E+05        | -135              | 6.02E+04        | -175              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -1.34E+05       | 5.96E+05        | -116              | 5.00E+04        | -141              |
| L4   | -1.34E+05       | 5.96E+05        | -116              | 5.00E+04        | -141              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.71E+05       | 5.15E+05        | -90               | 5.76E+04        | -87               |

Table G-958. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -8.83E+05         | 4.56E+05          | -8.62E+05         | 4.36E+05          |
| FD   | -8.87E+05         | 4.14E+05          | -8.19E+05         | 4.00E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.94E+05         | 4.20E+05          | -8.70E+05         | 4.16E+05          |
| L4   | -8.94E+05         | 4.20E+05          | -8.70E+05         | 4.16E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.91E+05         | 2.14E+05          | -9.58E+05         | 2.11E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-480. Time history of  $M_y^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

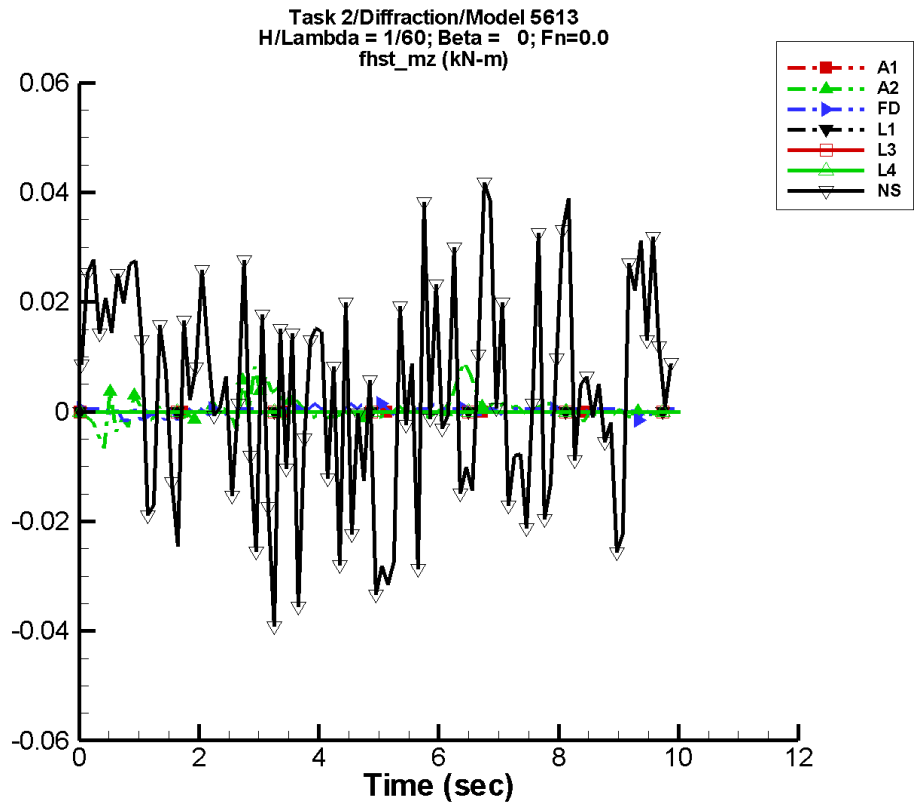
Table G-959. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 3.07E+05        | 1.67E+06        | -122              | 5.45E+05        | -38               |
| FD   | 1.87E+05        | 1.47E+06        | -140              | 4.02E+05        | -75               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.74E+05        | 1.48E+06        | -119              | 4.03E+05        | -35               |
| L4   | 1.74E+05        | 1.48E+06        | -119              | 4.03E+05        | -35               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-960. Minimum and maximum of  $M_y^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.29E+06         | 2.42E+06          | -1.22E+06         | 2.36E+06          |
| FD   | -1.24E+06         | 2.08E+06          | -1.17E+06         | 1.92E+06          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.25E+06         | 2.07E+06          | -1.22E+06         | 1.99E+06          |
| L4   | -1.25E+06         | 2.07E+06          | -1.22E+06         | 1.99E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-481. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-961. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

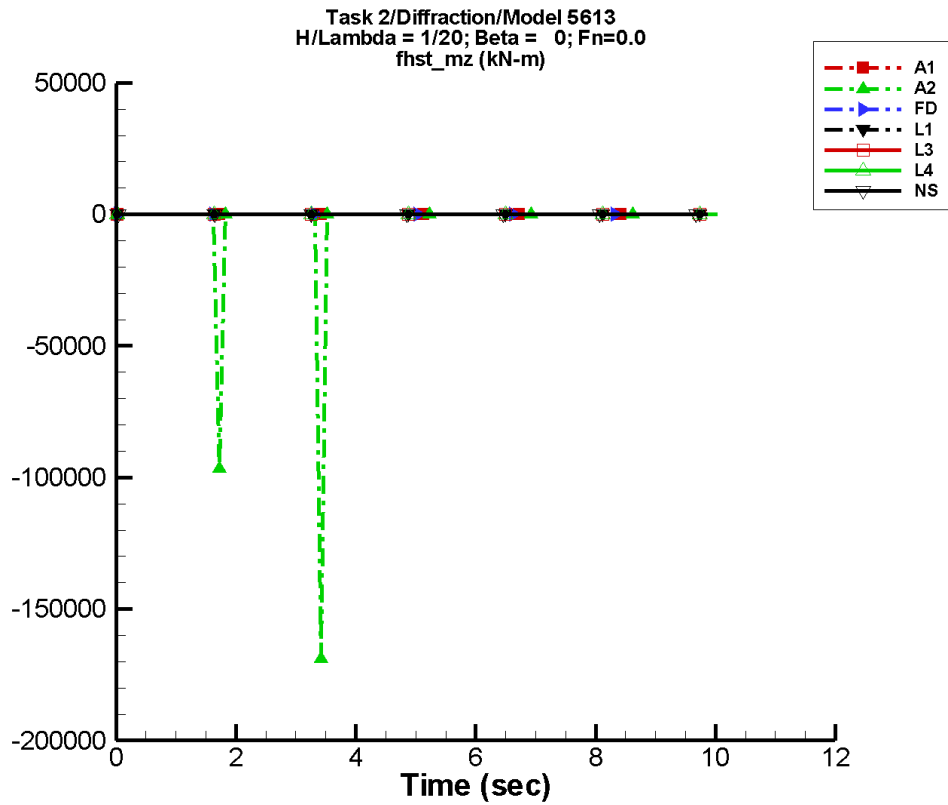
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 3.47E-04        | 8.93E-04        | -117              | 1.13E-03        | -99               |
| FD   | 2.51E-04        | 3.27E-04        | -136              | 2.96E-04        | 163               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.68E-03        | 8.55E-03        | 114               | 2.93E-03        | 50                |

Table G-962. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -6.59E-03         | 8.99E-03          | -1.87E-03         | 3.85E-03          |
| FD   | -1.50E-03         | 1.50E-03          | -7.23E-04         | 8.13E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.56E-02         | 4.39E-02          | -1.59E-02         | 2.08E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-482. Time history of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

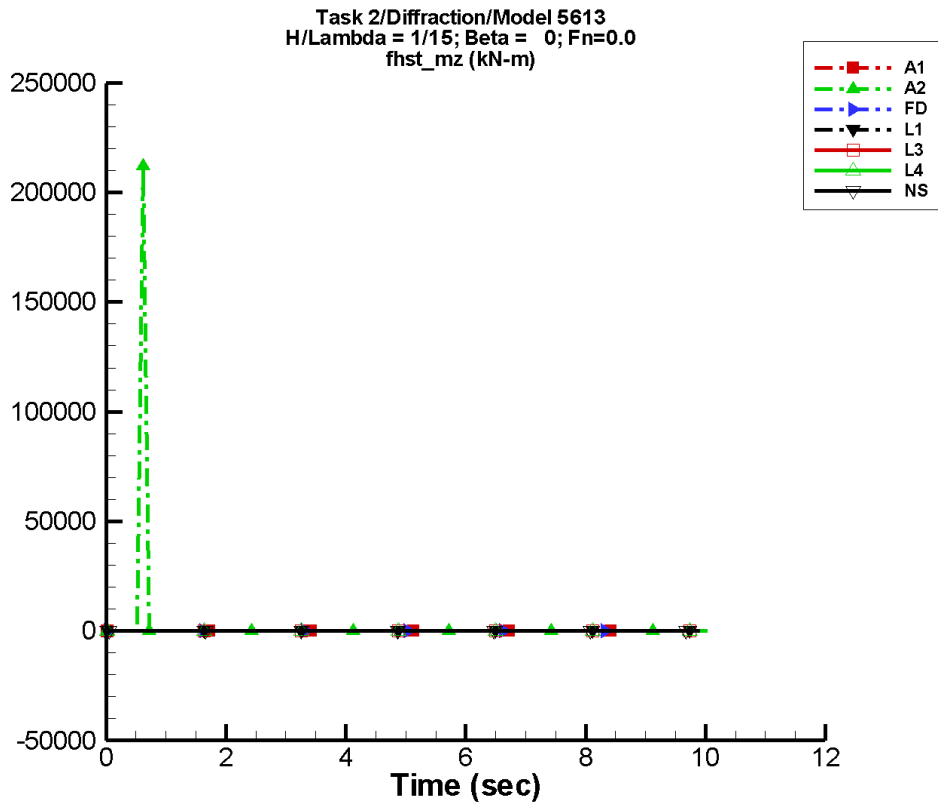
Table G-963. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.24E+03       | 3.42E+03        | 123               | 5.00E+03        | 8                 |
| FD   | 1.73E-04        | 5.61E-04        | 26                | 3.70E-04        | 143               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.03E-03       | 6.78E-03        | 41                | 7.29E-03        | 0                 |

Table G-964. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.69E+05         | 2.10E+05          | -2.26E+04         | 2.80E+04          |
| FD   | -2.50E-03         | 2.50E-03          | -1.32E-03         | 1.47E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.20E-02         | 8.19E-02          | -2.50E-02         | 3.99E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-483. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

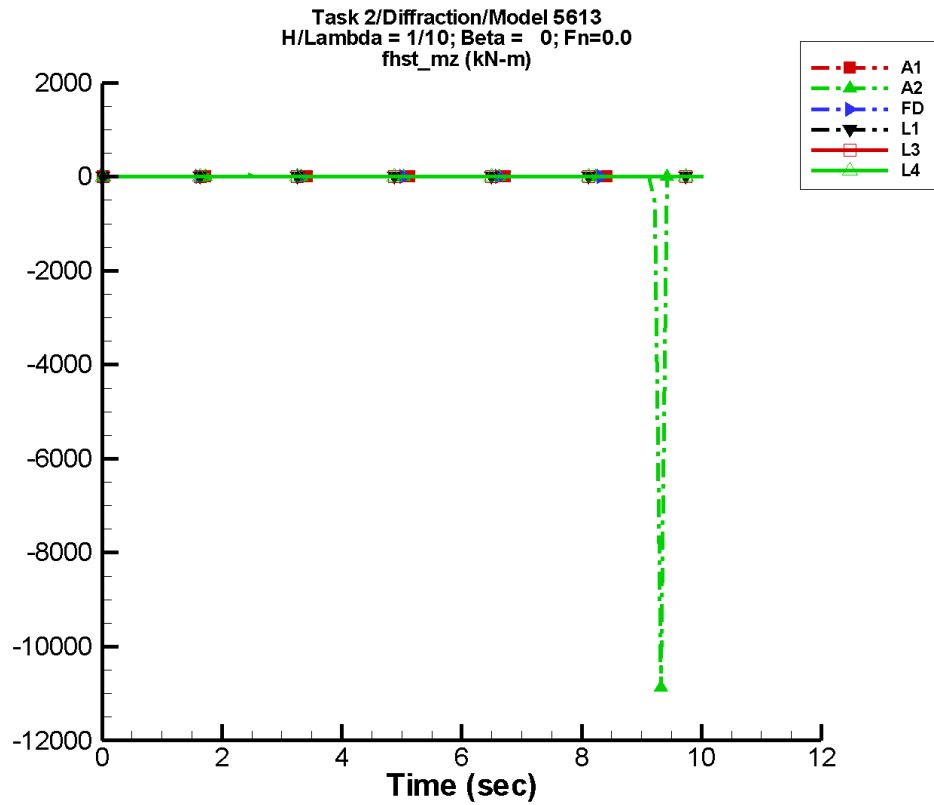
Table G-965. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.12E+03        | 2.39E+03        | 70                | 2.77E+03        | 45                |
| FD   | -3.42E-04       | 9.31E-04        | 35                | 4.39E-04        | 175               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.05E-02       | 4.33E-03        | -56               | 1.07E-02        | -171              |

Table G-966. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -0.105            | 2.12E+05          | -2.42E+03         | 2.83E+04          |
| FD   | -3.50E-03         | 2.50E-03          | -2.19E-03         | 8.23E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.121            | 0.105             | -5.18E-02         | 1.81E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-484. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

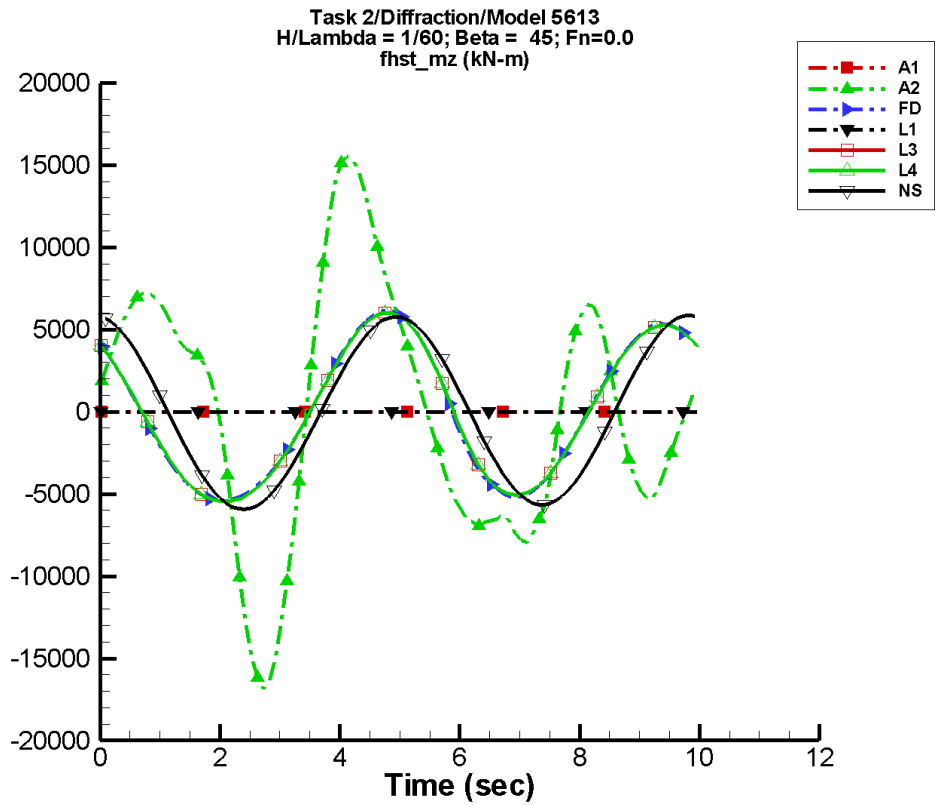
Table G-967. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -71.9           | 163.            | -53               | 234.            | -27               |
| FD   | 3.60E-04        | 1.38E-03        | 138               | 4.42E-04        | -138              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-968. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.09E+04         | 5.17E+03          | -1.50E+03         | 638.              |
| FD   | -3.50E-03         | 3.50E-03          | -1.43E-03         | 2.70E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-485. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-969. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

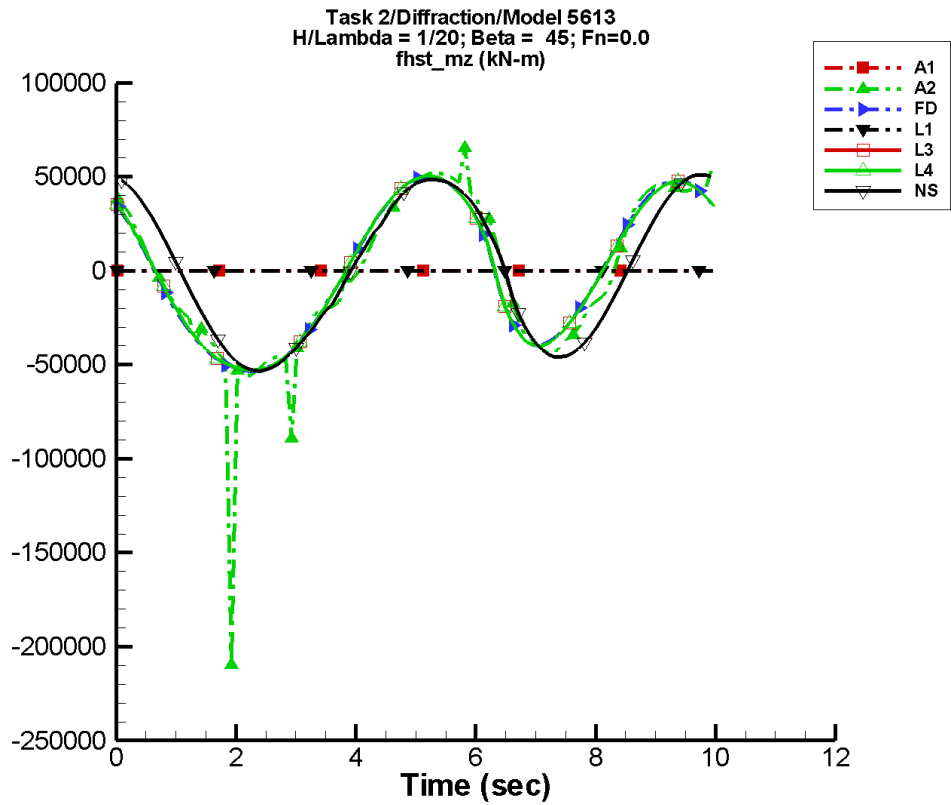
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 479.            | 1.85E+03        | 4                 | 5.28E+03        | 90                |
| FD   | -36.9           | 712.            | -160              | 5.46E+03        | 103               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -35.1           | 759.            | -157              | 5.39E+03        | 110               |
| L4   | -35.1           | 759.            | -157              | 5.39E+03        | 110               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.47           | 237.            | -176              | 5.79E+03        | 95                |

Table G-970. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.69E+04         | 1.55E+04          | -1.44E+04         | 1.38E+04          |
| FD   | -5.40E+03         | 6.16E+03          | -5.26E+03         | 5.86E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.45E+03         | 6.02E+03          | -5.41E+03         | 5.93E+03          |
| L4   | -5.45E+03         | 6.02E+03          | -5.41E+03         | 5.93E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.95E+03         | 5.85E+03          | -5.97E+03         | 5.61E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-486. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

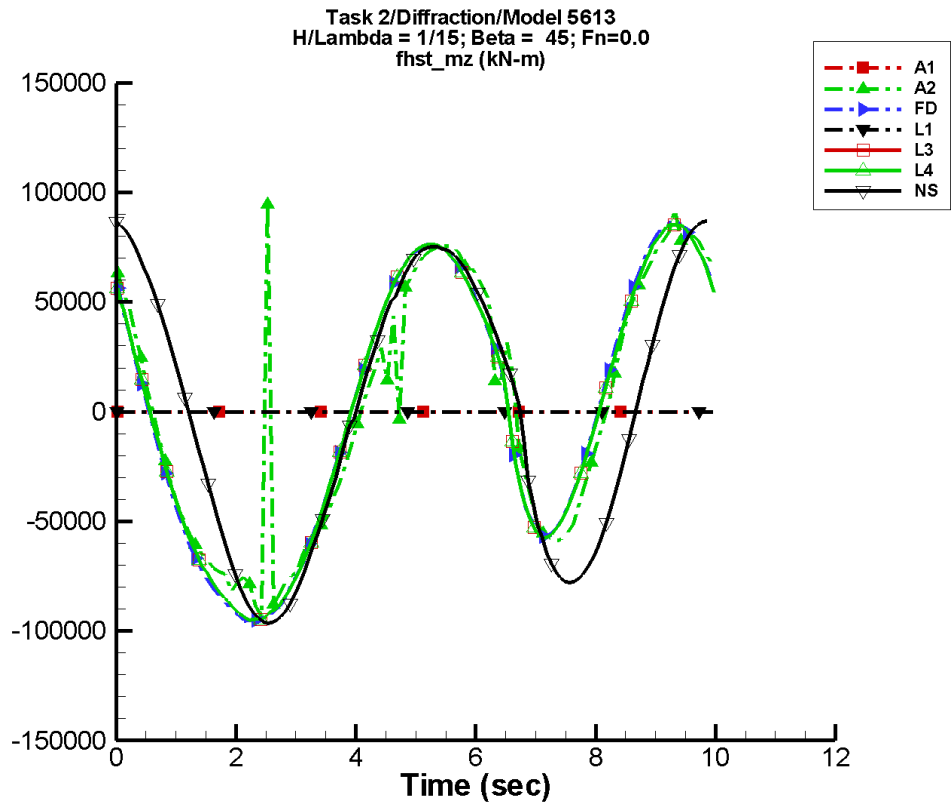
Table G-971. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 289.            | 1.80E+04        | -172              | 4.31E+04        | 88                |
| FD   | -899.           | 1.80E+04        | -171              | 4.44E+04        | 89                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -282.           | 1.86E+04        | -168              | 4.34E+04        | 96                |
| L4   | -282.           | 1.86E+04        | -168              | 4.34E+04        | 96                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 281.            | 1.05E+04        | -174              | 4.82E+04        | 88                |

Table G-972. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.10E+05         | 1.41E+05          | -7.02E+04         | 5.10E+04          |
| FD   | -5.35E+04         | 5.03E+04          | -5.23E+04         | 4.86E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.30E+04         | 5.05E+04          | -5.25E+04         | 4.98E+04          |
| L4   | -5.30E+04         | 5.05E+04          | -5.25E+04         | 4.98E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.33E+04         | 5.11E+04          | -5.36E+04         | 4.89E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-487. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

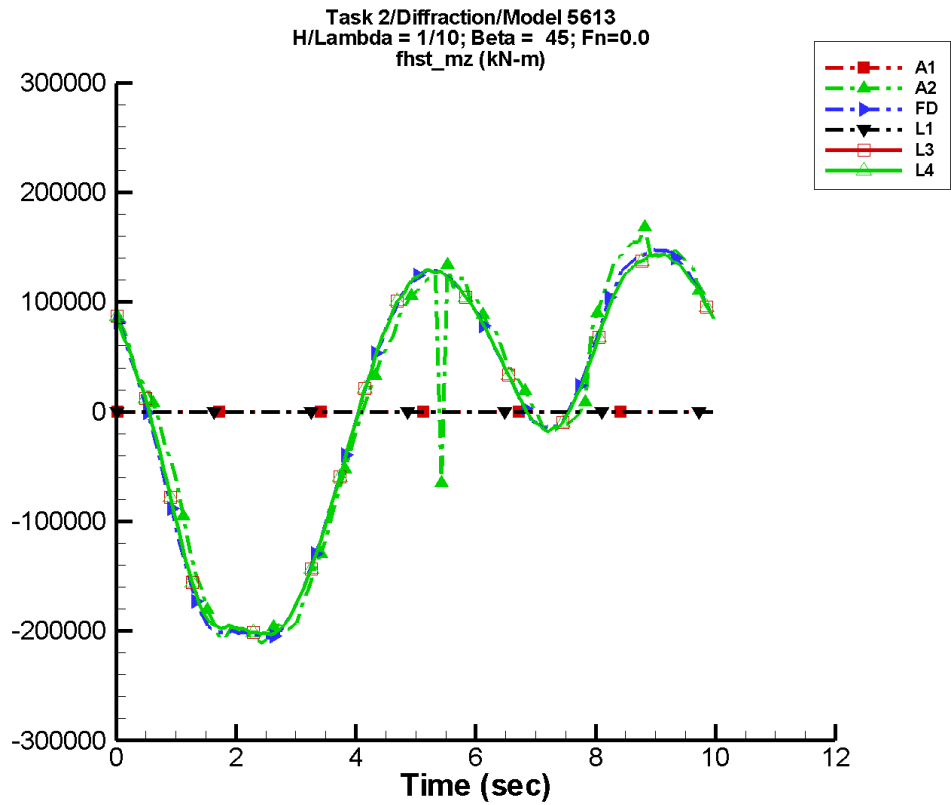
Table G-973. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -149.           | 3.70E+04        | -179              | 6.02E+04        | 92                |
| FD   | -1.75E+03       | 4.07E+04        | -176              | 6.90E+04        | 88                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -145.           | 4.25E+04        | -173              | 6.62E+04        | 95                |
| L4   | -145.           | 4.25E+04        | -173              | 6.62E+04        | 95                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 151.            | 1.89E+04        | 180               | 8.13E+04        | 79                |

Table G-974. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.36E+04         | 9.45E+04          | -7.44E+04         | 8.03E+04          |
| FD   | -9.58E+04         | 8.67E+04          | -9.37E+04         | 8.26E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.51E+04         | 8.53E+04          | -9.42E+04         | 8.40E+04          |
| L4   | -9.51E+04         | 8.53E+04          | -9.42E+04         | 8.40E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.64E+04         | 8.68E+04          | -9.61E+04         | 8.55E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-488. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

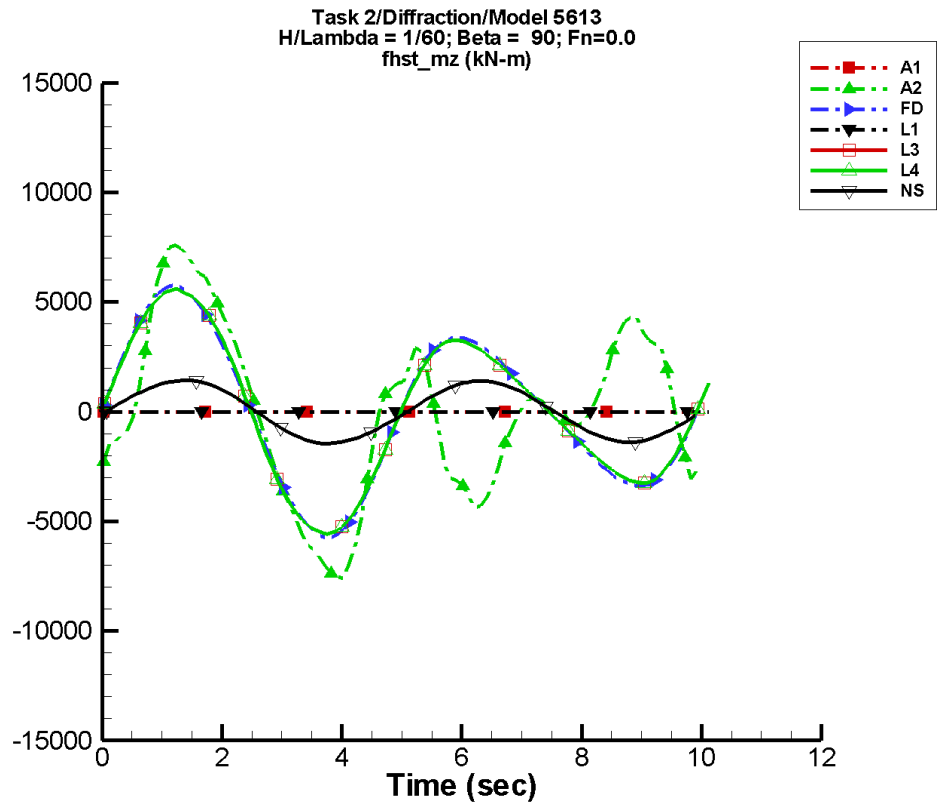
Table G-975. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 806.            | 1.27E+05        | 175               | 1.04E+05        | 99                |
| FD   | -1.75E+03       | 1.23E+05        | 178               | 1.10E+05        | 93                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -58.6           | 1.24E+05        | -178              | 1.07E+05        | 100               |
| L4   | -58.6           | 1.24E+05        | -178              | 1.07E+05        | 100               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-976. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.11E+05         | 1.68E+05          | -2.04E+05         | 1.51E+05          |
| FD   | -2.06E+05         | 1.48E+05          | -2.04E+05         | 1.44E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -2.03E+05         | 1.44E+05          | -2.02E+05         | 1.42E+05          |
| L4   | -2.03E+05         | 1.44E+05          | -2.02E+05         | 1.42E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-489. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-977. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

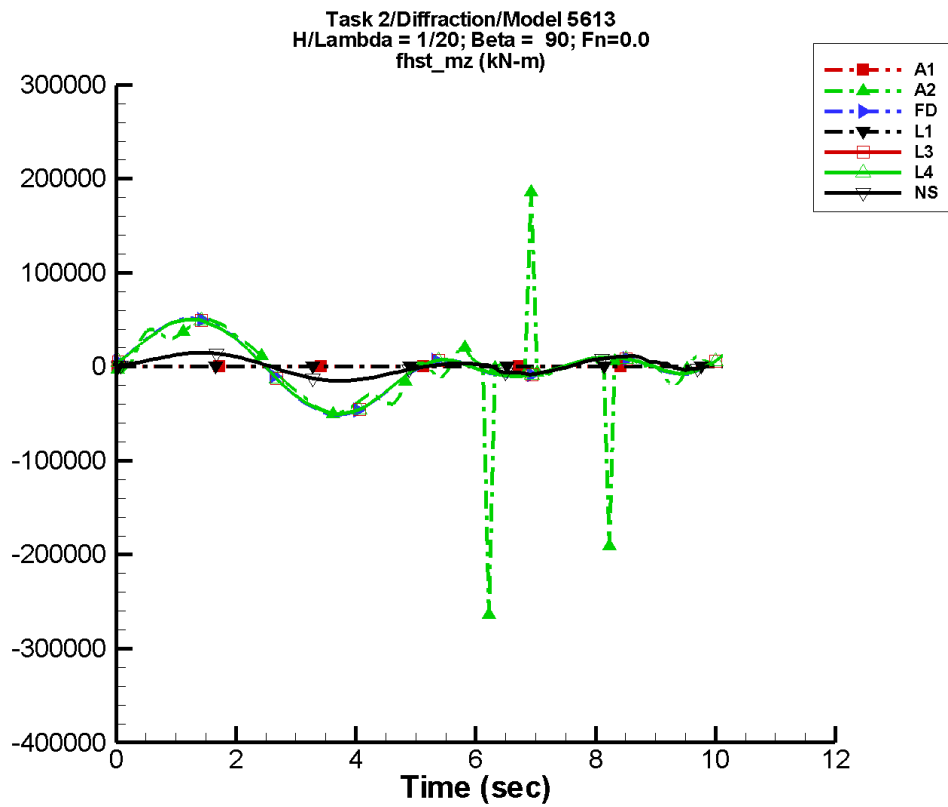
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 4.23            | 2.77E+03        | 75                | 2.36E+03        | -29               |
| FD   | -26.3           | 931.            | 77                | 4.53E+03        | -14               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -3.36E-02       | 982.            | 84                | 4.45E+03        | -9                |
| L4   | -3.36E-02       | 982.            | 84                | 4.45E+03        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.20            | 33.1            | 89                | 1.41E+03        | -8                |

Table G-978. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.59E+03         | 7.65E+03          | -6.94E+03         | 6.94E+03          |
| FD   | -5.77E+03         | 5.77E+03          | -5.47E+03         | 5.48E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.58E+03         | 5.58E+03          | -5.48E+03         | 5.48E+03          |
| L4   | -5.58E+03         | 5.58E+03          | -5.48E+03         | 5.48E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.45E+03         | 1.42E+03          | -1.39E+03         | 1.37E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-490. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

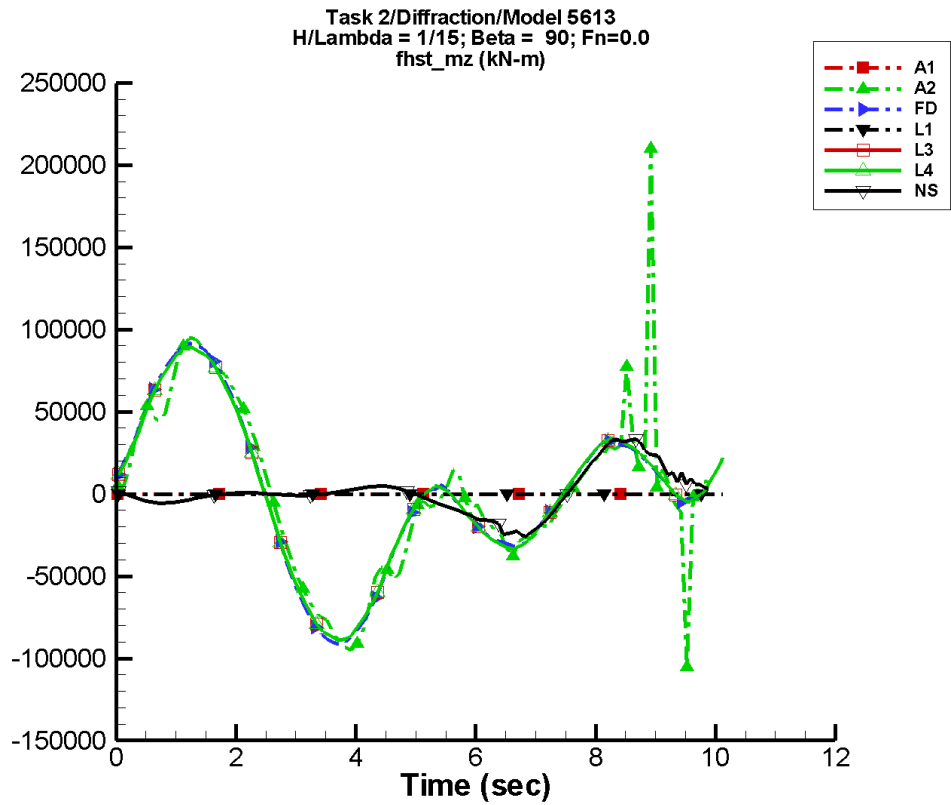
Table G-979. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.34E+03       | 2.10E+04        | 70                | 2.51E+04        | -21               |
| FD   | -631.           | 2.18E+04        | 78                | 2.50E+04        | -11               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -78.8           | 2.19E+04        | 84                | 2.50E+04        | -11               |
| L4   | -78.8           | 2.19E+04        | 84                | 2.50E+04        | -11               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 831.            | 7.13E+03        | 90                | 5.68E+03        | -16               |

Table G-980. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.64E+05         | 1.86E+05          | -4.51E+04         | 4.47E+04          |
| FD   | -5.14E+04         | 5.14E+04          | -4.89E+04         | 4.90E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.05E+04         | 5.05E+04          | -4.95E+04         | 4.95E+04          |
| L4   | -5.05E+04         | 5.05E+04          | -4.95E+04         | 4.95E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.52E+04         | 1.48E+04          | -1.45E+04         | 1.42E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-491. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

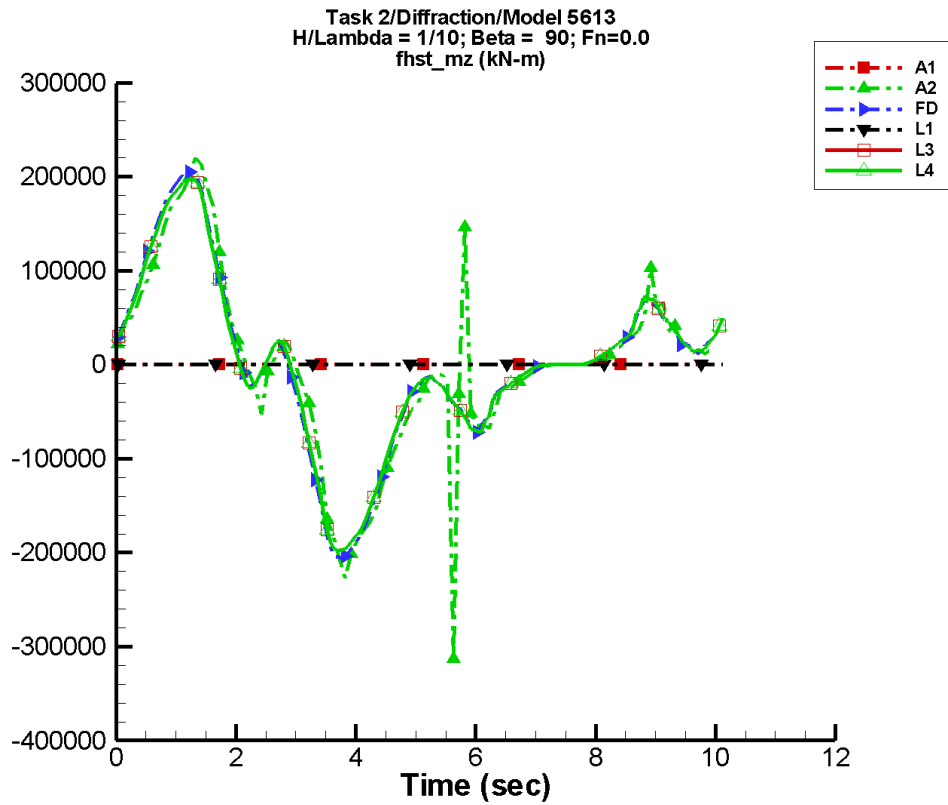
Table G-981. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.80E+03        | 4.45E+04        | 81                | 3.37E+04        | -25               |
| FD   | -1.28E+03       | 4.58E+04        | 78                | 3.70E+04        | -9                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -191.           | 4.58E+04        | 84                | 3.64E+04        | -12               |
| L4   | -191.           | 4.58E+04        | 84                | 3.64E+04        | -12               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.06E+03        | 7.65E+03        | 93                | 1.30E+04        | -180              |

Table G-982. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.05E+05         | 2.10E+05          | -8.45E+04         | 8.49E+04          |
| FD   | -9.14E+04         | 9.14E+04          | -8.72E+04         | 8.73E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.90E+04         | 8.91E+04          | -8.74E+04         | 8.75E+04          |
| L4   | -8.90E+04         | 8.91E+04          | -8.74E+04         | 8.75E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.58E+04         | 3.35E+04          | -2.35E+04         | 3.19E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-492. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

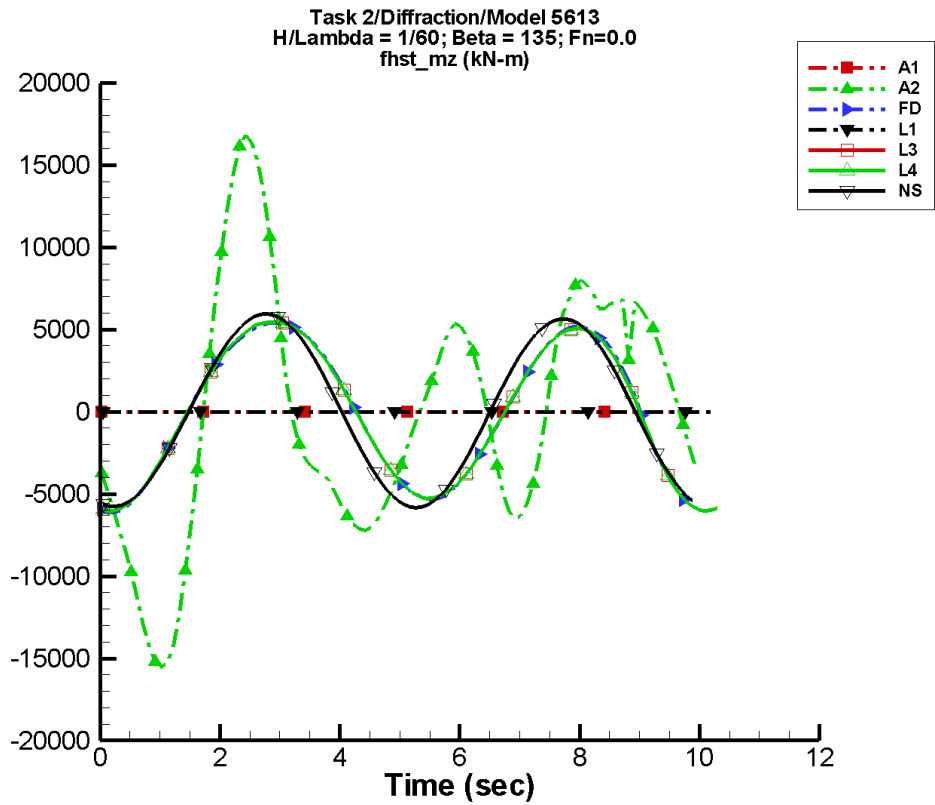
Table G-983. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.12E+03       | 9.60E+04        | 81                | 6.69E+04        | -20               |
| FD   | -1.21E+03       | 9.69E+04        | 80                | 6.74E+04        | -12               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.08E+03        | 9.37E+04        | 84                | 6.12E+04        | -10               |
| L4   | 1.08E+03        | 9.37E+04        | 84                | 6.12E+04        | -10               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-984. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.13E+05         | 2.41E+05          | -1.89E+05         | 1.88E+05          |
| FD   | -2.06E+05         | 2.05E+05          | -1.89E+05         | 1.89E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.98E+05         | 1.98E+05          | -1.92E+05         | 1.92E+05          |
| L4   | -1.98E+05         | 1.98E+05          | -1.92E+05         | 1.92E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-493. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-985. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

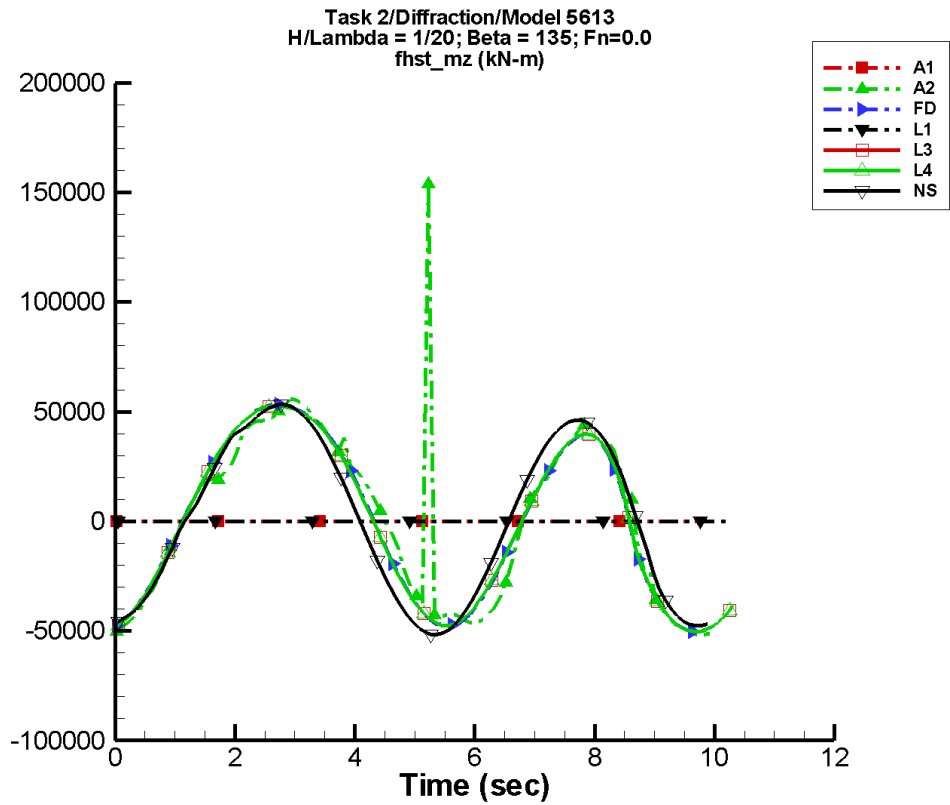
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -348.           | 1.54E+03        | -151              | 6.65E+03        | -134              |
| FD   | -12.0           | 805.            | -27               | 5.36E+03        | -135              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 27.6            | 764.            | -22               | 5.38E+03        | -128              |
| L4   | 27.6            | 764.            | -22               | 5.38E+03        | -128              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 5.22            | 239.            | 0                 | 5.79E+03        | -110              |

Table G-986. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.55E+04         | 1.68E+04          | -1.39E+04         | 1.44E+04          |
| FD   | -6.15E+03         | 5.40E+03          | -6.10E+03         | 5.26E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -6.02E+03         | 5.45E+03          | -5.98E+03         | 5.41E+03          |
| L4   | -6.02E+03         | 5.45E+03          | -5.98E+03         | 5.41E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.86E+03         | 5.94E+03          | -5.76E+03         | 5.71E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-494. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

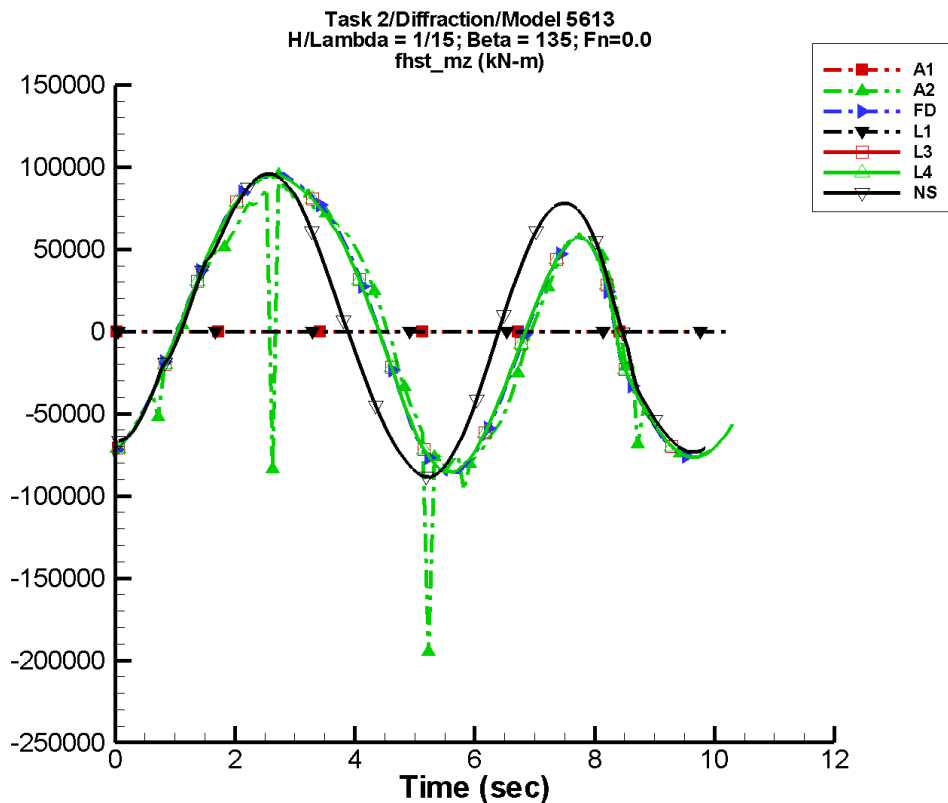
Table G-987. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.60E+03        | 1.94E+04        | -31               | 3.96E+04        | -121              |
| FD   | 470.            | 1.86E+04        | -16               | 4.34E+04        | -124              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 185.            | 1.81E+04        | -15               | 4.46E+04        | -115              |
| L4   | 185.            | 1.81E+04        | -15               | 4.46E+04        | -115              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 776.            | 1.02E+04        | 6                 | 4.79E+04        | -103              |

Table G-988. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.18E+04         | 1.54E+05          | -5.00E+04         | 5.19E+04          |
| FD   | -5.01E+04         | 5.34E+04          | -4.85E+04         | 5.22E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.04E+04         | 5.30E+04          | -4.98E+04         | 5.25E+04          |
| L4   | -5.04E+04         | 5.30E+04          | -4.98E+04         | 5.25E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.16E+04         | 5.32E+04          | -4.95E+04         | 5.13E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-495. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

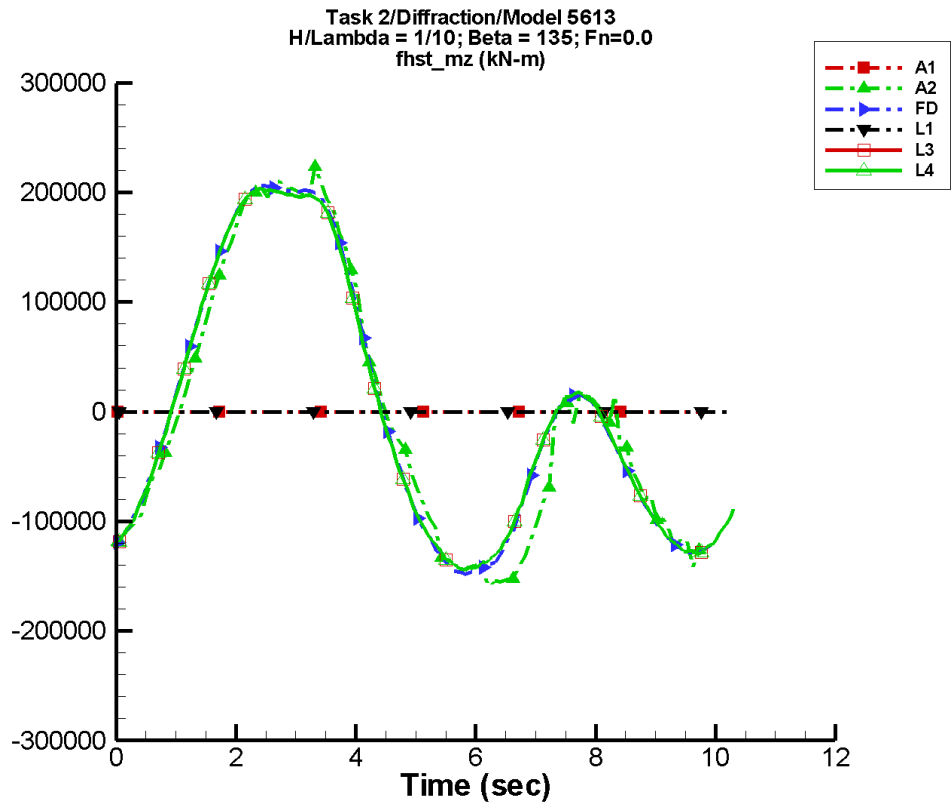
Table G-989. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.32E+03       | 3.82E+04        | -10               | 6.41E+04        | -119              |
| FD   | 1.20E+03        | 4.11E+04        | -12               | 6.94E+04        | -123              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 178.            | 4.09E+04        | -12               | 7.02E+04        | -113              |
| L4   | 178.            | 4.09E+04        | -12               | 7.02E+04        | -113              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 654.            | 1.78E+04        | 12                | 8.01E+04        | -91               |

Table G-990. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.95E+05         | 9.52E+04          | -8.94E+04         | 7.62E+04          |
| FD   | -8.69E+04         | 9.57E+04          | -8.29E+04         | 9.36E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.53E+04         | 9.51E+04          | -8.40E+04         | 9.42E+04          |
| L4   | -8.53E+04         | 9.51E+04          | -8.40E+04         | 9.42E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.86E+04         | 9.59E+04          | -8.62E+04         | 9.40E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-496. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

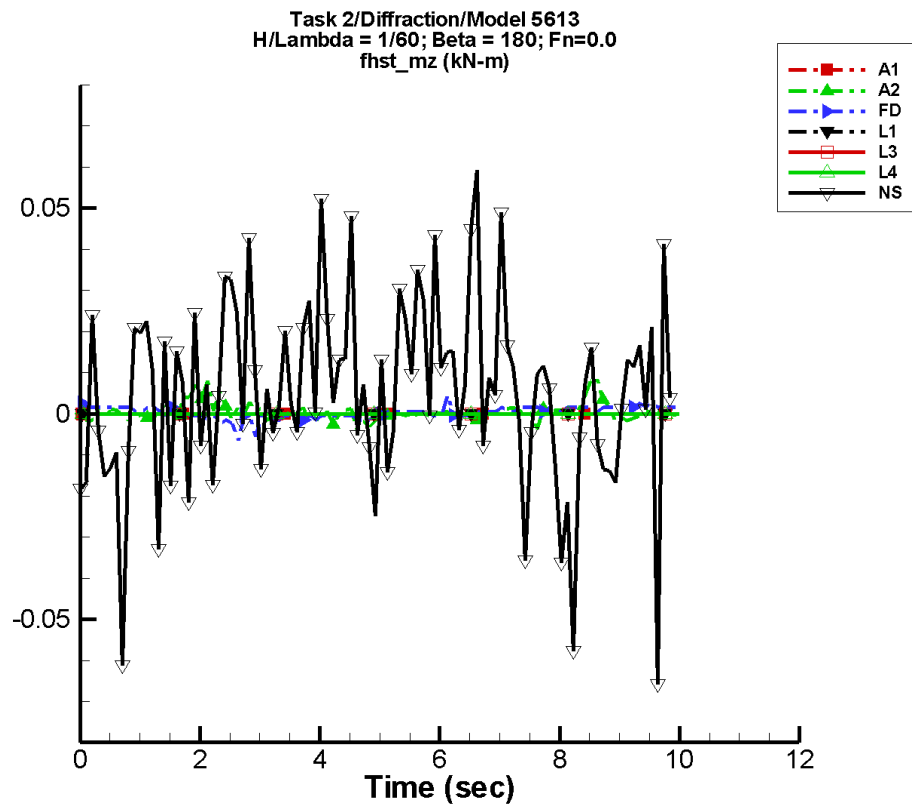
Table G-991. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.47E+03       | 1.31E+05        | -11               | 1.08E+05        | -128              |
| FD   | 1.07E+03        | 1.25E+05        | -11               | 1.10E+05        | -127              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 369.            | 1.23E+05        | -9                | 1.10E+05        | -118              |
| L4   | 369.            | 1.23E+05        | -9                | 1.10E+05        | -118              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-992. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.60E+05         | 2.23E+05          | -1.51E+05         | 2.05E+05          |
| FD   | -1.48E+05         | 2.06E+05          | -1.45E+05         | 2.04E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.44E+05         | 2.04E+05          | -1.42E+05         | 2.02E+05          |
| L4   | -1.44E+05         | 2.04E+05          | -1.42E+05         | 2.02E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-497. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-993. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

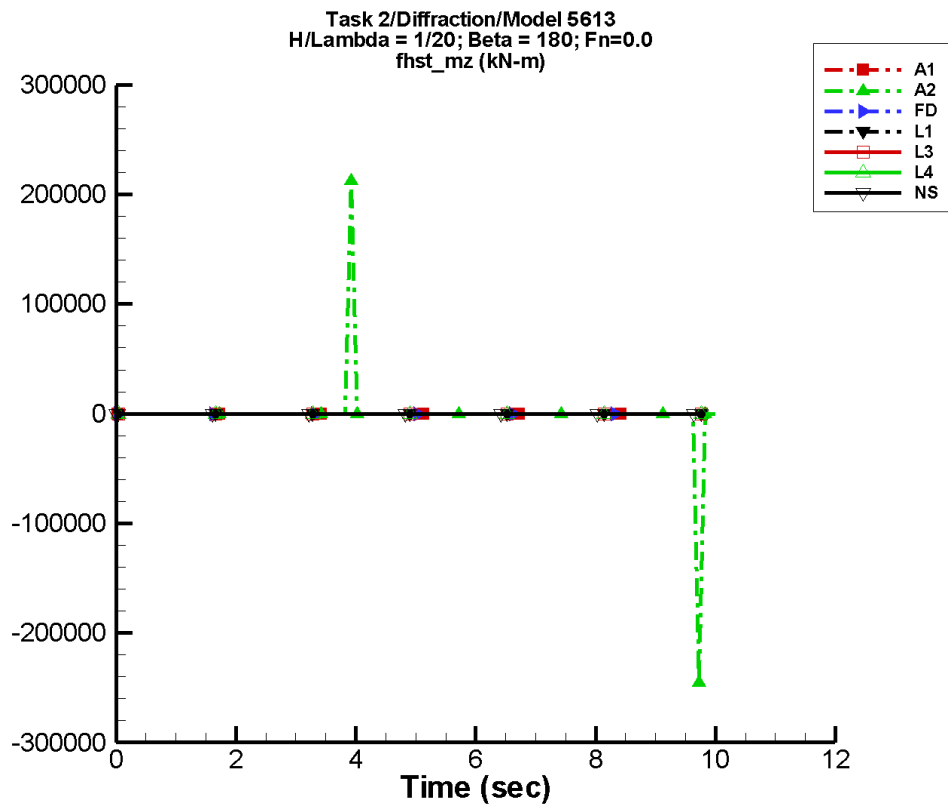
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 4.47E-04        | 7.45E-04        | 55                | 1.44E-03        | -101              |
| FD   | 3.59E-04        | 1.31E-03        | 125               | 5.84E-04        | 59                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 4.41E-03        | 1.11E-02        | -86               | 2.68E-03        | 3                 |

Table G-994. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.63E-03         | 8.72E-03          | -1.35E-03         | 5.69E-03          |
| FD   | -6.50E-03         | 4.50E-03          | -2.36E-03         | 2.09E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.58E-02         | 5.91E-02          | -1.45E-02         | 2.05E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-498. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

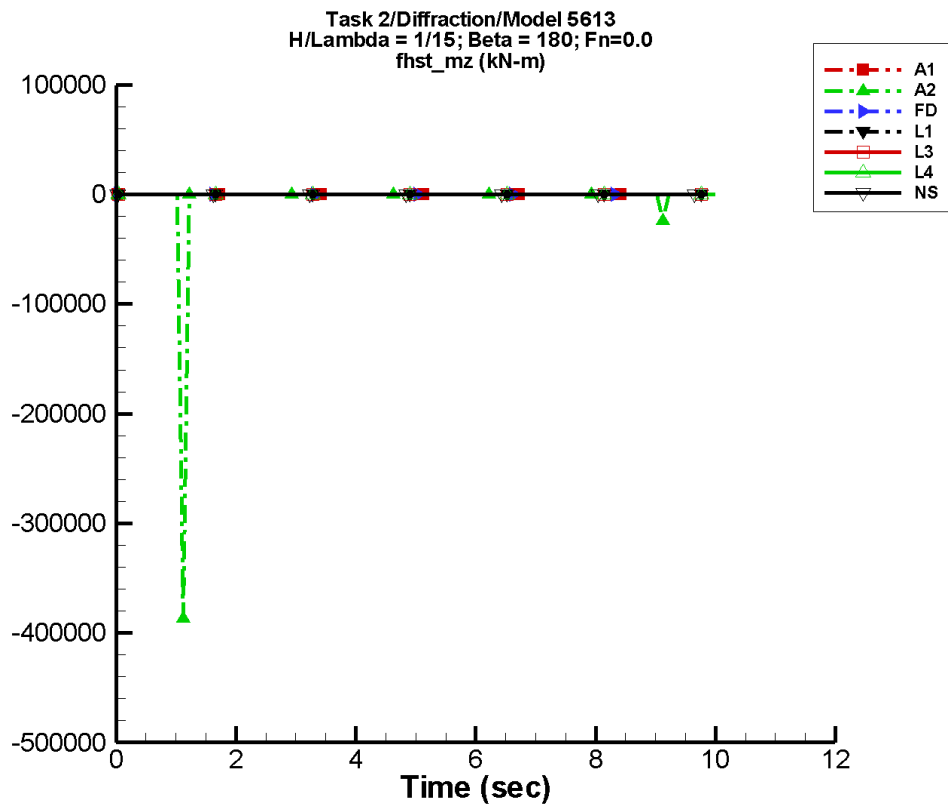
Table G-995. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.62E+03        | 8.48E+03        | -49               | 4.49E+03        | -102              |
| FD   | 8.52E-03        | 2.12E-02        | 0                 | 1.22E-02        | -68               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.42E-04       | 1.17E-02        | -31               | 8.83E-03        | 86                |

Table G-996. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.45E+05         | 2.12E+05          | -3.32E+04         | 2.83E+04          |
| FD   | -3.45E-02         | 0.113             | -2.38E-02         | 4.85E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.75E-02         | 0.106             | -2.37E-02         | 2.77E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-499. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

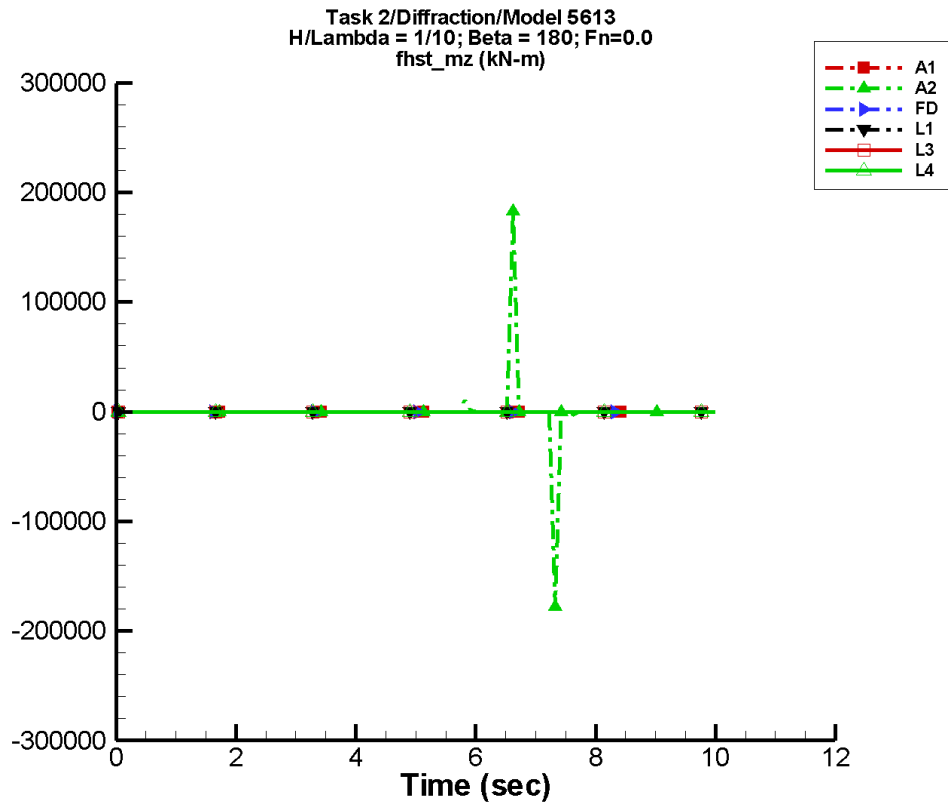
Table G-997. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.15E+03       | 4.26E+03        | -130              | 4.41E+03        | -178              |
| FD   | -1.16E-03       | 6.03E-03        | 138               | 9.61E-03        | 69                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.03E-02       | 5.07E-03        | -42               | 1.15E-02        | 21                |

Table G-998. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.87E+05         | 6.22E-02          | -5.16E+04         | 4.41E+03          |
| FD   | -2.90E-02         | 4.35E-02          | -2.76E-02         | 2.60E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.09E-02         | 8.45E-02          | -3.49E-02         | 2.62E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-500. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

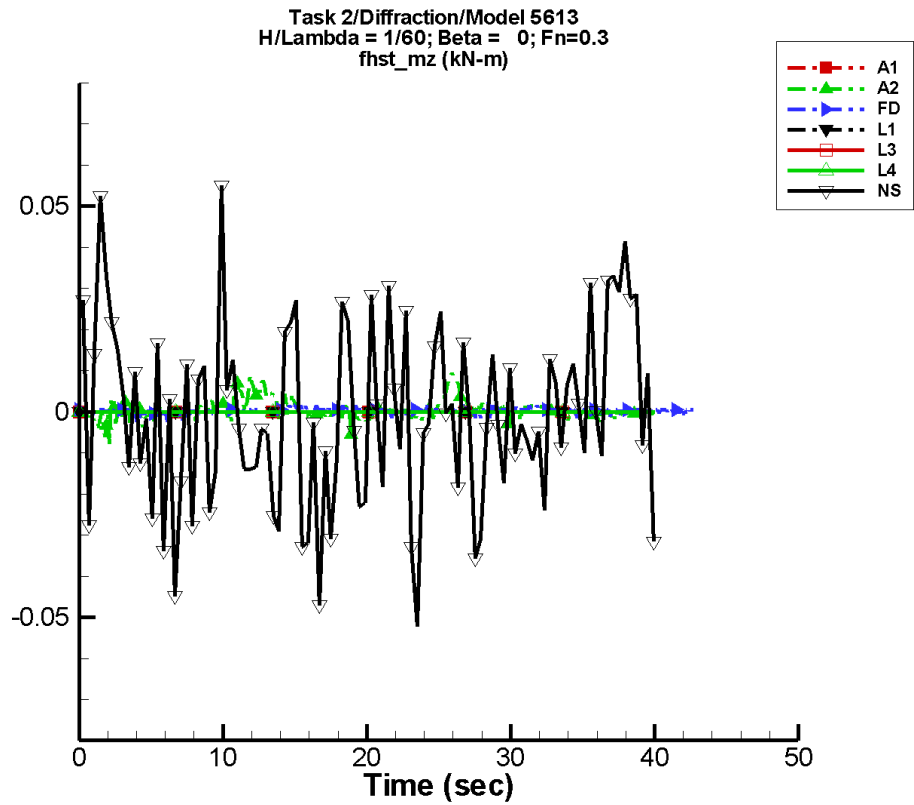
Table G-999. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 948.            | 846.            | -10               | 5.48E+03        | 31                |
| FD   | 1.39E-03        | 4.62E-03        | 163               | 4.36E-03        | 91                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1000. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.78E+05         | 1.86E+05          | -2.46E+04         | 2.48E+04          |
| FD   | -0.118            | 4.55E-02          | -1.57E-02         | 1.76E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-501. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1001. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

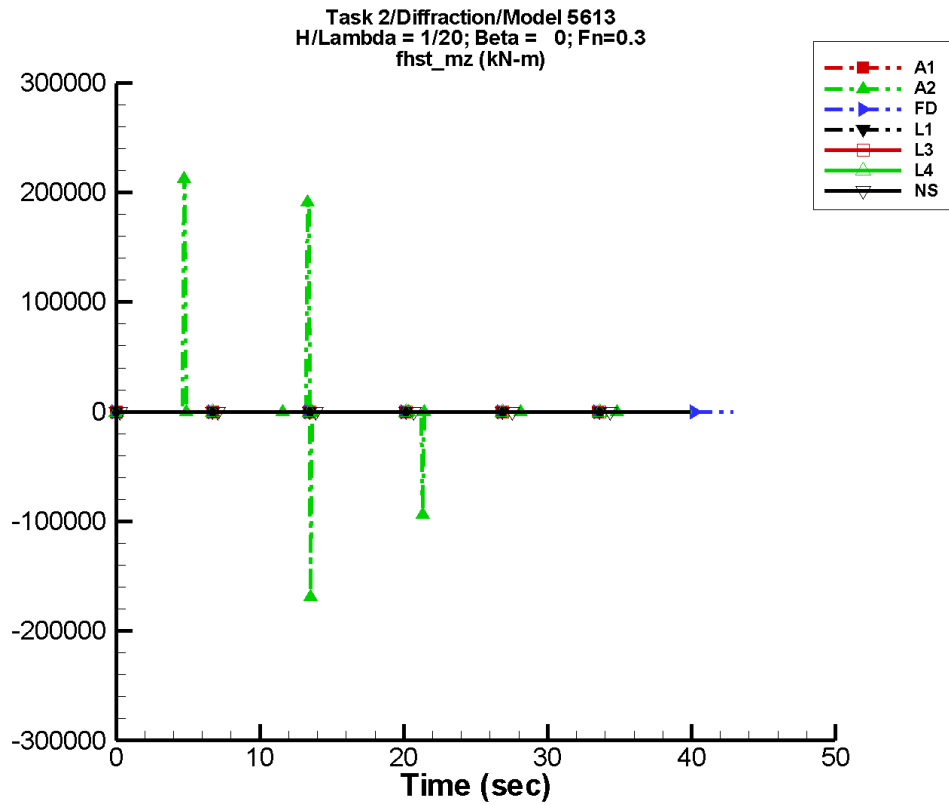
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 3.78E-04        | 7.71E-04        | -94               | 1.15E-03        | -98               |
| FD   | 1.97E-04        | 2.46E-04        | -121              | 2.98E-04        | 170               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.03E-04       | 7.09E-03        | 95                | 3.92E-03        | 110               |

Table G-1002. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.97E-03         | 9.48E-03          | -3.00E-03         | 7.91E-03          |
| FD   | -2.50E-03         | 1.50E-03          | -9.18E-04         | 9.65E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.22E-02         | 6.26E-02          | -1.46E-02         | 2.27E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-502. Time history of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

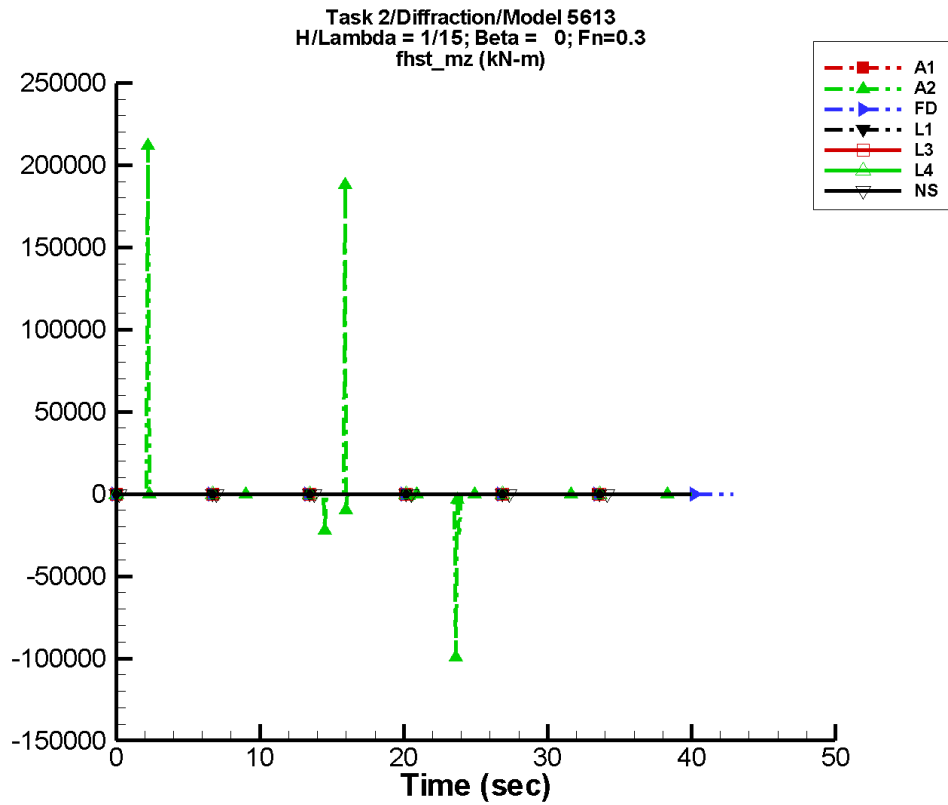
Table G-1003. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.24E+03        | 2.82E+03        | 35                | 1.61E+03        | -18               |
| FD   | 7.17E-05        | 5.11E-04        | 30                | 4.62E-04        | 170               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.36E-03        | 1.27E-02        | 70                | 8.21E-03        | 78                |

Table G-1004. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.69E+05         | 2.12E+05          | -1.25E+04         | 5.54E+04          |
| FD   | -2.50E-03         | 3.50E-03          | -1.30E-03         | 1.97E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.12E-02         | 9.05E-02          | -1.40E-02         | 3.97E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-503. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

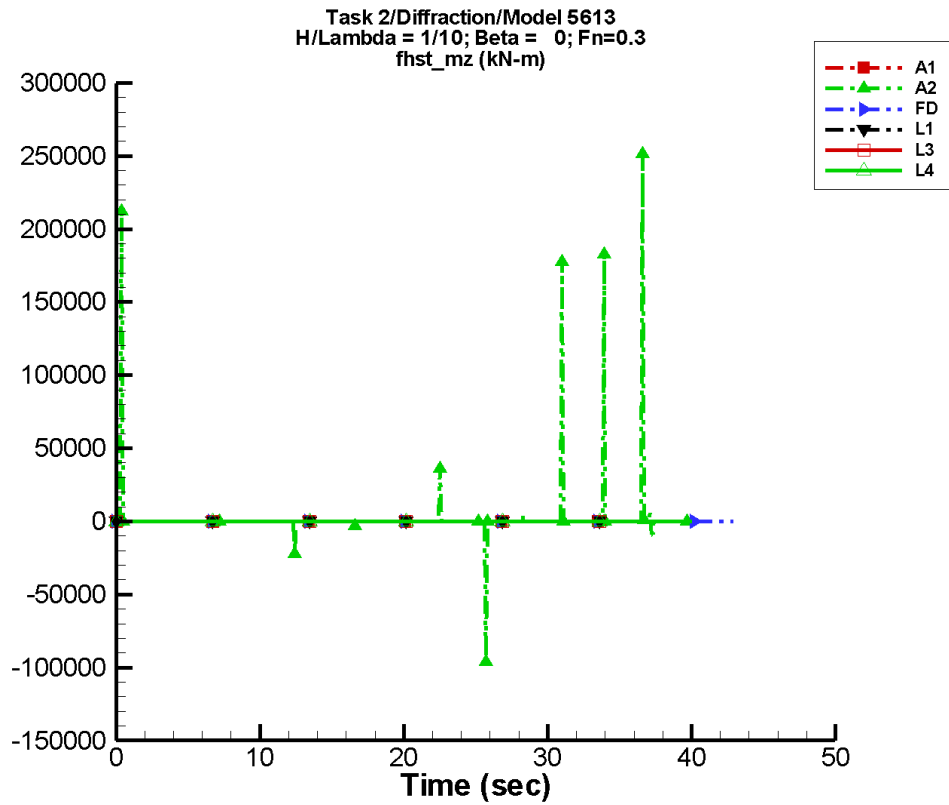
Table G-1005. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 610.            | 1.75E+03        | 49                | 1.38E+03        | 118               |
| FD   | -1.64E-04       | 8.69E-04        | 55                | 5.51E-04        | -177              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.64E-03       | 1.52E-02        | -26               | 7.06E-03        | -172              |

Table G-1006. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.92E+04         | 2.12E+05          | -1.87E+04         | 2.83E+04          |
| FD   | -4.50E-03         | 3.50E-03          | -2.82E-03         | 1.87E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.118            | 8.87E-02          | -5.30E-02         | 1.68E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-504. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

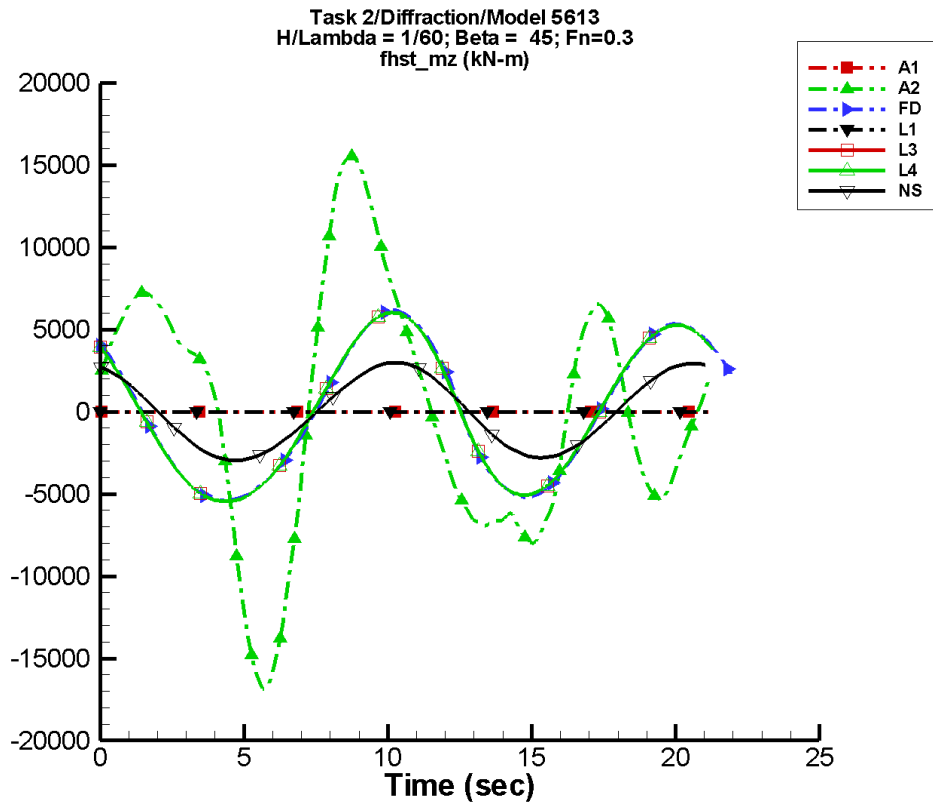
Table G-1007. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.69E+03        | 3.20E+03        | 127               | 2.38E+03        | 175               |
| FD   | 3.66E-04        | 1.34E-03        | 143               | 3.10E-04        | -106              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1008. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.62E+04         | 2.51E+05          | -1.28E+04         | 3.37E+04          |
| FD   | -4.50E-03         | 5.50E-03          | -2.01E-03         | 3.35E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-505. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1009. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

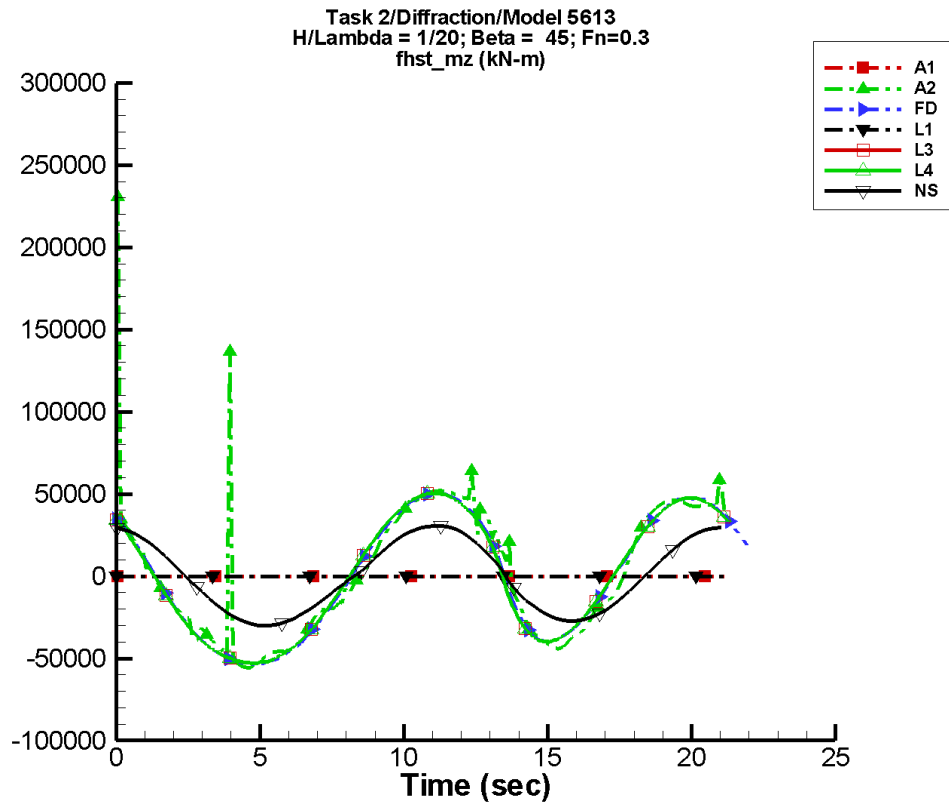
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 350.            | 1.54E+03        | 17                | 5.67E+03        | 105               |
| FD   | -20.7           | 739.            | -152              | 5.33E+03        | 130               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 12.6            | 741.            | -152              | 5.30E+03        | 123               |
| L4   | 12.6            | 741.            | -152              | 5.30E+03        | 123               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 6.67            | 162.            | -166              | 2.90E+03        | 109               |

Table G-1010. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.69E+04         | 1.55E+04          | -1.62E+04         | 1.52E+04          |
| FD   | -5.40E+03         | 6.16E+03          | -5.37E+03         | 6.08E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.45E+03         | 6.02E+03          | -5.44E+03         | 6.00E+03          |
| L4   | -5.45E+03         | 6.02E+03          | -5.44E+03         | 6.00E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.97E+03         | 2.99E+03          | -2.90E+03         | 2.86E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-506. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

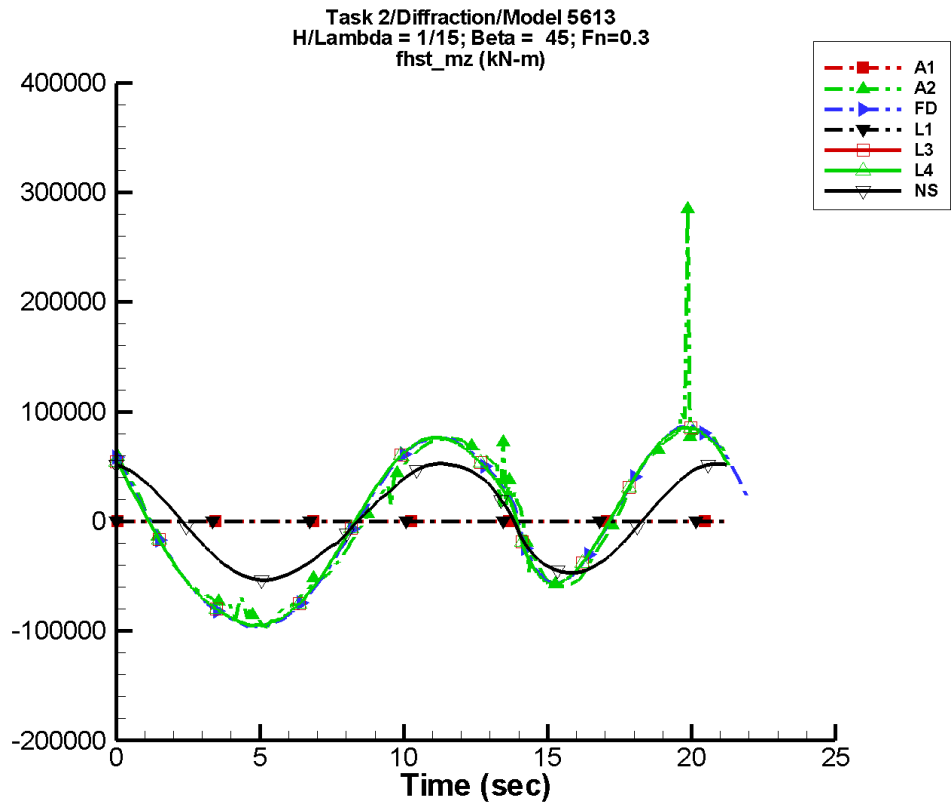
Table G-1011. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.41E+03        | 1.59E+04        | -171              | 4.34E+04        | 105               |
| FD   | -173.           | 1.85E+04        | -160              | 4.30E+04        | 118               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -2.95           | 1.78E+04        | -163              | 4.32E+04        | 111               |
| L4   | -2.95           | 1.78E+04        | -163              | 4.32E+04        | 111               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 176.            | 3.67E+03        | -169              | 2.90E+04        | 90                |

Table G-1012. Minimum and maximum of of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.60E+04         | 2.31E+05          | -5.58E+04         | 1.45E+05          |
| FD   | -5.35E+04         | 5.04E+04          | -5.30E+04         | 4.99E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.31E+04         | 5.05E+04          | -5.28E+04         | 5.03E+04          |
| L4   | -5.31E+04         | 5.05E+04          | -5.28E+04         | 5.03E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.02E+04         | 3.04E+04          | -3.03E+04         | 2.95E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-507. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

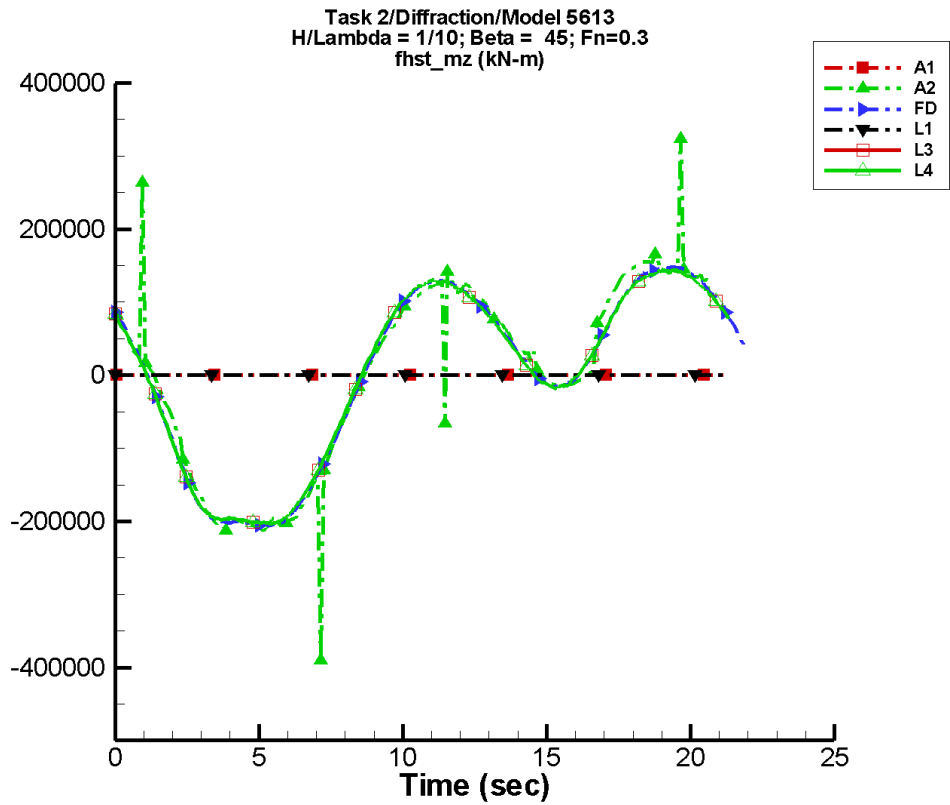
Table G-1013. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 385.            | 4.01E+04        | -172              | 6.46E+04        | 108               |
| FD   | -429.           | 4.16E+04        | -165              | 6.72E+04        | 117               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -195.           | 4.02E+04        | -167              | 6.71E+04        | 110               |
| L4   | -195.           | 4.02E+04        | -167              | 6.71E+04        | 110               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 425.            | 1.04E+04        | -171              | 5.00E+04        | 89                |

Table G-1014. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.64E+04         | 2.85E+05          | -9.34E+04         | 1.11E+05          |
| FD   | -9.58E+04         | 8.67E+04          | -9.51E+04         | 8.58E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -9.51E+04         | 8.53E+04          | -9.48E+04         | 8.52E+04          |
| L4   | -9.51E+04         | 8.53E+04          | -9.48E+04         | 8.52E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.38E+04         | 5.27E+04          | -5.41E+04         | 5.16E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-508. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

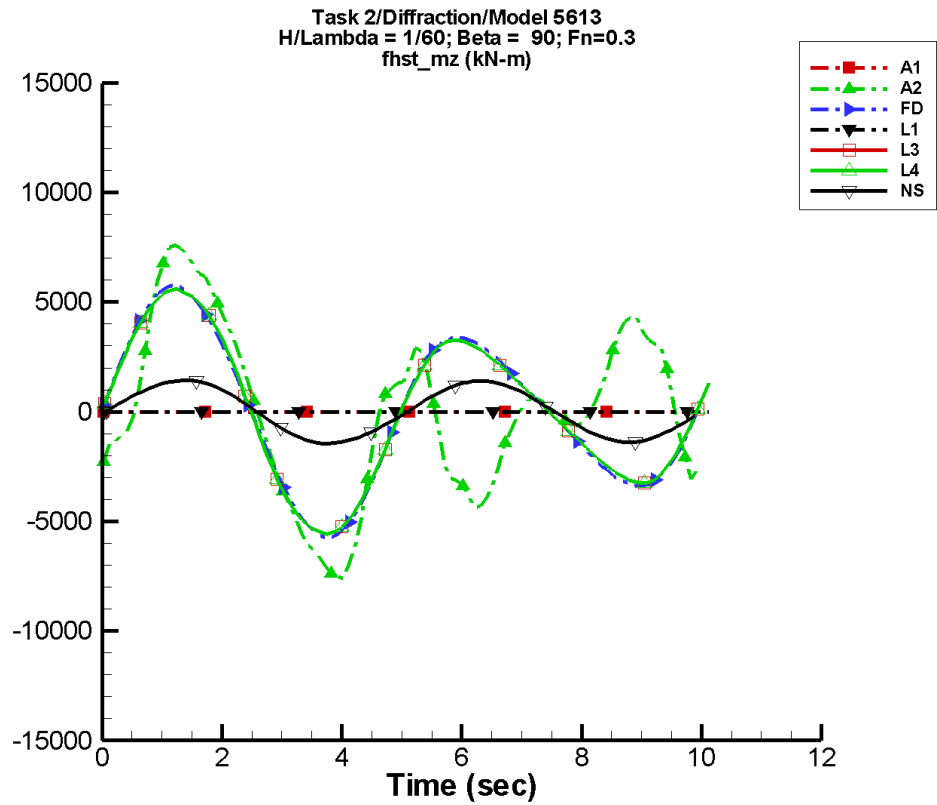
Table G-1015. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 2.67E+03        | 1.30E+05        | -178              | 1.07E+05        | 113               |
| FD   | -313.           | 1.25E+05        | -169              | 1.08E+05        | 122               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 407.            | 1.21E+05        | -173              | 1.07E+05        | 114               |
| L4   | 407.            | 1.21E+05        | -173              | 1.07E+05        | 114               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1016. Minimum and maximum of of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.90E+05         | 3.23E+05          | -2.12E+05         | 1.66E+05          |
| FD   | -2.06E+05         | 1.48E+05          | -2.05E+05         | 1.47E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -2.04E+05         | 1.44E+05          | -2.03E+05         | 1.43E+05          |
| L4   | -2.04E+05         | 1.44E+05          | -2.03E+05         | 1.43E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-509. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1017. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

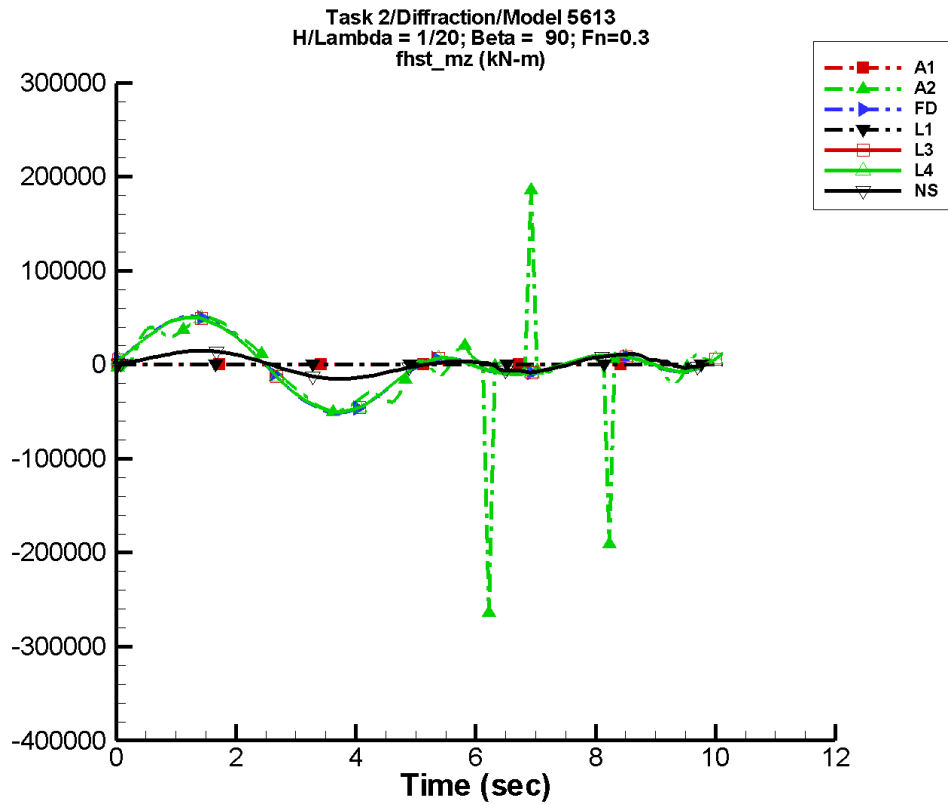
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 4.23            | 2.77E+03        | 75                | 2.36E+03        | -29               |
| FD   | -26.3           | 931.            | 77                | 4.53E+03        | -14               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -5.93E-02       | 982.            | 84                | 4.45E+03        | -9                |
| L4   | -5.93E-02       | 982.            | 84                | 4.45E+03        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.20            | 33.1            | 89                | 1.41E+03        | -8                |

Table G-1018. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -7.59E+03         | 7.65E+03          | -6.94E+03         | 6.94E+03          |
| FD   | -5.77E+03         | 5.77E+03          | -5.47E+03         | 5.48E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.58E+03         | 5.58E+03          | -5.48E+03         | 5.48E+03          |
| L4   | -5.58E+03         | 5.58E+03          | -5.48E+03         | 5.48E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.45E+03         | 1.42E+03          | -1.39E+03         | 1.37E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-510. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

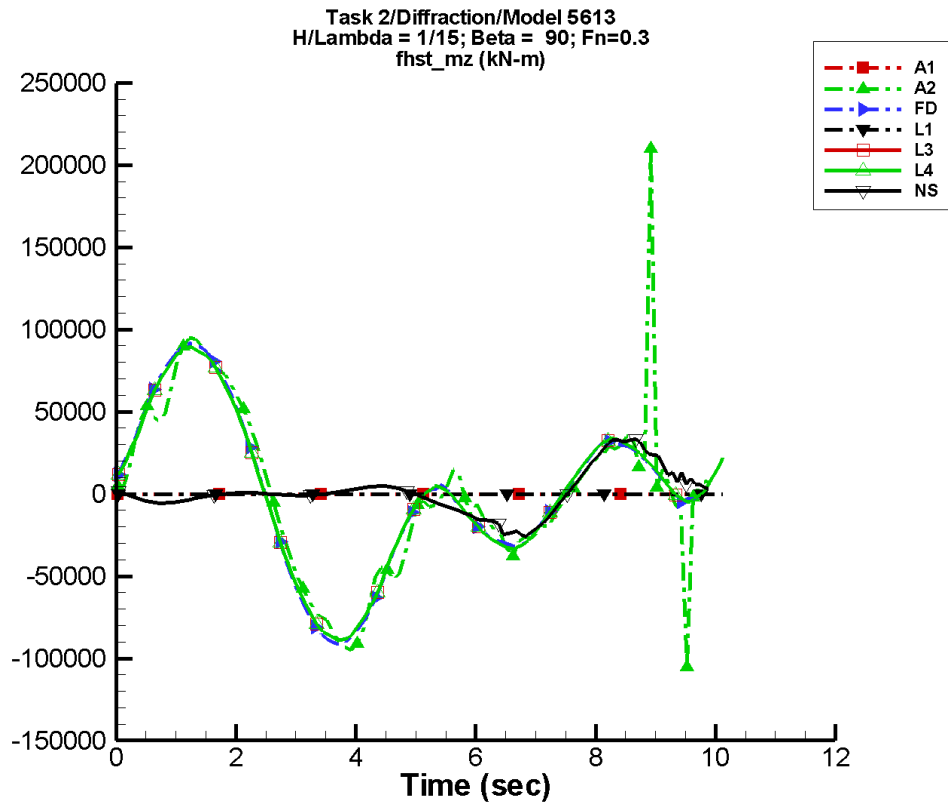
Table G-1019. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.34E+03       | 2.10E+04        | 70                | 2.51E+04        | -21               |
| FD   | -631.           | 2.18E+04        | 78                | 2.50E+04        | -11               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -78.9           | 2.19E+04        | 84                | 2.50E+04        | -11               |
| L4   | -78.9           | 2.19E+04        | 84                | 2.50E+04        | -11               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 831.            | 7.13E+03        | 90                | 5.68E+03        | -16               |

Table G-1020. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.64E+05         | 1.86E+05          | -4.51E+04         | 4.47E+04          |
| FD   | -5.14E+04         | 5.14E+04          | -4.89E+04         | 4.90E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.05E+04         | 5.05E+04          | -4.95E+04         | 4.95E+04          |
| L4   | -5.05E+04         | 5.05E+04          | -4.95E+04         | 4.95E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.52E+04         | 1.48E+04          | -1.45E+04         | 1.42E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-511. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

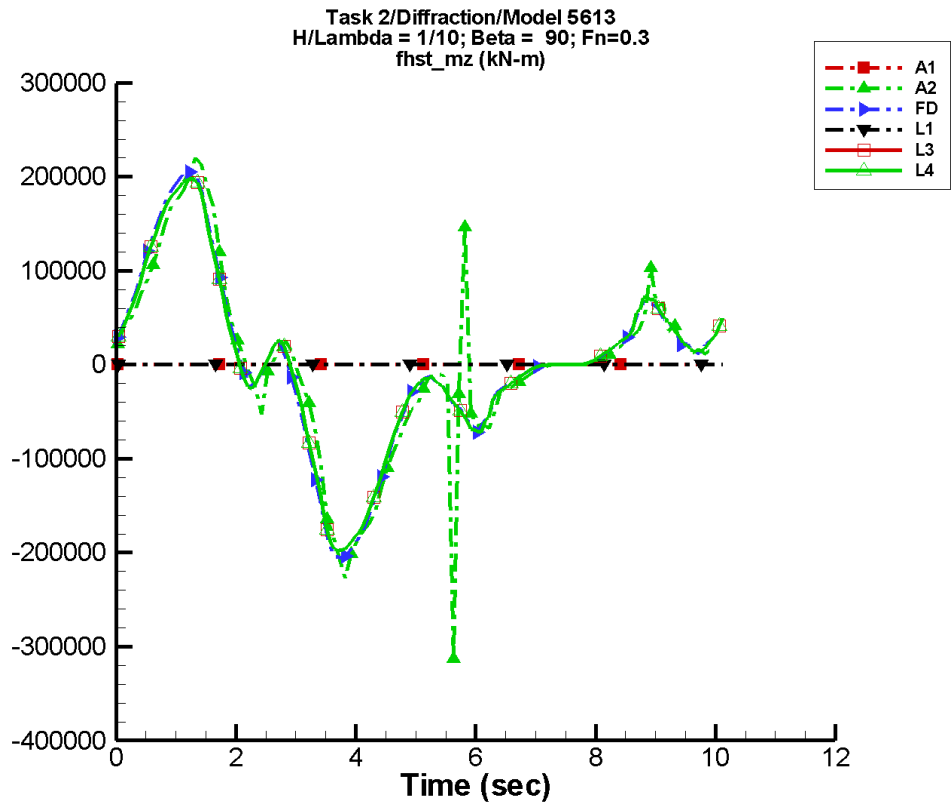
Table G-1021. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.36E+03        | 4.40E+04        | 80                | 3.44E+04        | -24               |
| FD   | -1.28E+03       | 4.58E+04        | 78                | 3.70E+04        | -9                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -191.           | 4.58E+04        | 84                | 3.64E+04        | -12               |
| L4   | -191.           | 4.58E+04        | 84                | 3.64E+04        | -12               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.06E+03        | 7.65E+03        | 93                | 1.30E+04        | -180              |

Table G-1022. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.05E+05         | 2.10E+05          | -8.45E+04         | 8.49E+04          |
| FD   | -9.14E+04         | 9.14E+04          | -8.72E+04         | 8.73E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.90E+04         | 8.91E+04          | -8.74E+04         | 8.75E+04          |
| L4   | -8.90E+04         | 8.91E+04          | -8.74E+04         | 8.75E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.58E+04         | 3.35E+04          | -2.35E+04         | 3.19E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-512. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

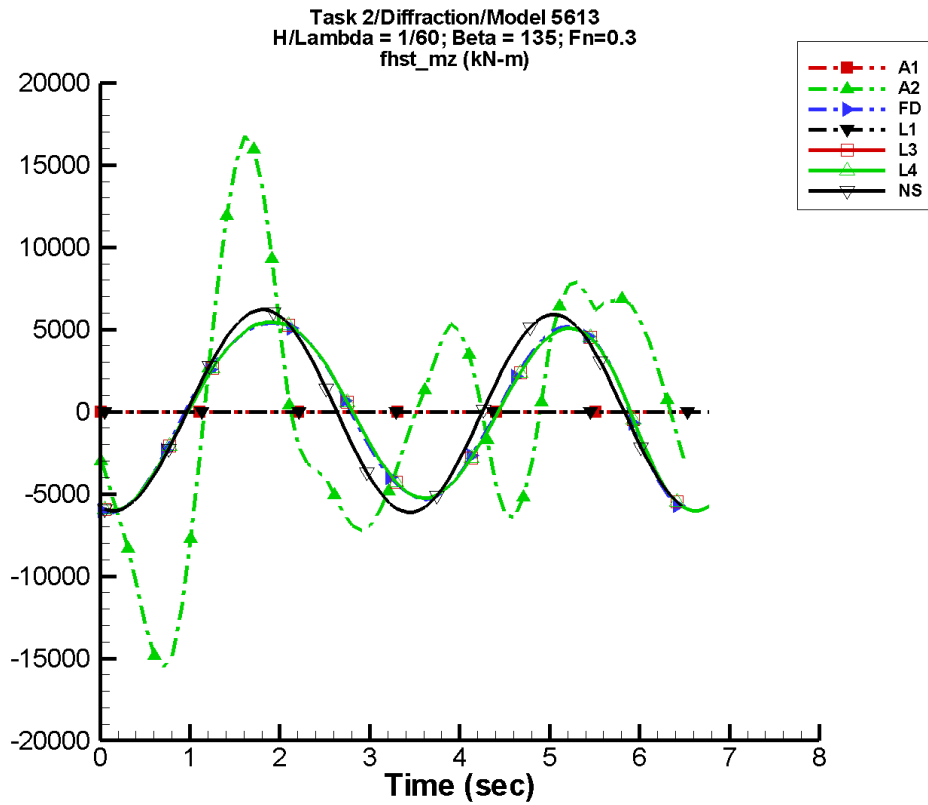
Table G-1023. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -1.12E+03       | 9.60E+04        | 81                | 6.69E+04        | -20               |
| FD   | -1.21E+03       | 9.69E+04        | 80                | 6.74E+04        | -12               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 1.08E+03        | 9.37E+04        | 84                | 6.12E+04        | -10               |
| L4   | 1.08E+03        | 9.37E+04        | 84                | 6.12E+04        | -10               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1024. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -3.13E+05         | 2.41E+05          | -1.89E+05         | 1.88E+05          |
| FD   | -2.06E+05         | 2.05E+05          | -1.89E+05         | 1.89E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.98E+05         | 1.98E+05          | -1.92E+05         | 1.92E+05          |
| L4   | -1.98E+05         | 1.98E+05          | -1.92E+05         | 1.92E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-513. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1025. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

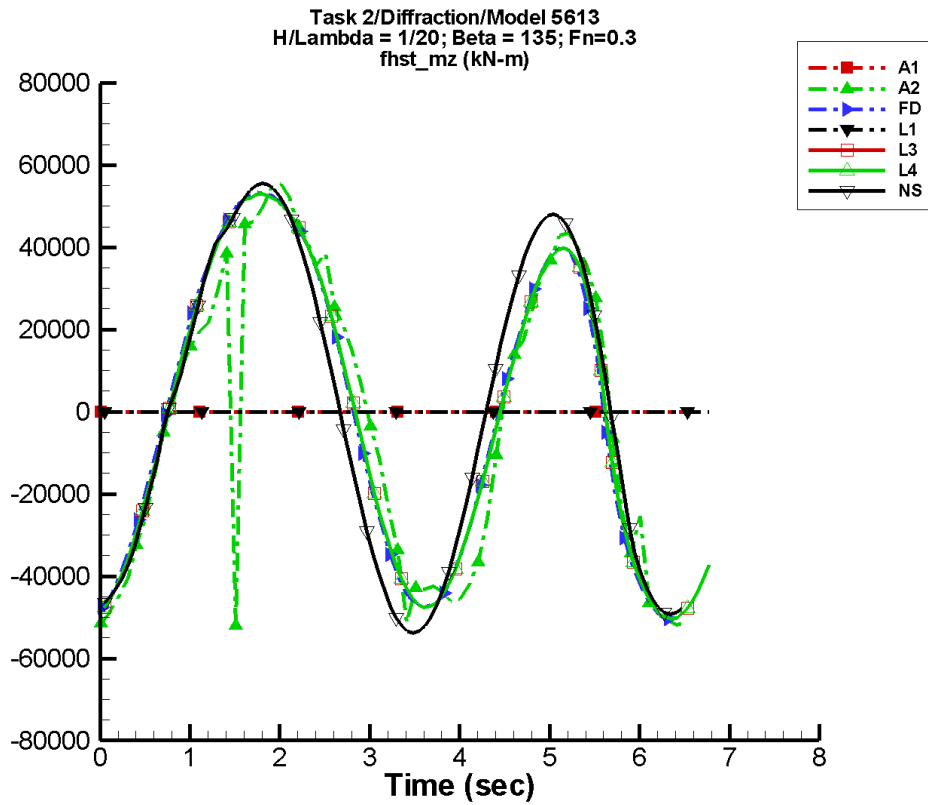
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 125.            | 948.            | -127              | 7.45E+03        | -133              |
| FD   | 30.7            | 826.            | -18               | 5.48E+03        | -116              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | -15.8           | 756.            | -23               | 5.33E+03        | -126              |
| L4   | -15.8           | 756.            | -23               | 5.33E+03        | -126              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 6.30            | 264.            | -1                | 6.05E+03        | -110              |

Table G-1026. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.55E+04         | 1.68E+04          | -1.21E+04         | 1.52E+04          |
| FD   | -6.16E+03         | 5.40E+03          | -6.04E+03         | 5.06E+03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -6.01E+03         | 5.45E+03          | -6.01E+03         | 5.35E+03          |
| L4   | -6.01E+03         | 5.45E+03          | -6.01E+03         | 5.35E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.13E+03         | 6.21E+03          | -6.05E+03         | 5.98E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-514. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

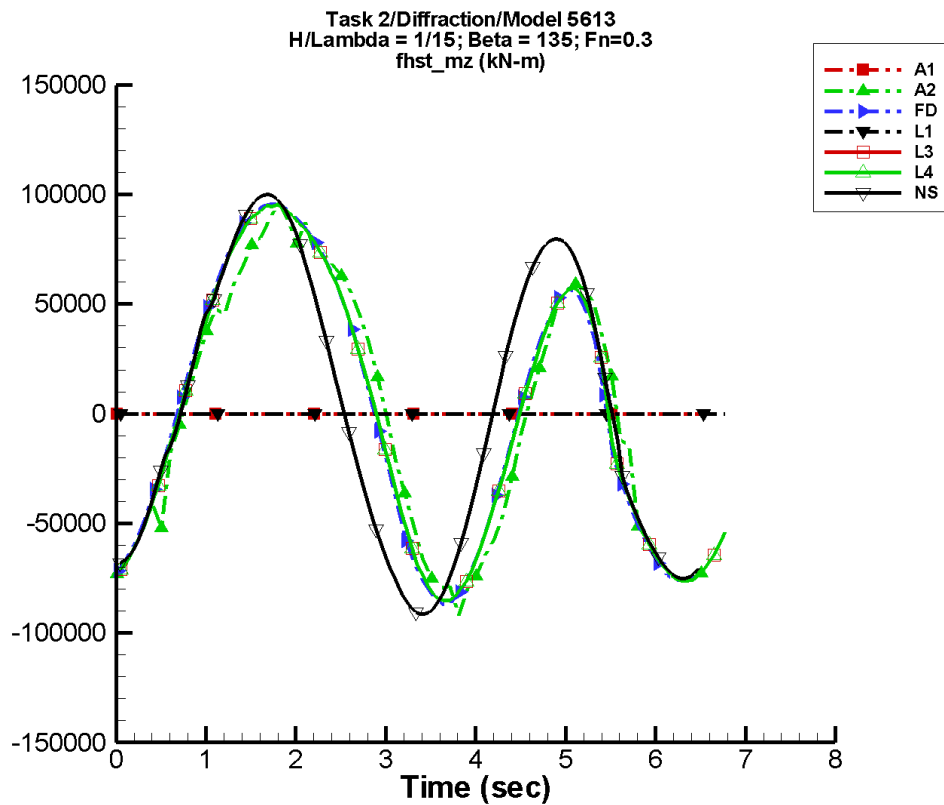
Table G-1027. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -778.           | 1.60E+04        | -21               | 4.10E+04        | -124              |
| FD   | 595.            | 1.93E+04        | -7                | 4.41E+04        | -103              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 101.            | 1.77E+04        | -13               | 4.30E+04        | -113              |
| L4   | 101.            | 1.77E+04        | -13               | 4.30E+04        | -113              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 796.            | 1.10E+04        | 6                 | 4.96E+04        | -102              |

Table G-1028. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.20E+04         | 5.53E+04          | -4.94E+04         | 4.57E+04          |
| FD   | -5.03E+04         | 5.34E+04          | -4.69E+04         | 5.08E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -5.04E+04         | 5.30E+04          | -4.89E+04         | 5.20E+04          |
| L4   | -5.04E+04         | 5.30E+04          | -4.89E+04         | 5.20E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.38E+04         | 5.55E+04          | -5.17E+04         | 5.36E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1 and NFA.

Figure G-515. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

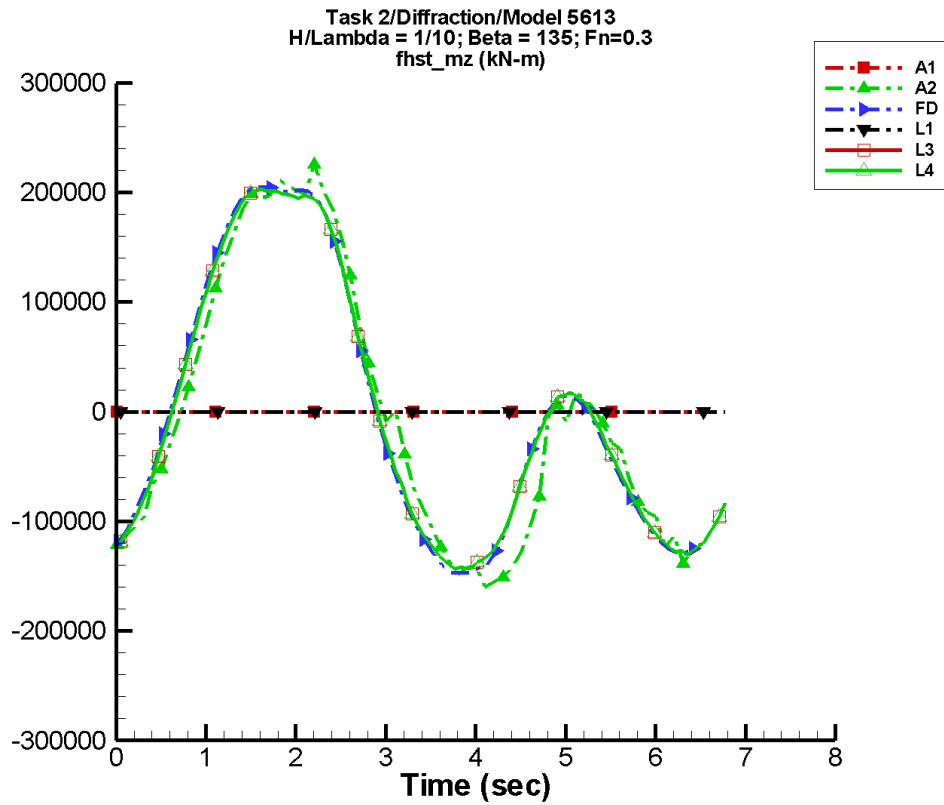
Table G-1029. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 220.            | 3.90E+04        | -14               | 6.51E+04        | -122              |
| FD   | 921.            | 4.28E+04        | -4                | 6.94E+04        | -102              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 73.3            | 3.99E+04        | -10               | 6.72E+04        | -112              |
| L4   | 73.3            | 3.99E+04        | -10               | 6.72E+04        | -112              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 629.            | 1.93E+04        | 12                | 8.23E+04        | -91               |

Table G-1030. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -9.19E+04         | 9.63E+04          | -7.67E+04         | 8.48E+04          |
| FD   | -8.67E+04         | 9.56E+04          | -7.74E+04         | 9.10E+04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -8.53E+04         | 9.51E+04          | -8.22E+04         | 9.30E+04          |
| L4   | -8.53E+04         | 9.51E+04          | -8.22E+04         | 9.30E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.14E+04         | 1.00E+05          | -8.90E+04         | 9.79E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, NFA and NSHIPMO.

Figure G-516. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

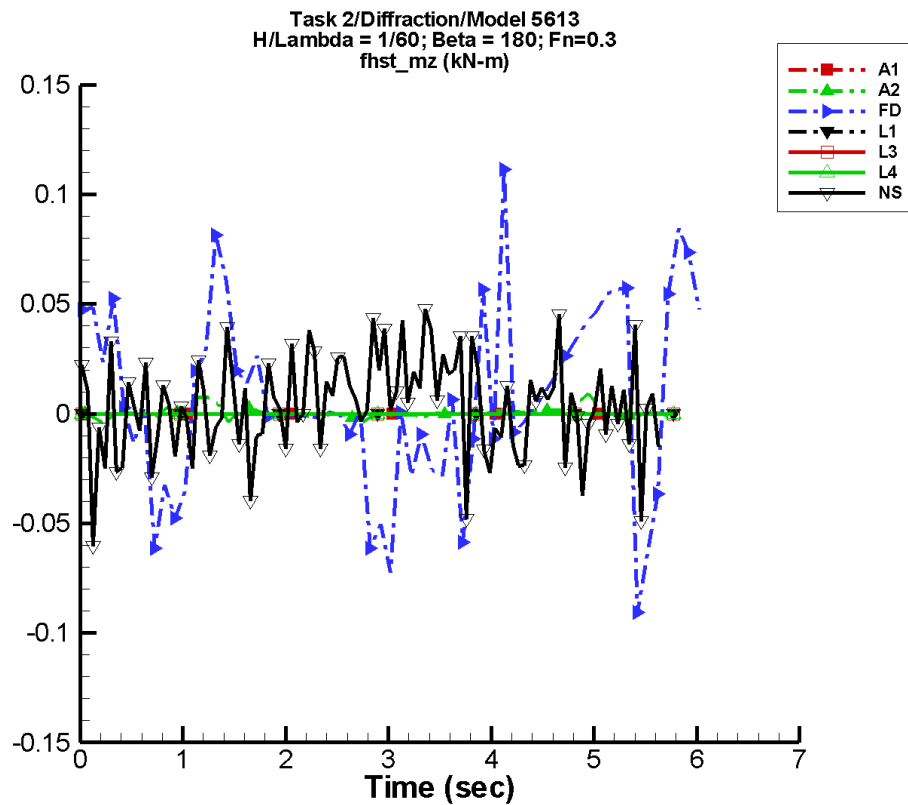
Table G-1031. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -2.17E+03       | 1.31E+05        | -12               | 1.07E+05        | -130              |
| FD   | 814.            | 1.27E+05        | -3                | 1.10E+05        | -107              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | 153.            | 1.22E+05        | -8                | 1.07E+05        | -116              |
| L4   | 153.            | 1.22E+05        | -8                | 1.07E+05        | -116              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1032. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.60E+05         | 2.26E+05          | -1.48E+05         | 2.07E+05          |
| FD   | -1.47E+05         | 2.05E+05          | -1.40E+05         | 2.04E+05          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | -1.44E+05         | 2.03E+05          | -1.40E+05         | 2.01E+05          |
| L4   | -1.44E+05         | 2.03E+05          | -1.40E+05         | 2.01E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-517. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1033. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

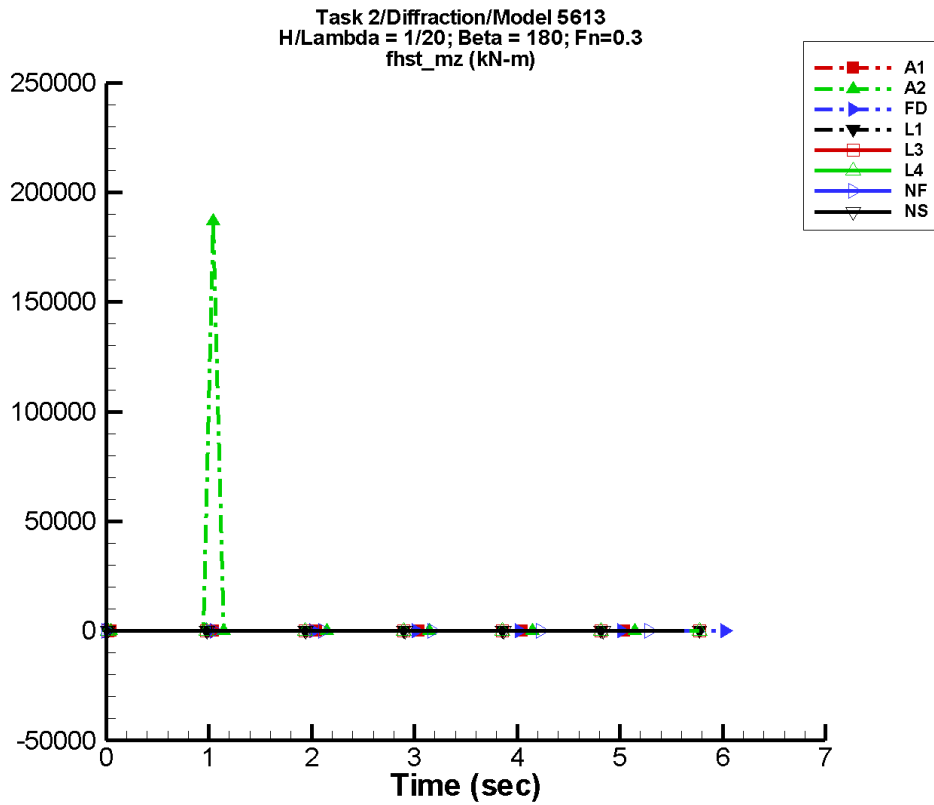
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 4.69E-04        | 6.26E-04        | 74                | 1.97E-03        | -115              |
| FD   | 6.84E-03        | 2.12E-02        | 56                | 1.59E-02        | 148               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.58E-03        | 1.15E-02        | -103              | 4.28E-03        | 96                |

Table G-1034. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -5.26E-03         | 9.20E-03          | -1.63E-03         | 3.12E-03          |
| FD   | -9.05E-02         | 0.112             | -3.25E-02         | 4.25E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.03E-02         | 4.79E-02          | -1.44E-02         | 2.36E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-518. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

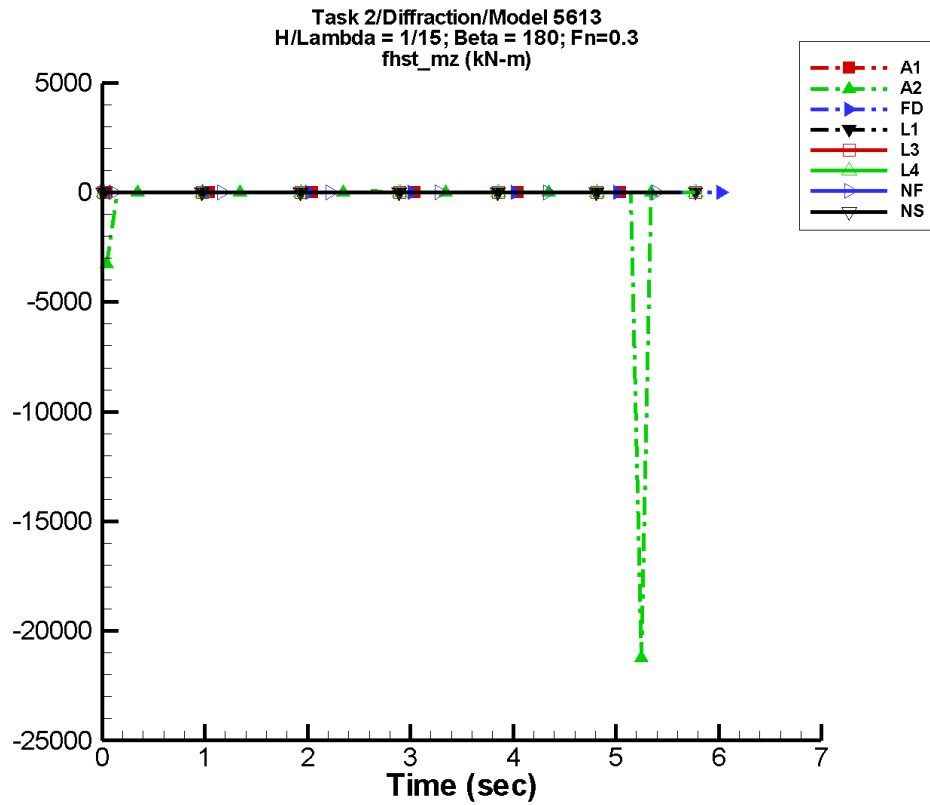
Table G-1035. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | 1.46E+03        | 3.26E+03        | 14                | 4.16E+03        | -60               |
| FD   | 3.43E-04        | 4.21E-02        | 22                | 3.26E-02        | -104              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 9.88E-04        | 1.01E-02        | -81               | 7.18E-03        | 71                |

Table G-1036. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.59E-02         | 1.87E+05          | -2.14E+03         | 2.49E+04          |
| FD   | -0.467            | 0.334             | -7.12E-02         | 0.116             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.15E-02         | 8.33E-02          | -2.86E-02         | 3.18E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-519. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

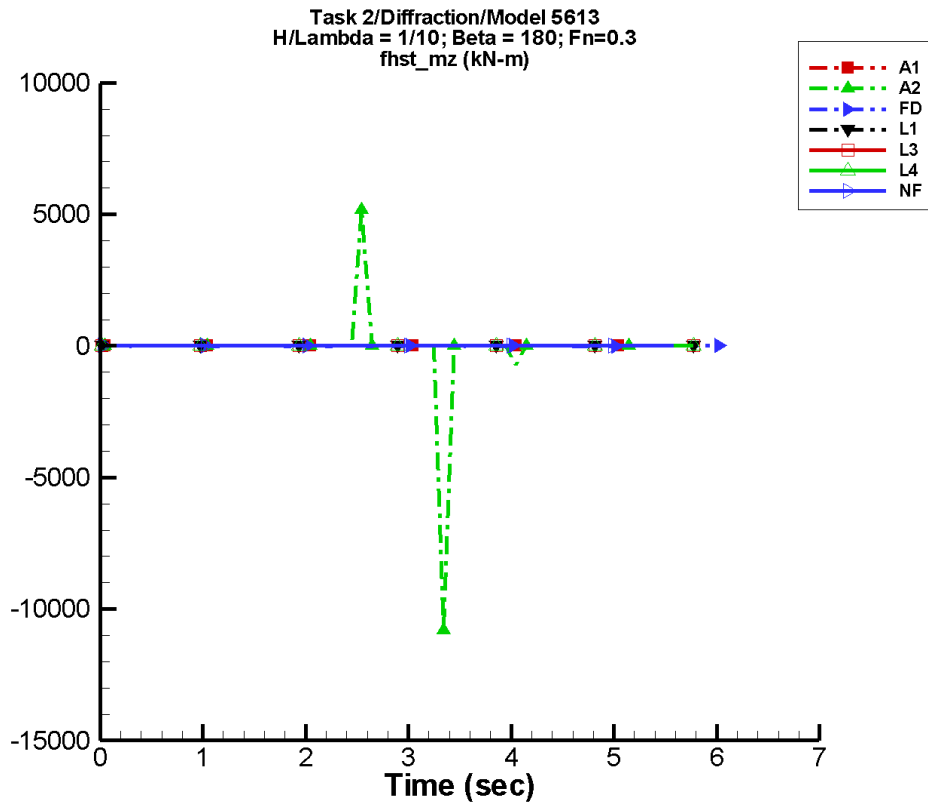
Table G-1037. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -386.           | 708.            | -73               | 724.            | -44               |
| FD   | -3.38E-03       | 1.40E-02        | 112               | 4.18E-02        | -100              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.20E-02       | 1.20E-02        | 79                | 1.37E-02        | -28               |

Table G-1038. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -2.12E+04         | 75.4              | -2.83E+03         | 242.              |
| FD   | -0.887            | 0.716             | -0.110            | 0.103             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.117            | 8.01E-02          | -4.68E-02         | 3.24E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from AEGIR-1, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-520. Time history of  $M_z^{hst}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

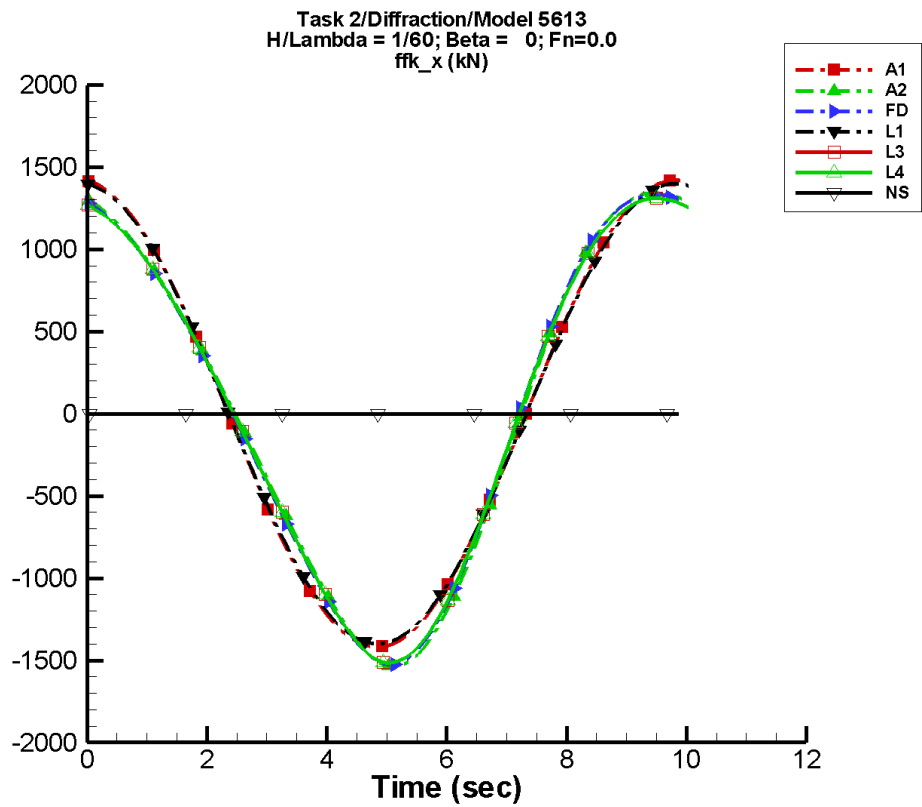
Table G-1039. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | —               | —               | —                 | —               | —                 |
| A2   | -108.           | 342.            | 26                | 419.            | 160               |
| FD   | -0.124          | 0.221           | -83               | 0.436           | -79               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1040. Minimum and maximum of  $M_z^{\text{hst}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | —                 | —                 | —                 | —                 |
| A2   | -1.08E+04         | 5.17E+03          | -1.48E+03         | 784.              |
| FD   | -2.64             | 1.66              | -1.30             | 0.566             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-521. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1041. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

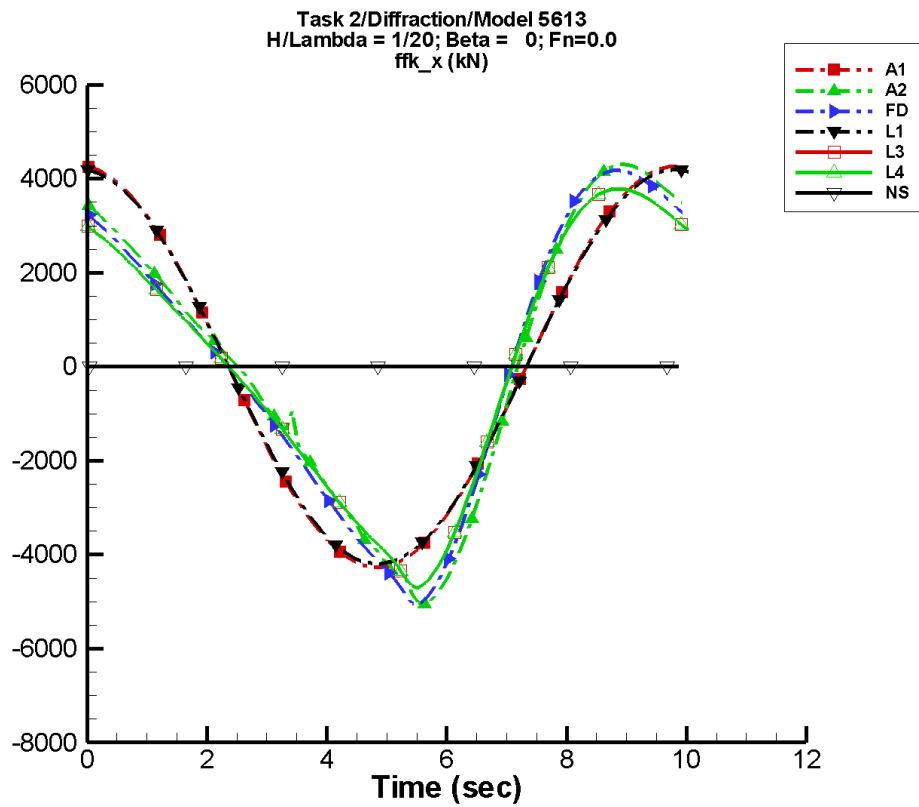
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.06         | 1.42E+03      | 90                | 1.51          | 28                |
| A2   | 2.68          | 1.41E+03      | 90                | 161.          | -149              |
| FD   | 1.99          | 1.40E+03      | 88                | 157.          | -152              |
| L1   | -1.27         | 1.40E+03      | 90                | 1.18          | 109               |
| L3   | 0.426         | 1.38E+03      | 91                | 150.          | -141              |
| L4   | 0.426         | 1.38E+03      | 91                | 150.          | -141              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1042. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.42E+03       | 1.42E+03        | -1.40E+03       | 1.41E+03        |
| A2   | -1.54E+03       | 1.34E+03        | -1.52E+03       | 1.33E+03        |
| FD   | -1.53E+03       | 1.33E+03        | -1.50E+03       | 1.32E+03        |
| L1   | -1.40E+03       | 1.40E+03        | -1.39E+03       | 1.39E+03        |
| L3   | -1.52E+03       | 1.31E+03        | -1.51E+03       | 1.31E+03        |
| L4   | -1.52E+03       | 1.31E+03        | -1.51E+03       | 1.31E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-522. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

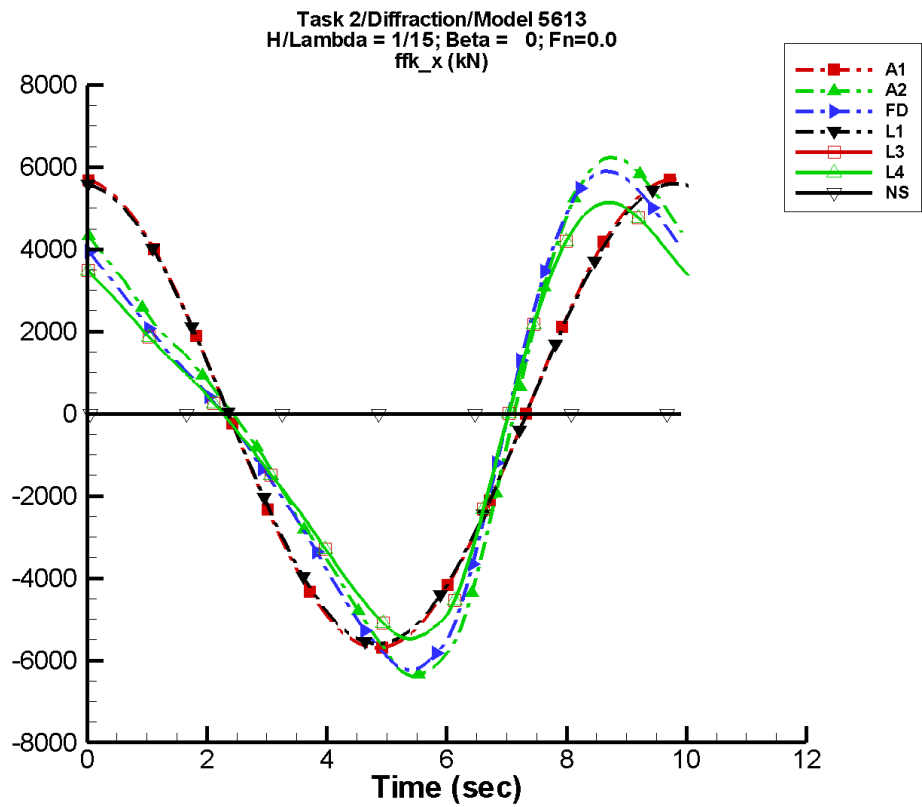
Table G-1043. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.20         | 4.27E+03      | 90                | 4.55          | 28                |
| A2   | 62.4          | 4.08E+03      | 90                | 1.17E+03      | -164              |
| FD   | 18.4          | 4.07E+03      | 91                | 1.16E+03      | -164              |
| L1   | -3.80         | 4.19E+03      | 90                | 3.54          | 109               |
| L3   | 12.6          | 3.74E+03      | 95                | 1.05E+03      | -157              |
| L4   | 12.6          | 3.74E+03      | 95                | 1.05E+03      | -157              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1044. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.27E+03       | 4.27E+03        | -4.22E+03       | 4.23E+03        |
| A2   | -5.05E+03       | 4.31E+03        | -4.82E+03       | 4.23E+03        |
| FD   | -5.06E+03       | 4.18E+03        | -4.83E+03       | 4.12E+03        |
| L1   | -4.20E+03       | 4.19E+03        | -4.18E+03       | 4.18E+03        |
| L3   | -4.70E+03       | 3.79E+03        | -4.60E+03       | 3.77E+03        |
| L4   | -4.70E+03       | 3.79E+03        | -4.60E+03       | 3.77E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-523. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

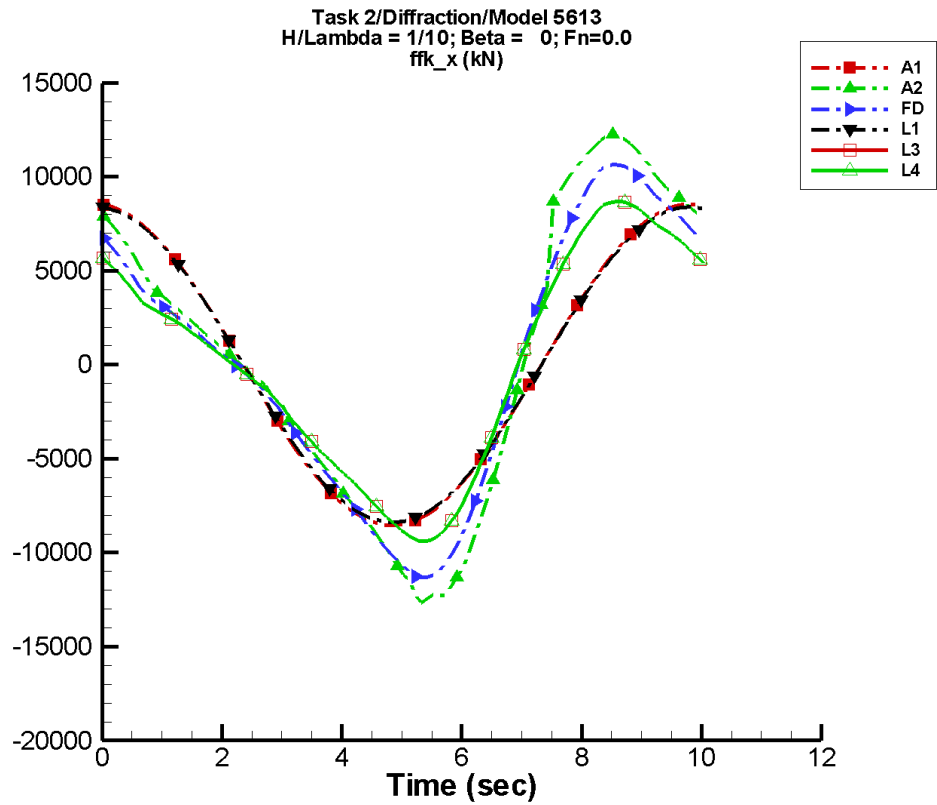
Table G-1045. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.27         | 5.70E+03      | 90                | 6.08          | 28                |
| A2   | 107.          | 5.53E+03      | 95                | 1.77E+03      | -160              |
| FD   | 17.6          | 5.37E+03      | 95                | 1.72E+03      | -163              |
| L1   | -5.06         | 5.59E+03      | 90                | 4.72          | 109               |
| L3   | 11.2          | 4.73E+03      | 98                | 1.49E+03      | -155              |
| L4   | 11.2          | 4.73E+03      | 98                | 1.49E+03      | -155              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1046. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.70E+03       | 5.70E+03        | -5.64E+03       | 5.65E+03        |
| A2   | -6.39E+03       | 6.23E+03        | -6.26E+03       | 6.12E+03        |
| FD   | -6.24E+03       | 5.90E+03        | -6.13E+03       | 5.80E+03        |
| L1   | -5.59E+03       | 5.59E+03        | -5.57E+03       | 5.57E+03        |
| L3   | -5.48E+03       | 5.14E+03        | -5.44E+03       | 5.10E+03        |
| L4   | -5.48E+03       | 5.14E+03        | -5.44E+03       | 5.10E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-524. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

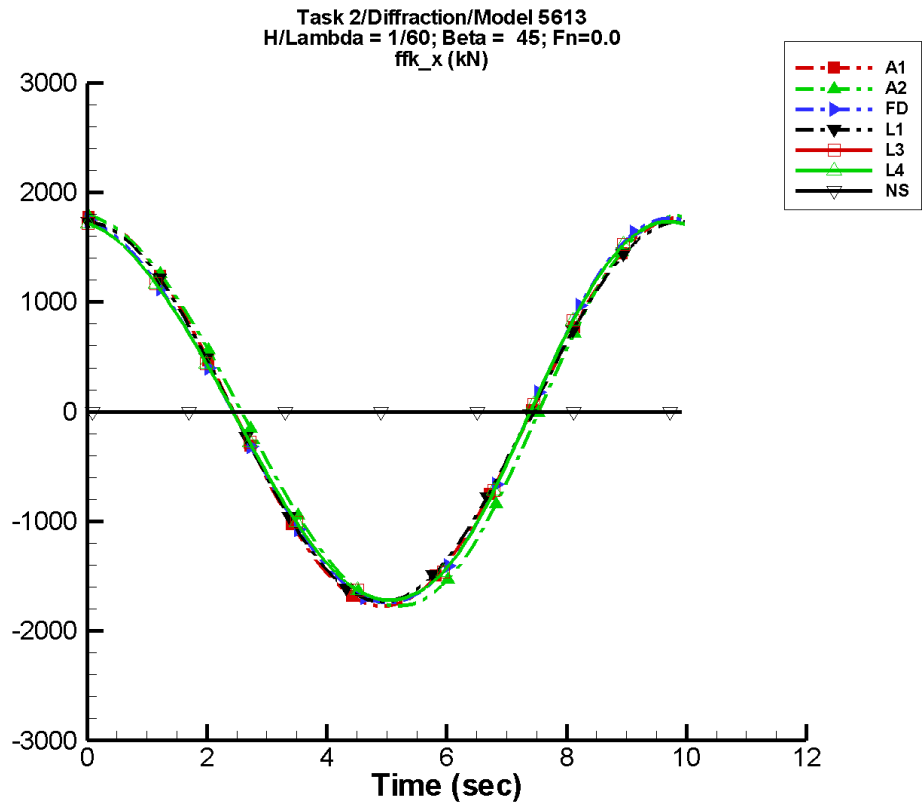
Table G-1047. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.40         | 8.55E+03      | 90                | 9.12          | 28                |
| A2   | 344.          | 1.04E+04      | 99                | 3.82E+03      | -155              |
| FD   | 21.4          | 9.33E+03      | 98                | 3.19E+03      | -157              |
| L1   | -7.59         | 8.39E+03      | 90                | 7.09          | 109               |
| L3   | -0.647        | 7.73E+03      | 101               | 2.52E+03      | -150              |
| L4   | -0.647        | 7.73E+03      | 101               | 2.52E+03      | -150              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1048. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.55E+03       | 8.55E+03        | -8.46E+03       | 8.47E+03        |
| A2   | -1.27E+04       | 1.23E+04        | -1.22E+04       | 1.19E+04        |
| FD   | -1.13E+04       | 1.06E+04        | -1.11E+04       | 1.04E+04        |
| L1   | -8.39E+03       | 8.39E+03        | -8.36E+03       | 8.36E+03        |
| L3   | -9.39E+03       | 8.68E+03        | -9.30E+03       | 8.63E+03        |
| L4   | -9.39E+03       | 8.68E+03        | -9.30E+03       | 8.63E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-525. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1049. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

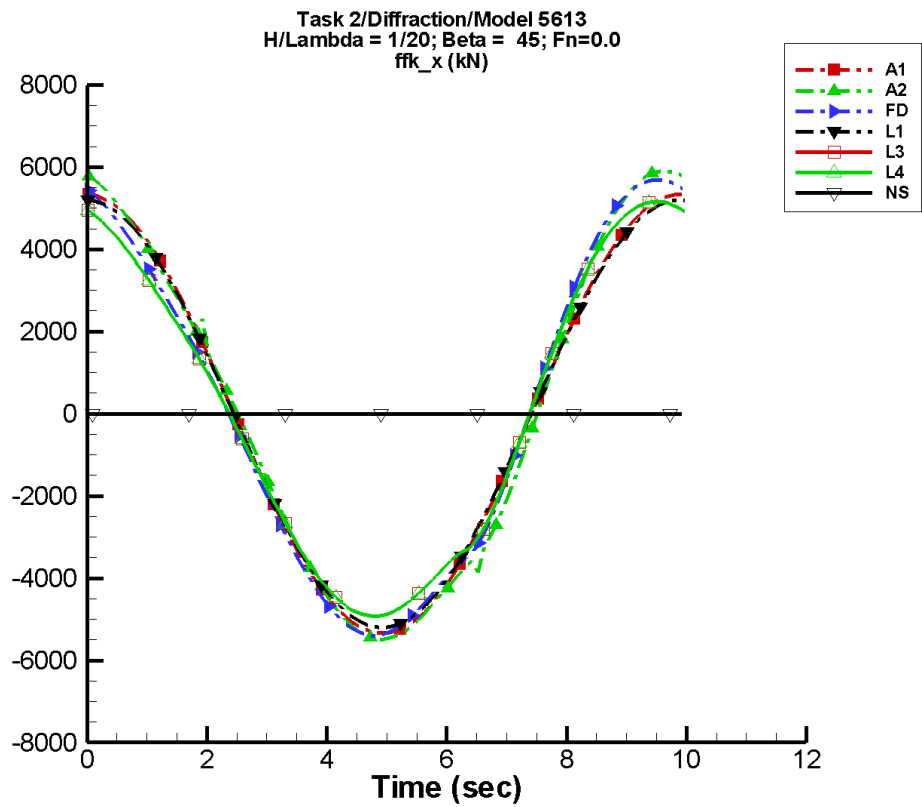
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.40         | 1.77E+03      | 87                | 1.96          | 25                |
| A2   | 1.47          | 1.78E+03      | 83                | 80.0          | 168               |
| FD   | -4.10E-02     | 1.75E+03      | 84                | 76.9          | 164               |
| L1   | -0.660        | 1.73E+03      | 87                | 1.15          | 162               |
| L3   | -0.638        | 1.73E+03      | 88                | 85.0          | 174               |
| L4   | -0.638        | 1.73E+03      | 88                | 85.0          | 174               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1050. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.77E+03       | 1.77E+03        | -1.76E+03       | 1.77E+03        |
| A2   | -1.77E+03       | 1.78E+03        | -1.76E+03       | 1.78E+03        |
| FD   | -1.74E+03       | 1.77E+03        | -1.72E+03       | 1.75E+03        |
| L1   | -1.73E+03       | 1.73E+03        | -1.73E+03       | 1.73E+03        |
| L3   | -1.72E+03       | 1.73E+03        | -1.71E+03       | 1.73E+03        |
| L4   | -1.72E+03       | 1.73E+03        | -1.71E+03       | 1.73E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-526. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

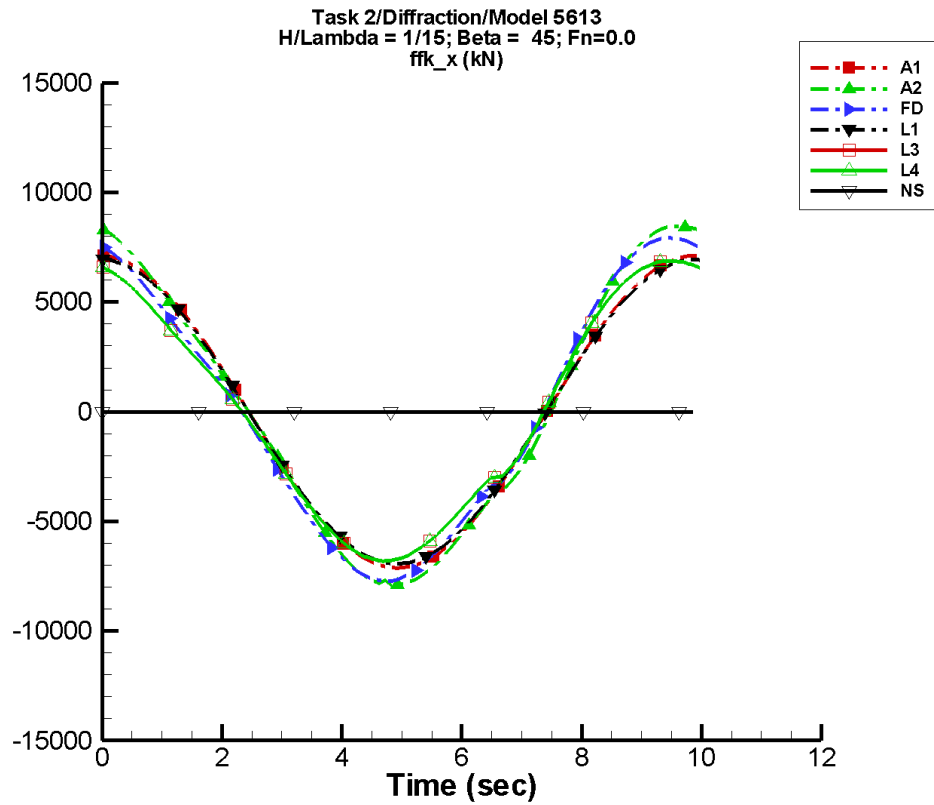
Table G-1051. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.20         | 5.34E+03      | 87                | 5.90          | 25                |
| A2   | 47.1          | 5.60E+03      | 86                | 362.          | 152               |
| FD   | -14.9         | 5.44E+03      | 87                | 334.          | 152               |
| L1   | -1.98         | 5.20E+03      | 87                | 3.46          | 162               |
| L3   | -9.61         | 4.98E+03      | 91                | 314.          | 165               |
| L4   | -9.61         | 4.98E+03      | 91                | 314.          | 165               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1052. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.34E+03       | 5.34E+03        | -5.28E+03       | 5.33E+03        |
| A2   | -5.49E+03       | 5.90E+03        | -5.42E+03       | 5.84E+03        |
| FD   | -5.40E+03       | 5.69E+03        | -5.33E+03       | 5.62E+03        |
| L1   | -5.20E+03       | 5.20E+03        | -5.18E+03       | 5.20E+03        |
| L3   | -4.92E+03       | 5.16E+03        | -4.90E+03       | 5.14E+03        |
| L4   | -4.92E+03       | 5.16E+03        | -4.90E+03       | 5.14E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-527. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

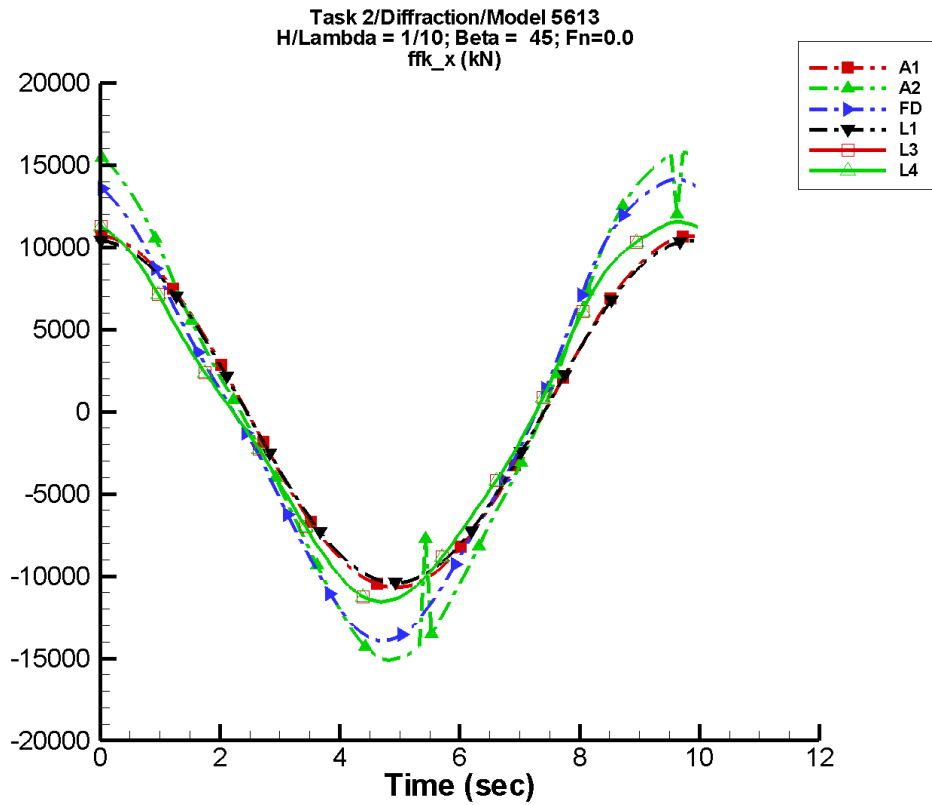
Table G-1053. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.61         | 7.12E+03      | 87                | 7.87          | 25                |
| A2   | 78.5          | 7.88E+03      | 89                | 461.          | 149               |
| FD   | -27.2         | 7.50E+03      | 90                | 318.          | 160               |
| L1   | -2.64         | 6.93E+03      | 87                | 4.61          | 162               |
| L3   | -3.41         | 6.61E+03      | 94                | 269.          | -179              |
| L4   | -3.41         | 6.61E+03      | 94                | 269.          | -179              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1054. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.12E+03       | 7.12E+03        | -7.05E+03       | 7.11E+03        |
| A2   | -7.92E+03       | 8.45E+03        | -7.79E+03       | 8.38E+03        |
| FD   | -7.72E+03       | 7.93E+03        | -7.62E+03       | 7.82E+03        |
| L1   | -6.93E+03       | 6.93E+03        | -6.91E+03       | 6.94E+03        |
| L3   | -6.81E+03       | 6.87E+03        | -6.77E+03       | 6.85E+03        |
| L4   | -6.81E+03       | 6.87E+03        | -6.77E+03       | 6.85E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-528. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

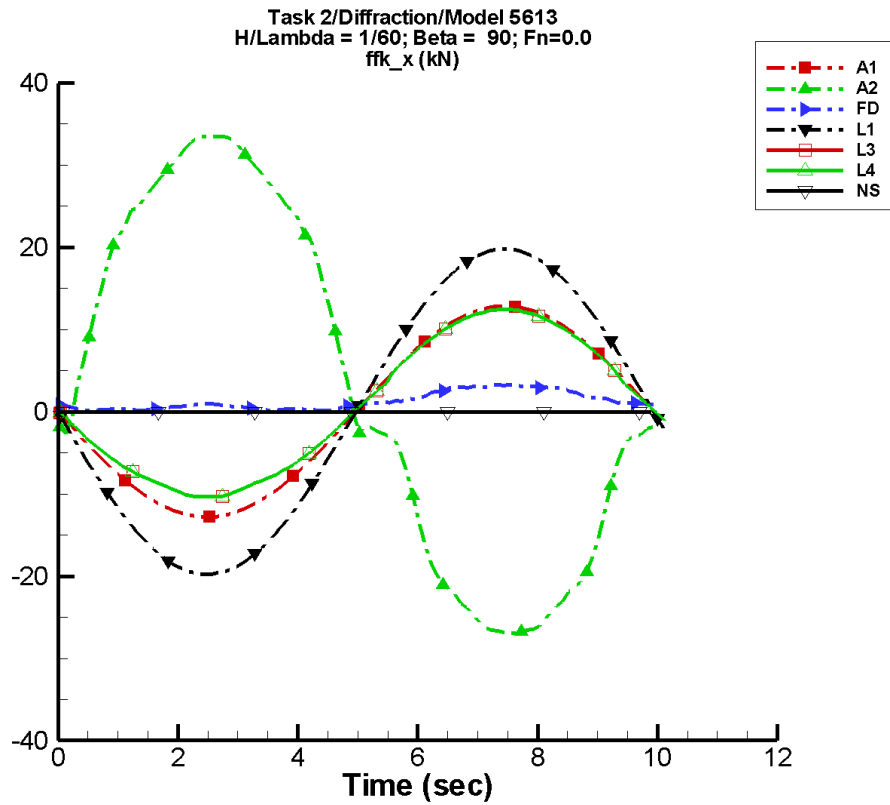
Table G-1055. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -8.42         | 1.07E+04      | 87                | 11.8          | 25                |
| A2   | 115.          | 1.45E+04      | 92                | 844.          | 150               |
| FD   | -25.7         | 1.34E+04      | 92                | 619.          | 169               |
| L1   | -3.96         | 1.04E+04      | 87                | 6.91          | 162               |
| L3   | 0.739         | 1.11E+04      | 96                | 470.          | -175              |
| L4   | 0.739         | 1.11E+04      | 96                | 470.          | -175              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1056. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.07E+04       | 1.07E+04        | -1.06E+04       | 1.07E+04        |
| A2   | -1.51E+04       | 1.58E+04        | -1.48E+04       | 1.52E+04        |
| FD   | -1.39E+04       | 1.41E+04        | -1.37E+04       | 1.39E+04        |
| L1   | -1.04E+04       | 1.04E+04        | -1.04E+04       | 1.04E+04        |
| L3   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| L4   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-529. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1057. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

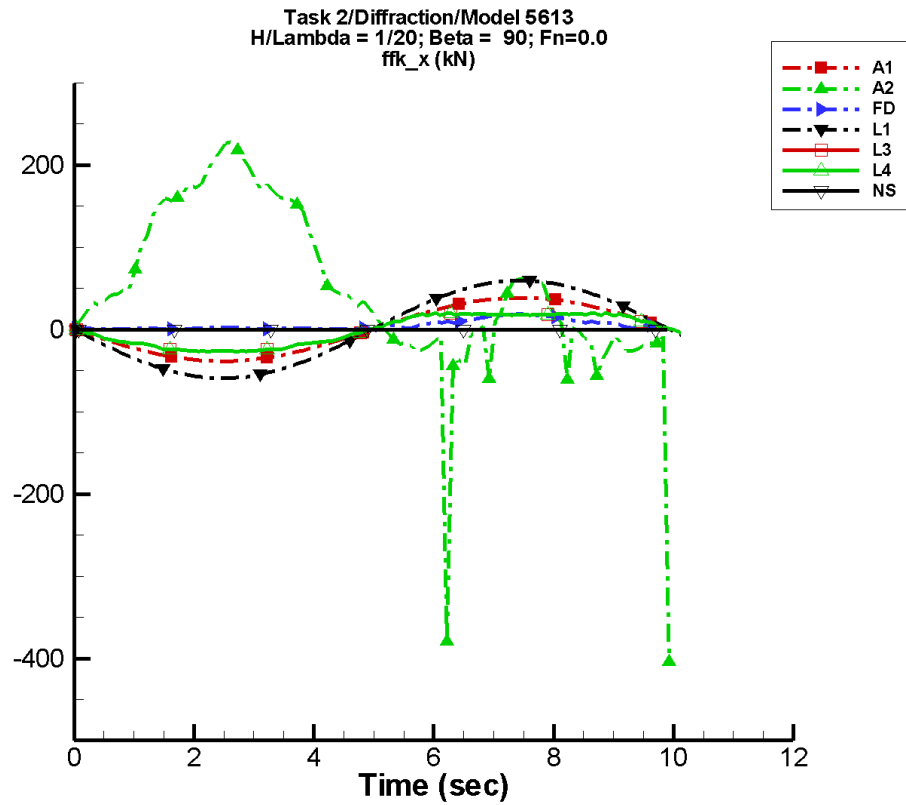
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.10E-03      | 12.8          | 176               | 1.23E-02      | 155               |
| A2   | 2.82          | 30.2          | -8                | 0.754         | -94               |
| FD   | 1.27          | 1.30          | 172               | 0.685         | -106              |
| L1   | 8.19E-03      | 19.8          | 176               | 1.30E-02      | 143               |
| L3   | 0.673         | 11.3          | 176               | 0.497         | -98               |
| L4   | 0.673         | 11.3          | 176               | 0.497         | -98               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1058. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -12.8           | 12.8            | -12.7           | 12.7            |
| A2   | -27.0           | 33.5            | -26.8           | 33.2            |
| FD   | 0.131           | 3.28            | 0.238           | 3.20            |
| L1   | -19.8           | 19.8            | -19.7           | 19.7            |
| L3   | -10.3           | 12.5            | -10.3           | 12.4            |
| L4   | -10.3           | 12.5            | -10.3           | 12.4            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-530. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

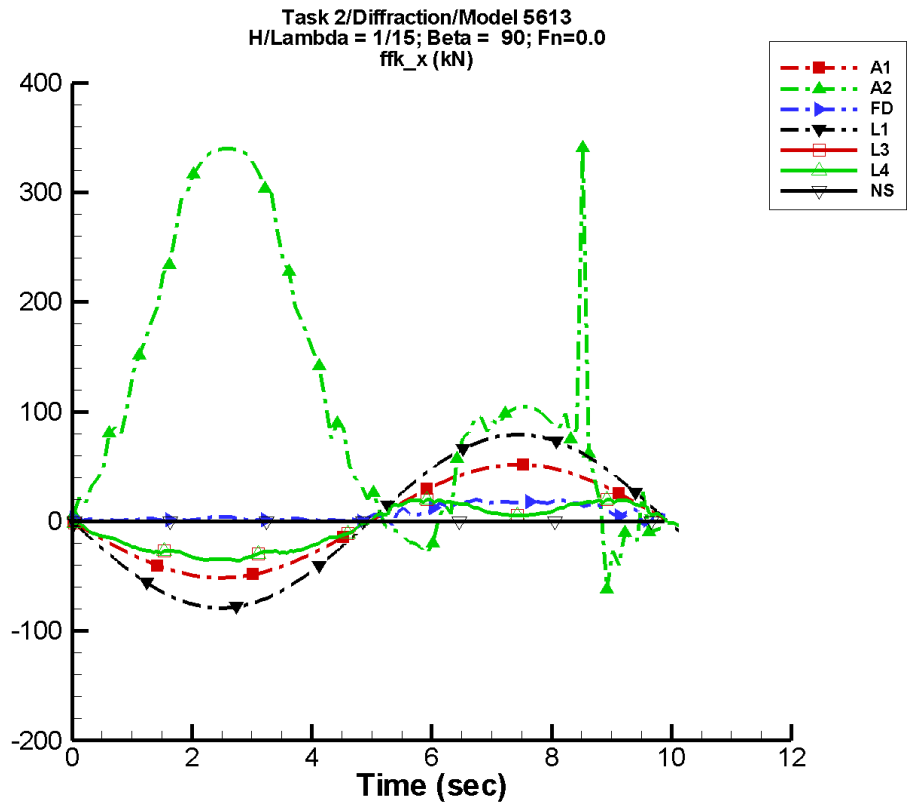
Table G-1059. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.44E-02      | 38.6          | 176               | 3.69E-02      | 155               |
| A2   | 50.5          | 100.          | -7                | 64.8          | -110              |
| FD   | 5.39          | 6.81          | 171               | 3.96          | -108              |
| L1   | 2.45E-02      | 59.3          | 176               | 3.90E-02      | 143               |
| L3   | -1.25         | 24.8          | 177               | 2.29          | 88                |
| L4   | -1.25         | 24.8          | 177               | 2.29          | 88                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1060. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -38.5           | 38.6            | -38.1           | 38.2            |
| A2   | -405.           | 228.            | -72.2           | 209.            |
| FD   | -0.780          | 18.6            | 0.652           | 17.9            |
| L1   | -59.3           | 59.3            | -59.1           | 59.1            |
| L3   | -26.9           | 20.3            | -26.4           | 18.8            |
| L4   | -26.9           | 20.3            | -26.4           | 18.8            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-531. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

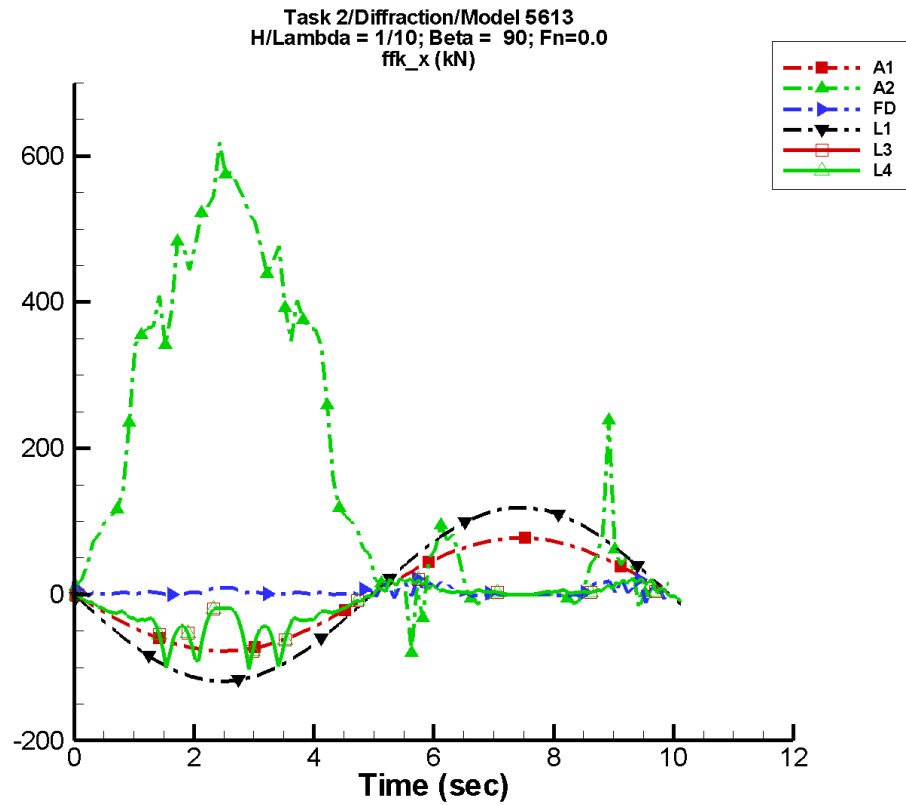
Table G-1061. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.25E-02      | 51.5          | 176               | 4.93E-02      | 155               |
| A2   | 115.          | 113.          | -6                | 114.          | -108              |
| FD   | 6.81          | 8.19          | 173               | 4.20          | -104              |
| L1   | 3.27E-02      | 79.1          | 176               | 5.21E-02      | 143               |
| L3   | -5.15         | 25.2          | 178               | 6.55          | 86                |
| L4   | -5.15         | 25.2          | 178               | 6.55          | 86                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1062. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -51.5           | 51.5            | -50.9           | 50.9            |
| A2   | -61.7           | 341.            | -18.5           | 338.            |
| FD   | -4.21           | 20.2            | 0.857           | 18.0            |
| L1   | -79.1           | 79.1            | -78.8           | 78.8            |
| L3   | -35.7           | 20.2            | -34.9           | 18.9            |
| L4   | -35.7           | 20.2            | -34.9           | 18.9            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-532. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

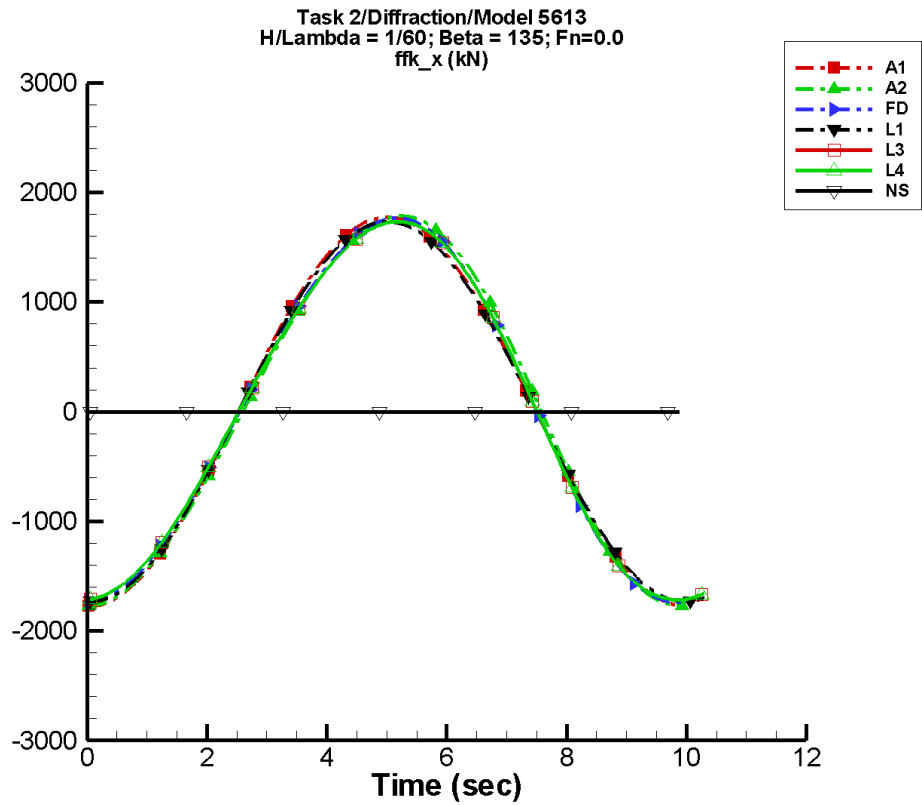
Table G-1063. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.88E-02      | 77.2          | 176               | 7.40E-02      | 155               |
| A2   | 171.          | 250.          | -8                | 123.          | -107              |
| FD   | 3.67          | 0.751         | -147              | 1.46          | 52                |
| L1   | 4.91E-02      | 119.          | 176               | 7.80E-02      | 143               |
| L3   | -14.5         | 31.2          | 178               | 12.3          | 89                |
| L4   | -14.5         | 31.2          | 178               | 12.3          | 89                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1064. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -77.2           | 77.2            | -76.4           | 76.4            |
| A2   | -79.7           | 618.            | -6.44           | 559.            |
| FD   | -11.4           | 21.8            | -0.616          | 11.7            |
| L1   | -119.           | 119.            | -118.           | 118.            |
| L3   | -102.           | 22.4            | -64.2           | 17.9            |
| L4   | -102.           | 22.4            | -64.2           | 17.9            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-533. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1065. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

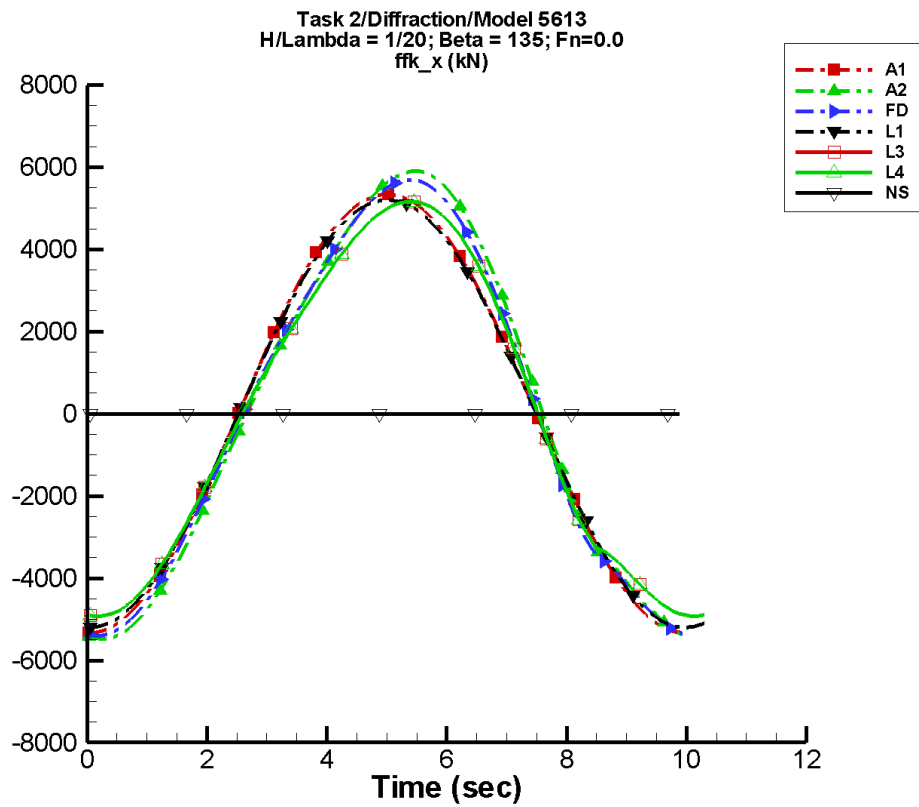
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.45          | 1.77E+03      | -96               | 2.01          | -156              |
| A2   | 4.51          | 1.78E+03      | -99               | 78.3          | -19               |
| FD   | 1.97          | 1.76E+03      | -100              | 77.5          | -18               |
| L1   | 1.83          | 1.73E+03      | -96               | 1.22          | -101              |
| L3   | 2.08          | 1.73E+03      | -96               | 85.5          | -13               |
| L4   | 2.08          | 1.73E+03      | -96               | 85.5          | -13               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1066. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.77E+03       | 1.77E+03        | -1.78E+03       | 1.76E+03        |
| A2   | -1.77E+03       | 1.78E+03        | -1.77E+03       | 1.77E+03        |
| FD   | -1.74E+03       | 1.77E+03        | -1.73E+03       | 1.75E+03        |
| L1   | -1.73E+03       | 1.73E+03        | -1.73E+03       | 1.73E+03        |
| L3   | -1.72E+03       | 1.73E+03        | -1.71E+03       | 1.73E+03        |
| L4   | -1.72E+03       | 1.73E+03        | -1.71E+03       | 1.73E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-534. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

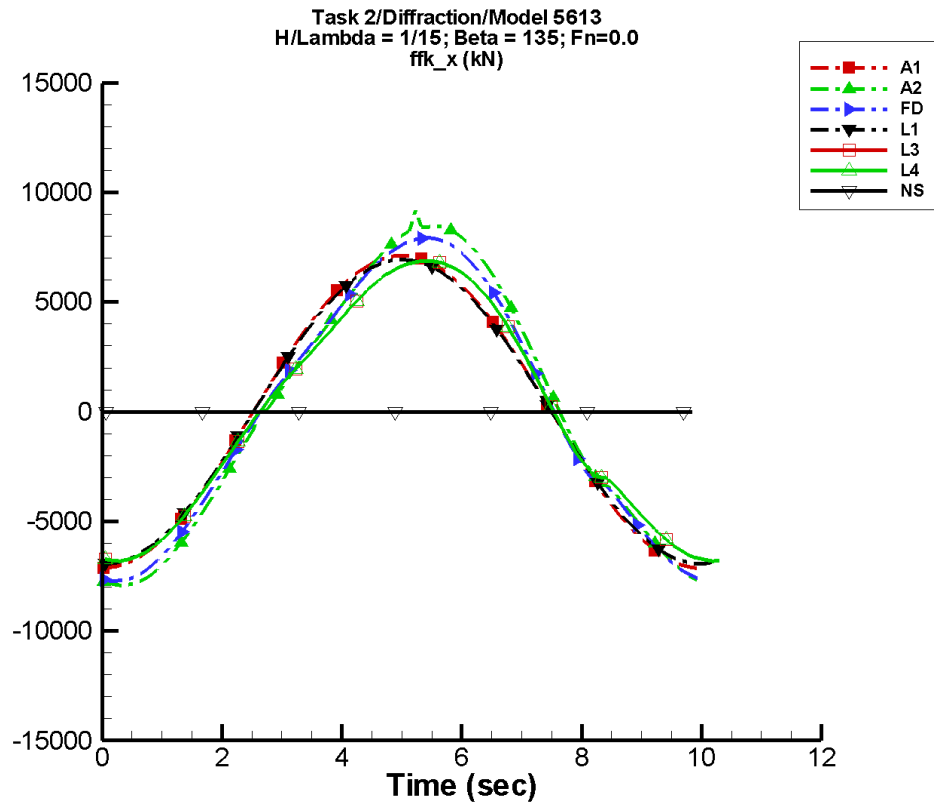
Table G-1067. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.36          | 5.34E+03      | -96               | 6.05          | -156              |
| A2   | 49.0          | 5.64E+03      | -102              | 331.          | -3                |
| FD   | -4.54         | 5.50E+03      | -103              | 375.          | -11               |
| L1   | 5.50          | 5.20E+03      | -96               | 3.67          | -101              |
| L3   | 0.349         | 5.01E+03      | -99               | 347.          | -1                |
| L4   | 0.349         | 5.01E+03      | -99               | 347.          | -1                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1068. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.34E+03       | 5.34E+03        | -5.34E+03       | 5.28E+03        |
| A2   | -5.49E+03       | 5.90E+03        | -5.48E+03       | 5.83E+03        |
| FD   | -5.40E+03       | 5.69E+03        | -5.40E+03       | 5.62E+03        |
| L1   | -5.20E+03       | 5.20E+03        | -5.19E+03       | 5.18E+03        |
| L3   | -4.92E+03       | 5.16E+03        | -4.91E+03       | 5.14E+03        |
| L4   | -4.92E+03       | 5.16E+03        | -4.91E+03       | 5.14E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-535. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

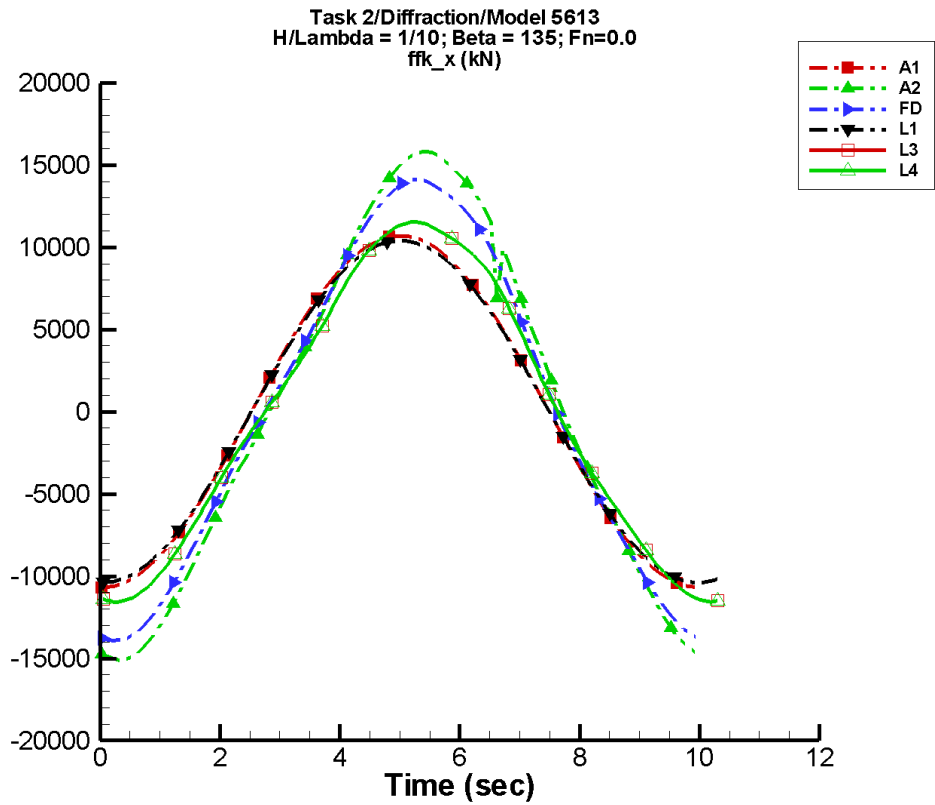
Table G-1069. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 5.83          | 7.12E+03      | -96               | 8.08          | -156              |
| A2   | 103.          | 7.98E+03      | -105              | 380.          | -6                |
| FD   | -23.1         | 7.61E+03      | -105              | 427.          | -15               |
| L1   | 7.33          | 6.93E+03      | -96               | 4.90          | -101              |
| L3   | 1.16          | 6.64E+03      | -102              | 312.          | -6                |
| L4   | 1.16          | 6.64E+03      | -102              | 312.          | -6                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1070. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.12E+03       | 7.12E+03        | -7.13E+03       | 7.05E+03        |
| A2   | -7.92E+03       | 9.17E+03        | -7.85E+03       | 8.46E+03        |
| FD   | -7.72E+03       | 7.93E+03        | -7.71E+03       | 7.83E+03        |
| L1   | -6.93E+03       | 6.93E+03        | -6.92E+03       | 6.91E+03        |
| L3   | -6.81E+03       | 6.87E+03        | -6.77E+03       | 6.85E+03        |
| L4   | -6.81E+03       | 6.87E+03        | -6.77E+03       | 6.85E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-536. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

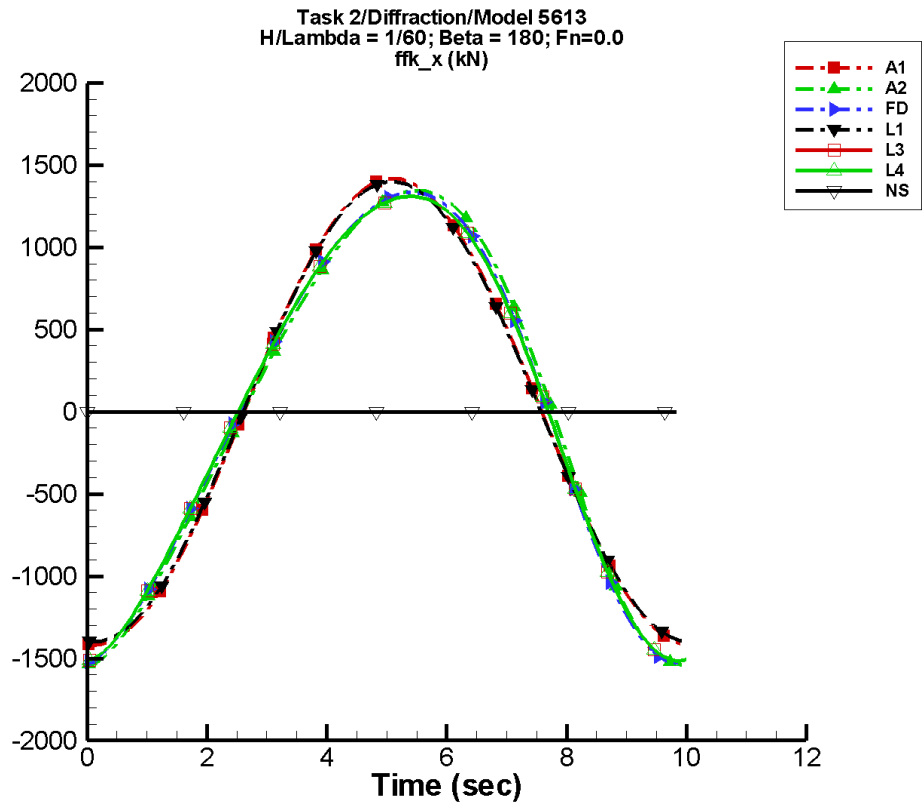
Table G-1071. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.74          | 1.07E+04      | -96               | 12.1          | -156              |
| A2   | 84.7          | 1.47E+04      | -107              | 752.          | -21               |
| FD   | -51.5         | 1.35E+04      | -107              | 755.          | -18               |
| L1   | 11.0          | 1.04E+04      | -96               | 7.35          | -101              |
| L3   | -0.451        | 1.11E+04      | -104              | 462.          | -13               |
| L4   | -0.451        | 1.11E+04      | -104              | 462.          | -13               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1072. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.07E+04       | 1.07E+04        | -1.07E+04       | 1.06E+04        |
| A2   | -1.51E+04       | 1.58E+04        | -1.50E+04       | 1.56E+04        |
| FD   | -1.39E+04       | 1.41E+04        | -1.39E+04       | 1.39E+04        |
| L1   | -1.04E+04       | 1.04E+04        | -1.04E+04       | 1.04E+04        |
| L3   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| L4   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-537. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1073. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

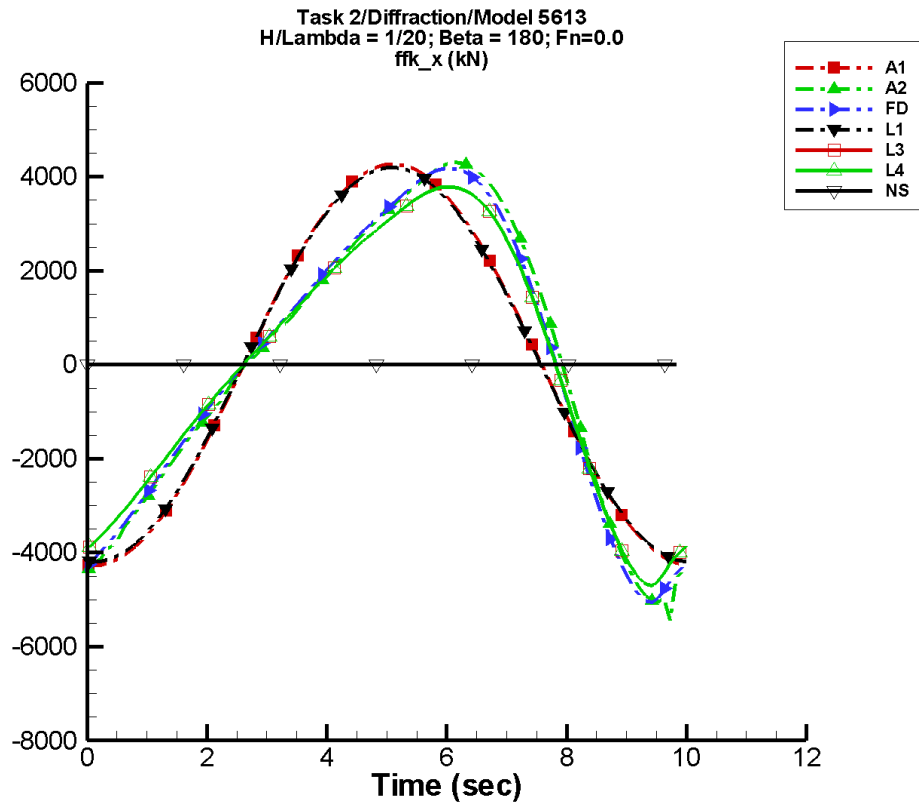
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.21          | 1.42E+03      | -99               | 1.66          | -158              |
| A2   | 5.07          | 1.41E+03      | -102              | 167.          | -56               |
| FD   | 2.42          | 1.40E+03      | -103              | 155.          | -60               |
| L1   | 1.02          | 1.40E+03      | -99               | 1.23          | -69               |
| L3   | 2.54          | 1.38E+03      | -99               | 149.          | -56               |
| L4   | 2.54          | 1.38E+03      | -99               | 149.          | -56               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1074. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.42E+03       | 1.42E+03        | -1.42E+03       | 1.40E+03        |
| A2   | -1.54E+03       | 1.34E+03        | -1.53E+03       | 1.33E+03        |
| FD   | -1.53E+03       | 1.33E+03        | -1.51E+03       | 1.32E+03        |
| L1   | -1.40E+03       | 1.40E+03        | -1.40E+03       | 1.39E+03        |
| L3   | -1.52E+03       | 1.31E+03        | -1.51E+03       | 1.31E+03        |
| L4   | -1.52E+03       | 1.31E+03        | -1.51E+03       | 1.31E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-538. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

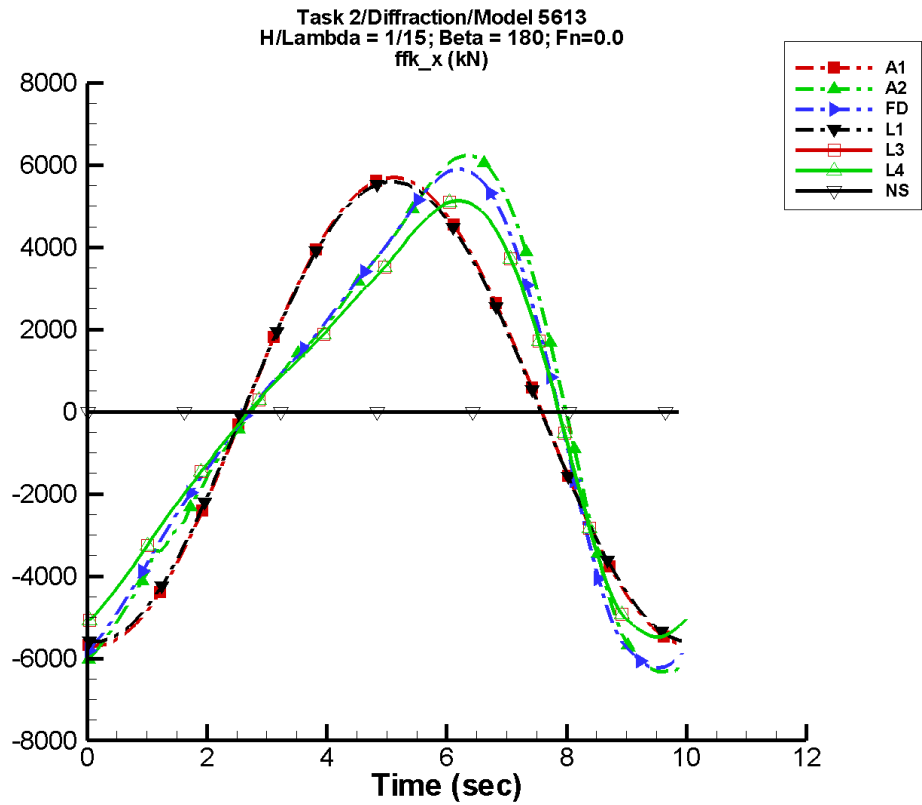
Table G-1075. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.64          | 4.27E+03      | -99               | 4.99          | -158              |
| A2   | 57.8          | 4.05E+03      | -107              | 1.17E+03      | -45               |
| FD   | 31.1          | 4.01E+03      | -107              | 1.11E+03      | -49               |
| L1   | 3.06          | 4.19E+03      | -99               | 3.68          | -69               |
| L3   | 27.3          | 3.67E+03      | -103              | 998.          | -42               |
| L4   | 27.3          | 3.67E+03      | -103              | 998.          | -42               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1076. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.27E+03       | 4.27E+03        | -4.28E+03       | 4.22E+03        |
| A2   | -5.43E+03       | 4.31E+03        | -4.90E+03       | 4.23E+03        |
| FD   | -5.06E+03       | 4.18E+03        | -4.83E+03       | 4.12E+03        |
| L1   | -4.20E+03       | 4.20E+03        | -4.20E+03       | 4.18E+03        |
| L3   | -4.70E+03       | 3.79E+03        | -4.60E+03       | 3.77E+03        |
| L4   | -4.70E+03       | 3.79E+03        | -4.60E+03       | 3.77E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-539. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

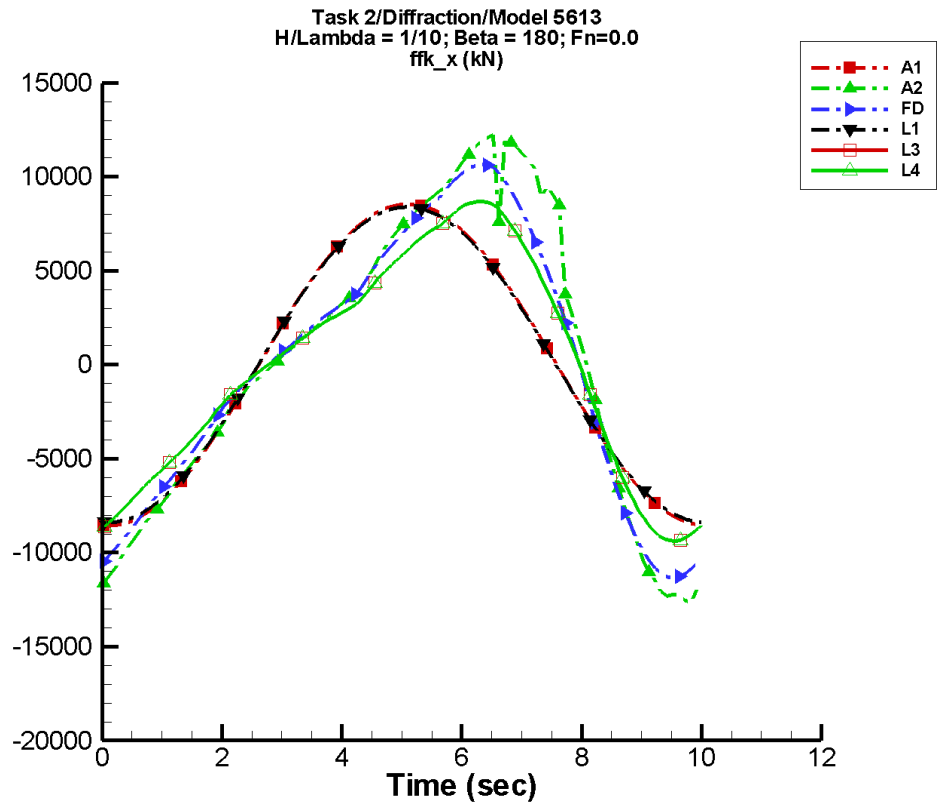
Table G-1077. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.85          | 5.70E+03      | -99               | 6.66          | -158              |
| A2   | 114.          | 5.47E+03      | -111              | 1.75E+03      | -49               |
| FD   | 39.5          | 5.31E+03      | -111              | 1.69E+03      | -51               |
| L1   | 4.08          | 5.59E+03      | -99               | 4.91          | -69               |
| L3   | 26.9          | 4.66E+03      | -107              | 1.45E+03      | -44               |
| L4   | 26.9          | 4.66E+03      | -107              | 1.45E+03      | -44               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1078. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.70E+03       | 5.70E+03        | -5.71E+03       | 5.64E+03        |
| A2   | -6.33E+03       | 6.23E+03        | -6.22E+03       | 6.12E+03        |
| FD   | -6.24E+03       | 5.90E+03        | -6.12E+03       | 5.80E+03        |
| L1   | -5.59E+03       | 5.59E+03        | -5.60E+03       | 5.57E+03        |
| L3   | -5.48E+03       | 5.14E+03        | -5.44E+03       | 5.11E+03        |
| L4   | -5.48E+03       | 5.14E+03        | -5.44E+03       | 5.11E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-540. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

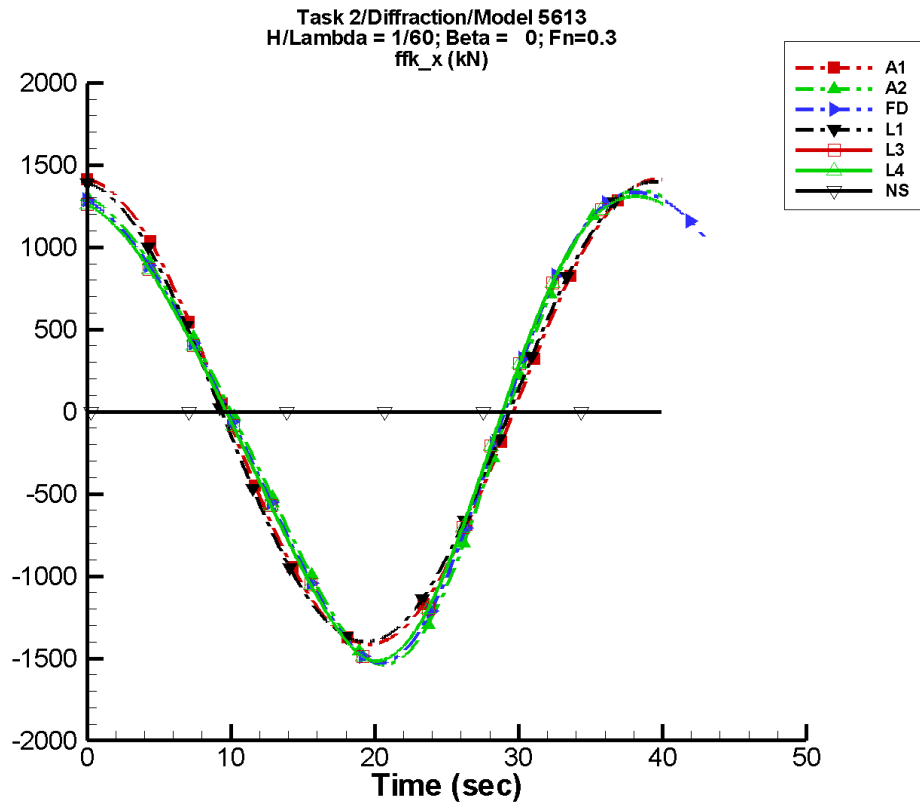
Table G-1079. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 7.28          | 8.55E+03      | -99               | 9.99          | -158              |
| A2   | 296.          | 1.01E+04      | -116              | 3.73E+03      | -56               |
| FD   | 51.4          | 9.22E+03      | -114              | 3.12E+03      | -55               |
| L1   | 6.12          | 8.39E+03      | -99               | 7.36          | -69               |
| L3   | 31.0          | 7.63E+03      | -110              | 2.45E+03      | -49               |
| L4   | 31.0          | 7.63E+03      | -110              | 2.45E+03      | -49               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1080. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.55E+03       | 8.55E+03        | -8.57E+03       | 8.46E+03        |
| A2   | -1.26E+04       | 1.22E+04        | -1.22E+04       | 1.13E+04        |
| FD   | -1.13E+04       | 1.06E+04        | -1.11E+04       | 1.04E+04        |
| L1   | -8.39E+03       | 8.39E+03        | -8.40E+03       | 8.36E+03        |
| L3   | -9.38E+03       | 8.68E+03        | -9.30E+03       | 8.63E+03        |
| L4   | -9.38E+03       | 8.68E+03        | -9.30E+03       | 8.63E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-541. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1081. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

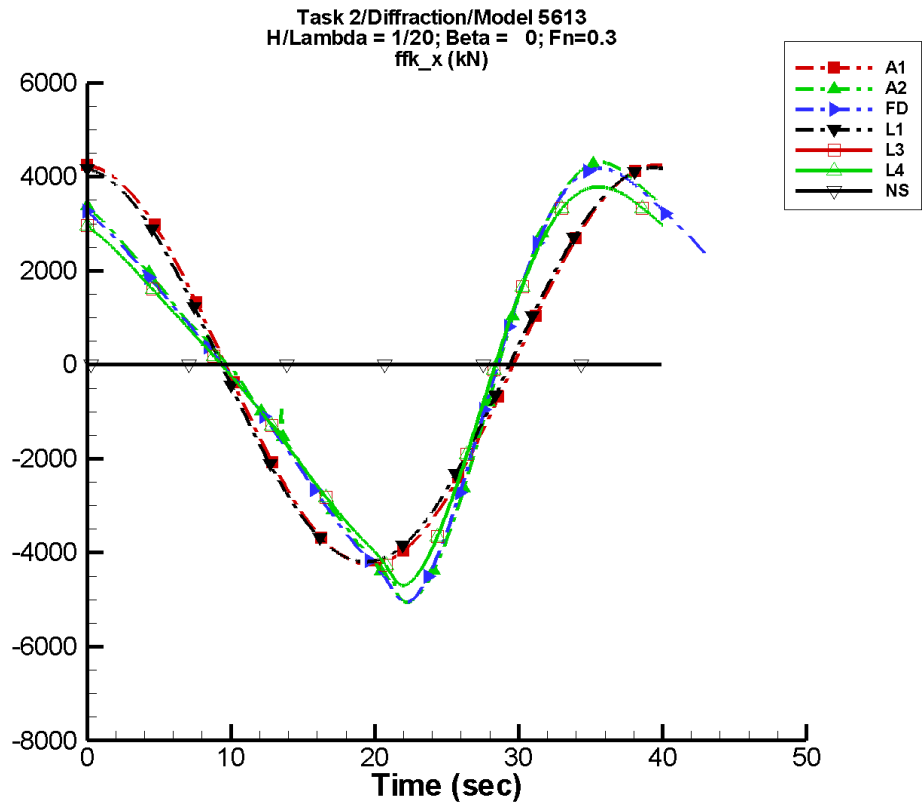
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.31E-02     | 1.41E+03      | 93                | 4.89E-02      | 21                |
| A2   | 3.33          | 1.41E+03      | 93                | 162.          | -142              |
| FD   | 2.55          | 1.40E+03      | 93                | 155.          | -141              |
| L1   | -0.941        | 1.40E+03      | 94                | 1.26          | 146               |
| L3   | 0.912         | 1.39E+03      | 95                | 151.          | -133              |
| L4   | 0.912         | 1.39E+03      | 95                | 151.          | -133              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1082. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.41E+03       | 1.41E+03        | -1.41E+03       | 1.41E+03        |
| A2   | -1.54E+03       | 1.34E+03        | -1.54E+03       | 1.34E+03        |
| FD   | -1.53E+03       | 1.33E+03        | -1.53E+03       | 1.33E+03        |
| L1   | -1.40E+03       | 1.40E+03        | -1.40E+03       | 1.40E+03        |
| L3   | -1.52E+03       | 1.31E+03        | -1.52E+03       | 1.31E+03        |
| L4   | -1.52E+03       | 1.31E+03        | -1.52E+03       | 1.31E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-542. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

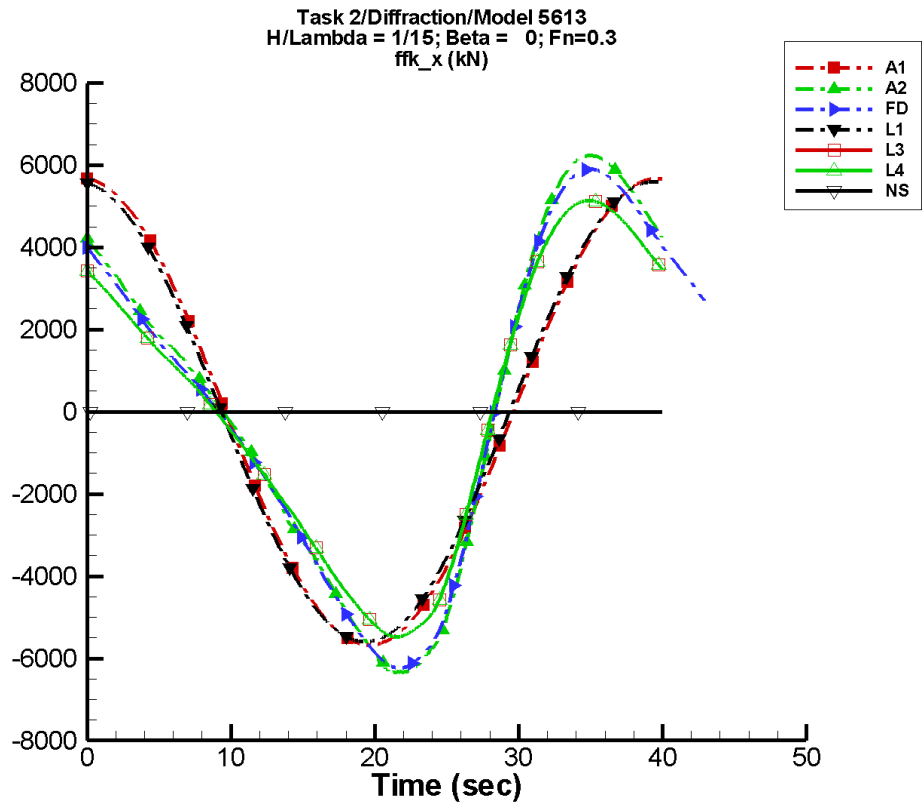
Table G-1083. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.90E-02     | 4.25E+03      | 93                | 0.148         | 21                |
| A2   | 58.1          | 4.09E+03      | 98                | 1.16E+03      | -151              |
| FD   | 23.9          | 4.03E+03      | 97                | 1.10E+03      | -153              |
| L1   | -2.82         | 4.19E+03      | 94                | 3.77          | 146               |
| L3   | 7.06          | 3.74E+03      | 98                | 1.04E+03      | -150              |
| L4   | 7.06          | 3.74E+03      | 98                | 1.04E+03      | -150              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1084. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.25E+03       | 4.25E+03        | -4.25E+03       | 4.25E+03        |
| A2   | -5.05E+03       | 4.31E+03        | -5.04E+03       | 4.30E+03        |
| FD   | -5.06E+03       | 4.18E+03        | -5.05E+03       | 4.17E+03        |
| L1   | -4.20E+03       | 4.20E+03        | -4.19E+03       | 4.19E+03        |
| L3   | -4.70E+03       | 3.79E+03        | -4.69E+03       | 3.79E+03        |
| L4   | -4.70E+03       | 3.79E+03        | -4.69E+03       | 3.79E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-543. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

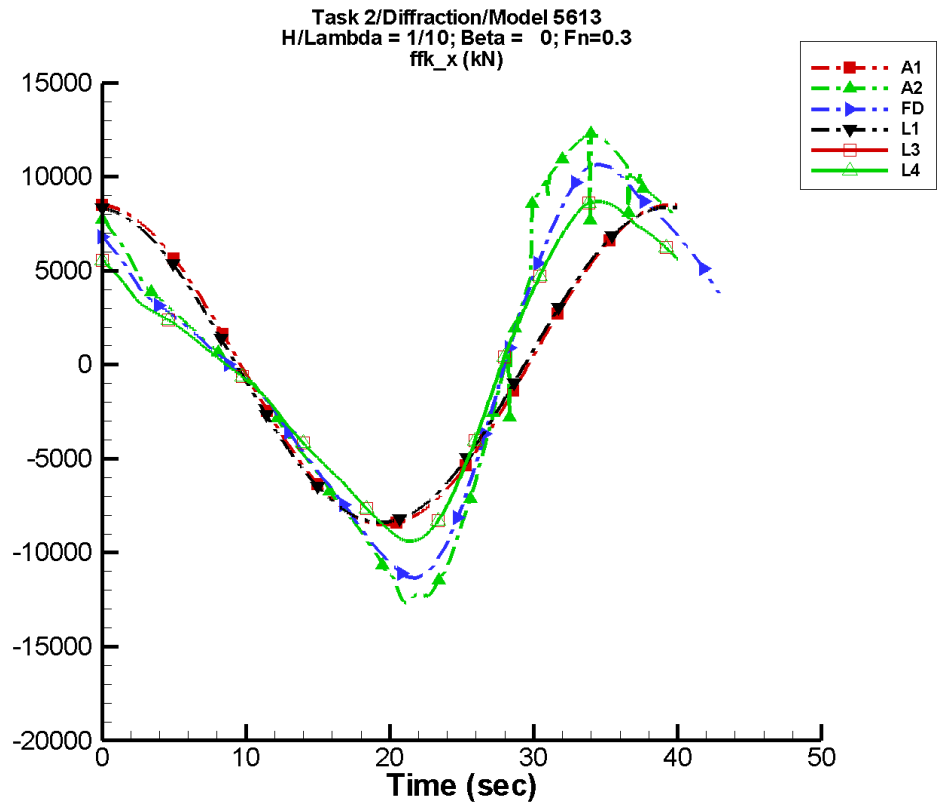
Table G-1085. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.132        | 5.67E+03      | 93                | 0.197         | 21                |
| A2   | 112.          | 5.52E+03      | 102               | 1.77E+03      | -147              |
| FD   | 25.4          | 5.33E+03      | 101               | 1.66E+03      | -150              |
| L1   | -3.77         | 5.59E+03      | 94                | 5.03          | 146               |
| L3   | -2.99         | 4.72E+03      | 102               | 1.47E+03      | -148              |
| L4   | -2.99         | 4.72E+03      | 102               | 1.47E+03      | -148              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1086. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.67E+03       | 5.67E+03        | -5.67E+03       | 5.67E+03        |
| A2   | -6.38E+03       | 6.23E+03        | -6.34E+03       | 6.23E+03        |
| FD   | -6.24E+03       | 5.90E+03        | -6.23E+03       | 5.89E+03        |
| L1   | -5.59E+03       | 5.59E+03        | -5.59E+03       | 5.59E+03        |
| L3   | -5.48E+03       | 5.14E+03        | -5.47E+03       | 5.13E+03        |
| L4   | -5.48E+03       | 5.14E+03        | -5.47E+03       | 5.13E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-544. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

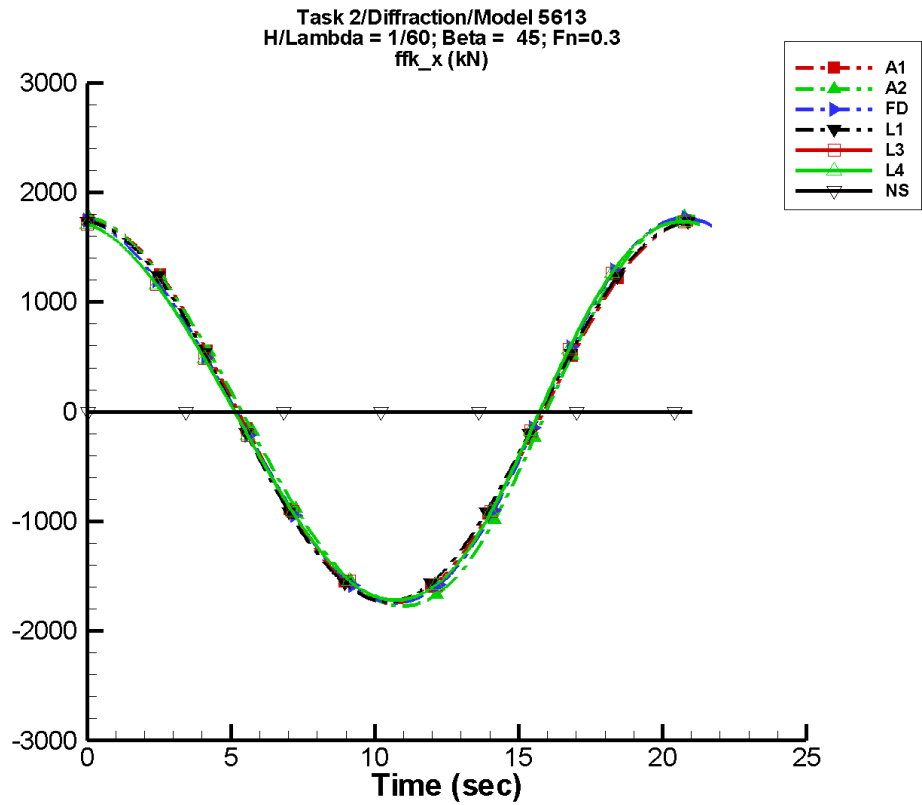
Table G-1087. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.198        | 8.51E+03      | 93                | 0.296         | 21                |
| A2   | 299.          | 1.03E+04      | 106               | 3.79E+03      | -141              |
| FD   | 40.6          | 9.26E+03      | 104               | 3.08E+03      | -145              |
| L1   | -5.65         | 8.39E+03      | 94                | 7.54          | 146               |
| L3   | -7.38         | 7.72E+03      | 105               | 2.51E+03      | -142              |
| L4   | -7.38         | 7.72E+03      | 105               | 2.51E+03      | -142              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1088. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.51E+03       | 8.51E+03        | -8.51E+03       | 8.51E+03        |
| A2   | -1.27E+04       | 1.23E+04        | -1.26E+04       | 1.21E+04        |
| FD   | -1.13E+04       | 1.06E+04        | -1.13E+04       | 1.06E+04        |
| L1   | -8.39E+03       | 8.39E+03        | -8.39E+03       | 8.39E+03        |
| L3   | -9.39E+03       | 8.68E+03        | -9.38E+03       | 8.68E+03        |
| L4   | -9.39E+03       | 8.68E+03        | -9.38E+03       | 8.68E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-545. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1089. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

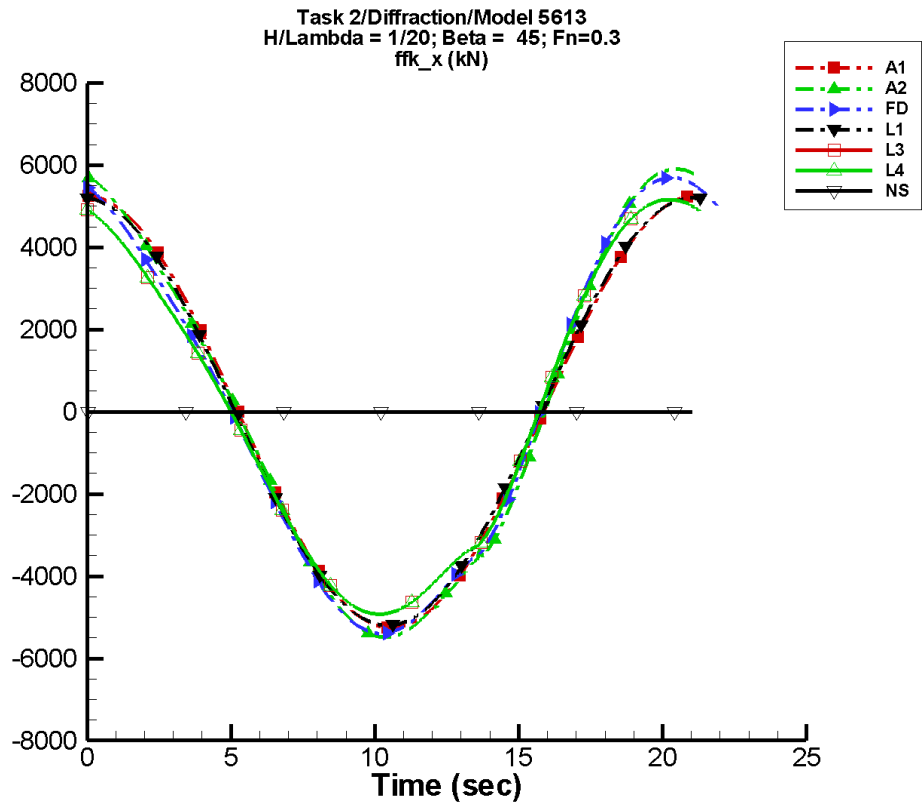
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.424         | 1.75E+03      | 92                | 0.626         | -157              |
| A2   | 3.63          | 1.78E+03      | 91                | 82.2          | -175              |
| FD   | 1.15          | 1.76E+03      | 97                | 76.8          | -168              |
| L1   | 0.226         | 1.73E+03      | 93                | 0.349         | -168              |
| L3   | 1.12          | 1.73E+03      | 94                | 85.4          | -172              |
| L4   | 1.12          | 1.73E+03      | 94                | 85.4          | -172              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1090. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.75E+03       | 1.75E+03        | -1.74E+03       | 1.75E+03        |
| A2   | -1.77E+03       | 1.78E+03        | -1.77E+03       | 1.78E+03        |
| FD   | -1.74E+03       | 1.77E+03        | -1.74E+03       | 1.76E+03        |
| L1   | -1.73E+03       | 1.73E+03        | -1.73E+03       | 1.73E+03        |
| L3   | -1.72E+03       | 1.73E+03        | -1.72E+03       | 1.73E+03        |
| L4   | -1.72E+03       | 1.73E+03        | -1.72E+03       | 1.73E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-546. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

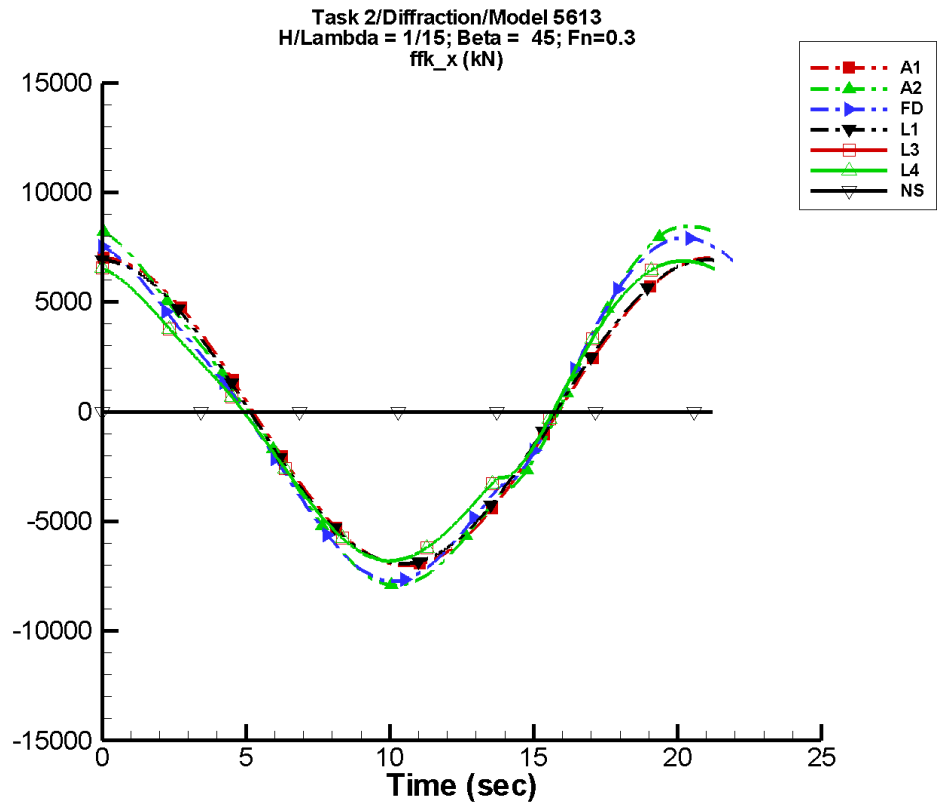
Table G-1091. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.28          | 5.25E+03      | 92                | 1.88          | -157              |
| A2   | 55.5          | 5.59E+03      | 94                | 369.          | 170               |
| FD   | 3.73          | 5.45E+03      | 101               | 365.          | -174              |
| L1   | 0.679         | 5.20E+03      | 93                | 1.05          | -168              |
| L3   | -0.131        | 4.99E+03      | 97                | 353.          | -179              |
| L4   | -0.131        | 4.99E+03      | 97                | 353.          | -179              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1092. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.25E+03       | 5.25E+03        | -5.24E+03       | 5.26E+03        |
| A2   | -5.49E+03       | 5.90E+03        | -5.47E+03       | 5.89E+03        |
| FD   | -5.40E+03       | 5.69E+03        | -5.38E+03       | 5.68E+03        |
| L1   | -5.20E+03       | 5.20E+03        | -5.19E+03       | 5.20E+03        |
| L3   | -4.92E+03       | 5.16E+03        | -4.92E+03       | 5.16E+03        |
| L4   | -4.92E+03       | 5.16E+03        | -4.92E+03       | 5.16E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-547. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

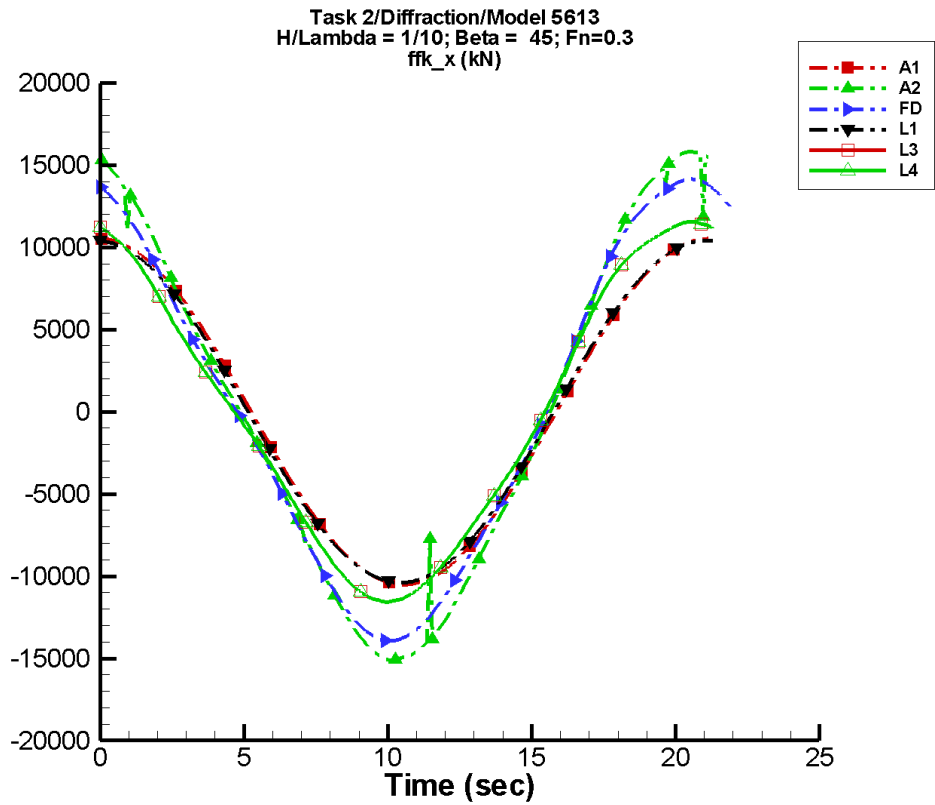
Table G-1093. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.70          | 7.01E+03      | 92                | 2.52          | -157              |
| A2   | 90.8          | 7.88E+03      | 97                | 460.          | 169               |
| FD   | 8.23          | 7.52E+03      | 103               | 410.          | -167              |
| L1   | 0.905         | 6.93E+03      | 93                | 1.40          | -168              |
| L3   | -6.30         | 6.62E+03      | 99                | 345.          | -172              |
| L4   | -6.30         | 6.62E+03      | 99                | 345.          | -172              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1094. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.01E+03       | 7.01E+03        | -7.00E+03       | 7.02E+03        |
| A2   | -7.92E+03       | 8.45E+03        | -7.90E+03       | 8.44E+03        |
| FD   | -7.72E+03       | 7.93E+03        | -7.70E+03       | 7.91E+03        |
| L1   | -6.93E+03       | 6.93E+03        | -6.93E+03       | 6.93E+03        |
| L3   | -6.81E+03       | 6.87E+03        | -6.80E+03       | 6.87E+03        |
| L4   | -6.81E+03       | 6.87E+03        | -6.80E+03       | 6.87E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-548. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

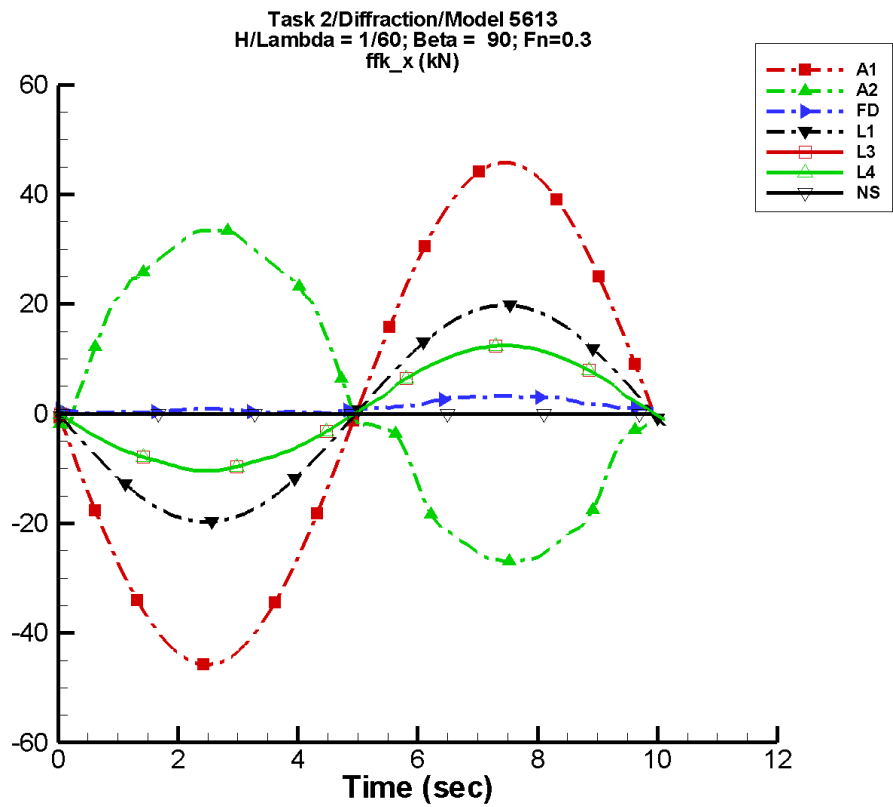
Table G-1095. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.56          | 1.05E+04      | 92                | 3.77          | -157              |
| A2   | 108.          | 1.45E+04      | 99                | 890.          | 172               |
| FD   | 26.1          | 1.34E+04      | 105               | 780.          | -166              |
| L1   | 1.36          | 1.04E+04      | 93                | 2.09          | -168              |
| L3   | -17.2         | 1.11E+04      | 101               | 530.          | -175              |
| L4   | -17.2         | 1.11E+04      | 101               | 530.          | -175              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1096. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.05E+04       | 1.05E+04        | -1.05E+04       | 1.05E+04        |
| A2   | -1.51E+04       | 1.58E+04        | -1.51E+04       | 1.56E+04        |
| FD   | -1.39E+04       | 1.42E+04        | -1.39E+04       | 1.41E+04        |
| L1   | -1.04E+04       | 1.04E+04        | -1.04E+04       | 1.04E+04        |
| L3   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| L4   | -1.16E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-549. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1097. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

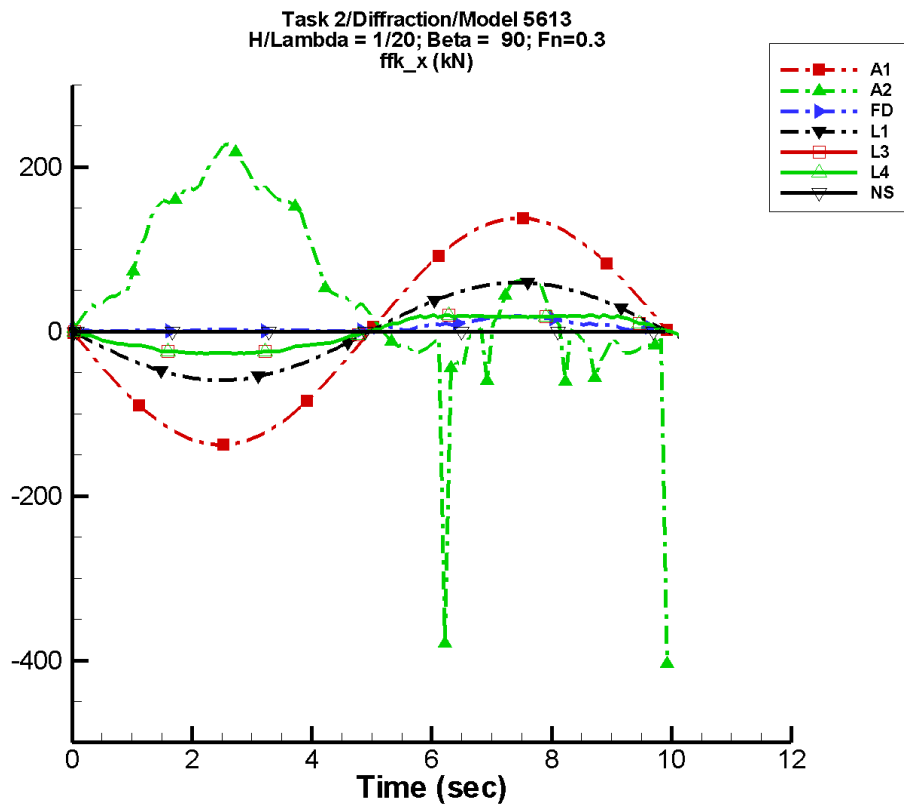
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.90E-02      | 45.8          | 176               | 4.39E-02      | 155               |
| A2   | 2.82          | 30.2          | -8                | 0.754         | -94               |
| FD   | 1.27          | 1.30          | 172               | 0.686         | -106              |
| L1   | 8.18E-03      | 19.8          | 176               | 1.30E-02      | 143               |
| L3   | 0.673         | 11.3          | 176               | 0.497         | -98               |
| L4   | 0.673         | 11.3          | 176               | 0.497         | -98               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1098. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -45.8           | 45.8            | -45.3           | 45.3            |
| A2   | -27.0           | 33.5            | -26.8           | 33.2            |
| FD   | 0.131           | 3.28            | 0.237           | 3.20            |
| L1   | -19.8           | 19.8            | -19.7           | 19.7            |
| L3   | -10.3           | 12.5            | -10.3           | 12.4            |
| L4   | -10.3           | 12.5            | -10.3           | 12.4            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-550. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

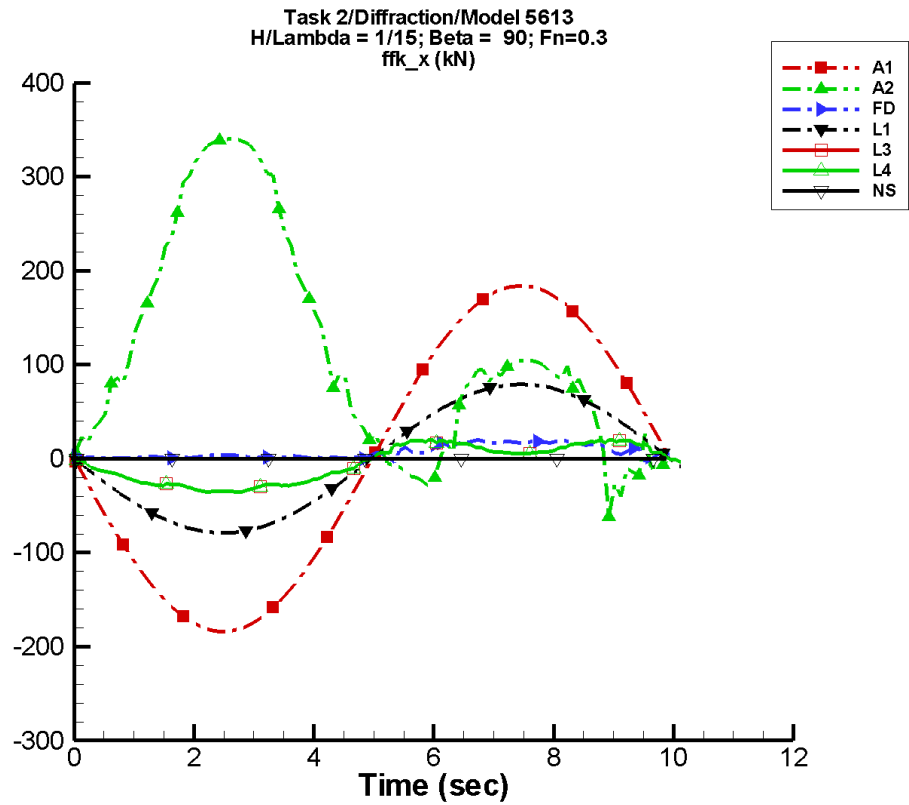
Table G-1099. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.71E-02      | 138.          | 176               | 0.132         | 155               |
| A2   | 50.5          | 100.          | -7                | 64.8          | -110              |
| FD   | 5.39          | 6.81          | 171               | 3.96          | -108              |
| L1   | 2.46E-02      | 59.3          | 176               | 3.90E-02      | 143               |
| L3   | -1.25         | 24.8          | 177               | 2.29          | 88                |
| L4   | -1.25         | 24.8          | 177               | 2.29          | 88                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1100. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -138.           | 138.            | -136.           | 136.            |
| A2   | -405.           | 228.            | -72.2           | 209.            |
| FD   | -0.781          | 18.6            | 0.650           | 17.9            |
| L1   | -59.3           | 59.3            | -59.1           | 59.1            |
| L3   | -26.9           | 20.3            | -26.4           | 18.8            |
| L4   | -26.9           | 20.3            | -26.4           | 18.8            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-551. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

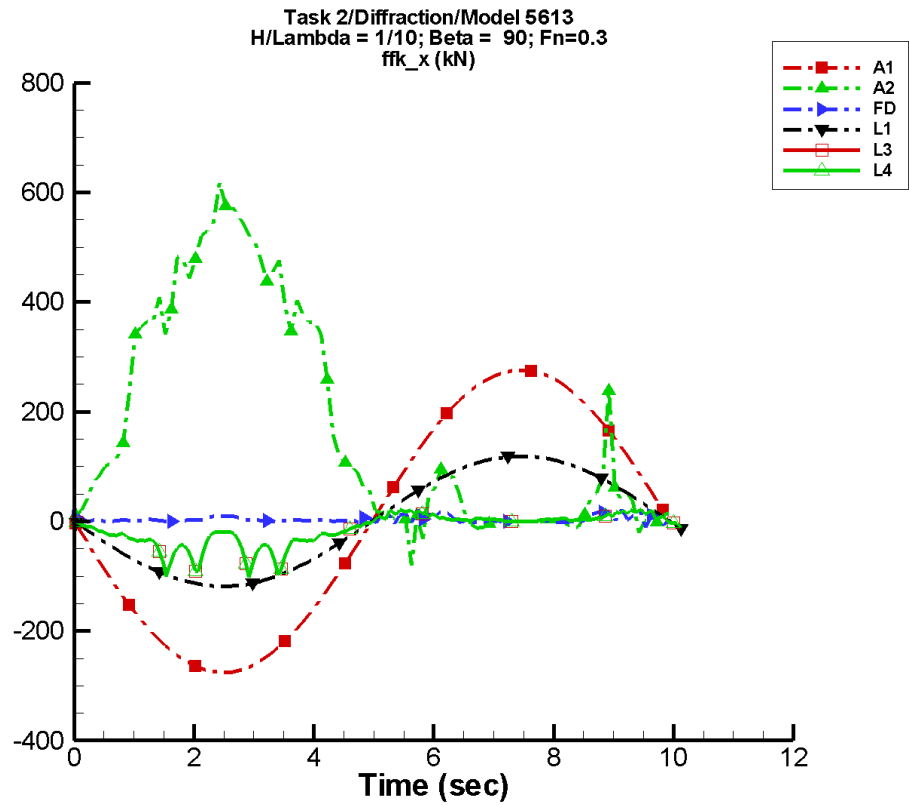
Table G-1101. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.116         | 184.          | 176               | 0.176         | 155               |
| A2   | 112.          | 117.          | -8                | 111.          | -105              |
| FD   | 6.81          | 8.19          | 173               | 4.20          | -104              |
| L1   | 3.27E-02      | 79.1          | 176               | 5.21E-02      | 143               |
| L3   | -5.15         | 25.2          | 178               | 6.55          | 86                |
| L4   | -5.15         | 25.2          | 178               | 6.55          | 86                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1102. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -184.           | 184.            | -182.           | 182.            |
| A2   | -61.7           | 340.            | -18.1           | 338.            |
| FD   | -4.21           | 20.2            | 0.859           | 18.0            |
| L1   | -79.1           | 79.1            | -78.8           | 78.8            |
| L3   | -35.7           | 20.2            | -34.9           | 18.9            |
| L4   | -35.7           | 20.2            | -34.9           | 18.9            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-552. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

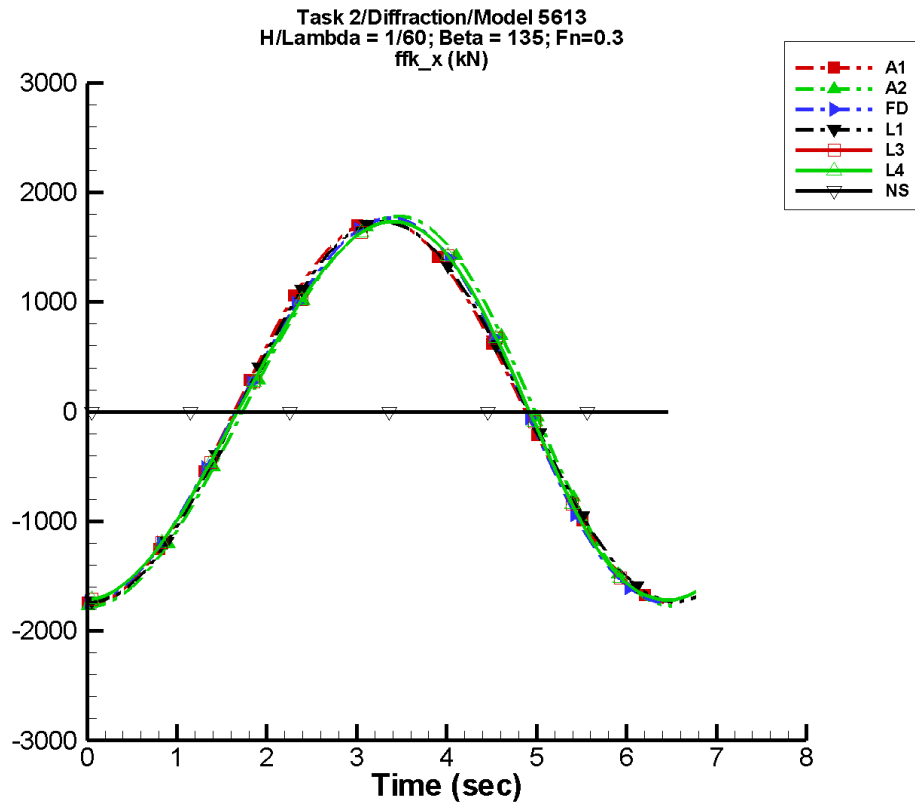
Table G-1103. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.174         | 276.          | 176               | 0.264         | 155               |
| A2   | 171.          | 250.          | -8                | 123.          | -107              |
| FD   | 3.67          | 0.753         | -147              | 1.46          | 52                |
| L1   | 4.91E-02      | 119.          | 176               | 7.81E-02      | 143               |
| L3   | -14.5         | 31.2          | 178               | 12.3          | 89                |
| L4   | -14.5         | 31.2          | 178               | 12.3          | 89                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1104. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -276.           | 276.            | -273.           | 273.            |
| A2   | -79.7           | 618.            | -6.44           | 559.            |
| FD   | -11.4           | 21.8            | -0.617          | 11.7            |
| L1   | -119.           | 119.            | -118.           | 118.            |
| L3   | -102.           | 22.4            | -64.2           | 17.9            |
| L4   | -102.           | 22.4            | -64.2           | 17.9            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-553. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1105. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

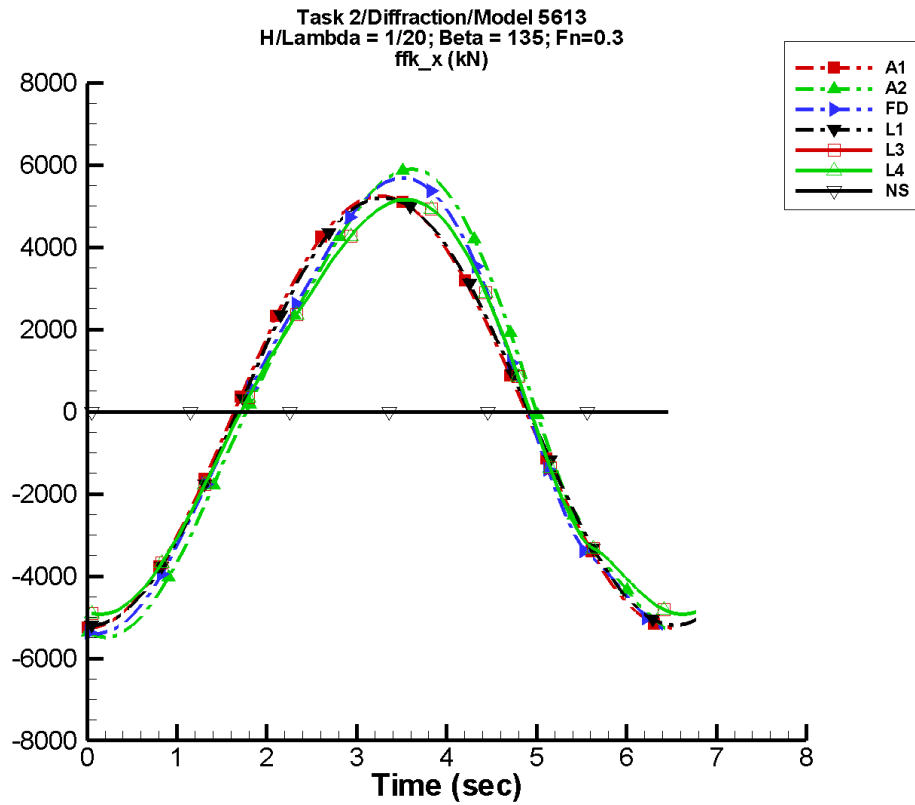
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.666         | 1.75E+03      | -94               | 1.02          | 180               |
| A2   | 3.68          | 1.78E+03      | -99               | 79.2          | -20               |
| FD   | 0.696         | 1.76E+03      | -91               | 76.0          | 3                 |
| L1   | 8.69E-02      | 1.73E+03      | -96               | 0.140         | 117               |
| L3   | 1.17          | 1.73E+03      | -96               | 82.4          | -11               |
| L4   | 1.17          | 1.73E+03      | -96               | 82.4          | -11               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1106. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.75E+03       | 1.74E+03        | -1.75E+03       | 1.70E+03        |
| A2   | -1.77E+03       | 1.78E+03        | -1.78E+03       | 1.74E+03        |
| FD   | -1.74E+03       | 1.76E+03        | -1.72E+03       | 1.72E+03        |
| L1   | -1.73E+03       | 1.73E+03        | -1.74E+03       | 1.72E+03        |
| L3   | -1.72E+03       | 1.73E+03        | -1.72E+03       | 1.72E+03        |
| L4   | -1.72E+03       | 1.73E+03        | -1.72E+03       | 1.72E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-554. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

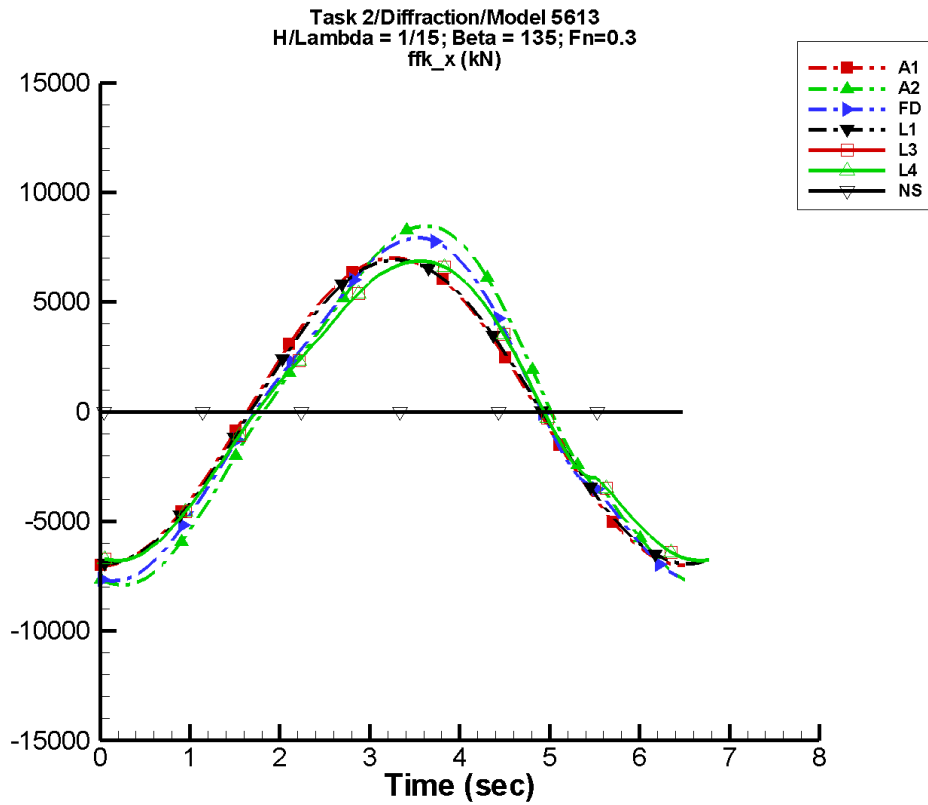
Table G–1107. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.00          | 5.25E+03      | -94               | 3.07          | 180               |
| A2   | 53.9          | 5.64E+03      | -103              | 331.          | -7                |
| FD   | -8.47         | 5.49E+03      | -94               | 336.          | 12                |
| L1   | 0.262         | 5.20E+03      | -96               | 0.419         | 117               |
| L3   | -4.68         | 5.03E+03      | -99               | 316.          | -5                |
| L4   | -4.68         | 5.03E+03      | -99               | 316.          | -5                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1108. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.25E+03       | 5.25E+03        | -5.26E+03       | 5.12E+03        |
| A2   | -5.49E+03       | 5.90E+03        | -5.48E+03       | 5.74E+03        |
| FD   | -5.40E+03       | 5.69E+03        | -5.39E+03       | 5.53E+03        |
| L1   | -5.20E+03       | 5.20E+03        | -5.23E+03       | 5.15E+03        |
| L3   | -4.92E+03       | 5.16E+03        | -4.96E+03       | 5.11E+03        |
| L4   | -4.92E+03       | 5.16E+03        | -4.96E+03       | 5.11E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-555. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

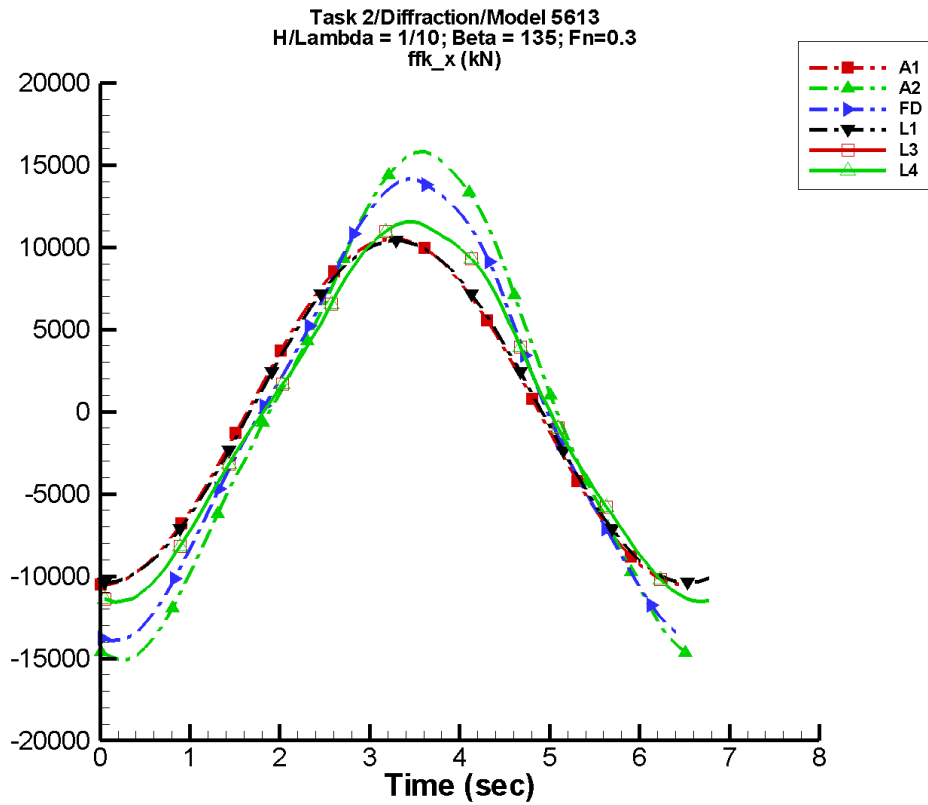
Table G-1109. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.67          | 7.01E+03      | -94               | 4.10          | 180               |
| A2   | 97.5          | 7.96E+03      | -105              | 381.          | -11               |
| FD   | -13.9         | 7.60E+03      | -96               | 339.          | 2                 |
| L1   | 0.349         | 6.93E+03      | -96               | 0.559         | 117               |
| L3   | -16.6         | 6.67E+03      | -101              | 302.          | -18               |
| L4   | -16.6         | 6.67E+03      | -101              | 302.          | -18               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1110. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.01E+03       | 7.00E+03        | -7.02E+03       | 6.84E+03        |
| A2   | -7.91E+03       | 8.45E+03        | -7.85E+03       | 8.25E+03        |
| FD   | -7.72E+03       | 7.93E+03        | -7.71E+03       | 7.70E+03        |
| L1   | -6.93E+03       | 6.93E+03        | -6.98E+03       | 6.87E+03        |
| L3   | -6.81E+03       | 6.87E+03        | -6.82E+03       | 6.81E+03        |
| L4   | -6.81E+03       | 6.87E+03        | -6.82E+03       | 6.81E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-556. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

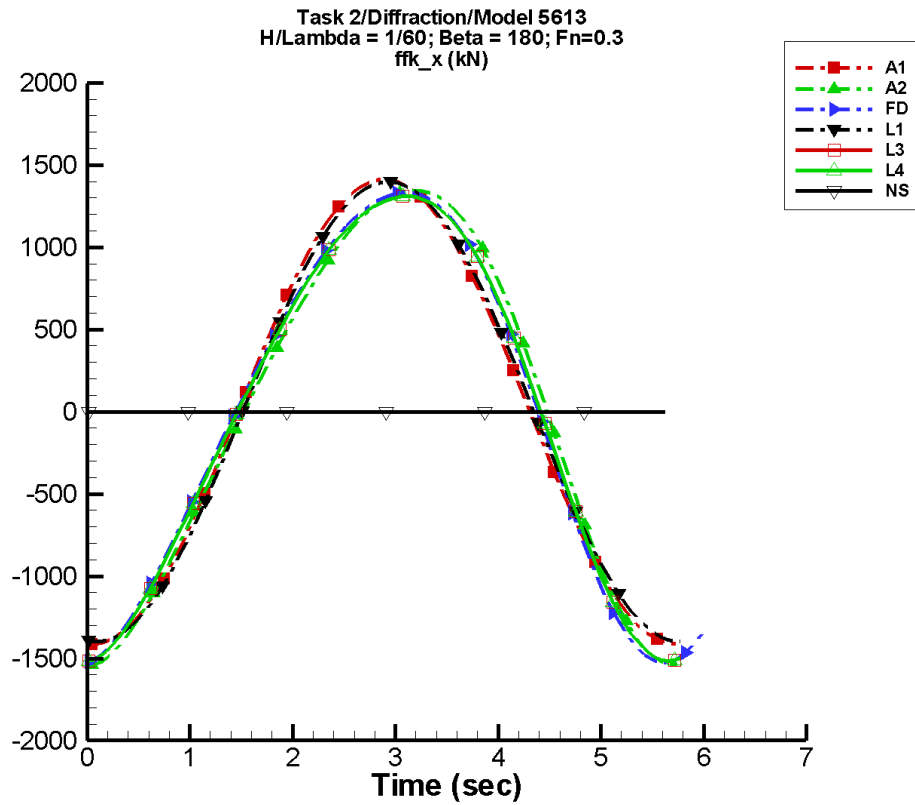
Table G-1111. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.01          | 1.05E+04      | -94               | 6.15          | 180               |
| A2   | 134.          | 1.47E+04      | -107              | 831.          | -26               |
| FD   | -20.9         | 1.35E+04      | -98               | 640.          | -8                |
| L1   | 0.524         | 1.04E+04      | -96               | 0.838         | 117               |
| L3   | -49.1         | 1.11E+04      | -104              | 542.          | -24               |
| L4   | -49.1         | 1.11E+04      | -104              | 542.          | -24               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1112. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.05E+04       | 1.05E+04        | -1.05E+04       | 1.03E+04        |
| A2   | -1.51E+04       | 1.58E+04        | -1.49E+04       | 1.53E+04        |
| FD   | -1.39E+04       | 1.41E+04        | -1.39E+04       | 1.37E+04        |
| L1   | -1.04E+04       | 1.04E+04        | -1.05E+04       | 1.03E+04        |
| L3   | -1.16E+04       | 1.15E+04        | -1.16E+04       | 1.14E+04        |
| L4   | -1.16E+04       | 1.15E+04        | -1.16E+04       | 1.14E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-557. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1113. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

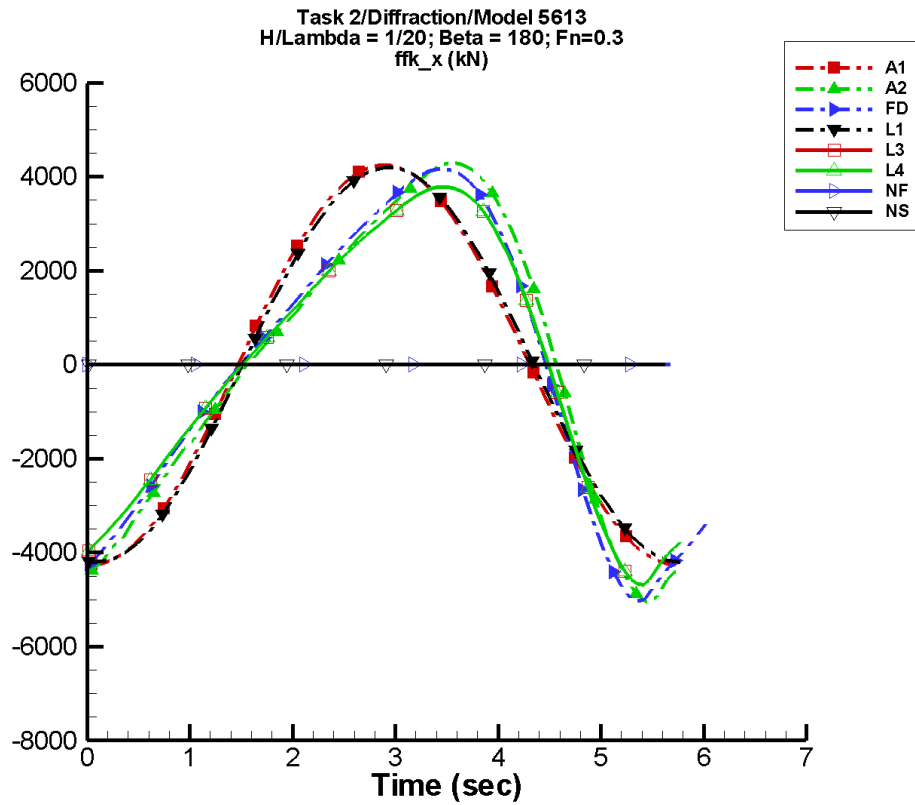
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.13          | 1.41E+03      | -101              | 1.77          | 153               |
| A2   | 4.06          | 1.41E+03      | -108              | 166.          | -68               |
| FD   | 3.11          | 1.40E+03      | -132              | 158.          | -118              |
| L1   | 2.43          | 1.40E+03      | -110              | 2.16          | -118              |
| L3   | 4.33          | 1.38E+03      | -111              | 149.          | -80               |
| L4   | 4.33          | 1.38E+03      | -111              | 149.          | -80               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1114. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.41E+03       | 1.41E+03        | -1.42E+03       | 1.37E+03        |
| A2   | -1.54E+03       | 1.34E+03        | -1.52E+03       | 1.31E+03        |
| FD   | -1.53E+03       | 1.33E+03        | -1.47E+03       | 1.30E+03        |
| L1   | -1.40E+03       | 1.40E+03        | -1.40E+03       | 1.38E+03        |
| L3   | -1.52E+03       | 1.31E+03        | -1.50E+03       | 1.30E+03        |
| L4   | -1.52E+03       | 1.31E+03        | -1.50E+03       | 1.30E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-558. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

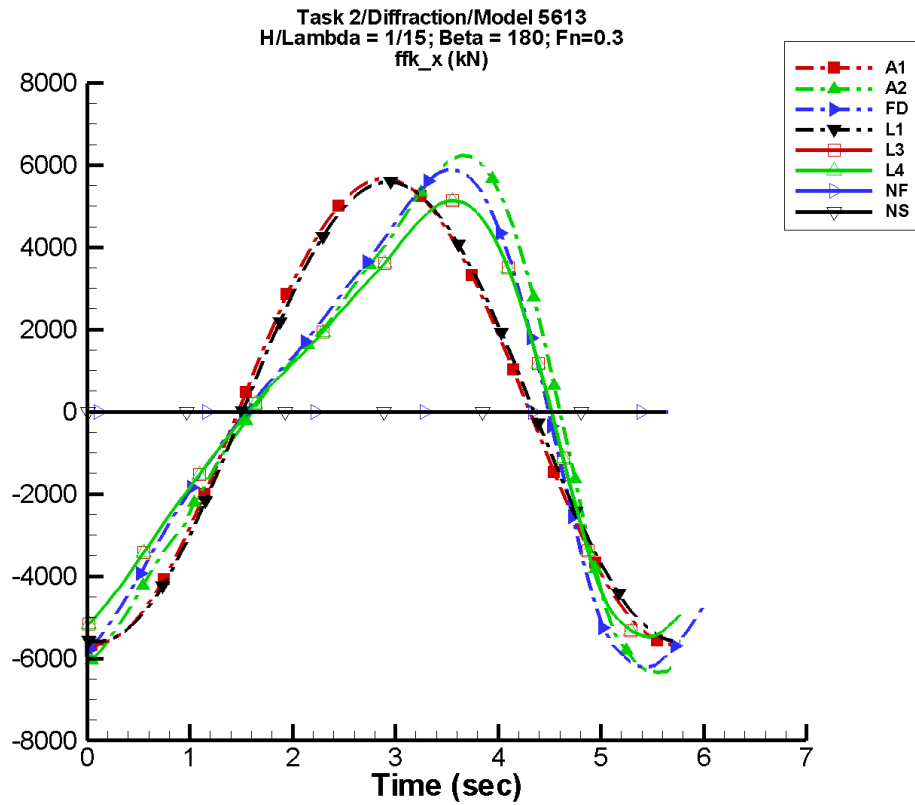
Table G-1115. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.40          | 4.25E+03      | -101              | 5.32          | 153               |
| A2   | 56.1          | 4.04E+03      | -113              | 1.15E+03      | -57               |
| FD   | 29.6          | 4.00E+03      | -135              | 1.15E+03      | -104              |
| L1   | 7.30          | 4.19E+03      | -110              | 6.49          | -118              |
| L3   | 25.6          | 3.67E+03      | -115              | 1.01E+03      | -64               |
| L4   | 25.6          | 3.67E+03      | -115              | 1.01E+03      | -64               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1116. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.25E+03       | 4.25E+03        | -4.26E+03       | 4.11E+03        |
| A2   | -5.05E+03       | 4.31E+03        | -4.57E+03       | 4.09E+03        |
| FD   | -5.04E+03       | 4.17E+03        | -4.55E+03       | 4.00E+03        |
| L1   | -4.20E+03       | 4.19E+03        | -4.19E+03       | 4.15E+03        |
| L3   | -4.69E+03       | 3.79E+03        | -4.45E+03       | 3.73E+03        |
| L4   | -4.69E+03       | 3.79E+03        | -4.45E+03       | 3.73E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-559. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

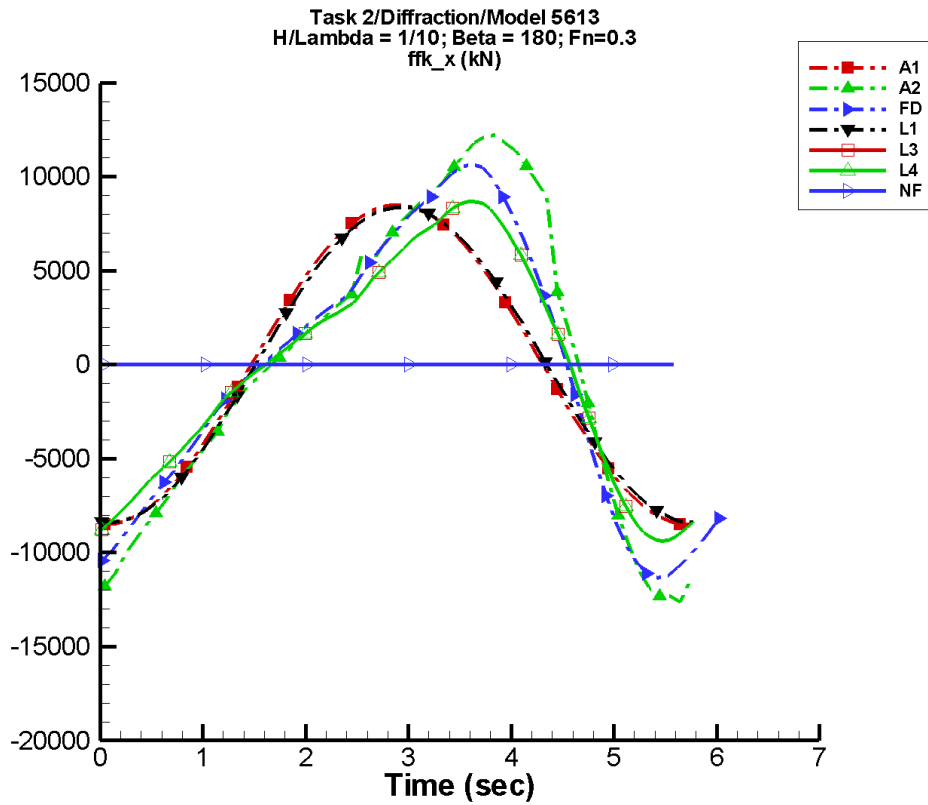
Table G-1117. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.54          | 5.67E+03      | -101              | 7.11          | 153               |
| A2   | 110.          | 5.48E+03      | -118              | 1.74E+03      | -61               |
| FD   | 33.7          | 5.30E+03      | -139              | 1.73E+03      | -106              |
| L1   | 9.73          | 5.59E+03      | -110              | 8.66          | -118              |
| L3   | 12.7          | 4.67E+03      | -118              | 1.48E+03      | -66               |
| L4   | 12.7          | 4.67E+03      | -118              | 1.48E+03      | -66               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1118. Minimum and maximum of  $F_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.67E+03       | 5.67E+03        | -5.69E+03       | 5.49E+03        |
| A2   | -6.34E+03       | 6.23E+03        | -6.04E+03       | 5.90E+03        |
| FD   | -6.24E+03       | 5.90E+03        | -5.91E+03       | 5.59E+03        |
| L1   | -5.59E+03       | 5.59E+03        | -5.58E+03       | 5.53E+03        |
| L3   | -5.48E+03       | 5.14E+03        | -5.37E+03       | 5.04E+03        |
| L4   | -5.48E+03       | 5.14E+03        | -5.37E+03       | 5.04E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-560. Time history of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

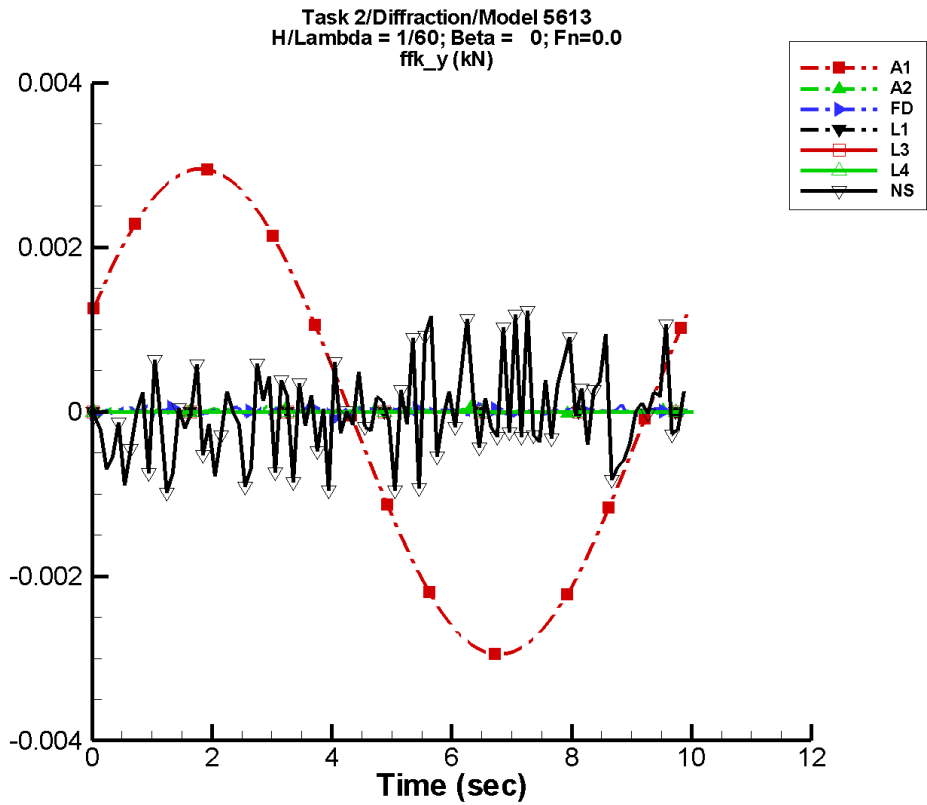
Table G-1119. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 6.80          | 8.51E+03      | -101              | 10.7          | 153               |
| A2   | 352.          | 1.02E+04      | -122              | 3.74E+03      | -67               |
| FD   | 53.4          | 9.20E+03      | -142              | 3.19E+03      | -111              |
| L1   | 14.6          | 8.39E+03      | -110              | 13.0          | -118              |
| L3   | 30.3          | 7.64E+03      | -121              | 2.47E+03      | -71               |
| L4   | 30.3          | 7.64E+03      | -121              | 2.47E+03      | -71               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1120. Minimum and maximum of  $F_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.51E+03       | 8.50E+03        | -8.53E+03       | 8.24E+03        |
| A2   | -1.26E+04       | 1.22E+04        | -1.15E+04       | 1.15E+04        |
| FD   | -1.13E+04       | 1.06E+04        | -1.05E+04       | 9.90E+03        |
| L1   | -8.39E+03       | 8.39E+03        | -8.37E+03       | 8.30E+03        |
| L3   | -9.39E+03       | 8.68E+03        | -9.12E+03       | 8.46E+03        |
| L4   | -9.39E+03       | 8.68E+03        | -9.12E+03       | 8.46E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-561. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1121. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

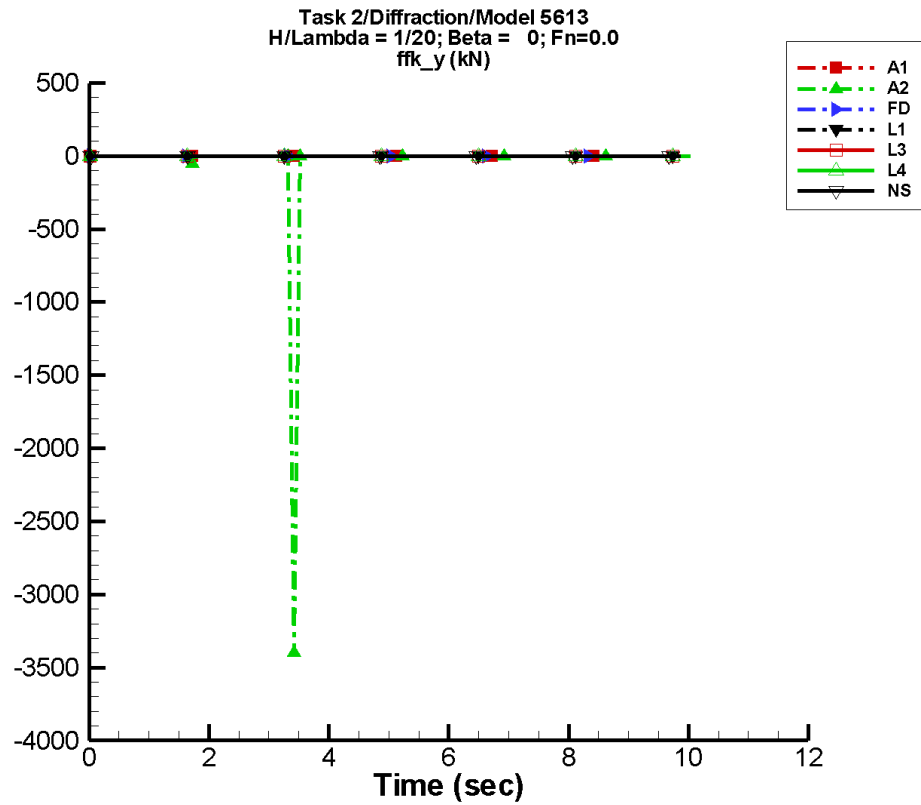
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.68E-06     | 2.95E-03      | 20                | 3.61E-06      | -8                |
| A2   | 1.34E-05      | 9.43E-06      | -49               | 7.52E-06      | 94                |
| FD   | 1.19E-05      | 1.10E-05      | -78               | 6.11E-06      | 153               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.10E-06     | 1.88E-04      | -151              | 8.94E-05      | -83               |

Table G-1122. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.95E-03       | 2.95E-03        | -2.92E-03       | 2.94E-03        |
| A2   | -1.93E-05       | 7.38E-05        | -9.04E-06       | 3.29E-05        |
| FD   | -8.99E-05       | 1.24E-04        | -1.71E-05       | 4.57E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.27E-03       | 1.23E-03        | -3.48E-04       | 2.58E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-562. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

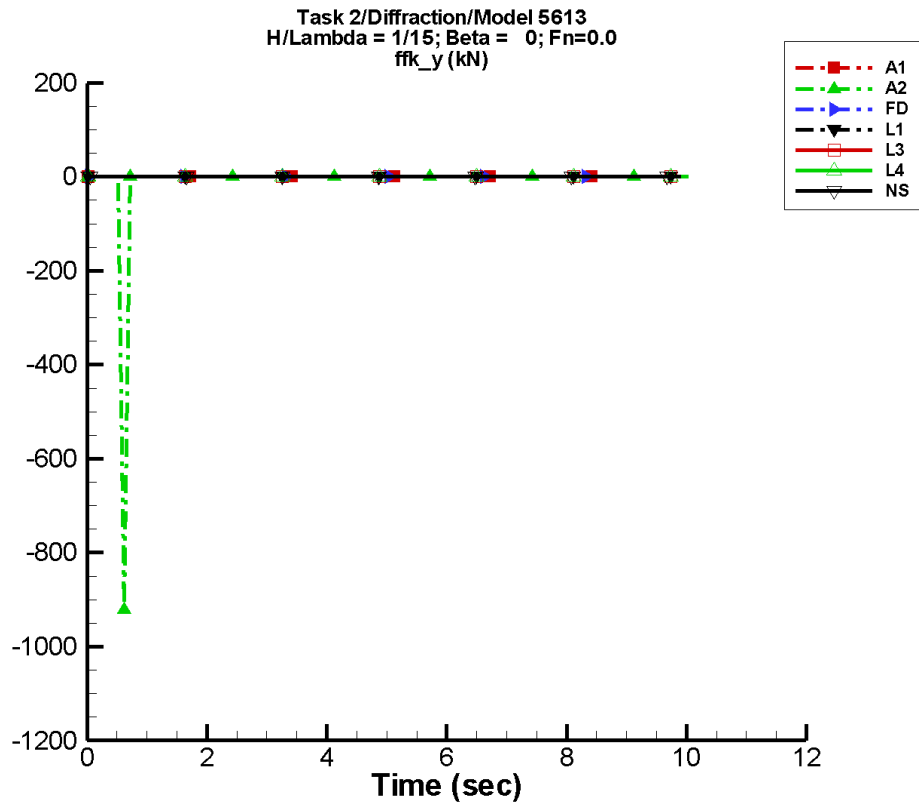
Table G-1123. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -8.05E-06     | 8.88E-03      | 20                | 1.09E-05      | -8                |
| A2   | -41.6         | 70.2          | 155               | 50.9          | 15                |
| FD   | -1.57E-06     | 4.08E-06      | -72               | 2.50E-05      | -25               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 3.52E-04      | 1.58E-04      | 85                | 5.69E-04      | 10                |

Table G-1124. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.88E-03       | 8.88E-03        | -8.79E-03       | 8.85E-03        |
| A2   | -3.40E+03       | 3.19E-02        | -453.           | 39.1            |
| FD   | -1.65E-04       | 1.40E-04        | -4.02E-05       | 6.16E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.85E-03       | 3.81E-03        | -3.08E-04       | 1.60E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-563. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

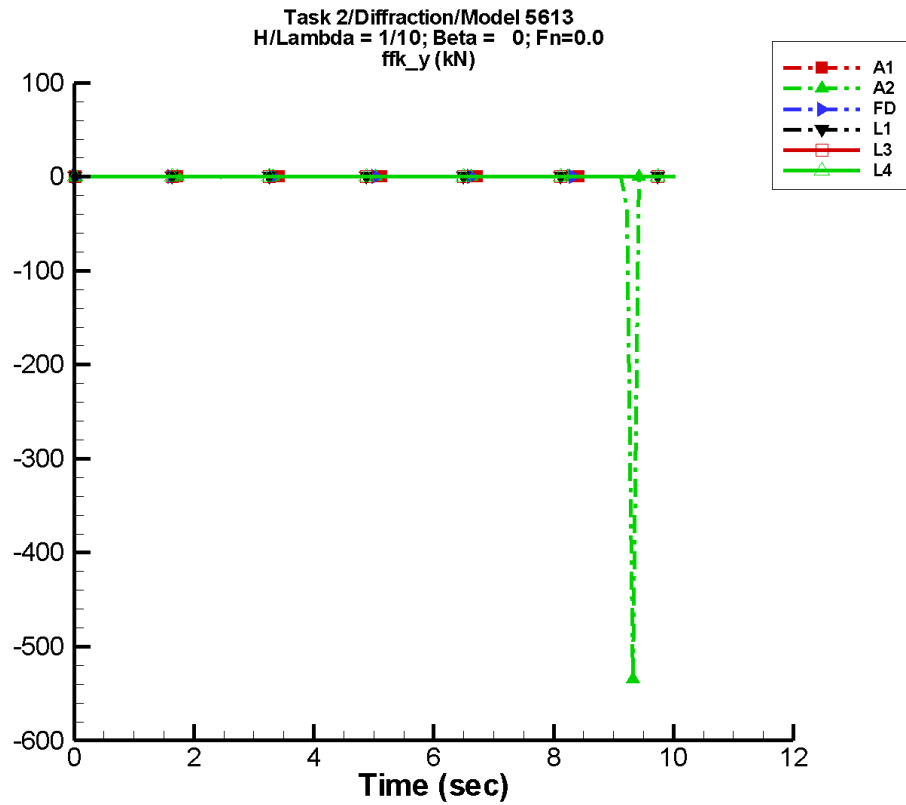
Table G-1125. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.07E-05     | 1.19E-02      | 20                | 1.45E-05      | -8                |
| A2   | -4.85         | 10.4          | -110              | 12.1          | -135              |
| FD   | -1.44E-05     | 1.67E-05      | -56               | 2.36E-05      | -17               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.94E-05     | 2.27E-04      | -37               | 6.12E-04      | -99               |

Table G-1126. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.19E-02       | 1.19E-02        | -1.17E-02       | 1.18E-02        |
| A2   | -922.           | 5.95E-04        | -123.           | 10.5            |
| FD   | -2.17E-04       | 1.94E-04        | -7.07E-05       | 4.14E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -5.20E-03       | 8.14E-03        | -2.37E-03       | 1.80E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-564. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

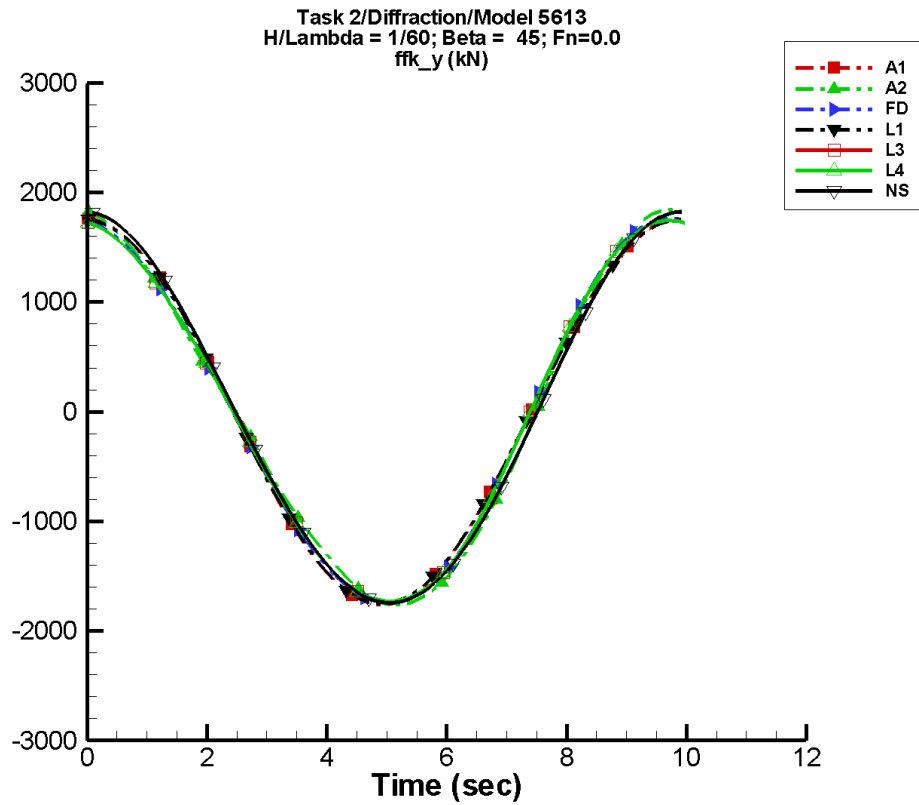
Table G-1127. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.61E-05     | 1.78E-02      | 20                | 2.18E-05      | -8                |
| A2   | -4.90         | 9.55          | -68               | 10.2          | -42               |
| FD   | 8.77E-06      | 3.20E-05      | 16                | 1.87E-05      | 29                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1128. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.78E-02       | 1.78E-02        | -1.76E-02       | 1.77E-02        |
| A2   | -535.           | 2.97E-02        | -75.5           | 6.43            |
| FD   | -2.42E-04       | 2.31E-04        | -8.27E-05       | 8.83E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-565. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G-1129. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

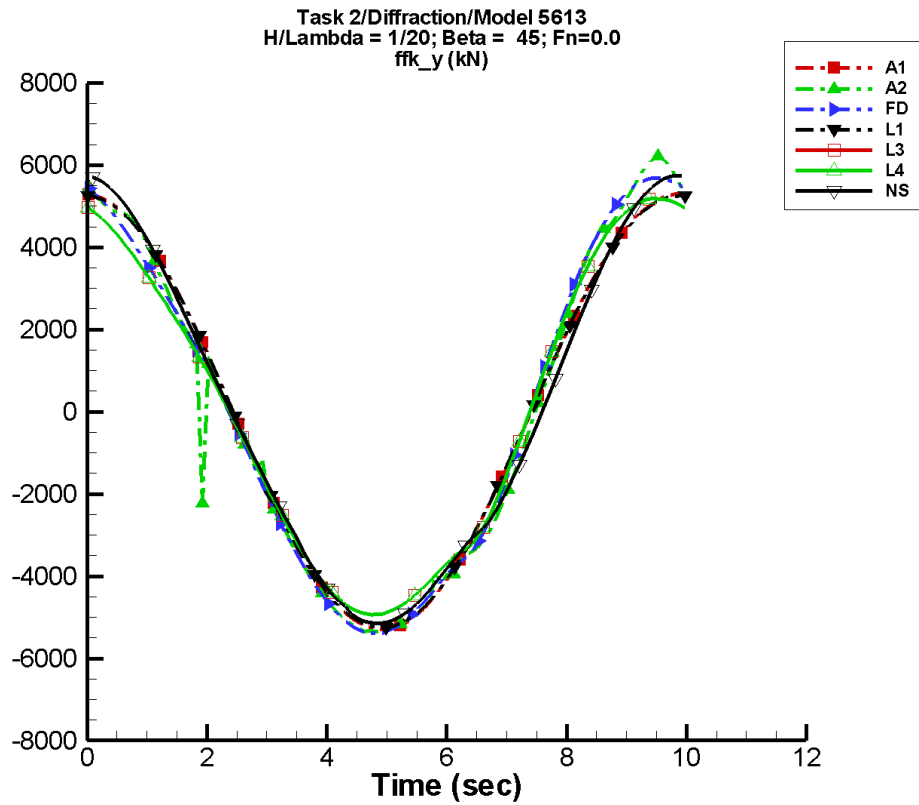
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.38         | 1.76E+03      | 87                | 1.94          | 26                |
| A2   | -2.37         | 1.77E+03      | 86                | 137.          | 154               |
| FD   | -1.34         | 1.76E+03      | 84                | 77.8          | 165               |
| L1   | -0.670        | 1.75E+03      | 88                | 1.17          | 162               |
| L3   | -1.33         | 1.74E+03      | 88                | 85.6          | 175               |
| L4   | -1.33         | 1.74E+03      | 88                | 85.6          | 175               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.72         | 1.78E+03      | 89                | 55.2          | 127               |

Table G-1130. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.76E+03       | 1.76E+03        | -1.74E+03       | 1.76E+03        |
| A2   | -1.76E+03       | 1.84E+03        | -1.74E+03       | 1.82E+03        |
| FD   | -1.74E+03       | 1.76E+03        | -1.72E+03       | 1.74E+03        |
| L1   | -1.75E+03       | 1.75E+03        | -1.75E+03       | 1.75E+03        |
| L3   | -1.73E+03       | 1.74E+03        | -1.72E+03       | 1.74E+03        |
| L4   | -1.73E+03       | 1.74E+03        | -1.72E+03       | 1.74E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.74E+03       | 1.82E+03        | -1.73E+03       | 1.81E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-566. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

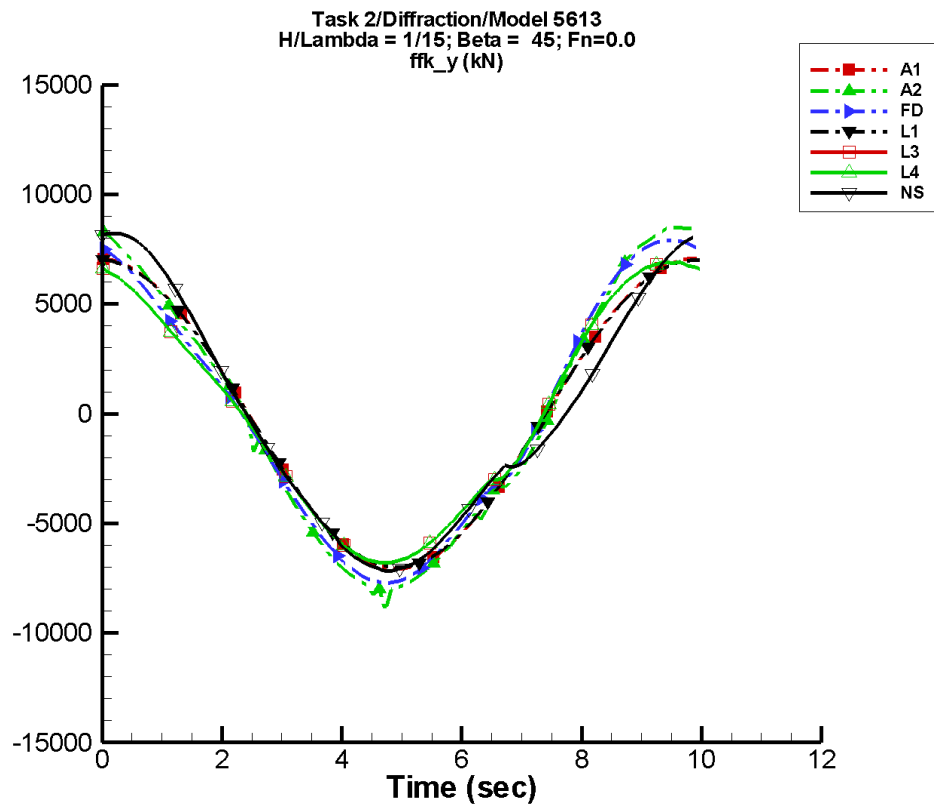
Table G-1131. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.15         | 5.29E+03      | 87                | 5.83          | 26                |
| A2   | -8.00         | 5.52E+03      | 89                | 373.          | 134               |
| FD   | -20.3         | 5.44E+03      | 87                | 338.          | 152               |
| L1   | -2.01         | 5.25E+03      | 88                | 3.50          | 162               |
| L3   | -8.53         | 5.00E+03      | 91                | 315.          | 164               |
| L4   | -8.53         | 5.00E+03      | 91                | 315.          | 164               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.77         | 5.28E+03      | 90                | 355.          | 100               |

Table G-1132. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.29E+03       | 5.29E+03        | -5.24E+03       | 5.28E+03        |
| A2   | -5.34E+03       | 7.62E+03        | -5.30E+03       | 5.89E+03        |
| FD   | -5.39E+03       | 5.69E+03        | -5.33E+03       | 5.62E+03        |
| L1   | -5.25E+03       | 5.25E+03        | -5.24E+03       | 5.26E+03        |
| L3   | -4.94E+03       | 5.18E+03        | -4.92E+03       | 5.16E+03        |
| L4   | -4.94E+03       | 5.18E+03        | -4.92E+03       | 5.16E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -5.15E+03       | 5.74E+03        | -5.09E+03       | 5.67E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-567. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

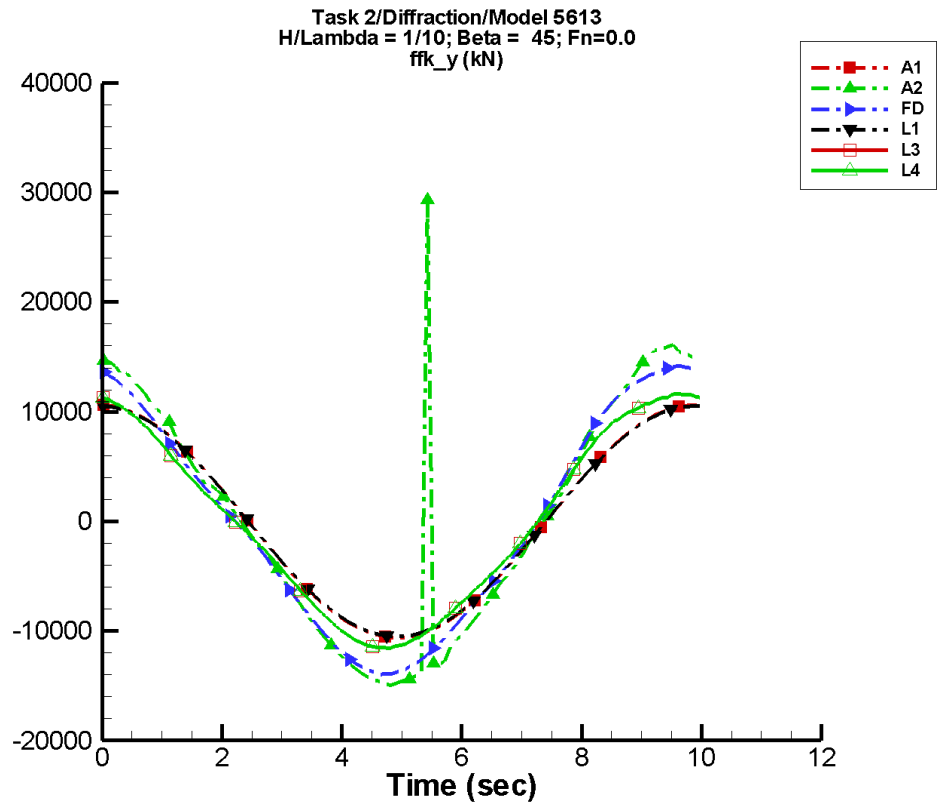
Table G-1133. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.54         | 7.07E+03      | 87                | 7.78          | 26                |
| A2   | -46.3         | 7.98E+03      | 91                | 307.          | 133               |
| FD   | -34.4         | 7.49E+03      | 90                | 318.          | 159               |
| L1   | -2.68         | 7.01E+03      | 88                | 4.67          | 162               |
| L3   | 1.64          | 6.63E+03      | 94                | 267.          | 179               |
| L4   | 1.64          | 6.63E+03      | 94                | 267.          | 179               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 21.2          | 7.17E+03      | 88                | 900.          | 46                |

Table G-1134. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.07E+03       | 7.07E+03        | -7.00E+03       | 7.05E+03        |
| A2   | -8.99E+03       | 8.50E+03        | -8.08E+03       | 8.39E+03        |
| FD   | -7.74E+03       | 7.91E+03        | -7.61E+03       | 7.81E+03        |
| L1   | -7.01E+03       | 7.01E+03        | -6.98E+03       | 7.01E+03        |
| L3   | -6.80E+03       | 6.91E+03        | -6.77E+03       | 6.88E+03        |
| L4   | -6.80E+03       | 6.91E+03        | -6.77E+03       | 6.88E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -7.17E+03       | 8.23E+03        | -7.08E+03       | 8.23E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-568. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

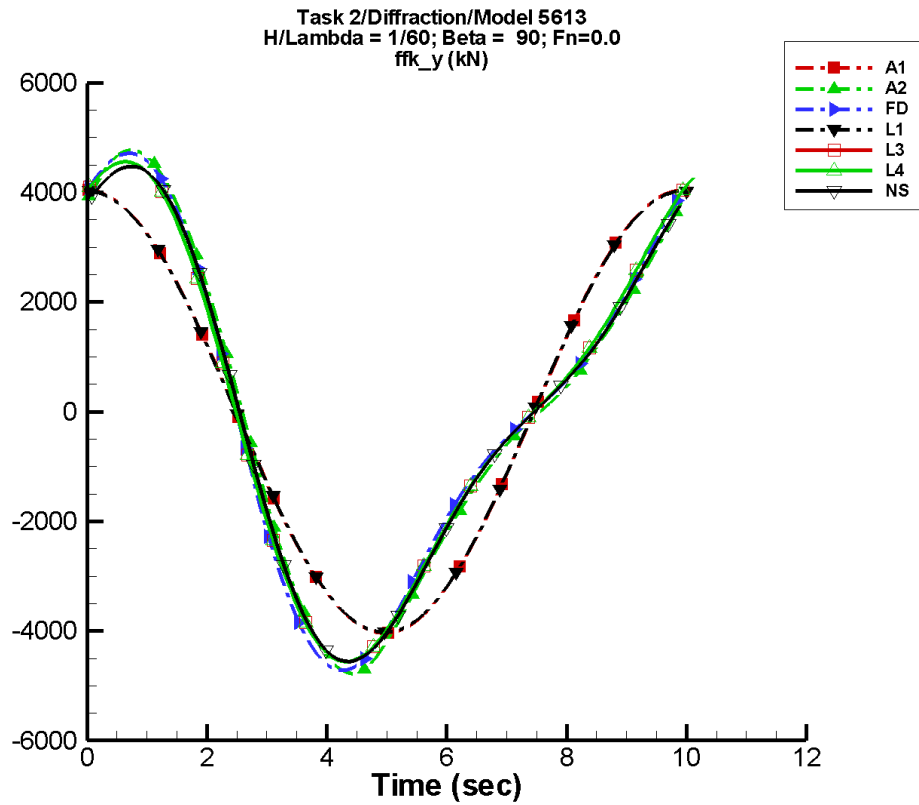
Table G-1135. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -8.30         | 1.06E+04      | 87                | 11.7          | 26                |
| A2   | 395.          | 1.37E+04      | 94                | 981.          | 107               |
| FD   | -31.1         | 1.33E+04      | 92                | 624.          | 169               |
| L1   | -4.02         | 1.05E+04      | 88                | 7.00          | 162               |
| L3   | 14.2          | 1.11E+04      | 96                | 467.          | -177              |
| L4   | 14.2          | 1.11E+04      | 96                | 467.          | -177              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1136. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.06E+04       | 1.06E+04        | -1.05E+04       | 1.06E+04        |
| A2   | -1.50E+04       | 2.93E+04        | -1.48E+04       | 1.55E+04        |
| FD   | -1.40E+04       | 1.42E+04        | -1.37E+04       | 1.39E+04        |
| L1   | -1.05E+04       | 1.05E+04        | -1.05E+04       | 1.05E+04        |
| L3   | -1.16E+04       | 1.17E+04        | -1.15E+04       | 1.15E+04        |
| L4   | -1.16E+04       | 1.17E+04        | -1.15E+04       | 1.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-569. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1137. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

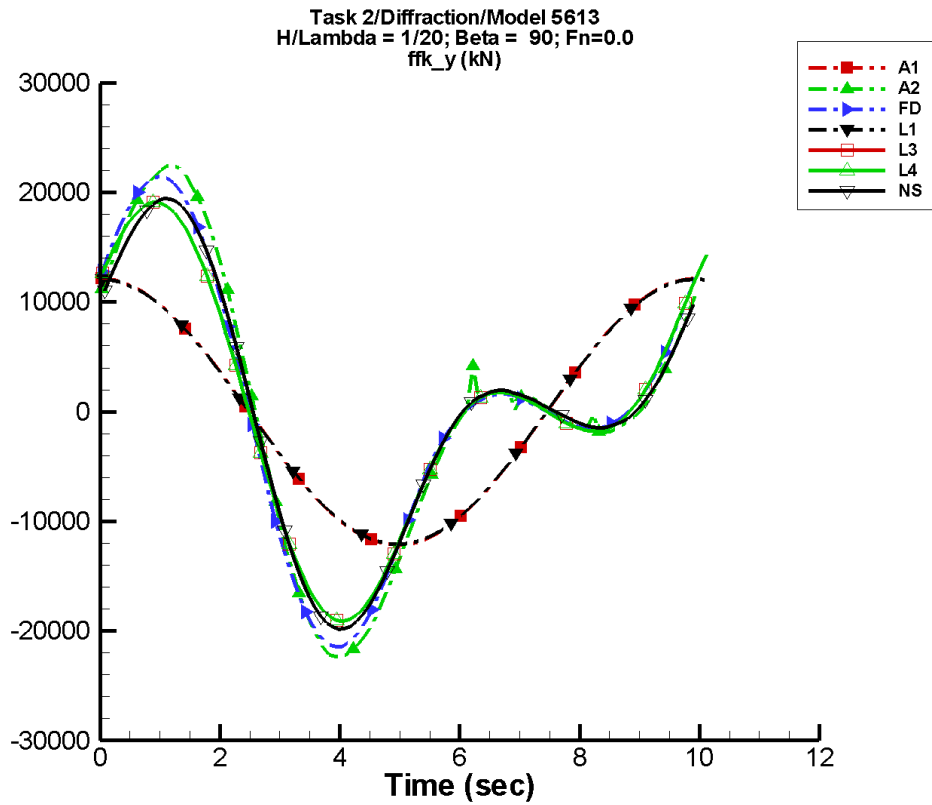
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.24         | 4.04E+03      | 86                | 4.52          | 24                |
| A2   | -2.89         | 4.09E+03      | 82                | 1.28E+03      | -15               |
| FD   | -2.61         | 4.07E+03      | 82                | 1.34E+03      | -15               |
| L1   | -1.02         | 4.02E+03      | 86                | 1.63          | -29               |
| L3   | 1.72E-02      | 4.03E+03      | 86                | 1.17E+03      | -8                |
| L4   | 1.72E-02      | 4.03E+03      | 86                | 1.17E+03      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.21         | 3.97E+03      | 88                | 1.21E+03      | -7                |

Table G-1138. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.04E+03       | 4.04E+03        | -4.00E+03       | 4.04E+03        |
| A2   | -4.78E+03       | 4.77E+03        | -4.68E+03       | 4.68E+03        |
| FD   | -4.72E+03       | 4.72E+03        | -4.63E+03       | 4.64E+03        |
| L1   | -4.02E+03       | 4.02E+03        | -4.01E+03       | 4.04E+03        |
| L3   | -4.56E+03       | 4.56E+03        | -4.53E+03       | 4.54E+03        |
| L4   | -4.56E+03       | 4.56E+03        | -4.53E+03       | 4.54E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -4.56E+03       | 4.47E+03        | -4.48E+03       | 4.40E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-570. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

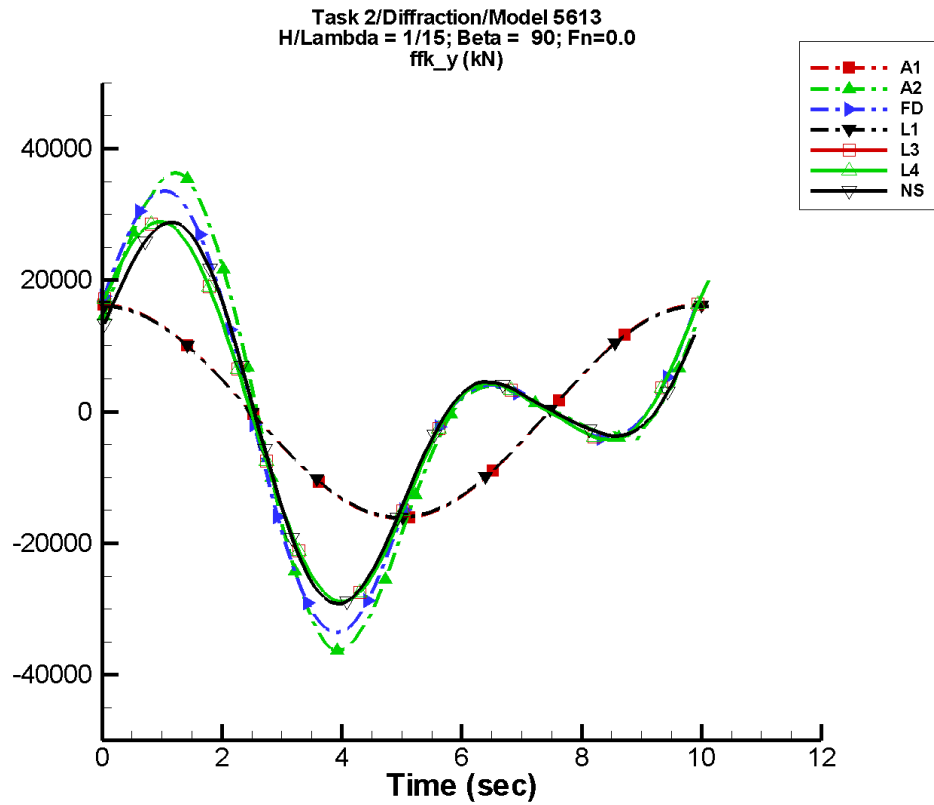
Table G-1139. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.75         | 1.21E+04      | 86                | 13.6          | 24                |
| A2   | 44.4          | 1.34E+04      | 82                | 1.17E+04      | -17               |
| FD   | -33.8         | 1.33E+04      | 82                | 1.08E+04      | -15               |
| L1   | -3.07         | 1.21E+04      | 86                | 4.89          | -29               |
| L3   | 12.4          | 1.22E+04      | 86                | 9.46E+03      | -8                |
| L4   | 12.4          | 1.22E+04      | 86                | 9.46E+03      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 18.1          | 1.20E+04      | 88                | 1.01E+04      | -7                |

Table G-1140. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.21E+04       | 1.21E+04        | -1.20E+04       | 1.21E+04        |
| A2   | -2.24E+04       | 2.24E+04        | -2.18E+04       | 2.18E+04        |
| FD   | -2.15E+04       | 2.15E+04        | -2.09E+04       | 2.09E+04        |
| L1   | -1.21E+04       | 1.21E+04        | -1.20E+04       | 1.21E+04        |
| L3   | -1.91E+04       | 1.91E+04        | -1.89E+04       | 1.89E+04        |
| L4   | -1.91E+04       | 1.91E+04        | -1.89E+04       | 1.89E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.98E+04       | 1.95E+04        | -1.93E+04       | 1.90E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-571. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

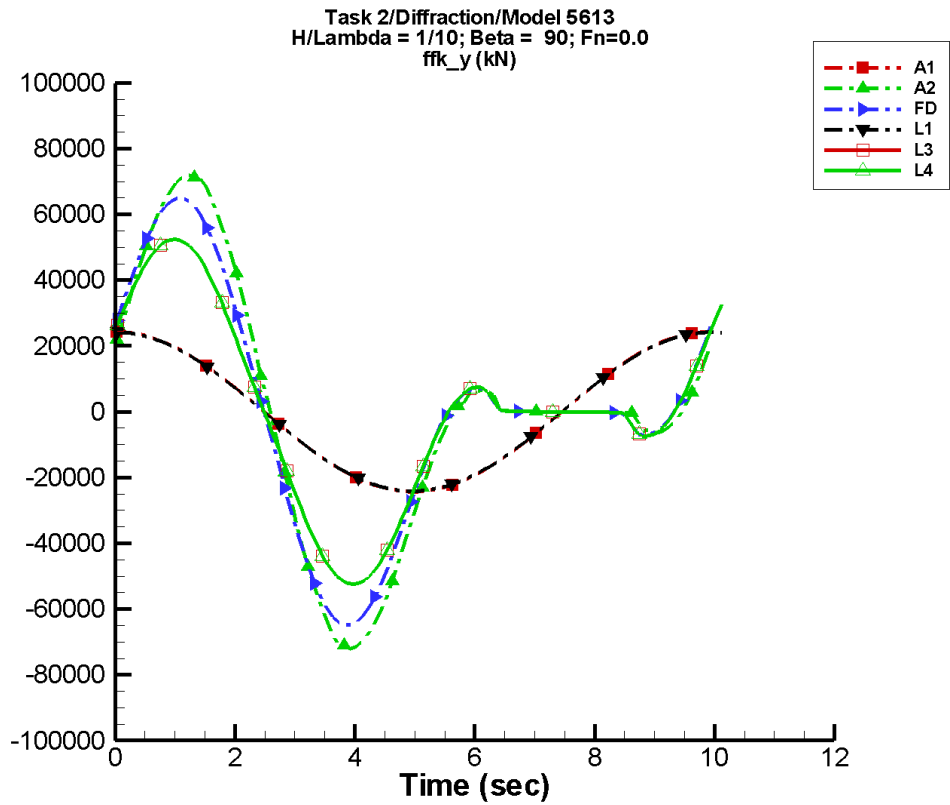
Table G-1141. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.0         | 1.62E+04      | 86                | 18.2          | 24                |
| A2   | 11.5          | 1.96E+04      | 81                | 2.00E+04      | -17               |
| FD   | -74.3         | 1.88E+04      | 82                | 1.84E+04      | -15               |
| L1   | -4.09         | 1.61E+04      | 86                | 6.53          | -29               |
| L3   | 30.4          | 1.66E+04      | 86                | 1.57E+04      | -8                |
| L4   | 30.4          | 1.66E+04      | 86                | 1.57E+04      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 80.7          | 1.57E+04      | 88                | 1.64E+04      | -6                |

Table G-1142. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.62E+04       | 1.62E+04        | -1.60E+04       | 1.62E+04        |
| A2   | -3.63E+04       | 3.64E+04        | -3.50E+04       | 3.52E+04        |
| FD   | -3.36E+04       | 3.36E+04        | -3.26E+04       | 3.27E+04        |
| L1   | -1.61E+04       | 1.61E+04        | -1.60E+04       | 1.62E+04        |
| L3   | -2.89E+04       | 2.89E+04        | -2.86E+04       | 2.86E+04        |
| L4   | -2.89E+04       | 2.89E+04        | -2.86E+04       | 2.86E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.92E+04       | 2.88E+04        | -2.87E+04       | 2.83E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-572. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

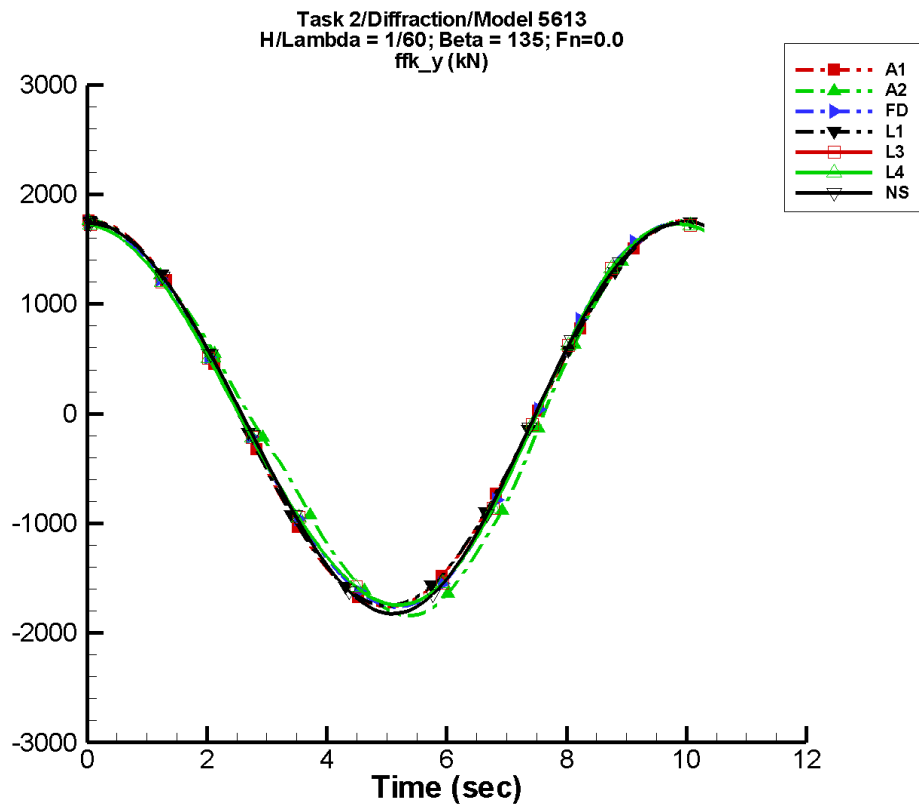
Table G-1143. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -19.5         | 2.43E+04      | 86                | 27.2          | 24                |
| A2   | 86.4          | 3.63E+04      | 81                | 3.87E+04      | -17               |
| FD   | -284.         | 3.36E+04      | 81                | 3.50E+04      | -13               |
| L1   | -6.13         | 2.41E+04      | 86                | 9.78          | -29               |
| L3   | 152.          | 2.80E+04      | 86                | 2.79E+04      | -8                |
| L4   | 152.          | 2.80E+04      | 86                | 2.79E+04      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1144. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.43E+04       | 2.43E+04        | -2.41E+04       | 2.43E+04        |
| A2   | -7.21E+04       | 7.20E+04        | -6.94E+04       | 6.94E+04        |
| FD   | -6.49E+04       | 6.49E+04        | -6.27E+04       | 6.28E+04        |
| L1   | -2.41E+04       | 2.41E+04        | -2.41E+04       | 2.42E+04        |
| L3   | -5.24E+04       | 5.24E+04        | -5.18E+04       | 5.18E+04        |
| L4   | -5.24E+04       | 5.24E+04        | -5.18E+04       | 5.18E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-573. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1145. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

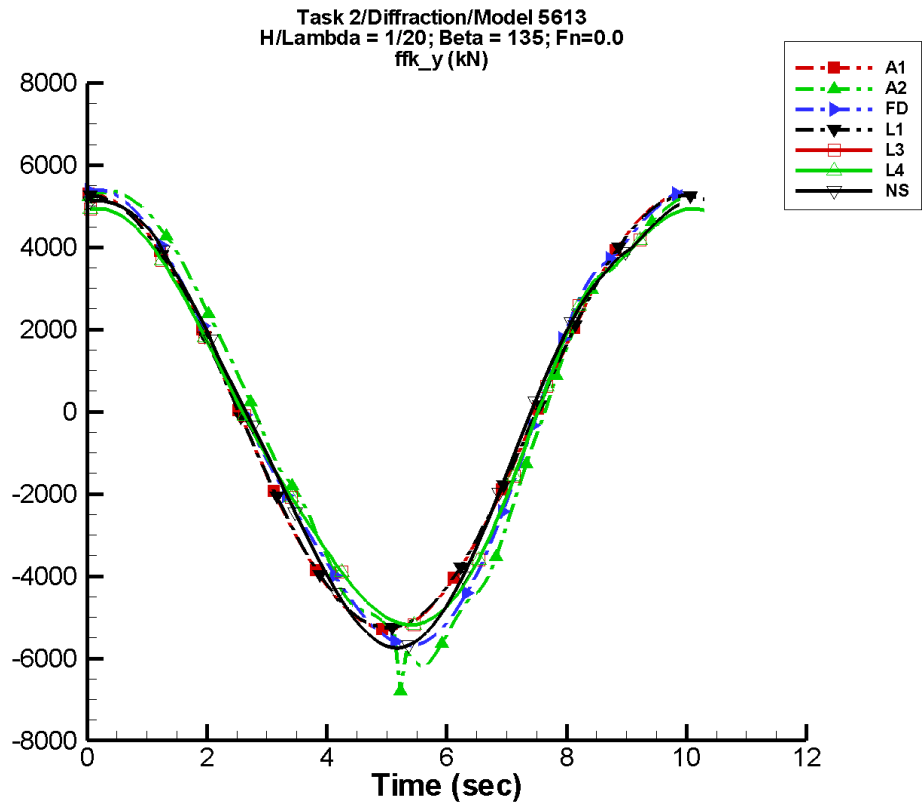
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.45         | 1.76E+03      | 84                | 2.00          | 23                |
| A2   | -1.17         | 1.77E+03      | 78                | 133.          | 171               |
| FD   | -0.724        | 1.76E+03      | 80                | 78.3          | 162               |
| L1   | -1.85         | 1.75E+03      | 84                | 1.24          | 79                |
| L3   | -1.41         | 1.74E+03      | 84                | 86.1          | 167               |
| L4   | -1.41         | 1.74E+03      | 84                | 86.1          | 167               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.63         | 1.78E+03      | 87                | 53.1          | -142              |

Table G–1146. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.76E+03       | 1.76E+03        | -1.74E+03       | 1.76E+03        |
| A2   | -1.84E+03       | 1.76E+03        | -1.82E+03       | 1.76E+03        |
| FD   | -1.76E+03       | 1.74E+03        | -1.74E+03       | 1.73E+03        |
| L1   | -1.75E+03       | 1.75E+03        | -1.74E+03       | 1.75E+03        |
| L3   | -1.74E+03       | 1.73E+03        | -1.74E+03       | 1.72E+03        |
| L4   | -1.74E+03       | 1.73E+03        | -1.74E+03       | 1.72E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.82E+03       | 1.74E+03        | -1.80E+03       | 1.74E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-574. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

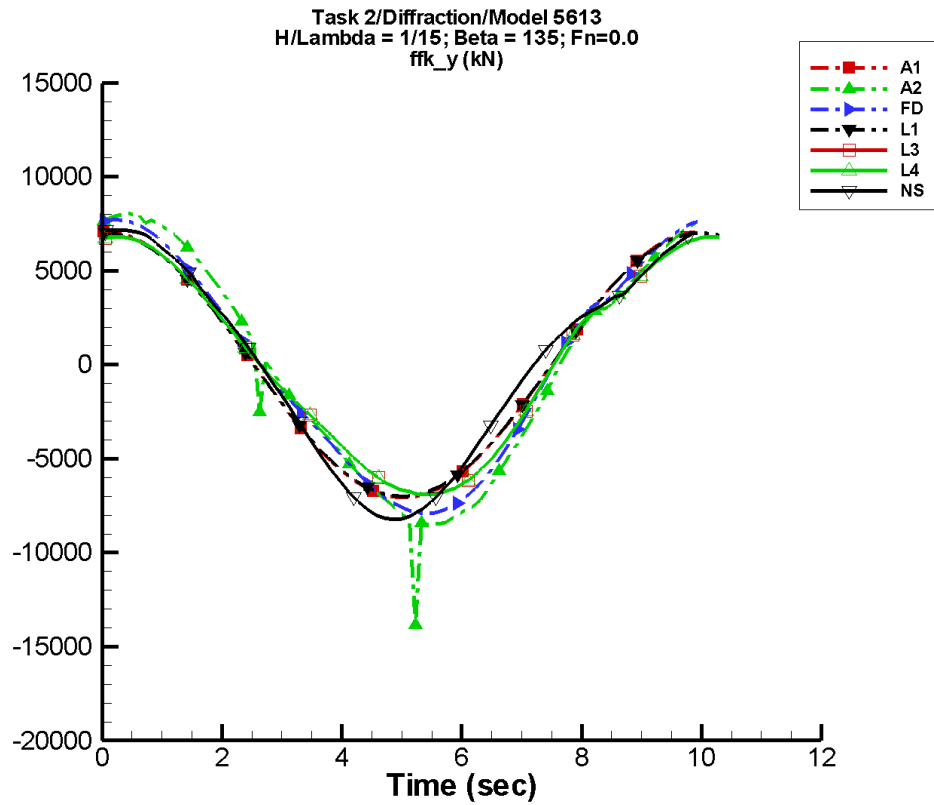
Table G–1147. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.35         | 5.29E+03      | 84                | 6.03          | 23                |
| A2   | -9.53         | 5.60E+03      | 75                | 367.          | -166              |
| FD   | 9.60          | 5.50E+03      | 77                | 379.          | 169               |
| L1   | -5.56         | 5.25E+03      | 84                | 3.72          | 79                |
| L3   | -1.53         | 5.03E+03      | 81                | 348.          | 179               |
| L4   | -1.53         | 5.03E+03      | 81                | 348.          | 179               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 5.52          | 5.34E+03      | 86                | 308.          | -111              |

Table G–1148. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.29E+03       | 5.29E+03        | -5.24E+03       | 5.30E+03        |
| A2   | -6.80E+03       | 5.35E+03        | -6.01E+03       | 5.31E+03        |
| FD   | -5.69E+03       | 5.40E+03        | -5.62E+03       | 5.41E+03        |
| L1   | -5.25E+03       | 5.25E+03        | -5.23E+03       | 5.25E+03        |
| L3   | -5.18E+03       | 4.94E+03        | -5.16E+03       | 4.93E+03        |
| L4   | -5.18E+03       | 4.94E+03        | -5.16E+03       | 4.93E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -5.74E+03       | 5.14E+03        | -5.67E+03       | 5.14E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-575. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

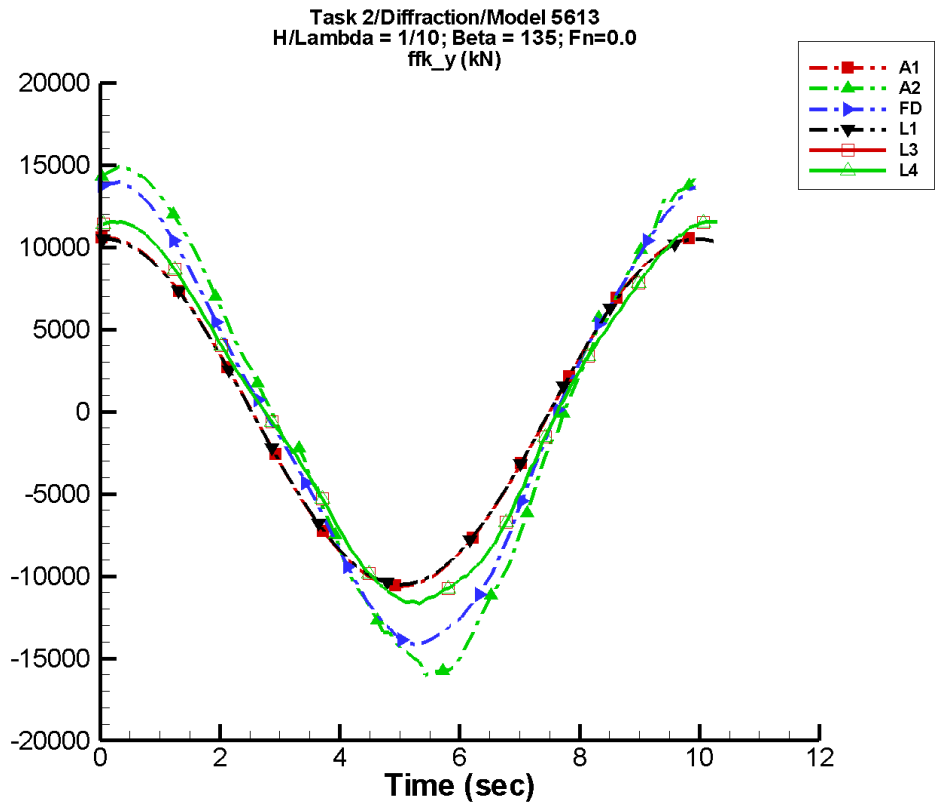
Table G-1149. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.81         | 7.07E+03      | 84                | 8.05          | 23                |
| A2   | -83.9         | 8.13E+03      | 73                | 268.          | -148              |
| FD   | 30.4          | 7.60E+03      | 75                | 427.          | 165               |
| L1   | -7.41         | 7.00E+03      | 84                | 4.96          | 79                |
| L3   | -6.10         | 6.66E+03      | 78                | 312.          | 176               |
| L4   | -6.10         | 6.66E+03      | 78                | 312.          | 176               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 26.9          | 7.23E+03      | 89                | 803.          | -50               |

Table G-1150. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.07E+03       | 7.07E+03        | -7.00E+03       | 7.08E+03        |
| A2   | -1.39E+04       | 8.04E+03        | -9.02E+03       | 7.90E+03        |
| FD   | -7.91E+03       | 7.74E+03        | -7.81E+03       | 7.71E+03        |
| L1   | -7.01E+03       | 7.01E+03        | -6.98E+03       | 6.99E+03        |
| L3   | -6.91E+03       | 6.80E+03        | -6.88E+03       | 6.78E+03        |
| L4   | -6.91E+03       | 6.80E+03        | -6.88E+03       | 6.78E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -8.23E+03       | 7.17E+03        | -8.15E+03       | 7.19E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-576. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

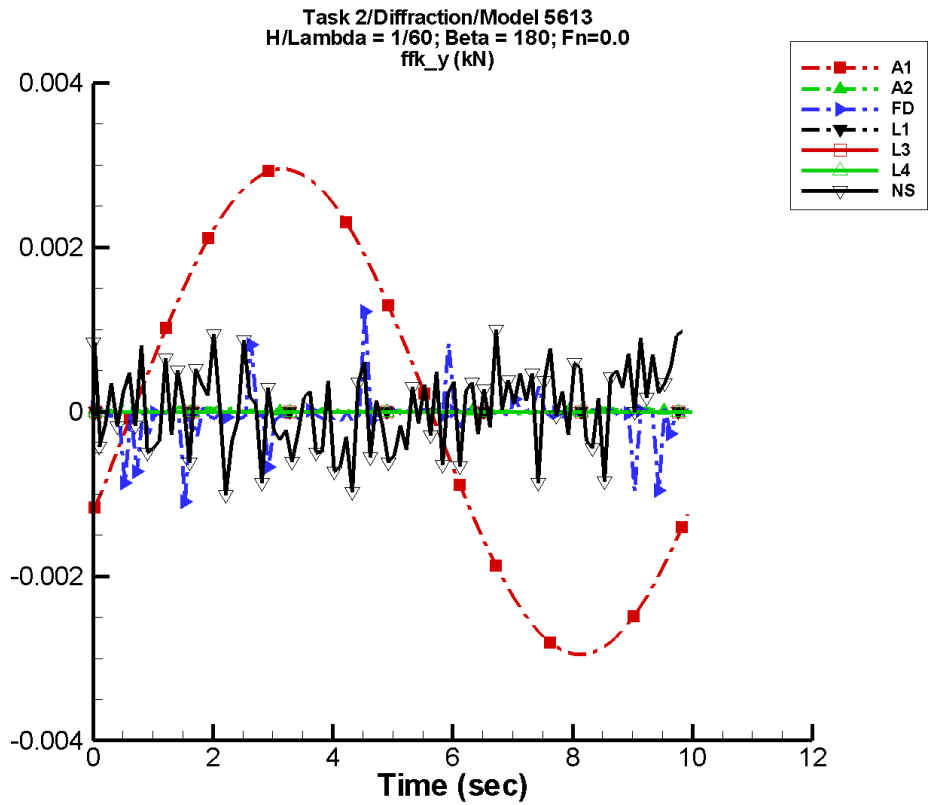
Table G-1151. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -8.71         | 1.06E+04      | 84                | 12.1          | 23                |
| A2   | -14.3         | 1.46E+04      | 72                | 813.          | 166               |
| FD   | 54.7          | 1.35E+04      | 73                | 760.          | 162               |
| L1   | -11.1         | 1.05E+04      | 84                | 7.44          | 79                |
| L3   | -13.9         | 1.11E+04      | 76                | 461.          | 169               |
| L4   | -13.9         | 1.11E+04      | 76                | 461.          | 169               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1152. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.06E+04       | 1.06E+04        | -1.05E+04       | 1.06E+04        |
| A2   | -1.60E+04       | 1.49E+04        | -1.56E+04       | 1.46E+04        |
| FD   | -1.42E+04       | 1.40E+04        | -1.39E+04       | 1.39E+04        |
| L1   | -1.05E+04       | 1.05E+04        | -1.05E+04       | 1.05E+04        |
| L3   | -1.17E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| L4   | -1.17E+04       | 1.16E+04        | -1.15E+04       | 1.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-577. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1153. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

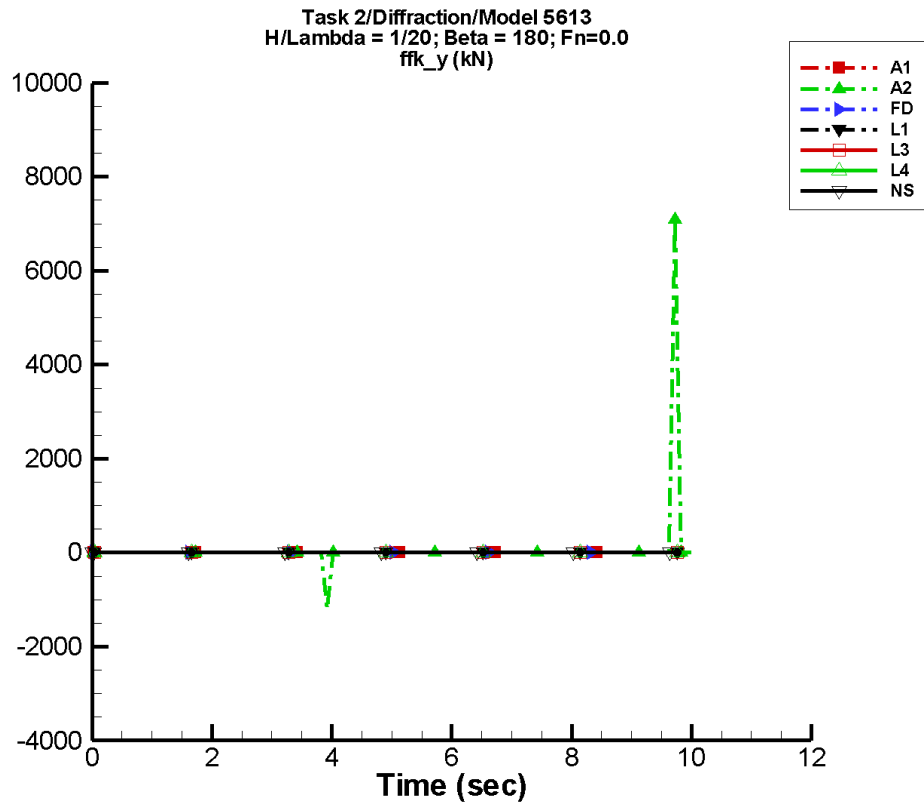
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -7.28E-07     | 2.95E-03      | -29               | 1.99E-06      | -56               |
| A2   | 1.46E-05      | 1.10E-05      | 32                | 2.91E-06      | 56                |
| FD   | -3.26E-05     | 9.97E-05      | -115              | 2.09E-05      | 161               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 5.37E-05      | 2.54E-04      | 122               | 4.56E-05      | 7                 |

Table G-1154. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.95E-03       | 2.95E-03        | -2.92E-03       | 2.92E-03        |
| A2   | -2.23E-05       | 8.26E-05        | -1.02E-05       | 5.55E-05        |
| FD   | -1.10E-03       | 1.22E-03        | -2.38E-04       | 1.96E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.19E-03       | 1.11E-03        | -2.80E-04       | 5.61E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-578. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

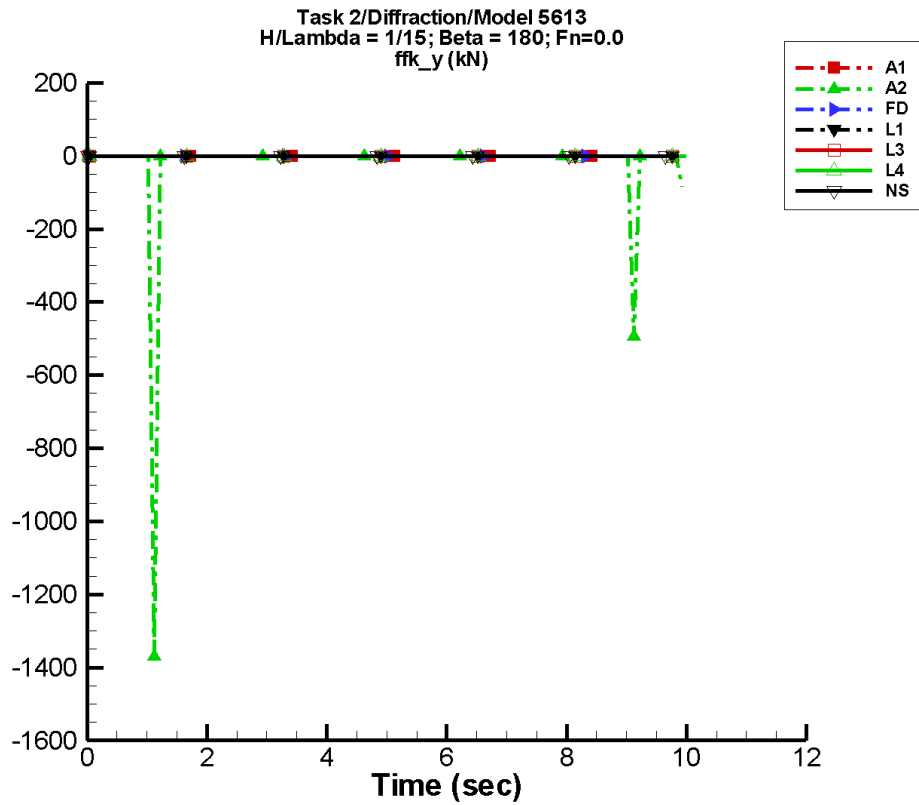
Table G–1155. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.19E-06     | 8.88E-03      | -29               | 5.98E-06      | -56               |
| A2   | 31.9          | 130.          | 112               | 118.          | 104               |
| FD   | -3.15E-03     | 1.13E-03      | -103              | 4.41E-03      | 82                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.62E-05     | 3.91E-04      | -100              | 3.85E-04      | 149               |

Table G–1156. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.88E-03       | 8.88E-03        | -8.79E-03       | 8.79E-03        |
| A2   | -1.21E+03       | 7.09E+03        | -179.           | 949.            |
| FD   | -1.04E-02       | 1.45E-02        | -9.65E-03       | 1.66E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -4.77E-03       | 3.99E-03        | -1.96E-03       | 1.11E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-579. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

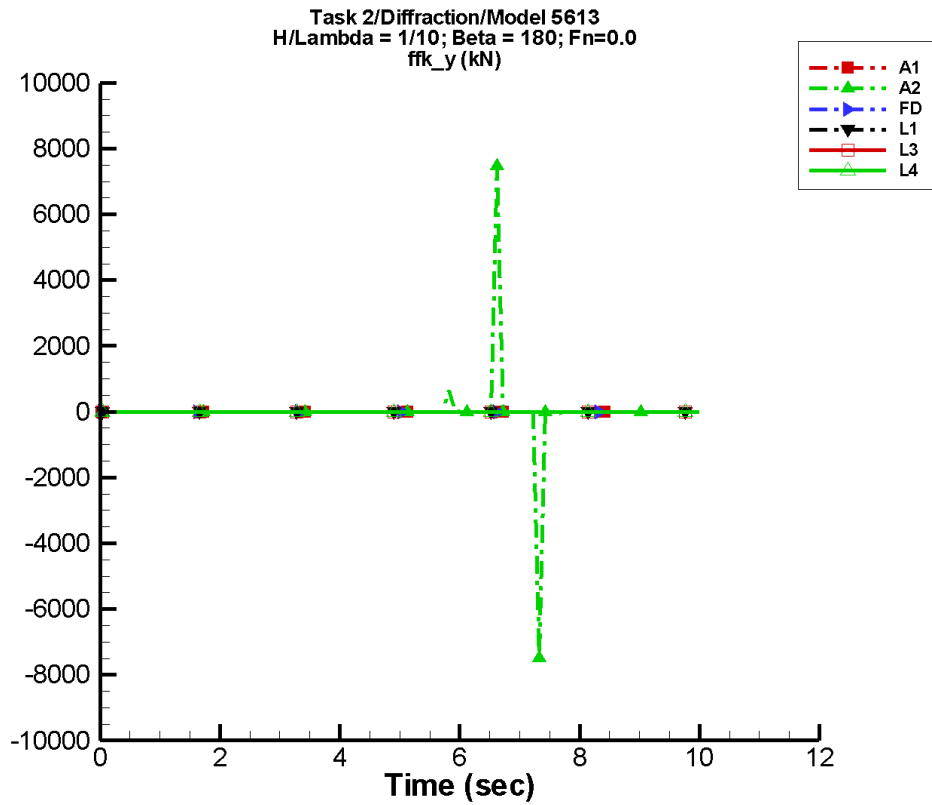
Table G-1157. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.93E-06     | 1.19E-02      | -29               | 7.98E-06      | -56               |
| A2   | -11.9         | 20.0          | -109              | 10.5          | -148              |
| FD   | -3.32E-03     | 2.36E-03      | 179               | 2.71E-03      | 67                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.22E-04      | 2.30E-04      | 56                | 5.34E-04      | -71               |

Table G-1158. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.19E-02       | 1.19E-02        | -1.17E-02       | 1.17E-02        |
| A2   | -1.37E+03       | 5.63E-04        | -183.           | 15.7            |
| FD   | -1.63E-02       | 4.83E-03        | -1.13E-02       | 1.54E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -5.71E-03       | 5.84E-03        | -1.26E-03       | 2.12E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-580. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

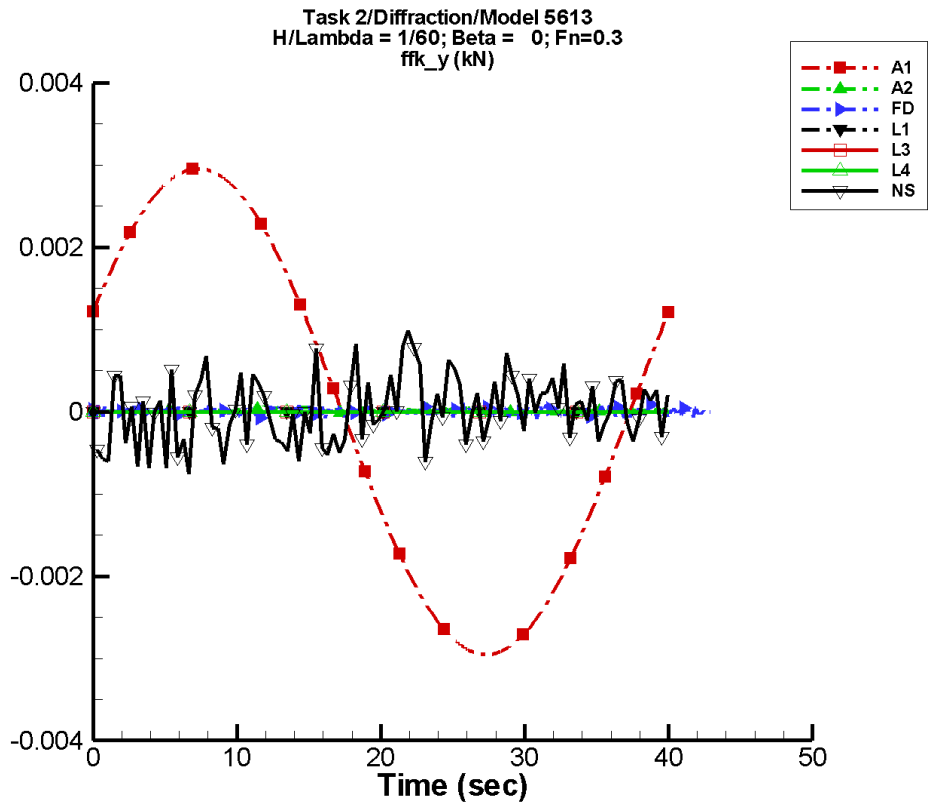
Table G-1159. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.39E-06     | 1.78E-02      | -29               | 1.20E-05      | -56               |
| A2   | -4.03         | 93.8          | -91               | 123.          | 26                |
| FD   | -1.47E-03     | 1.00E-03      | -116              | 1.26E-03      | -118              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1160. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.78E-02       | 1.78E-02        | -1.76E-02       | 1.76E-02        |
| A2   | -7.49E+03       | 7.47E+03        | -1.02E+03       | 1.02E+03        |
| FD   | -1.64E-02       | 2.26E-02        | -6.49E-03       | 3.61E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-581. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1161. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

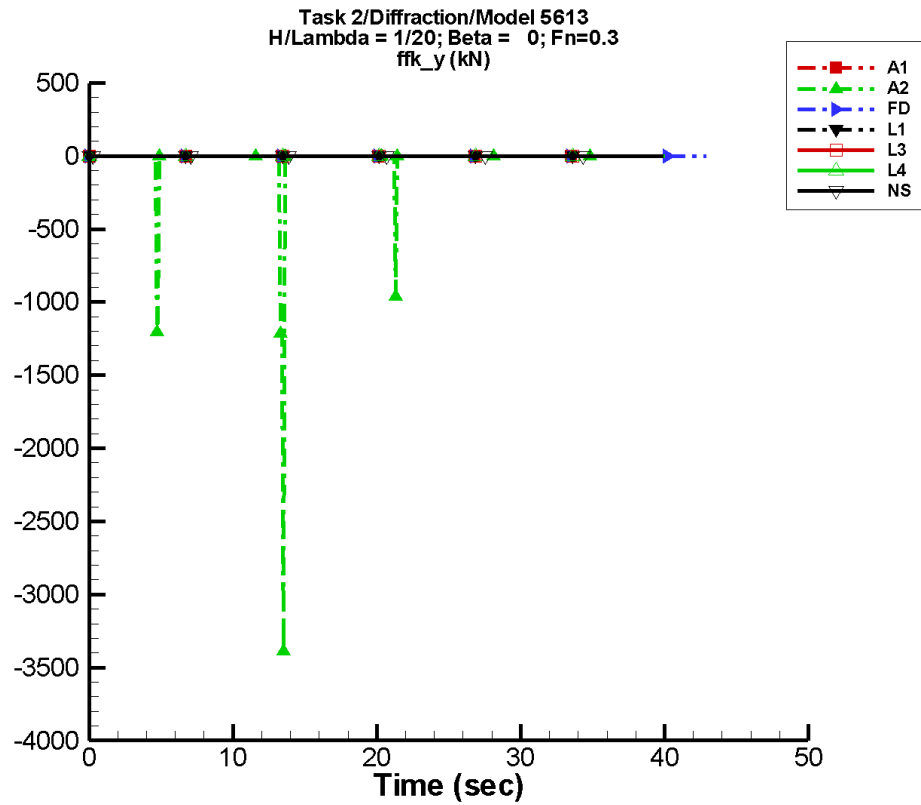
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.46E-08     | 2.95E-03      | 24                | 1.34E-07      | -6                |
| A2   | 1.40E-05      | 1.05E-05      | -48               | 5.38E-06      | 111               |
| FD   | 5.48E-06      | 4.56E-06      | -76               | 6.26E-06      | 43                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.50E-06      | 2.05E-04      | -144              | 3.54E-05      | -116              |

Table G-1162. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.95E-03       | 2.95E-03        | -2.95E-03       | 2.95E-03        |
| A2   | -2.49E-05       | 8.06E-05        | -1.85E-05       | 5.66E-05        |
| FD   | -1.18E-04       | 1.23E-04        | -3.41E-05       | 3.95E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.10E-03       | 9.86E-04        | -5.05E-04       | 3.69E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-582. Time history of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

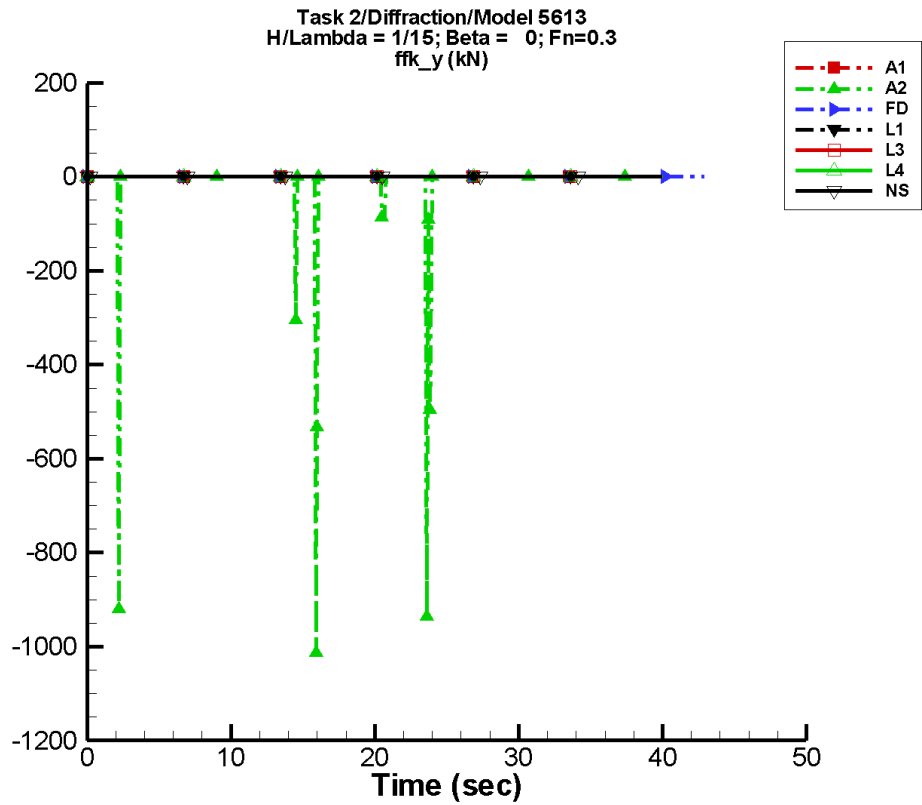
Table G-1163. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.83E-07     | 8.88E-03      | 24                | 4.04E-07      | -5                |
| A2   | -21.8         | 30.7          | 163               | 9.06          | 19                |
| FD   | 4.79E-06      | 4.06E-06      | 57                | 2.31E-05      | 2                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.35E-04      | 3.09E-04      | 111               | 4.61E-04      | 44                |

Table G-1164. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.88E-03       | 8.88E-03        | -8.88E-03       | 8.88E-03        |
| A2   | -3.39E+03       | 0.240           | -747.           | 58.0            |
| FD   | -2.23E-04       | 1.87E-04        | -6.59E-05       | 6.84E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.03E-03       | 3.13E-03        | -7.68E-04       | 1.56E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-583. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

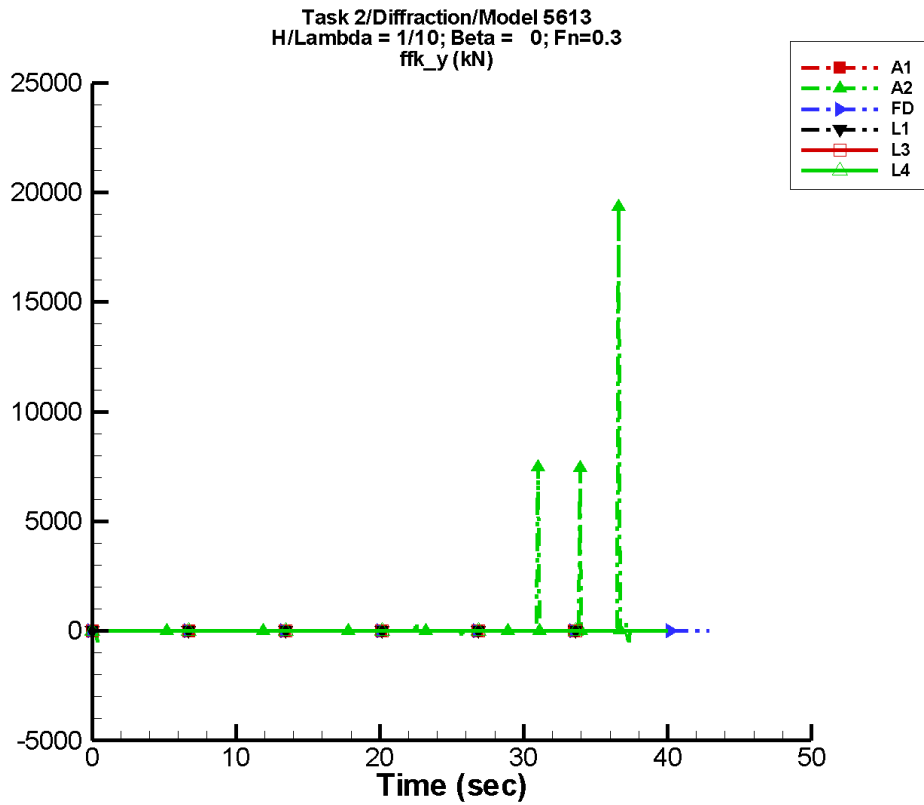
Table G–1165. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.80E-07     | 1.19E-02      | 24                | 5.40E-07      | -6                |
| A2   | -12.6         | 11.5          | 97                | 12.8          | -105              |
| FD   | -2.90E-06     | 1.12E-05      | -82               | 2.84E-05      | -24               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.51E-05     | 5.75E-04      | -52               | 4.09E-04      | -95               |

Table G–1166. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.19E-02       | 1.19E-02        | -1.19E-02       | 1.19E-02        |
| A2   | -1.01E+03       | 6.51E-04        | -243.           | 16.3            |
| FD   | -2.48E-04       | 2.30E-04        | -7.44E-05       | 7.88E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.78E-03       | 5.26E-03        | -1.14E-03       | 1.84E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-584. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

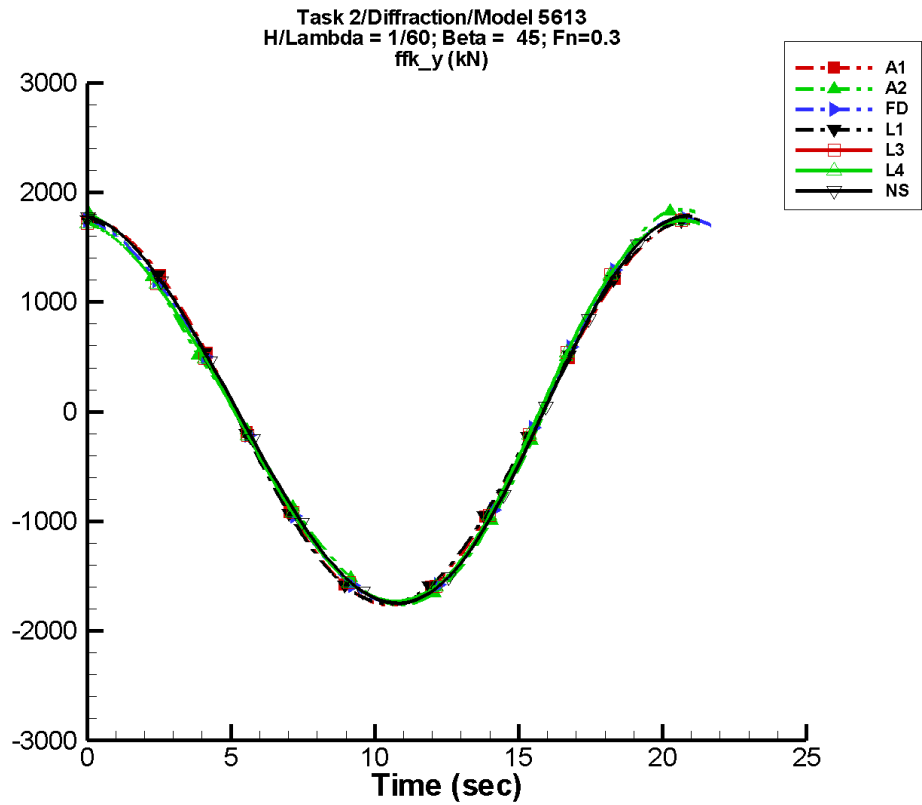
Table G-1167. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.68E-07     | 1.78E-02      | 24                | 8.10E-07      | -6                |
| A2   | 82.6          | 147.          | 137               | 124.          | -171              |
| FD   | -2.79E-06     | 1.55E-05      | 12                | 2.64E-05      | 11                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1168. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.78E-02       | 1.78E-02        | -1.78E-02       | 1.78E-02        |
| A2   | -497.           | 1.93E+04        | -285.           | 2.59E+03        |
| FD   | -2.65E-04       | 2.72E-04        | -9.10E-05       | 1.13E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-585. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1169. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

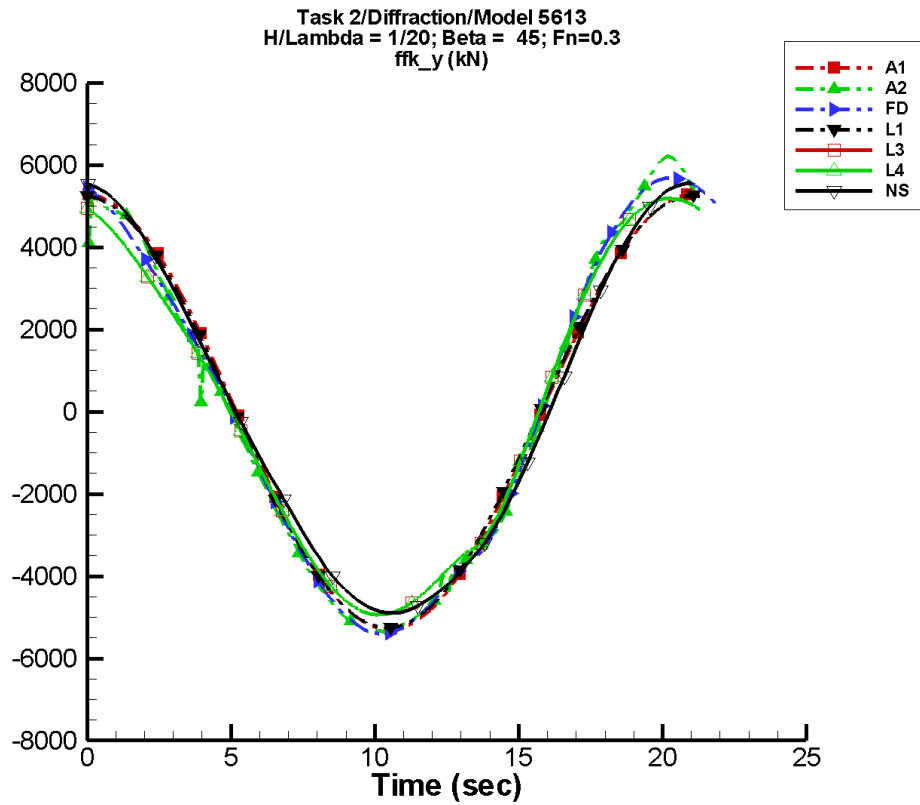
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.420         | 1.76E+03      | 93                | 0.623         | -156              |
| A2   | 0.114         | 1.77E+03      | 94                | 138.          | 171               |
| FD   | -0.169        | 1.76E+03      | 97                | 77.5          | -167              |
| L1   | 0.228         | 1.75E+03      | 93                | 0.352         | -168              |
| L3   | 0.449         | 1.74E+03      | 94                | 85.9          | -172              |
| L4   | 0.449         | 1.74E+03      | 94                | 85.9          | -172              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 5.73          | 1.76E+03      | 91                | 67.3          | 173               |

Table G–1170. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.76E+03       | 1.76E+03        | -1.76E+03       | 1.76E+03        |
| A2   | -1.76E+03       | 1.84E+03        | -1.76E+03       | 1.84E+03        |
| FD   | -1.74E+03       | 1.76E+03        | -1.74E+03       | 1.76E+03        |
| L1   | -1.75E+03       | 1.75E+03        | -1.75E+03       | 1.75E+03        |
| L3   | -1.73E+03       | 1.74E+03        | -1.73E+03       | 1.74E+03        |
| L4   | -1.73E+03       | 1.74E+03        | -1.73E+03       | 1.74E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.75E+03       | 1.78E+03        | -1.73E+03       | 1.77E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-586. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

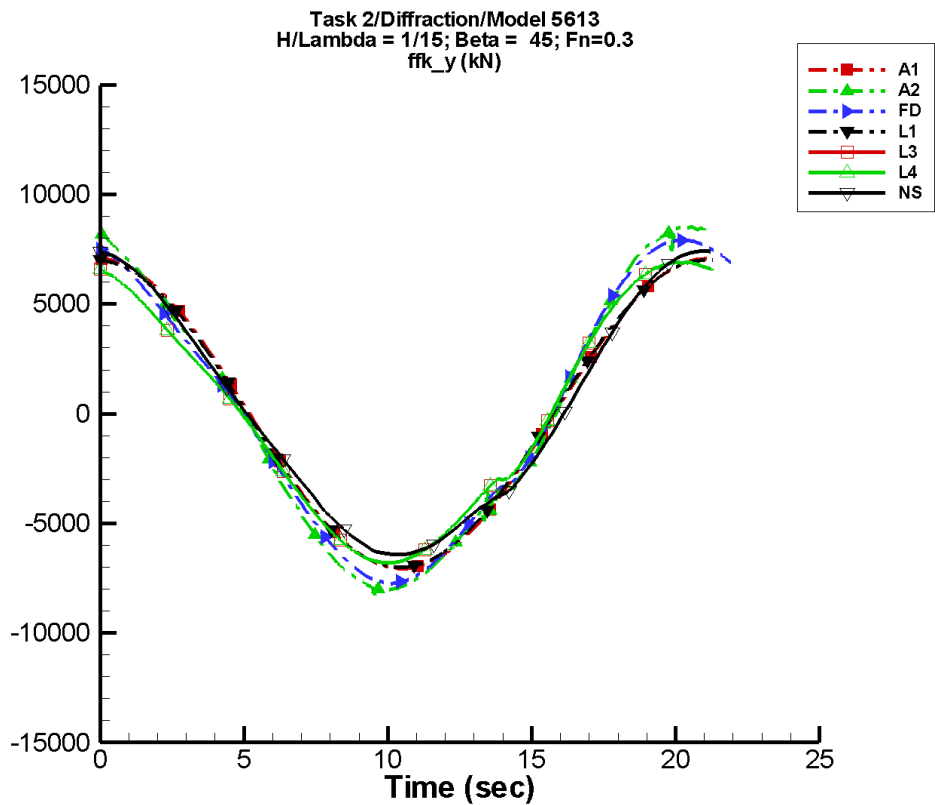
Table G-1171. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.26          | 5.29E+03      | 93                | 1.87          | -156              |
| A2   | -0.473        | 5.51E+03      | 97                | 340.          | 158               |
| FD   | -1.73         | 5.45E+03      | 101               | 369.          | -174              |
| L1   | 0.684         | 5.25E+03      | 93                | 1.05          | -168              |
| L3   | 1.10          | 5.01E+03      | 97                | 354.          | -180              |
| L4   | 1.10          | 5.01E+03      | 97                | 354.          | -180              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 54.8          | 5.16E+03      | 91                | 343.          | 126               |

Table G-1172. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.29E+03       | 5.29E+03        | -5.28E+03       | 5.29E+03        |
| A2   | -5.35E+03       | 7.62E+03        | -5.34E+03       | 6.13E+03        |
| FD   | -5.40E+03       | 5.69E+03        | -5.38E+03       | 5.67E+03        |
| L1   | -5.25E+03       | 5.25E+03        | -5.25E+03       | 5.25E+03        |
| L3   | -4.94E+03       | 5.18E+03        | -4.93E+03       | 5.18E+03        |
| L4   | -4.94E+03       | 5.18E+03        | -4.93E+03       | 5.18E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -4.90E+03       | 5.56E+03        | -4.85E+03       | 5.51E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-587. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

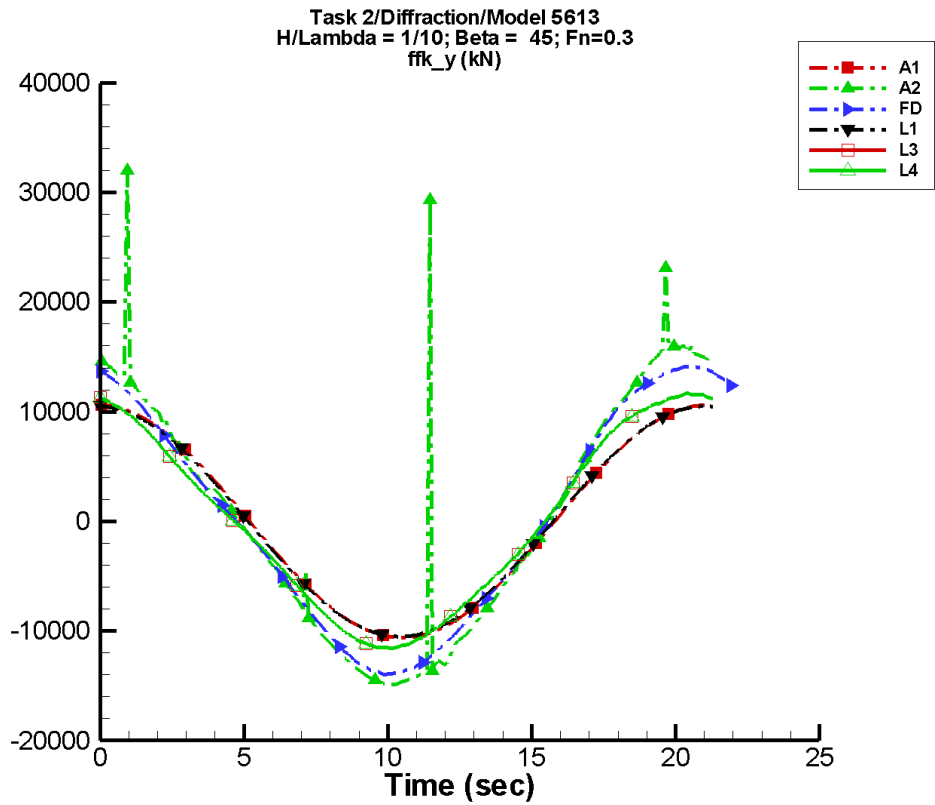
Table G-1173. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.69          | 7.07E+03      | 93                | 2.50          | -156              |
| A2   | -4.62         | 7.93E+03      | 99                | 286.          | 156               |
| FD   | 1.12          | 7.51E+03      | 103               | 409.          | -167              |
| L1   | 0.911         | 7.01E+03      | 93                | 1.41          | -168              |
| L3   | -1.05         | 6.64E+03      | 99                | 343.          | -174              |
| L4   | -1.05         | 6.64E+03      | 99                | 343.          | -174              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 86.0          | 6.72E+03      | 92                | 497.          | 114               |

Table G-1174. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.07E+03       | 7.07E+03        | -7.05E+03       | 7.07E+03        |
| A2   | -8.29E+03       | 8.52E+03        | -8.03E+03       | 8.47E+03        |
| FD   | -7.74E+03       | 7.92E+03        | -7.70E+03       | 7.89E+03        |
| L1   | -7.01E+03       | 7.01E+03        | -7.00E+03       | 7.00E+03        |
| L3   | -6.80E+03       | 6.91E+03        | -6.80E+03       | 6.90E+03        |
| L4   | -6.80E+03       | 6.91E+03        | -6.80E+03       | 6.90E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.43E+03       | 7.41E+03        | -6.39E+03       | 7.36E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-588. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

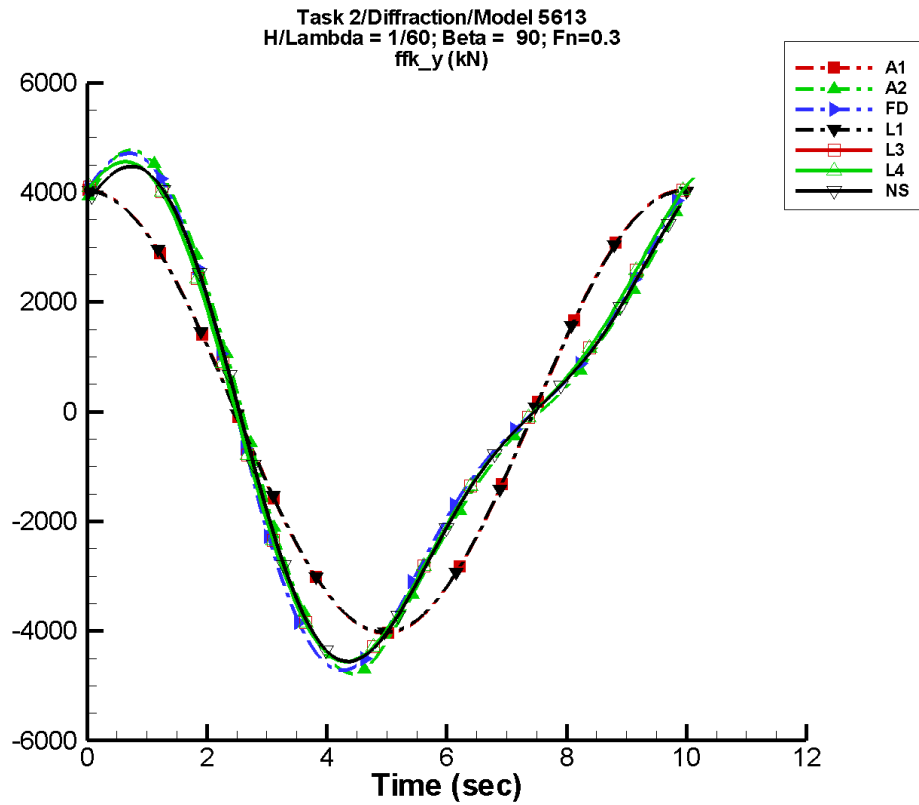
Table G-1175. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.53          | 1.06E+04      | 93                | 3.75          | -156              |
| A2   | 309.          | 1.43E+04      | 101               | 964.          | 145               |
| FD   | 21.3          | 1.33E+04      | 105               | 782.          | -166              |
| L1   | 1.37          | 1.05E+04      | 93                | 2.11          | -168              |
| L3   | -2.79         | 1.11E+04      | 101               | 528.          | -176              |
| L4   | -2.79         | 1.11E+04      | 101               | 528.          | -176              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1176. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.06E+04       | 1.06E+04        | -1.06E+04       | 1.06E+04        |
| A2   | -1.49E+04       | 3.20E+04        | -1.51E+04       | 1.67E+04        |
| FD   | -1.40E+04       | 1.42E+04        | -1.39E+04       | 1.41E+04        |
| L1   | -1.05E+04       | 1.05E+04        | -1.05E+04       | 1.05E+04        |
| L3   | -1.16E+04       | 1.17E+04        | -1.15E+04       | 1.16E+04        |
| L4   | -1.16E+04       | 1.17E+04        | -1.15E+04       | 1.16E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-589. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1177. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

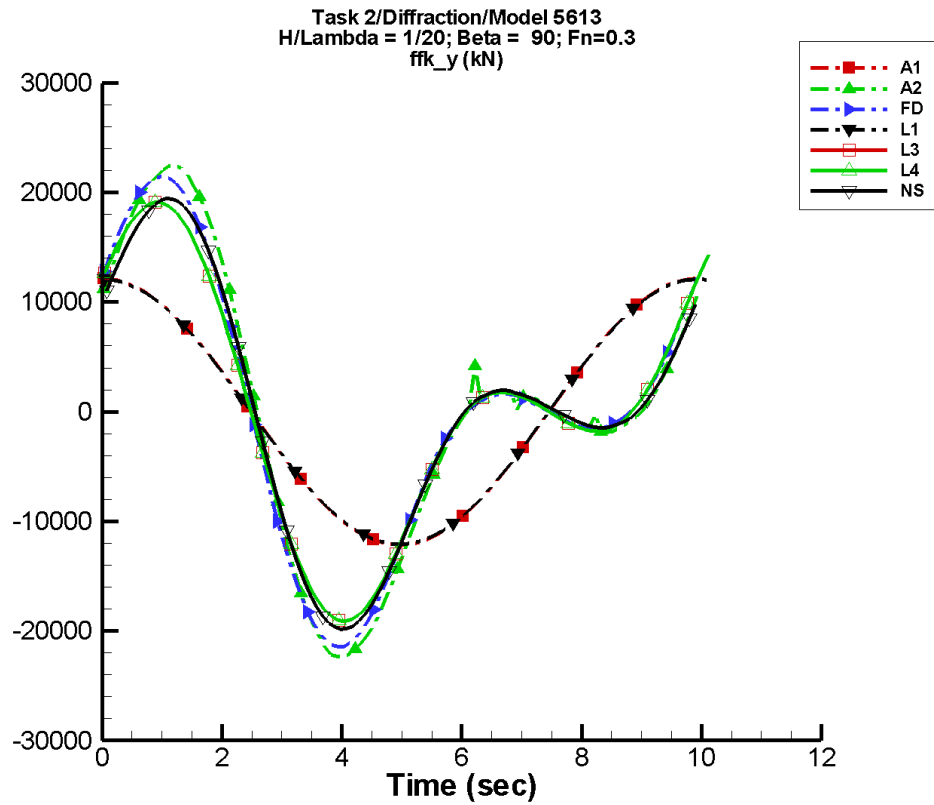
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.24         | 4.04E+03      | 86                | 4.52          | 24                |
| A2   | -2.89         | 4.09E+03      | 82                | 1.28E+03      | -15               |
| FD   | -2.61         | 4.07E+03      | 82                | 1.34E+03      | -15               |
| L1   | -1.02         | 4.02E+03      | 86                | 1.63          | -29               |
| L3   | 1.82E-02      | 4.03E+03      | 86                | 1.17E+03      | -8                |
| L4   | 1.82E-02      | 4.03E+03      | 86                | 1.17E+03      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.21         | 3.97E+03      | 88                | 1.21E+03      | -7                |

Table G-1178. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.04E+03       | 4.04E+03        | -4.00E+03       | 4.04E+03        |
| A2   | -4.78E+03       | 4.77E+03        | -4.68E+03       | 4.68E+03        |
| FD   | -4.72E+03       | 4.72E+03        | -4.63E+03       | 4.64E+03        |
| L1   | -4.02E+03       | 4.02E+03        | -4.01E+03       | 4.04E+03        |
| L3   | -4.56E+03       | 4.56E+03        | -4.53E+03       | 4.54E+03        |
| L4   | -4.56E+03       | 4.56E+03        | -4.53E+03       | 4.54E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -4.56E+03       | 4.47E+03        | -4.48E+03       | 4.40E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-590. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

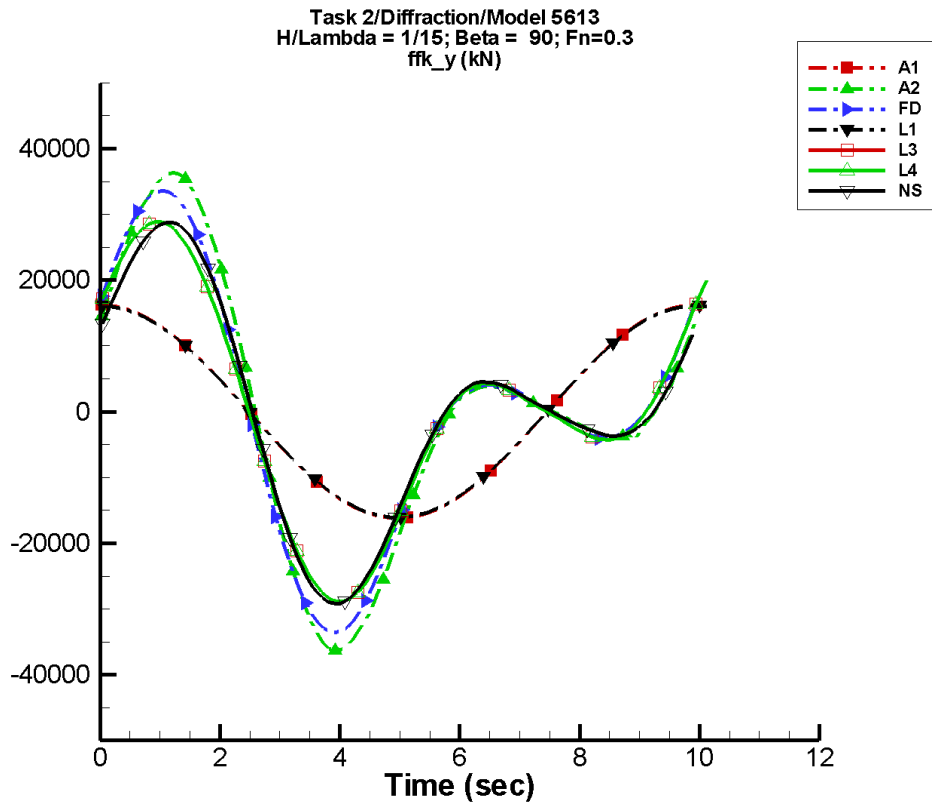
Table G-1179. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.75         | 1.21E+04      | 86                | 13.6          | 24                |
| A2   | 44.4          | 1.34E+04      | 82                | 1.17E+04      | -17               |
| FD   | -33.8         | 1.33E+04      | 82                | 1.08E+04      | -15               |
| L1   | -3.07         | 1.21E+04      | 86                | 4.89          | -29               |
| L3   | 12.4          | 1.22E+04      | 86                | 9.46E+03      | -8                |
| L4   | 12.4          | 1.22E+04      | 86                | 9.46E+03      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 18.1          | 1.20E+04      | 88                | 1.01E+04      | -7                |

Table G-1180. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.21E+04       | 1.21E+04        | -1.20E+04       | 1.21E+04        |
| A2   | -2.24E+04       | 2.24E+04        | -2.18E+04       | 2.18E+04        |
| FD   | -2.15E+04       | 2.15E+04        | -2.09E+04       | 2.09E+04        |
| L1   | -1.21E+04       | 1.21E+04        | -1.20E+04       | 1.21E+04        |
| L3   | -1.91E+04       | 1.91E+04        | -1.89E+04       | 1.89E+04        |
| L4   | -1.91E+04       | 1.91E+04        | -1.89E+04       | 1.89E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.98E+04       | 1.95E+04        | -1.93E+04       | 1.90E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-591. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

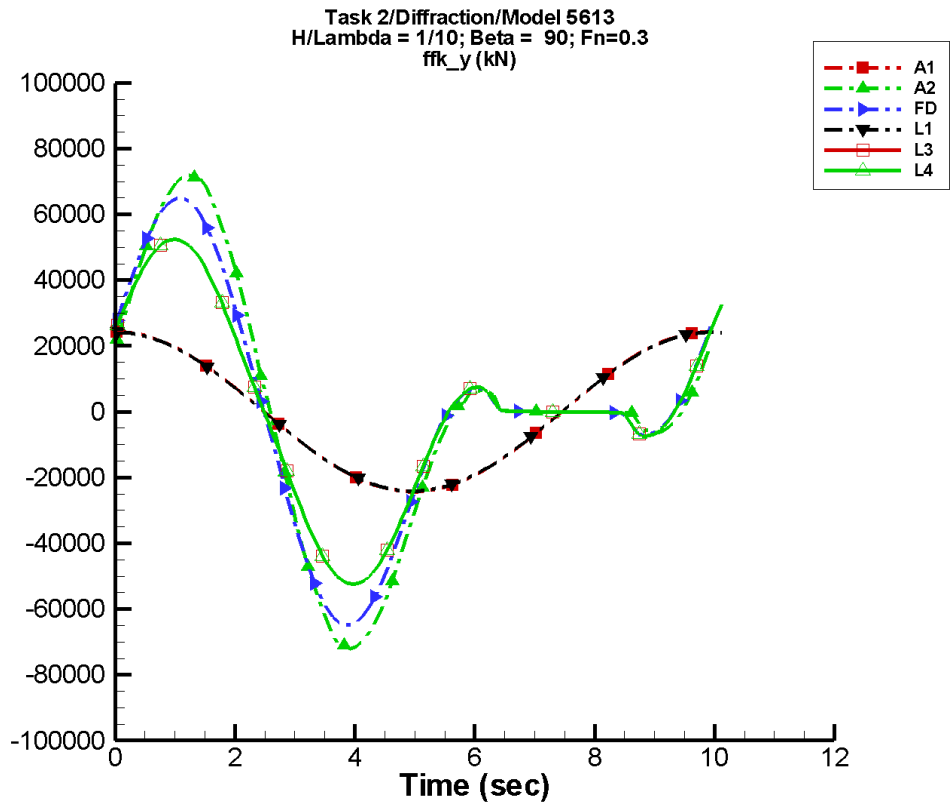
Table G-1181. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.0         | 1.62E+04      | 86                | 18.2          | 24                |
| A2   | 0.190         | 1.96E+04      | 81                | 2.00E+04      | -17               |
| FD   | -74.3         | 1.88E+04      | 82                | 1.84E+04      | -15               |
| L1   | -4.09         | 1.61E+04      | 86                | 6.53          | -29               |
| L3   | 30.4          | 1.66E+04      | 86                | 1.57E+04      | -8                |
| L4   | 30.4          | 1.66E+04      | 86                | 1.57E+04      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 80.7          | 1.57E+04      | 88                | 1.64E+04      | -6                |

Table G-1182. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.62E+04       | 1.62E+04        | -1.60E+04       | 1.62E+04        |
| A2   | -3.63E+04       | 3.64E+04        | -3.50E+04       | 3.52E+04        |
| FD   | -3.36E+04       | 3.36E+04        | -3.26E+04       | 3.27E+04        |
| L1   | -1.61E+04       | 1.61E+04        | -1.60E+04       | 1.62E+04        |
| L3   | -2.89E+04       | 2.89E+04        | -2.86E+04       | 2.86E+04        |
| L4   | -2.89E+04       | 2.89E+04        | -2.86E+04       | 2.86E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.92E+04       | 2.88E+04        | -2.87E+04       | 2.83E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-592. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

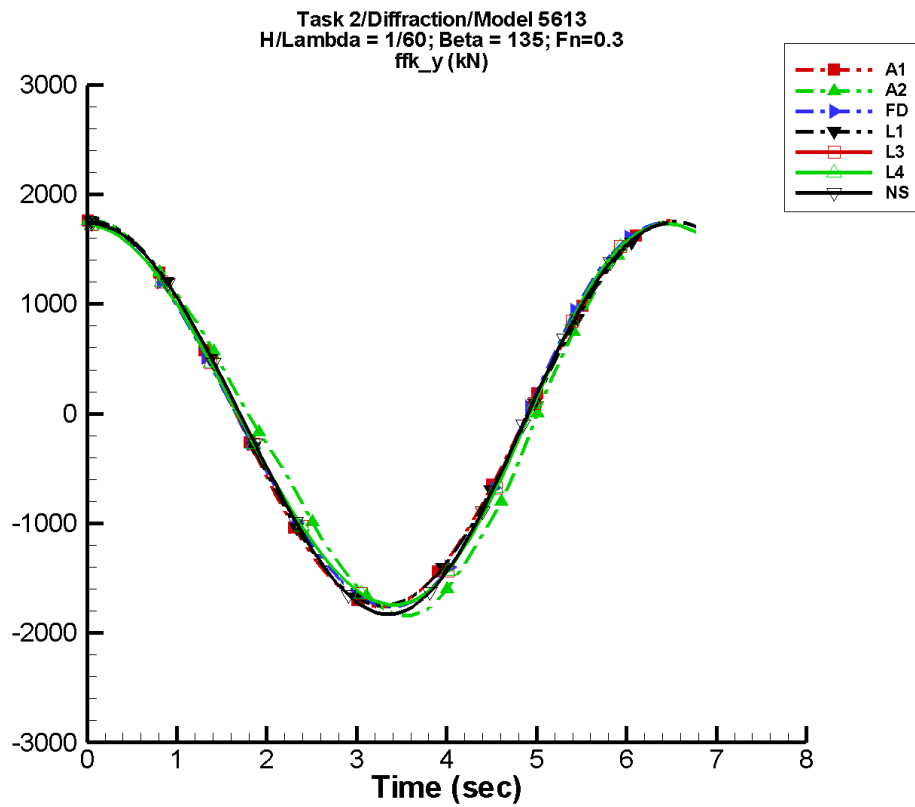
Table G-1183. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -19.5         | 2.43E+04      | 86                | 27.2          | 24                |
| A2   | 86.4          | 3.63E+04      | 81                | 3.87E+04      | -17               |
| FD   | -284.         | 3.36E+04      | 81                | 3.50E+04      | -13               |
| L1   | -6.13         | 2.41E+04      | 86                | 9.79          | -29               |
| L3   | 152.          | 2.80E+04      | 86                | 2.79E+04      | -8                |
| L4   | 152.          | 2.80E+04      | 86                | 2.79E+04      | -8                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1184. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.43E+04       | 2.43E+04        | -2.41E+04       | 2.43E+04        |
| A2   | -7.21E+04       | 7.20E+04        | -6.94E+04       | 6.94E+04        |
| FD   | -6.49E+04       | 6.49E+04        | -6.27E+04       | 6.28E+04        |
| L1   | -2.41E+04       | 2.41E+04        | -2.41E+04       | 2.42E+04        |
| L3   | -5.24E+04       | 5.24E+04        | -5.18E+04       | 5.18E+04        |
| L4   | -5.24E+04       | 5.24E+04        | -5.18E+04       | 5.18E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-593. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1185. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

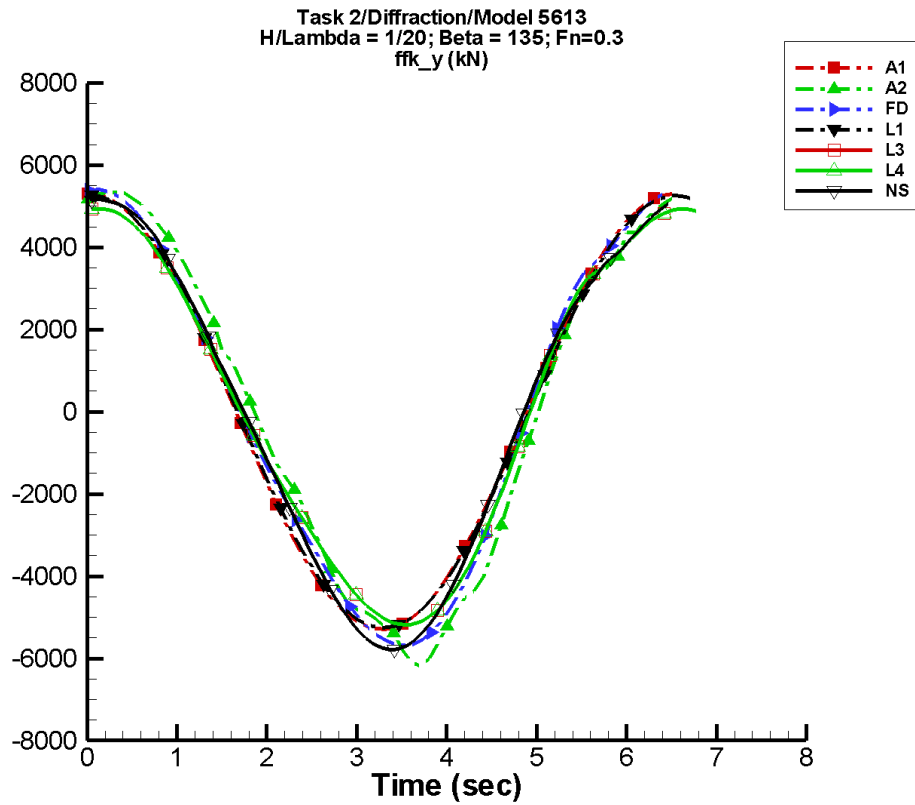
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.683        | 1.76E+03      | 85                | 1.05          | -1                |
| A2   | -0.898        | 1.77E+03      | 78                | 134.          | 170               |
| FD   | 0.597         | 1.76E+03      | 89                | 76.7          | -178              |
| L1   | -8.81E-02     | 1.75E+03      | 84                | 0.142         | -63               |
| L3   | -0.506        | 1.74E+03      | 84                | 82.9          | 168               |
| L4   | -0.506        | 1.74E+03      | 84                | 82.9          | 168               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.70         | 1.78E+03      | 87                | 54.1          | -141              |

Table G–1186. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.76E+03       | 1.76E+03        | -1.72E+03       | 1.77E+03        |
| A2   | -1.84E+03       | 1.76E+03        | -1.79E+03       | 1.76E+03        |
| FD   | -1.76E+03       | 1.74E+03        | -1.72E+03       | 1.72E+03        |
| L1   | -1.75E+03       | 1.75E+03        | -1.74E+03       | 1.76E+03        |
| L3   | -1.74E+03       | 1.73E+03        | -1.73E+03       | 1.73E+03        |
| L4   | -1.74E+03       | 1.73E+03        | -1.73E+03       | 1.73E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.83E+03       | 1.74E+03        | -1.81E+03       | 1.74E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-594. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

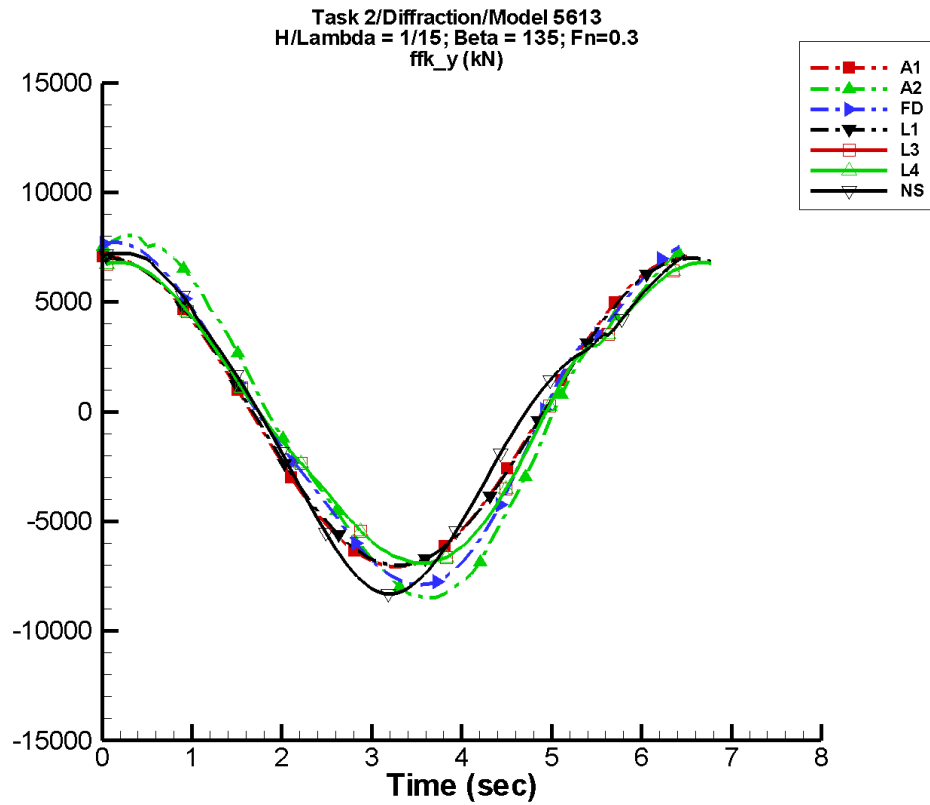
Table G–1187. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.06         | 5.29E+03      | 85                | 3.15          | -1                |
| A2   | -2.60         | 5.57E+03      | 74                | 352.          | -172              |
| FD   | 13.1          | 5.49E+03      | 86                | 340.          | -168              |
| L1   | -0.266        | 5.25E+03      | 84                | 0.426         | -63               |
| L3   | 3.32          | 5.05E+03      | 81                | 316.          | 176               |
| L4   | 3.32          | 5.05E+03      | 81                | 316.          | 176               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -11.3         | 5.35E+03      | 85                | 304.          | -109              |

Table G–1188. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.29E+03       | 5.29E+03        | -5.17E+03       | 5.31E+03        |
| A2   | -6.20E+03       | 5.34E+03        | -5.68E+03       | 5.30E+03        |
| FD   | -5.69E+03       | 5.40E+03        | -5.53E+03       | 5.39E+03        |
| L1   | -5.25E+03       | 5.25E+03        | -5.21E+03       | 5.29E+03        |
| L3   | -5.18E+03       | 4.94E+03        | -5.14E+03       | 4.98E+03        |
| L4   | -5.18E+03       | 4.94E+03        | -5.14E+03       | 4.98E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -5.79E+03       | 5.16E+03        | -5.71E+03       | 5.16E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-595. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

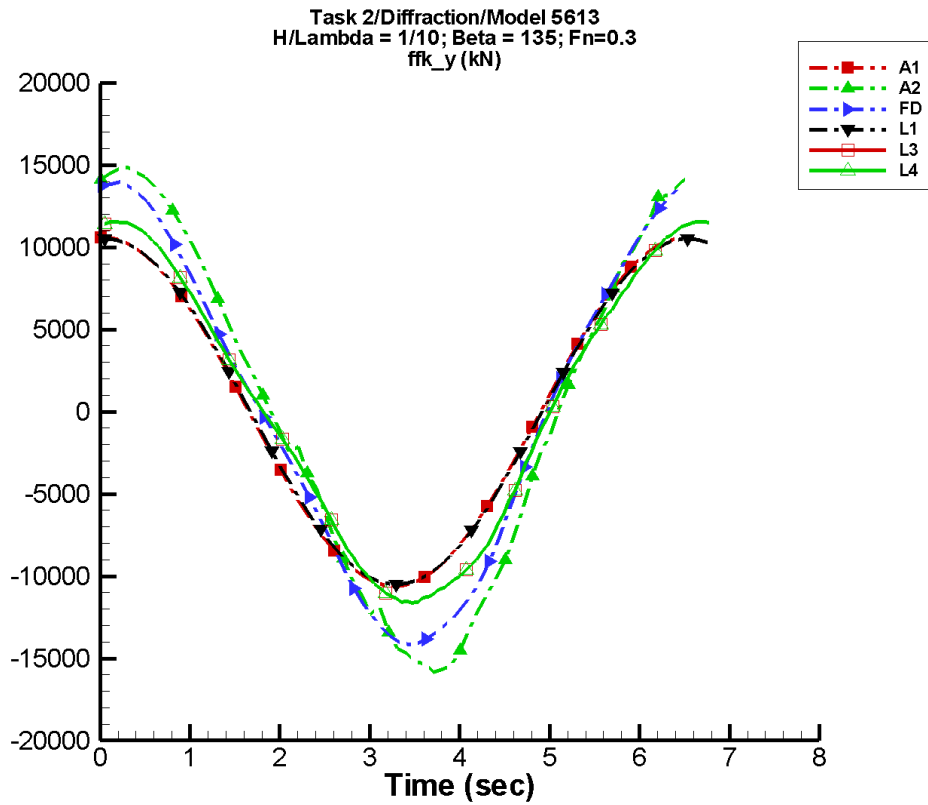
Table G–1189. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.74         | 7.07E+03      | 85                | 4.20          | -1                |
| A2   | -3.00         | 8.02E+03      | 73                | 240.          | -160              |
| FD   | 23.3          | 7.59E+03      | 84                | 336.          | -177              |
| L1   | -0.353        | 7.00E+03      | 84                | 0.569         | -63               |
| L3   | 11.6          | 6.69E+03      | 79                | 300.          | 163               |
| L4   | 11.6          | 6.69E+03      | 79                | 300.          | 163               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 11.2          | 7.28E+03      | 89                | 818.          | -49               |

Table G–1190. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.06E+03       | 7.07E+03        | -6.90E+03       | 7.09E+03        |
| A2   | -8.48E+03       | 8.04E+03        | -8.23E+03       | 7.80E+03        |
| FD   | -7.91E+03       | 7.74E+03        | -7.68E+03       | 7.70E+03        |
| L1   | -7.01E+03       | 7.01E+03        | -6.95E+03       | 7.06E+03        |
| L3   | -6.91E+03       | 6.80E+03        | -6.84E+03       | 6.83E+03        |
| L4   | -6.91E+03       | 6.80E+03        | -6.84E+03       | 6.83E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -8.32E+03       | 7.23E+03        | -8.24E+03       | 7.24E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-596. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

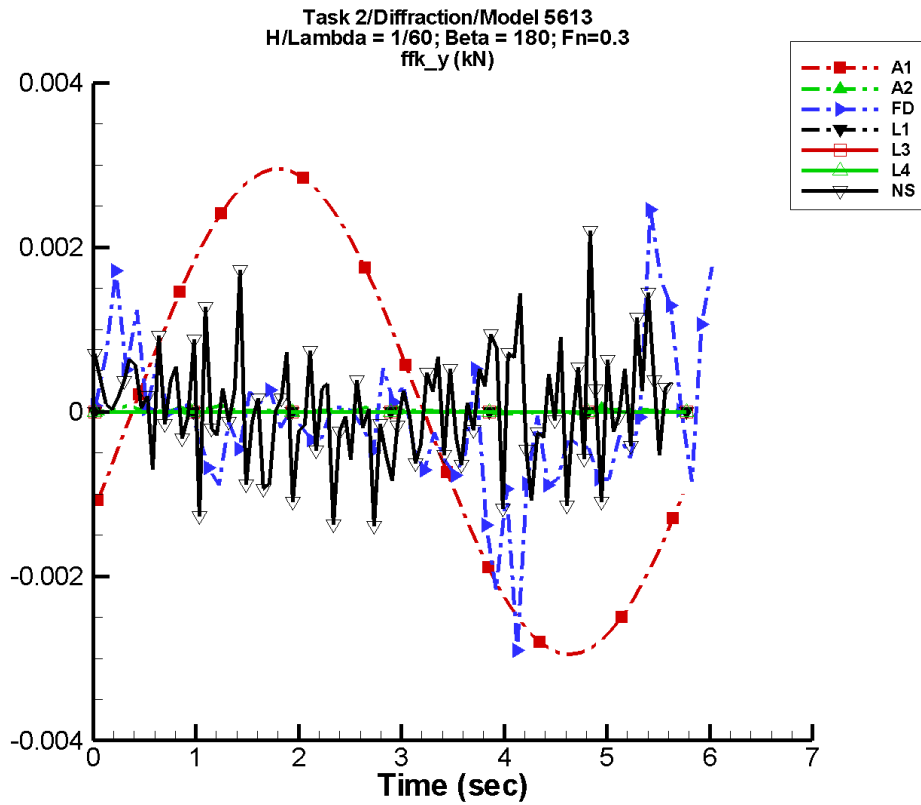
Table G-1191. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.12         | 1.06E+04      | 85                | 6.30          | -1                |
| A2   | 20.2          | 1.45E+04      | 71                | 852.          | 157               |
| FD   | 32.0          | 1.35E+04      | 82                | 644.          | 174               |
| L1   | -0.532        | 1.05E+04      | 84                | 0.853         | -63               |
| L3   | 33.6          | 1.12E+04      | 76                | 537.          | 158               |
| L4   | 33.6          | 1.12E+04      | 76                | 537.          | 158               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1192. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.06E+04       | 1.06E+04        | -1.03E+04       | 1.06E+04        |
| A2   | -1.58E+04       | 1.49E+04        | -1.50E+04       | 1.45E+04        |
| FD   | -1.42E+04       | 1.40E+04        | -1.37E+04       | 1.39E+04        |
| L1   | -1.05E+04       | 1.05E+04        | -1.04E+04       | 1.06E+04        |
| L3   | -1.16E+04       | 1.16E+04        | -1.14E+04       | 1.16E+04        |
| L4   | -1.16E+04       | 1.16E+04        | -1.14E+04       | 1.16E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-597. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1193. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

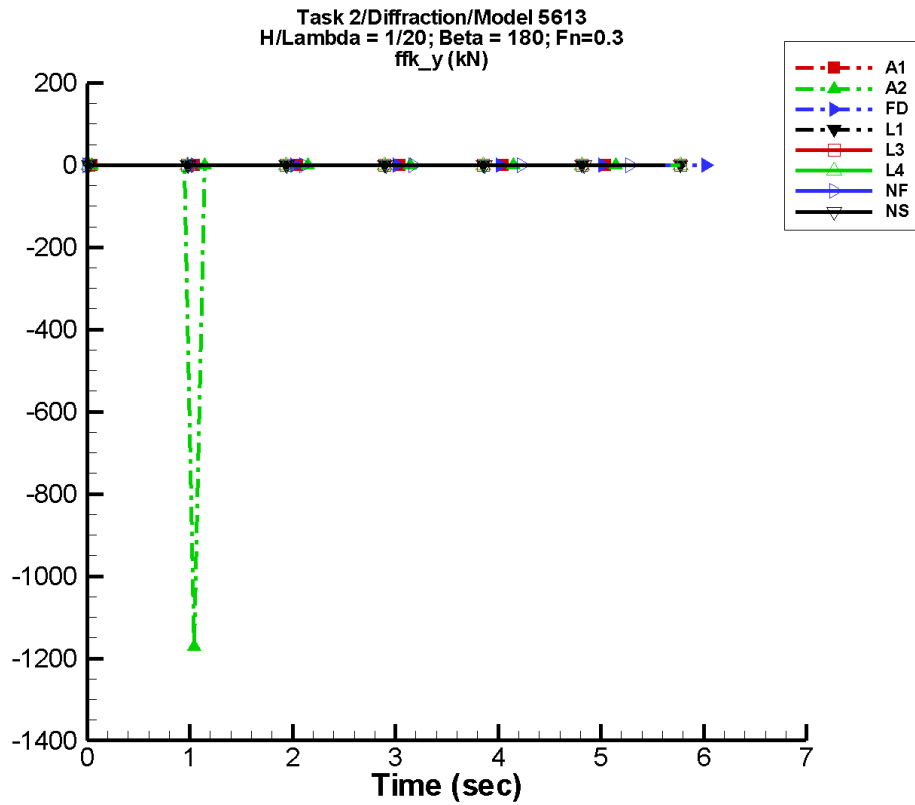
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.90E-06     | 2.95E-03      | -32               | 2.99E-06      | -45               |
| A2   | 1.48E-05      | 1.21E-05      | 9                 | 4.79E-06      | 47                |
| FD   | -1.74E-04     | 5.41E-04      | 2                 | 5.71E-04      | 20                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 4.62E-05      | 2.18E-04      | 106               | 9.40E-05      | -42               |

Table G-1194. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.95E-03       | 2.95E-03        | -2.86E-03       | 2.89E-03        |
| A2   | -2.12E-05       | 7.82E-05        | -6.69E-06       | 3.28E-05        |
| FD   | -2.90E-03       | 2.46E-03        | -1.11E-03       | 1.29E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.39E-03       | 2.20E-03        | -3.96E-04       | 5.09E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-598. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

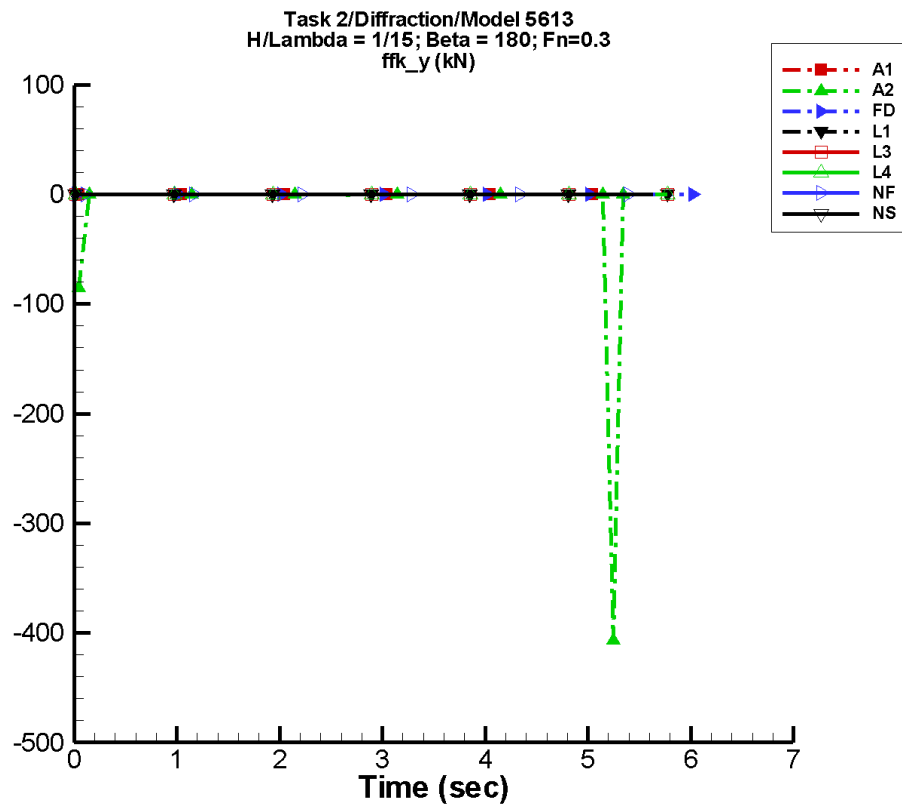
Table G–1195. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.70E-06     | 8.88E-03      | -32               | 9.00E-06      | -45               |
| A2   | -9.14         | 20.5          | -166              | 26.1          | 120               |
| FD   | -1.88E-04     | 2.71E-03      | 31                | 2.62E-04      | -45               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 8.19E-05      | 1.53E-04      | -108              | 2.88E-04      | 132               |

Table G–1196. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.88E-03       | 8.87E-03        | -8.61E-03       | 8.68E-03        |
| A2   | -1.17E+03       | 2.99E-04        | -156.           | 13.4            |
| FD   | -1.54E-02       | 1.10E-02        | -4.27E-03       | 3.78E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -5.40E-03       | 3.86E-03        | -8.45E-04       | 9.57E-04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-599. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

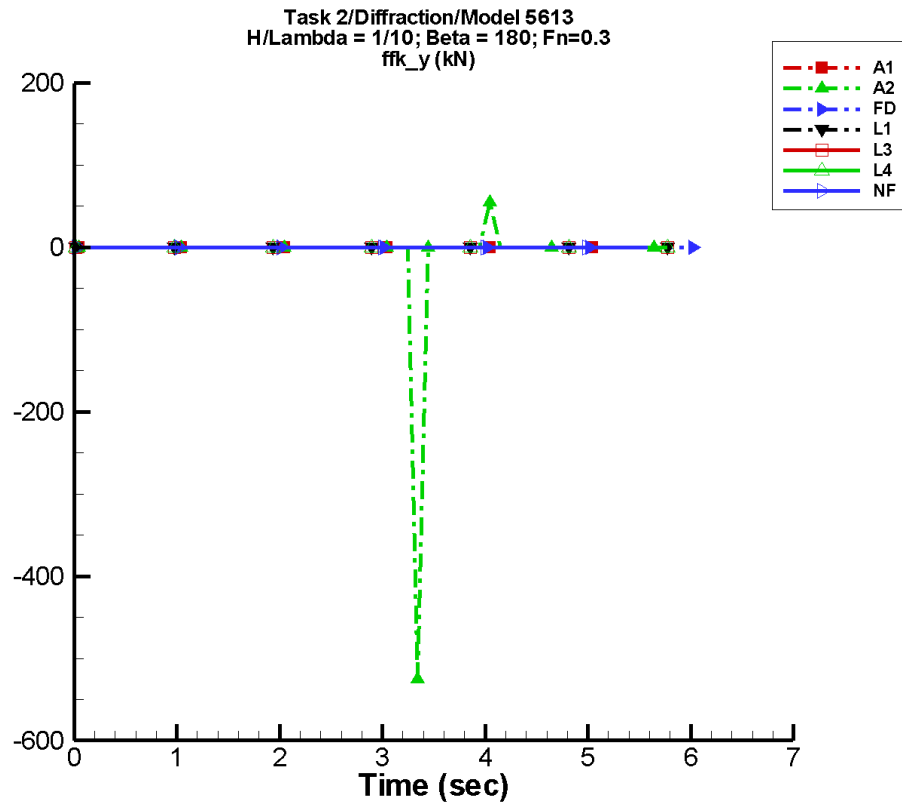
Table G–1197. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -7.61E-06     | 1.19E-02      | -32               | 1.20E-05      | -45               |
| A2   | -7.72         | 14.0          | -74               | 14.3          | -46               |
| FD   | -4.15E-04     | 3.24E-03      | 51                | 2.44E-03      | 2                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.51E-05     | 5.30E-04      | 82                | 5.30E-04      | -75               |

Table G–1198. Minimum and maximum of  $F_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.19E-02       | 1.18E-02        | -1.15E-02       | 1.16E-02        |
| A2   | -407.           | 6.12E-04        | -54.3           | 4.63            |
| FD   | -2.23E-02       | 1.74E-02        | -3.71E-03       | 4.82E-03        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.03E-02       | 9.74E-03        | -1.50E-03       | 4.03E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-600. Time history of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

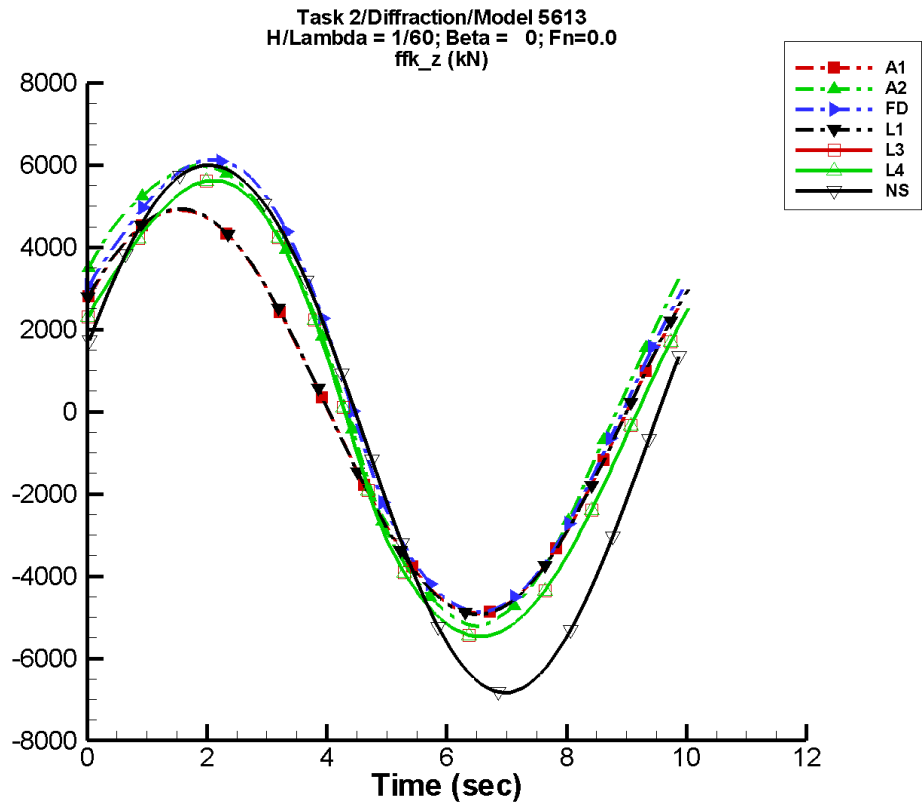
Table G-1199. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.14E-05     | 1.78E-02      | -32               | 1.80E-05      | -45               |
| A2   | -8.23         | 18.2          | 58                | 16.5          | -167              |
| FD   | 1.65E-03      | 7.29E-03      | 49                | 8.70E-03      | 82                |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1200. Minimum and maximum of  $F_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.78E-02       | 1.78E-02        | -1.72E-02       | 1.74E-02        |
| A2   | -525.           | 55.2            | -69.9           | 12.3            |
| FD   | -4.43E-02       | 4.18E-02        | -1.53E-02       | 2.13E-02        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-601. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–1201. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

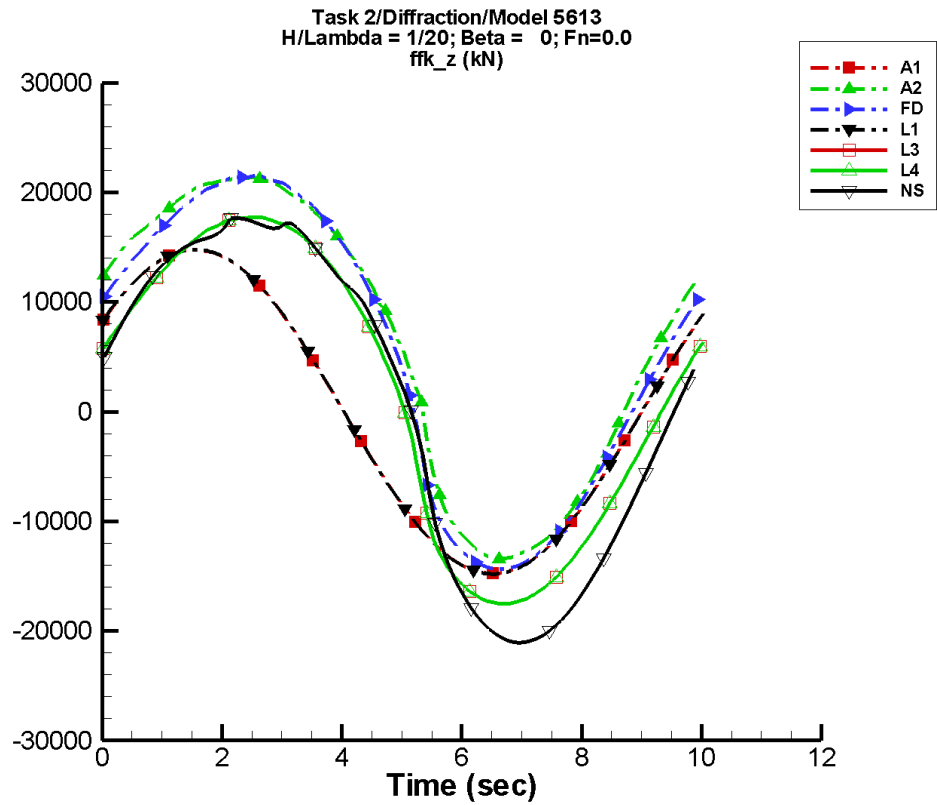
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.77         | 4.91E+03      | 29                | 6.33          | -3                |
| A2   | 602.          | 5.66E+03      | 26                | 423.          | -165              |
| FD   | 710.          | 5.53E+03      | 18                | 513.          | -158              |
| L1   | -0.404        | 4.93E+03      | 30                | 5.12          | 53                |
| L3   | 70.9          | 5.60E+03      | 21                | 503.          | -142              |
| L4   | 70.9          | 5.60E+03      | 21                | 503.          | -142              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -298.         | 6.45E+03      | 16                | 127.          | 137               |

Table G–1202. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.91E+03       | 4.91E+03        | -4.86E+03       | 4.85E+03        |
| A2   | -5.21E+03       | 5.99E+03        | -5.13E+03       | 5.98E+03        |
| FD   | -4.87E+03       | 6.13E+03        | -4.82E+03       | 6.07E+03        |
| L1   | -4.93E+03       | 4.93E+03        | -4.91E+03       | 4.91E+03        |
| L3   | -5.47E+03       | 5.62E+03        | -5.45E+03       | 5.60E+03        |
| L4   | -5.47E+03       | 5.62E+03        | -5.45E+03       | 5.60E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.84E+03       | 6.00E+03        | -6.77E+03       | 5.94E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-602. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

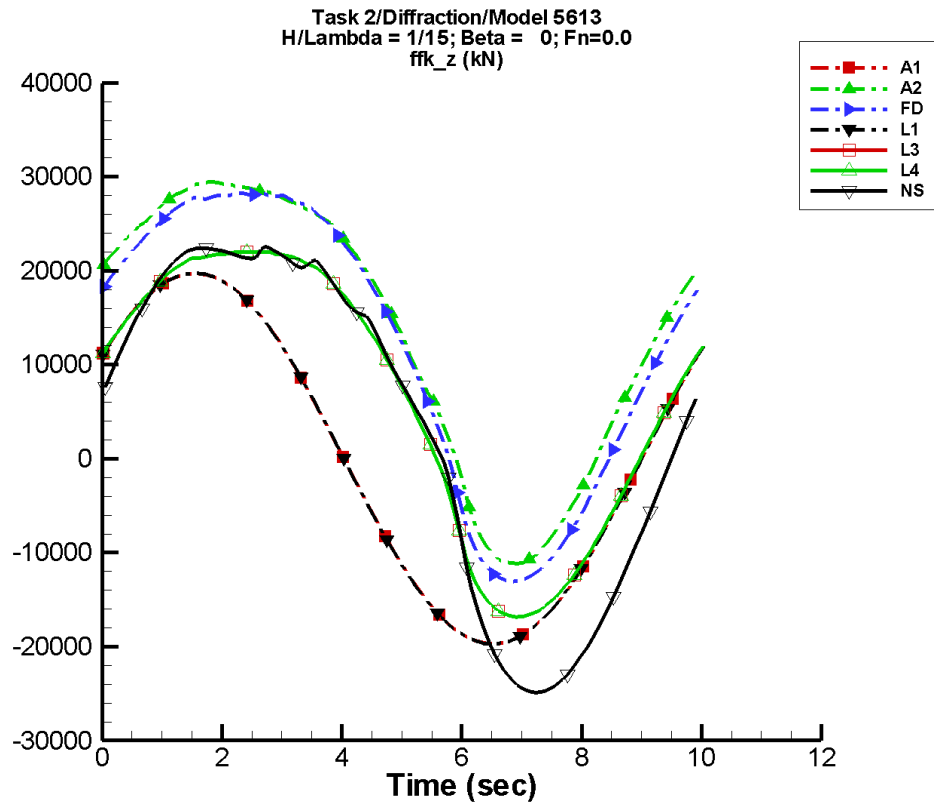
Table G-1203. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -14.3         | 1.48E+04      | 29                | 19.0          | -3                |
| A2   | 6.42E+03      | 1.75E+04      | 10                | 3.10E+03      | 136               |
| FD   | 5.44E+03      | 1.79E+04      | 5                 | 3.23E+03      | 147               |
| L1   | -1.21         | 1.48E+04      | 30                | 15.4          | 53                |
| L3   | 1.64E+03      | 1.77E+04      | 7                 | 2.89E+03      | 154               |
| L4   | 1.64E+03      | 1.77E+04      | 7                 | 2.89E+03      | 154               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 577.          | 1.96E+04      | 6                 | 3.01E+03      | 129               |

Table G-1204. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.48E+04       | 1.48E+04        | -1.46E+04       | 1.46E+04        |
| A2   | -1.34E+04       | 2.14E+04        | -1.31E+04       | 2.12E+04        |
| FD   | -1.43E+04       | 2.15E+04        | -1.41E+04       | 2.14E+04        |
| L1   | -1.48E+04       | 1.48E+04        | -1.47E+04       | 1.47E+04        |
| L3   | -1.75E+04       | 1.78E+04        | -1.75E+04       | 1.77E+04        |
| L4   | -1.75E+04       | 1.78E+04        | -1.75E+04       | 1.77E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.11E+04       | 1.77E+04        | -2.08E+04       | 1.75E+04        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-603. Time history of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

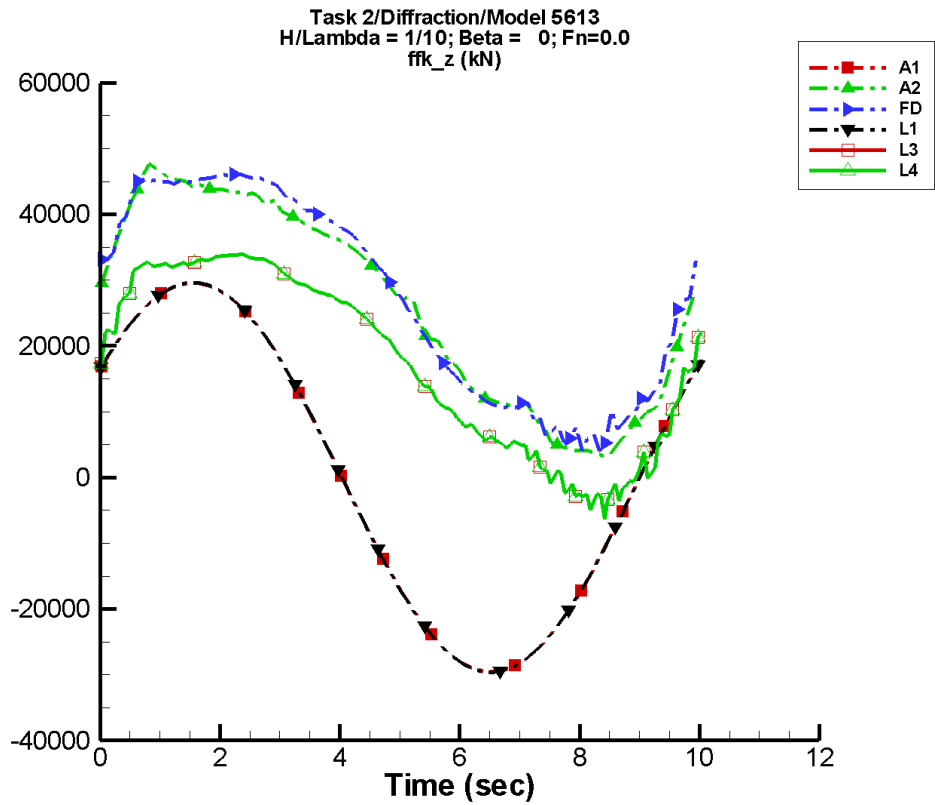
Table G–1205. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -19.2         | 1.97E+04      | 29                | 25.4          | -3                |
| A2   | 1.34E+04      | 1.94E+04      | 8                 | 4.00E+03      | 114               |
| FD   | 1.18E+04      | 2.02E+04      | 2                 | 4.27E+03      | 108               |
| L1   | -1.62         | 1.97E+04      | 30                | 20.5          | 53                |
| L3   | 6.31E+03      | 1.92E+04      | 3                 | 3.78E+03      | 110               |
| L4   | 6.31E+03      | 1.92E+04      | 3                 | 3.78E+03      | 110               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 3.42E+03      | 2.35E+04      | -1                | 4.75E+03      | 86                |

Table G–1206. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.97E+04       | 1.97E+04        | -1.95E+04       | 1.95E+04        |
| A2   | -1.12E+04       | 2.95E+04        | -1.08E+04       | 2.94E+04        |
| FD   | -1.31E+04       | 2.83E+04        | -1.28E+04       | 2.81E+04        |
| L1   | -1.97E+04       | 1.97E+04        | -1.97E+04       | 1.97E+04        |
| L3   | -1.68E+04       | 2.20E+04        | -1.67E+04       | 2.20E+04        |
| L4   | -1.68E+04       | 2.20E+04        | -1.67E+04       | 2.20E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.49E+04       | 2.26E+04        | -2.47E+04       | 2.23E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-604. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

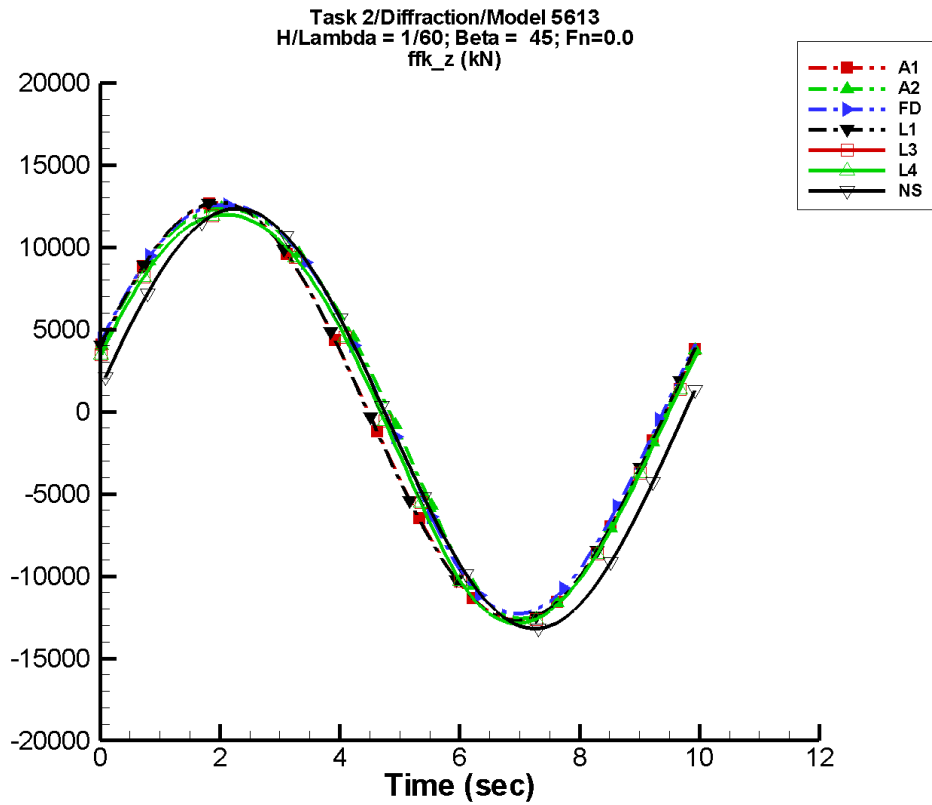
Table G–1207. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -28.7         | 2.96E+04      | 29                | 38.1          | -3                |
| A2   | 2.63E+04      | 2.02E+04      | -3                | 5.49E+03      | 18                |
| FD   | 2.76E+04      | 2.05E+04      | -4                | 3.02E+03      | 16                |
| L1   | -2.43         | 2.96E+04      | 30                | 30.7          | 53                |
| L3   | 1.76E+04      | 1.77E+04      | -6                | 3.66E+03      | 9                 |
| L4   | 1.76E+04      | 1.77E+04      | -6                | 3.66E+03      | 9                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1208. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.96E+04       | 2.96E+04        | -2.93E+04       | 2.92E+04        |
| A2   | 3.15E+03        | 4.77E+04        | 3.82E+03        | 4.60E+04        |
| FD   | 4.00E+03        | 4.63E+04        | 5.93E+03        | 4.59E+04        |
| L1   | -2.96E+04       | 2.96E+04        | -2.95E+04       | 2.95E+04        |
| L3   | -6.37E+03       | 3.39E+04        | -3.56E+03       | 3.37E+04        |
| L4   | -6.37E+03       | 3.39E+04        | -3.56E+03       | 3.37E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-605. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G-1209. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

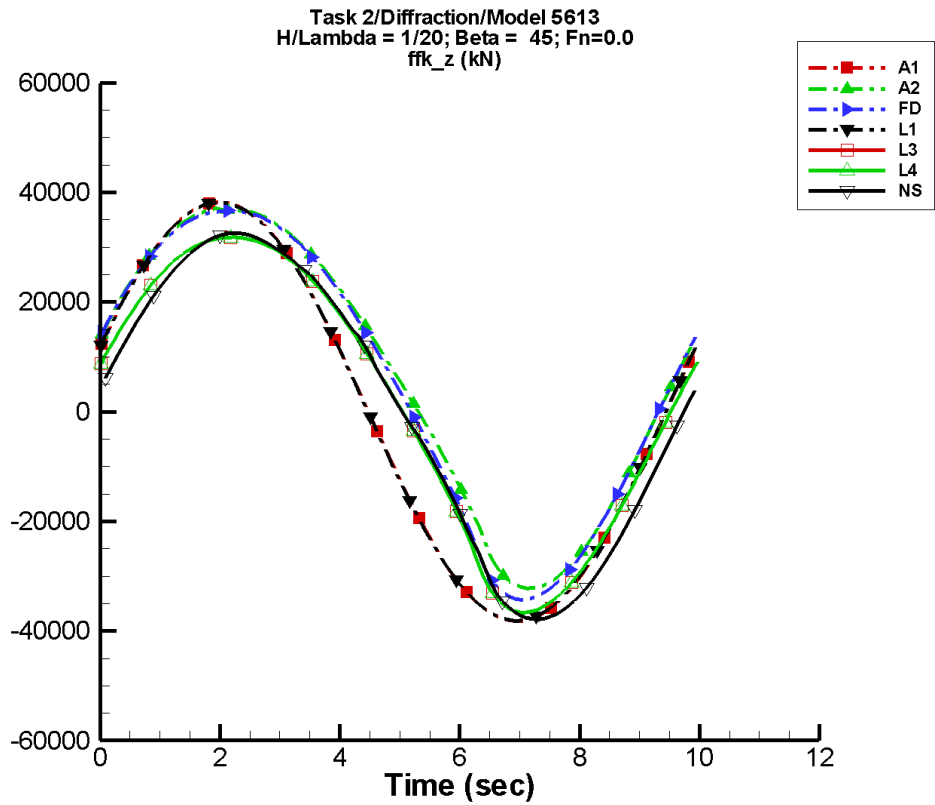
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -10.8         | 1.27E+04      | 14                | 14.8          | -12               |
| A2   | 606.          | 1.25E+04      | 8                 | 727.          | 103               |
| FD   | 716.          | 1.25E+04      | 7                 | 596.          | 115               |
| L1   | 5.22          | 1.27E+04      | 14                | 8.82          | 44                |
| L3   | 74.8          | 1.25E+04      | 10                | 583.          | 124               |
| L4   | 74.8          | 1.25E+04      | 10                | 583.          | 124               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -312.         | 1.28E+04      | 7                 | 122.          | 96                |

Table G-1210. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.27E+04       | 1.27E+04        | -1.26E+04       | 1.27E+04        |
| A2   | -1.26E+04       | 1.24E+04        | -1.24E+04       | 1.24E+04        |
| FD   | -1.23E+04       | 1.26E+04        | -1.22E+04       | 1.25E+04        |
| L1   | -1.27E+04       | 1.27E+04        | -1.27E+04       | 1.27E+04        |
| L3   | -1.29E+04       | 1.20E+04        | -1.28E+04       | 1.19E+04        |
| L4   | -1.29E+04       | 1.20E+04        | -1.28E+04       | 1.19E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.32E+04       | 1.23E+04        | -1.31E+04       | 1.23E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-606. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

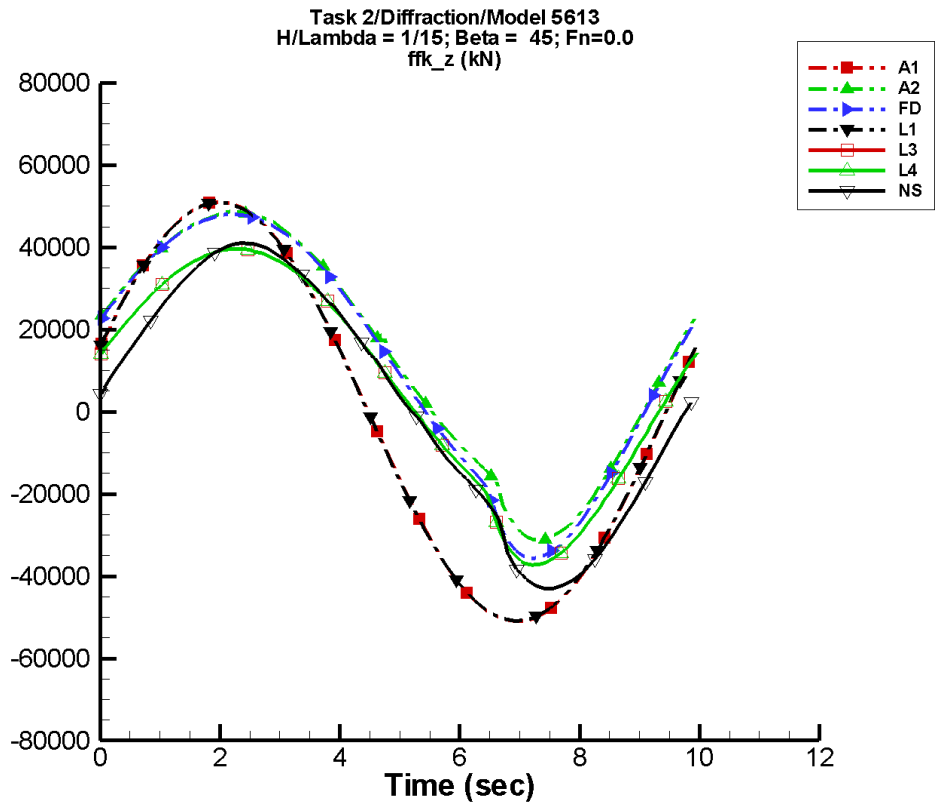
Table G-1211. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -32.4         | 3.82E+04      | 14                | 44.5          | -12               |
| A2   | 6.38E+03      | 3.37E+04      | 2                 | 3.76E+03      | 75                |
| FD   | 5.33E+03      | 3.47E+04      | 1                 | 3.98E+03      | 80                |
| L1   | 15.7          | 3.81E+04      | 14                | 26.5          | 44                |
| L3   | 1.55E+03      | 3.33E+04      | 3                 | 3.72E+03      | 86                |
| L4   | 1.55E+03      | 3.33E+04      | 3                 | 3.72E+03      | 86                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 245.          | 3.43E+04      | 2                 | 2.93E+03      | 76                |

Table G-1212. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.82E+04       | 3.82E+04        | -3.78E+04       | 3.83E+04        |
| A2   | -3.22E+04       | 3.72E+04        | -3.18E+04       | 3.70E+04        |
| FD   | -3.43E+04       | 3.67E+04        | -3.38E+04       | 3.65E+04        |
| L1   | -3.81E+04       | 3.81E+04        | -3.80E+04       | 3.80E+04        |
| L3   | -3.66E+04       | 3.18E+04        | -3.64E+04       | 3.17E+04        |
| L4   | -3.66E+04       | 3.18E+04        | -3.64E+04       | 3.17E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.79E+04       | 3.25E+04        | -3.74E+04       | 3.25E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-607. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

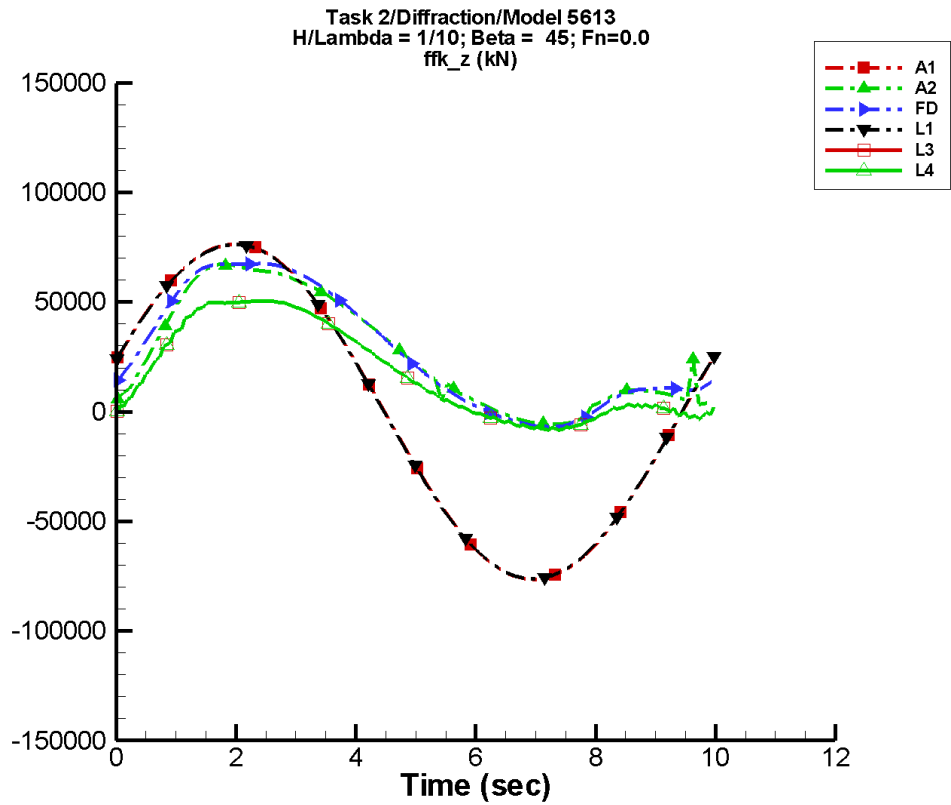
Table G-1213. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -43.3         | 5.10E+04      | 14                | 59.4          | -12               |
| A2   | 1.33E+04      | 3.73E+04      | 2                 | 3.97E+03      | 67                |
| FD   | 1.17E+04      | 3.94E+04      | -1                | 4.63E+03      | 64                |
| L1   | 20.9          | 5.09E+04      | 14                | 35.3          | 44                |
| L3   | 6.36E+03      | 3.55E+04      | 1                 | 3.70E+03      | 66                |
| L4   | 6.36E+03      | 3.55E+04      | 1                 | 3.70E+03      | 66                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.31E+03      | 3.92E+04      | -3                | 3.13E+03      | 47                |

Table G-1214. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.10E+04       | 5.10E+04        | -5.05E+04       | 5.11E+04        |
| A2   | -3.12E+04       | 4.87E+04        | -3.03E+04       | 4.82E+04        |
| FD   | -3.56E+04       | 4.80E+04        | -3.46E+04       | 4.76E+04        |
| L1   | -5.09E+04       | 5.09E+04        | -5.07E+04       | 5.07E+04        |
| L3   | -3.73E+04       | 3.97E+04        | -3.69E+04       | 3.95E+04        |
| L4   | -3.73E+04       | 3.97E+04        | -3.69E+04       | 3.95E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.30E+04       | 4.10E+04        | -4.27E+04       | 4.11E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-608. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

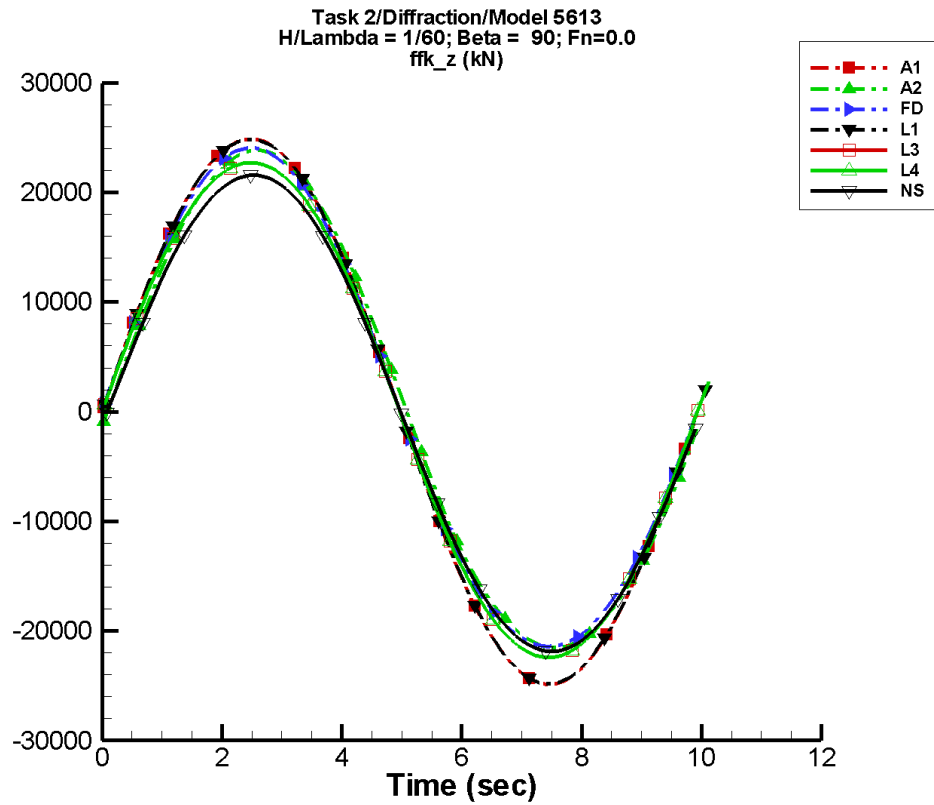
Table G-1215. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -64.9         | 7.65E+04      | 14                | 89.1          | -12               |
| A2   | 2.60E+04      | 3.48E+04      | -6                | 8.68E+03      | -97               |
| FD   | 2.71E+04      | 3.69E+04      | -6                | 5.71E+03      | -101              |
| L1   | 31.3          | 7.63E+04      | 14                | 52.9          | 44                |
| L3   | 1.72E+04      | 2.89E+04      | -7                | 6.78E+03      | -91               |
| L4   | 1.72E+04      | 2.89E+04      | -7                | 6.78E+03      | -91               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1216. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.65E+04       | 7.65E+04        | -7.57E+04       | 7.67E+04        |
| A2   | -5.78E+03       | 6.73E+04        | -5.36E+03       | 6.69E+04        |
| FD   | -6.86E+03       | 6.76E+04        | -6.36E+03       | 6.75E+04        |
| L1   | -7.63E+04       | 7.63E+04        | -7.60E+04       | 7.60E+04        |
| L3   | -8.40E+03       | 5.05E+04        | -7.84E+03       | 5.04E+04        |
| L4   | -8.40E+03       | 5.05E+04        | -7.84E+03       | 5.04E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-609. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1217. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

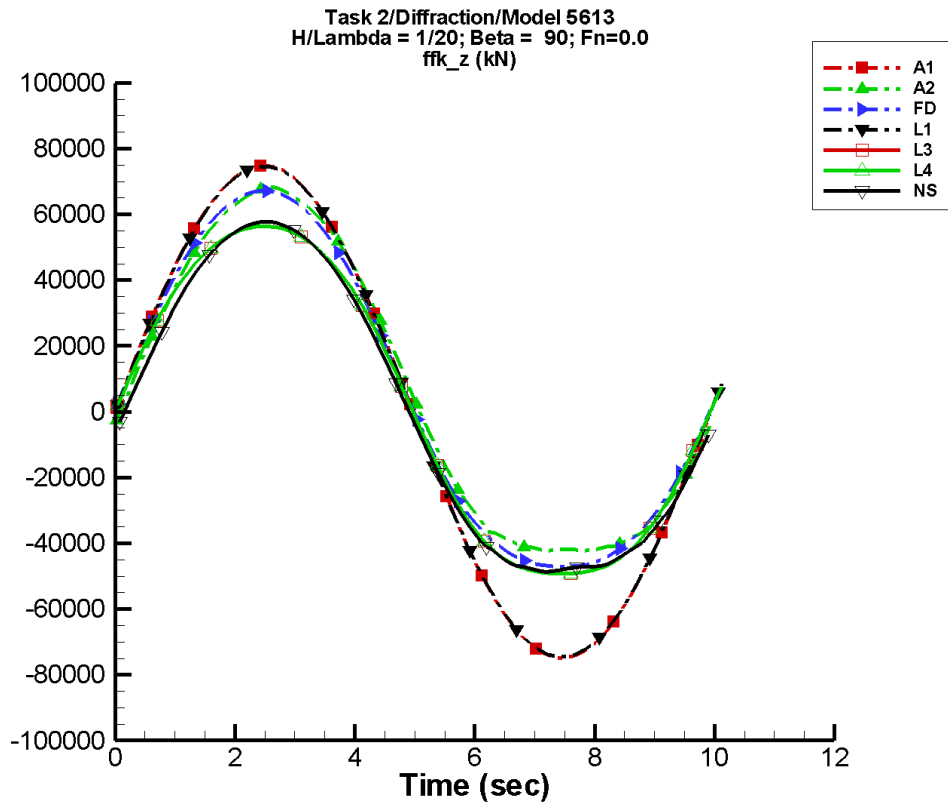
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -15.7         | 2.49E+04      | -4                | 23.8          | -25               |
| A2   | 610.          | 2.29E+04      | -8                | 519.          | -102              |
| FD   | 734.          | 2.30E+04      | -8                | 603.          | -108              |
| L1   | -10.3         | 2.48E+04      | -4                | 16.3          | -37               |
| L3   | 65.5          | 2.28E+04      | -4                | 50.7          | -37               |
| L4   | 65.5          | 2.28E+04      | -4                | 50.7          | -37               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -323.         | 2.18E+04      | -2                | 159.          | -88               |

Table G–1218. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.49E+04       | 2.49E+04        | -2.46E+04       | 2.46E+04        |
| A2   | -2.15E+04       | 2.38E+04        | -2.13E+04       | 2.36E+04        |
| FD   | -2.14E+04       | 2.41E+04        | -2.14E+04       | 2.38E+04        |
| L1   | -2.48E+04       | 2.48E+04        | -2.47E+04       | 2.48E+04        |
| L3   | -2.24E+04       | 2.27E+04        | -2.23E+04       | 2.26E+04        |
| L4   | -2.24E+04       | 2.27E+04        | -2.23E+04       | 2.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.19E+04       | 2.16E+04        | -2.17E+04       | 2.14E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-610. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

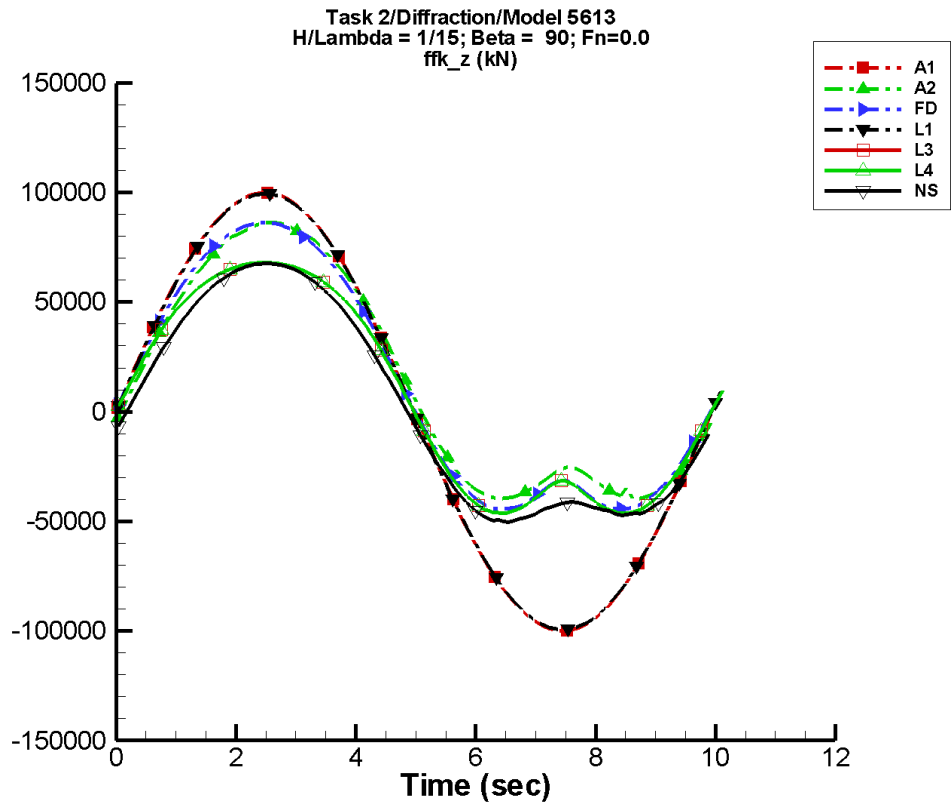
Table G-1219. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -47.3         | 7.48E+04      | -4                | 71.7          | -25               |
| A2   | 6.51E+03      | 5.76E+04      | -8                | 5.84E+03      | -104              |
| FD   | 5.56E+03      | 5.90E+04      | -7                | 4.44E+03      | -108              |
| L1   | -30.8         | 7.45E+04      | -4                | 49.0          | -37               |
| L3   | 1.56E+03      | 5.57E+04      | -4                | 1.18E+03      | -82               |
| L4   | 1.56E+03      | 5.57E+04      | -4                | 1.18E+03      | -82               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.98          | 5.53E+04      | -1                | 4.24E+03      | -95               |

Table G-1220. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.48E+04       | 7.48E+04        | -7.41E+04       | 7.40E+04        |
| A2   | -4.22E+04       | 6.82E+04        | -4.20E+04       | 6.71E+04        |
| FD   | -4.71E+04       | 6.71E+04        | -4.72E+04       | 6.65E+04        |
| L1   | -7.45E+04       | 7.45E+04        | -7.42E+04       | 7.43E+04        |
| L3   | -4.93E+04       | 5.64E+04        | -4.92E+04       | 5.63E+04        |
| L4   | -4.93E+04       | 5.64E+04        | -4.92E+04       | 5.63E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.86E+04       | 5.77E+04        | -4.81E+04       | 5.74E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-611. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

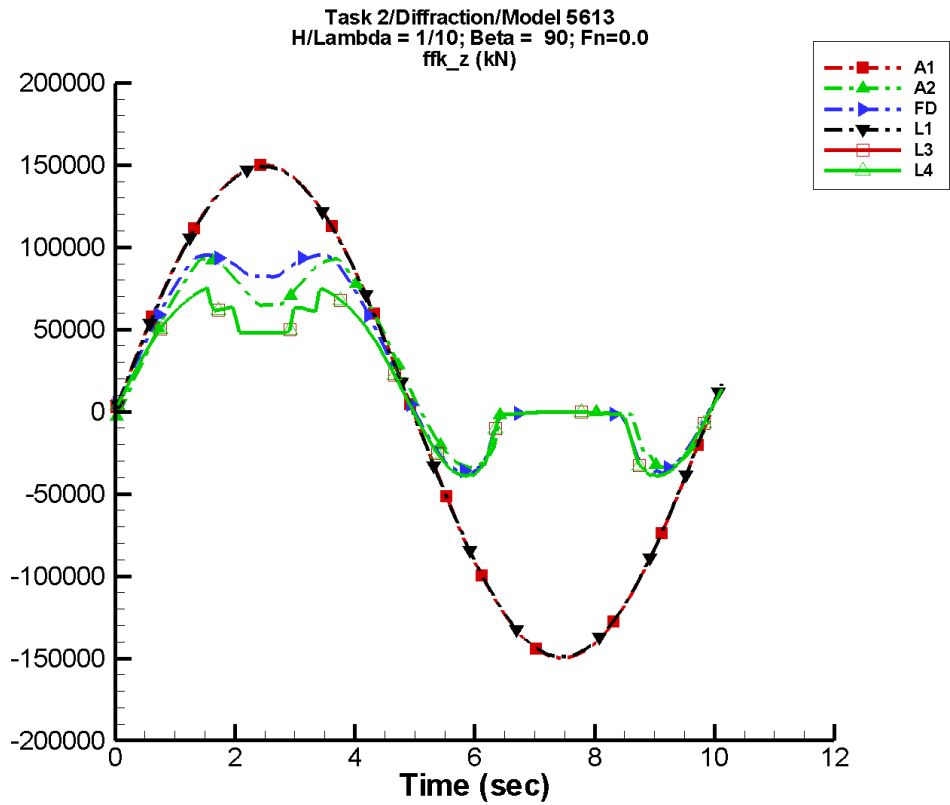
Table G-1221. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -63.1         | 9.99E+04      | -4                | 95.7          | -25               |
| A2   | 1.38E+04      | 6.46E+04      | -7                | 1.32E+04      | -104              |
| FD   | 1.25E+04      | 6.70E+04      | -7                | 1.17E+04      | -110              |
| L1   | -41.0         | 9.94E+04      | -4                | 65.4          | -37               |
| L3   | 6.30E+03      | 6.00E+04      | -3                | 6.53E+03      | -91               |
| L4   | 6.30E+03      | 6.00E+04      | -3                | 6.53E+03      | -91               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.53E+03      | 6.10E+04      | -1                | 9.09E+03      | -94               |

Table G-1222. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -9.99E+04       | 9.99E+04        | -9.89E+04       | 9.88E+04        |
| A2   | -3.99E+04       | 8.63E+04        | -3.86E+04       | 8.52E+04        |
| FD   | -4.43E+04       | 8.62E+04        | -4.34E+04       | 8.54E+04        |
| L1   | -9.93E+04       | 9.94E+04        | -9.90E+04       | 9.90E+04        |
| L3   | -4.64E+04       | 6.80E+04        | -4.59E+04       | 6.78E+04        |
| L4   | -4.64E+04       | 6.80E+04        | -4.59E+04       | 6.78E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -5.02E+04       | 6.76E+04        | -4.96E+04       | 6.76E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-612. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

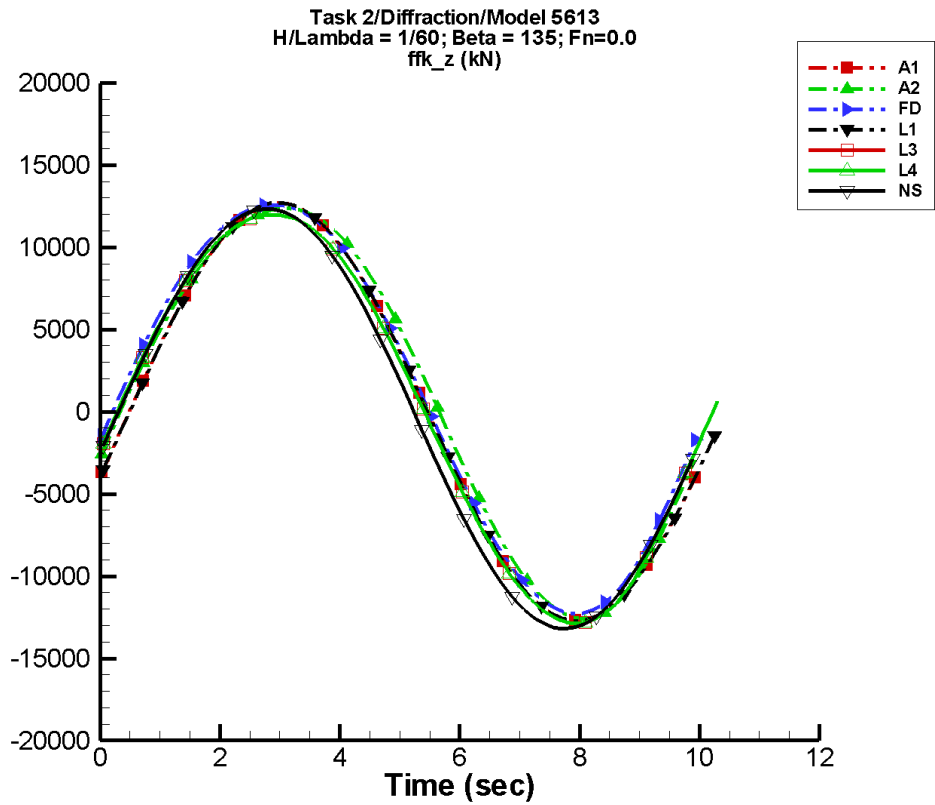
Table G-1223. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -94.7         | 1.50E+05      | -4                | 144.          | -25               |
| A2   | 2.69E+04      | 5.49E+04      | -6                | 1.81E+04      | -97               |
| FD   | 2.86E+04      | 5.83E+04      | -5                | 2.11E+04      | -110              |
| L1   | -61.6         | 1.49E+05      | -4                | 98.1          | -37               |
| L3   | 1.71E+04      | 4.19E+04      | 0                 | 1.11E+04      | -83               |
| L4   | 1.71E+04      | 4.19E+04      | 0                 | 1.11E+04      | -83               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1224. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.50E+05       | 1.50E+05        | -1.48E+05       | 1.48E+05        |
| A2   | -3.39E+04       | 9.33E+04        | -2.99E+04       | 8.84E+04        |
| FD   | -3.84E+04       | 9.53E+04        | -3.31E+04       | 9.29E+04        |
| L1   | -1.49E+05       | 1.49E+05        | -1.48E+05       | 1.49E+05        |
| L3   | -3.94E+04       | 7.55E+04        | -3.82E+04       | 7.03E+04        |
| L4   | -3.94E+04       | 7.55E+04        | -3.82E+04       | 7.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-613. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1225. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

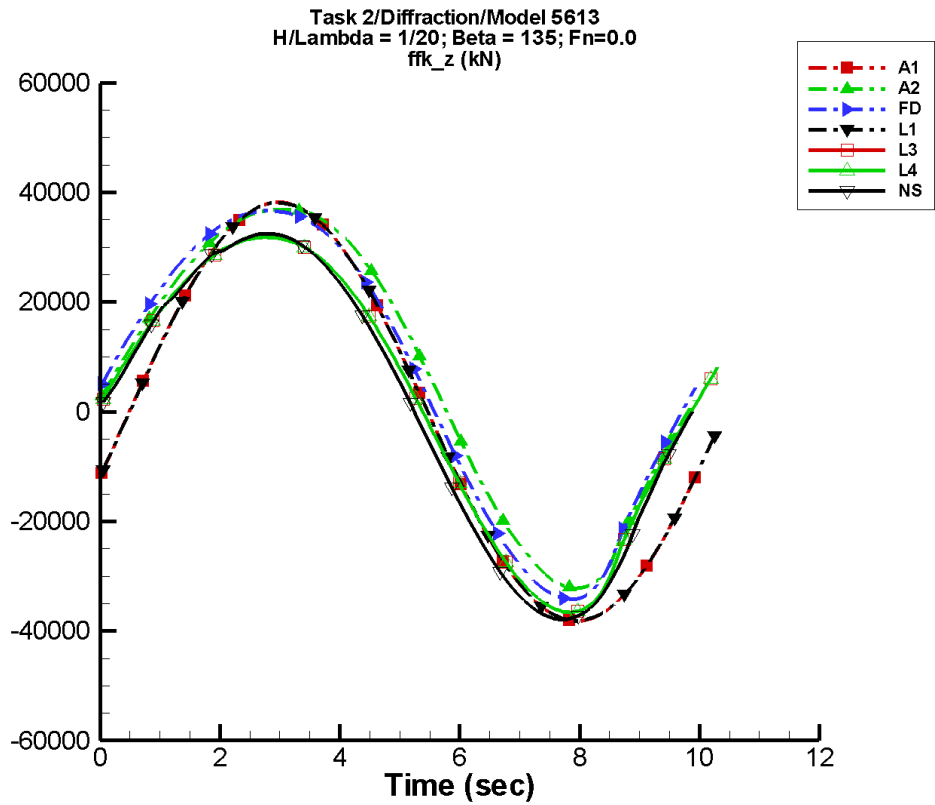
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.51         | 1.27E+04      | -22               | 9.35          | -46               |
| A2   | 613.          | 1.25E+04      | -24               | 768.          | 44                |
| FD   | 725.          | 1.25E+04      | -22               | 561.          | 35                |
| L1   | 5.77          | 1.27E+04      | -22               | 16.3          | -7                |
| L3   | 75.8          | 1.25E+04      | -18               | 557.          | 35                |
| L4   | 75.8          | 1.25E+04      | -18               | 557.          | 35                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -312.         | 1.27E+04      | -11               | 132.          | 69                |

Table G-1226. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.27E+04       | 1.27E+04        | -1.26E+04       | 1.26E+04        |
| A2   | -1.26E+04       | 1.24E+04        | -1.24E+04       | 1.23E+04        |
| FD   | -1.23E+04       | 1.26E+04        | -1.22E+04       | 1.25E+04        |
| L1   | -1.27E+04       | 1.27E+04        | -1.27E+04       | 1.27E+04        |
| L3   | -1.29E+04       | 1.20E+04        | -1.28E+04       | 1.19E+04        |
| L4   | -1.29E+04       | 1.20E+04        | -1.28E+04       | 1.19E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.32E+04       | 1.23E+04        | -1.31E+04       | 1.22E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-614. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

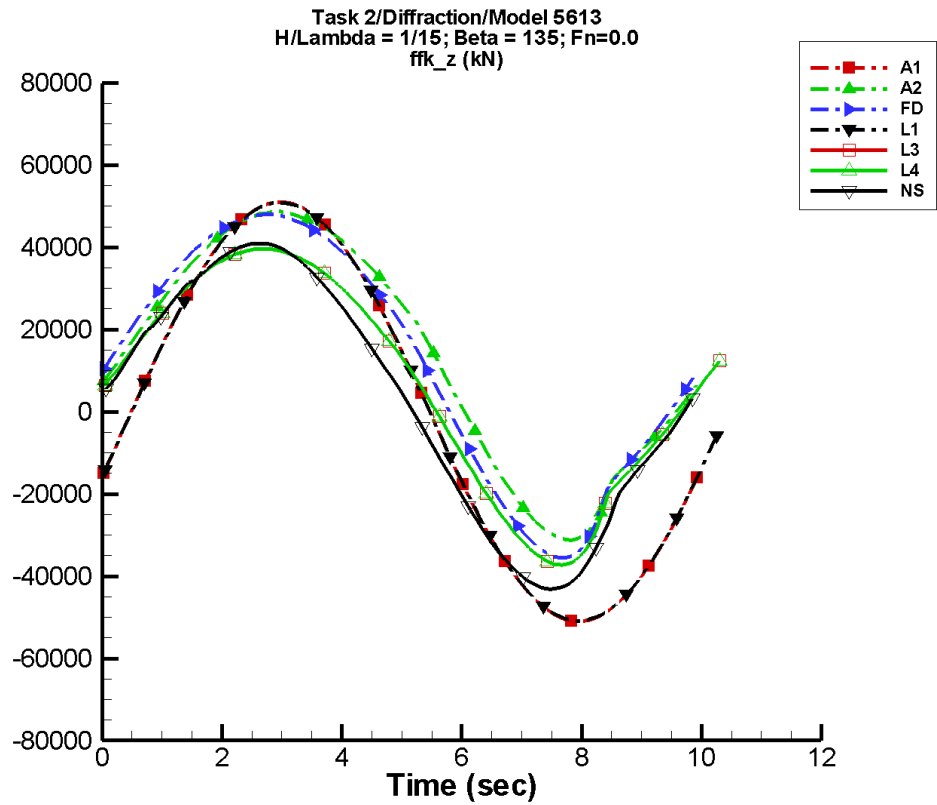
Table G-1227. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.6         | 3.82E+04      | -22               | 28.1          | -46               |
| A2   | 6.36E+03      | 3.36E+04      | -19               | 3.78E+03      | 73                |
| FD   | 5.39E+03      | 3.45E+04      | -16               | 3.67E+03      | 66                |
| L1   | 17.3          | 3.82E+04      | -22               | 48.8          | -7                |
| L3   | 1.56E+03      | 3.33E+04      | -11               | 3.67E+03      | 73                |
| L4   | 1.56E+03      | 3.33E+04      | -11               | 3.67E+03      | 73                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 185.          | 3.44E+04      | -6                | 3.09E+03      | 90                |

Table G-1228. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.82E+04       | 3.82E+04        | -3.78E+04       | 3.78E+04        |
| A2   | -3.22E+04       | 3.69E+04        | -3.18E+04       | 3.68E+04        |
| FD   | -3.43E+04       | 3.67E+04        | -3.38E+04       | 3.65E+04        |
| L1   | -3.81E+04       | 3.81E+04        | -3.80E+04       | 3.80E+04        |
| L3   | -3.66E+04       | 3.18E+04        | -3.64E+04       | 3.17E+04        |
| L4   | -3.66E+04       | 3.18E+04        | -3.64E+04       | 3.17E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.79E+04       | 3.25E+04        | -3.75E+04       | 3.21E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-615. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

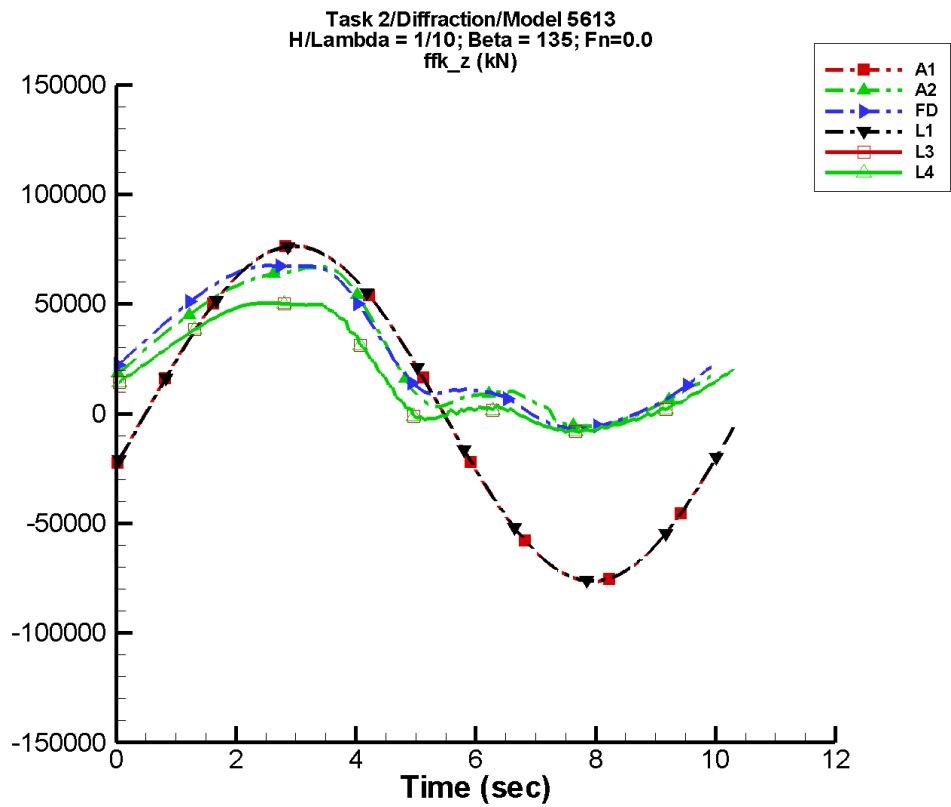
Table G-1229. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -18.1         | 5.10E+04      | -22               | 37.6          | -46               |
| A2   | 1.33E+04      | 3.75E+04      | -19               | 3.73E+03      | 85                |
| FD   | 1.17E+04      | 3.95E+04      | -16               | 4.51E+03      | 77                |
| L1   | 23.1          | 5.09E+04      | -22               | 65.1          | -7                |
| L3   | 6.31E+03      | 3.58E+04      | -10               | 4.15E+03      | 90                |
| L4   | 6.31E+03      | 3.58E+04      | -10               | 4.15E+03      | 90                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.28E+03      | 3.95E+04      | 0                 | 3.31E+03      | 122               |

Table G-1230. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.10E+04       | 5.10E+04        | -5.05E+04       | 5.05E+04        |
| A2   | -3.12E+04       | 4.87E+04        | -3.03E+04       | 4.82E+04        |
| FD   | -3.56E+04       | 4.80E+04        | -3.55E+04       | 4.76E+04        |
| L1   | -5.09E+04       | 5.09E+04        | -5.07E+04       | 5.07E+04        |
| L3   | -3.73E+04       | 3.97E+04        | -3.69E+04       | 3.95E+04        |
| L4   | -3.73E+04       | 3.97E+04        | -3.69E+04       | 3.95E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.31E+04       | 4.09E+04        | -4.27E+04       | 4.07E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-616. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

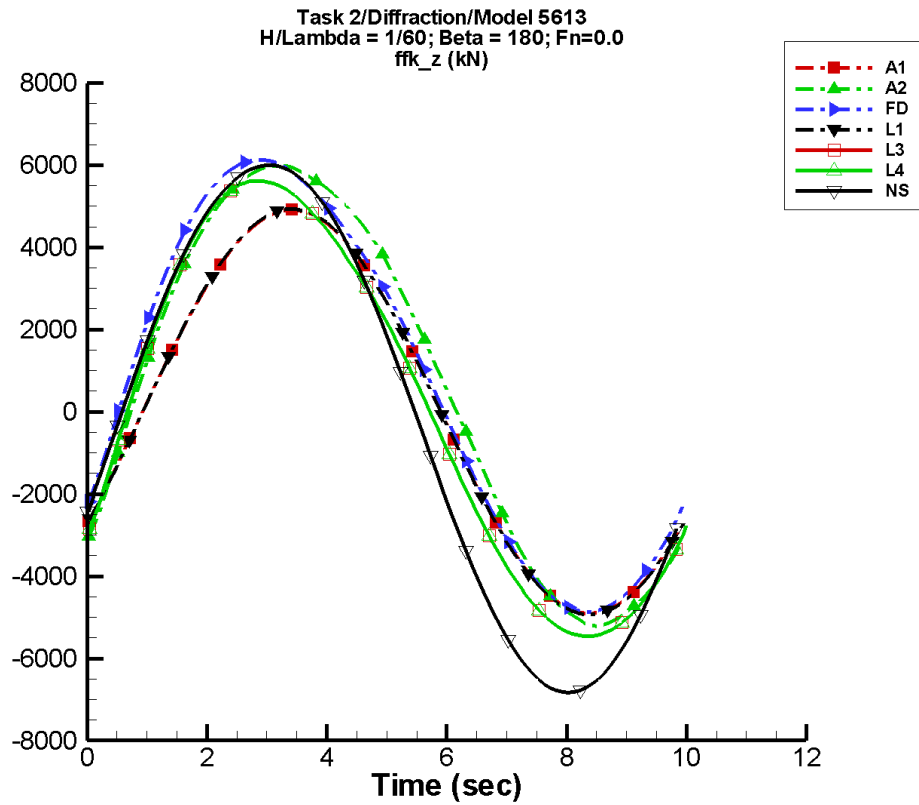
Table G-1231. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -27.2         | 7.65E+04      | -22               | 56.3          | -46               |
| A2   | 2.59E+04      | 3.37E+04      | -9                | 7.13E+03      | -112              |
| FD   | 2.74E+04      | 3.61E+04      | -10               | 6.47E+03      | -104              |
| L1   | 34.6          | 7.63E+04      | -22               | 97.6          | -7                |
| L3   | 1.73E+04      | 2.86E+04      | -2                | 7.02E+03      | -99               |
| L4   | 1.73E+04      | 2.86E+04      | -2                | 7.02E+03      | -99               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1232. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.65E+04       | 7.65E+04        | -7.57E+04       | 7.57E+04        |
| A2   | -5.74E+03       | 6.73E+04        | -5.36E+03       | 6.62E+04        |
| FD   | -6.83E+03       | 6.75E+04        | -6.80E+03       | 6.75E+04        |
| L1   | -7.63E+04       | 7.63E+04        | -7.60E+04       | 7.60E+04        |
| L3   | -8.40E+03       | 5.05E+04        | -7.84E+03       | 5.04E+04        |
| L4   | -8.40E+03       | 5.05E+04        | -7.84E+03       | 5.04E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

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Data identically zero, insufficient, or not available from NFA.

Figure G-617. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1233. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

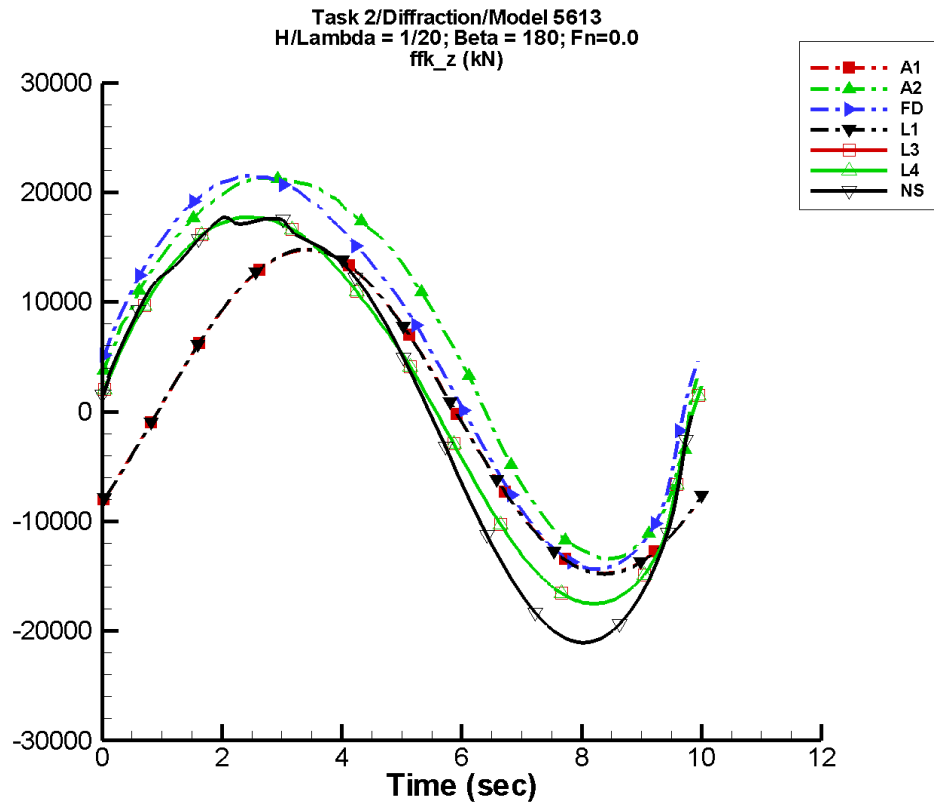
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.385        | 4.91E+03      | -38               | 3.02          | -75               |
| A2   | 607.          | 5.69E+03      | -39               | 467.          | -45               |
| FD   | 699.          | 5.56E+03      | -34               | 511.          | -49               |
| L1   | 4.28          | 4.93E+03      | -38               | 4.29          | -7                |
| L3   | 71.4          | 5.61E+03      | -29               | 511.          | -51               |
| L4   | 71.4          | 5.61E+03      | -29               | 511.          | -51               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -295.         | 6.45E+03      | -20               | 135.          | 24                |

Table G–1234. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.91E+03       | 4.91E+03        | -4.86E+03       | 4.86E+03        |
| A2   | -5.21E+03       | 5.99E+03        | -5.13E+03       | 5.93E+03        |
| FD   | -4.87E+03       | 6.13E+03        | -4.82E+03       | 6.07E+03        |
| L1   | -4.93E+03       | 4.93E+03        | -4.91E+03       | 4.91E+03        |
| L3   | -5.47E+03       | 5.62E+03        | -5.45E+03       | 5.60E+03        |
| L4   | -5.47E+03       | 5.62E+03        | -5.45E+03       | 5.60E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.84E+03       | 6.00E+03        | -6.77E+03       | 5.94E+03        |



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Data identically zero, insufficient, or not available from NFA.

Figure G-618. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

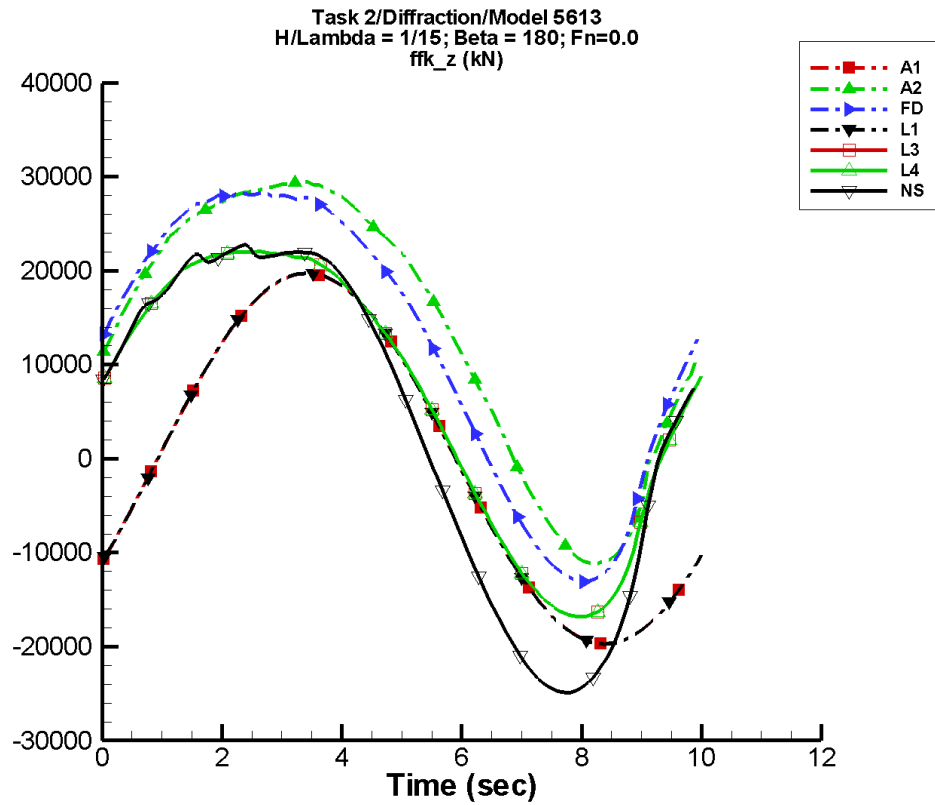
Table G–1235. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.16         | 1.48E+04      | -38               | 9.07          | -75               |
| A2   | 6.43E+03      | 1.73E+04      | -26               | 3.27E+03      | 16                |
| FD   | 5.49E+03      | 1.77E+04      | -20               | 3.01E+03      | 5                 |
| L1   | 12.9          | 1.48E+04      | -38               | 12.9          | -7                |
| L3   | 1.71E+03      | 1.76E+04      | -14               | 2.65E+03      | 12                |
| L4   | 1.71E+03      | 1.76E+04      | -14               | 2.65E+03      | 12                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 597.          | 1.96E+04      | -10               | 3.27E+03      | 40                |

Table G–1236. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.48E+04       | 1.48E+04        | -1.46E+04       | 1.46E+04        |
| A2   | -1.34E+04       | 2.13E+04        | -1.31E+04       | 2.12E+04        |
| FD   | -1.43E+04       | 2.16E+04        | -1.41E+04       | 2.14E+04        |
| L1   | -1.48E+04       | 1.48E+04        | -1.47E+04       | 1.47E+04        |
| L3   | -1.75E+04       | 1.78E+04        | -1.75E+04       | 1.77E+04        |
| L4   | -1.75E+04       | 1.78E+04        | -1.75E+04       | 1.77E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.11E+04       | 1.77E+04        | -2.09E+04       | 1.75E+04        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-619. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

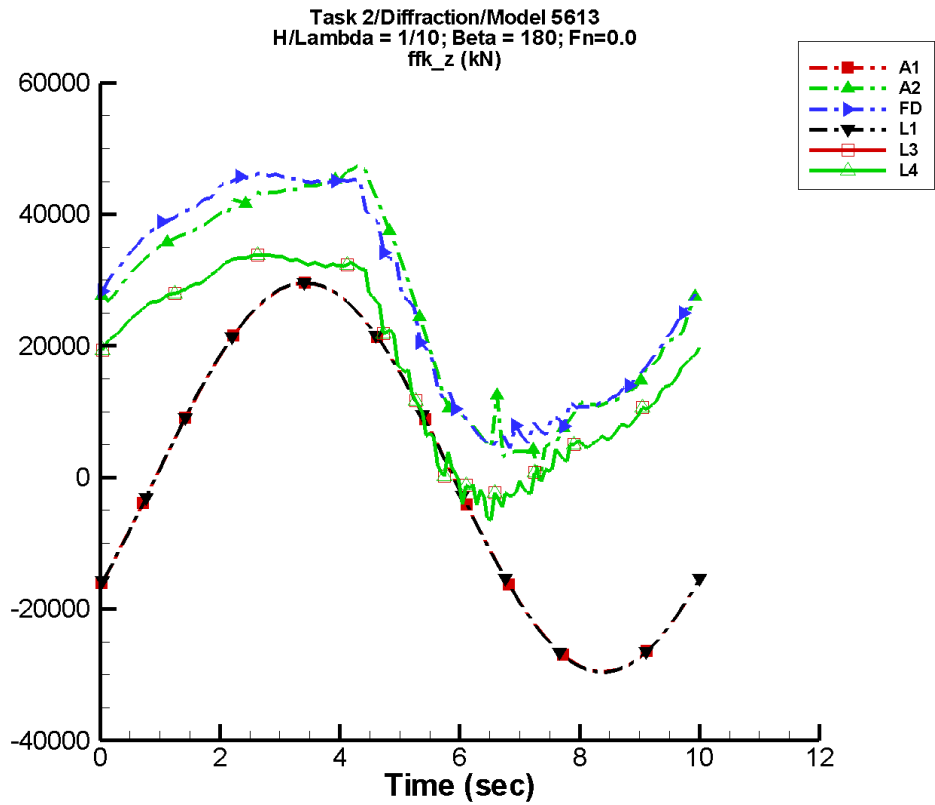
Table G-1237. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.55         | 1.97E+04      | -38               | 12.1          | -75               |
| A2   | 1.34E+04      | 1.92E+04      | -24               | 4.23E+03      | 36                |
| FD   | 1.19E+04      | 2.00E+04      | -18               | 4.03E+03      | 39                |
| L1   | 17.1          | 1.97E+04      | -38               | 17.2          | -7                |
| L3   | 6.31E+03      | 1.91E+04      | -11               | 3.55E+03      | 52                |
| L4   | 6.31E+03      | 1.91E+04      | -11               | 3.55E+03      | 52                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 3.38E+03      | 2.35E+04      | -2                | 4.85E+03      | 83                |

Table G-1238. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.97E+04       | 1.97E+04        | -1.95E+04       | 1.95E+04        |
| A2   | -1.12E+04       | 2.94E+04        | -1.09E+04       | 2.92E+04        |
| FD   | -1.31E+04       | 2.83E+04        | -1.28E+04       | 2.81E+04        |
| L1   | -1.97E+04       | 1.97E+04        | -1.97E+04       | 1.97E+04        |
| L3   | -1.68E+04       | 2.20E+04        | -1.69E+04       | 2.20E+04        |
| L4   | -1.68E+04       | 2.20E+04        | -1.69E+04       | 2.20E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.49E+04       | 2.28E+04        | -2.47E+04       | 2.22E+04        |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-620. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

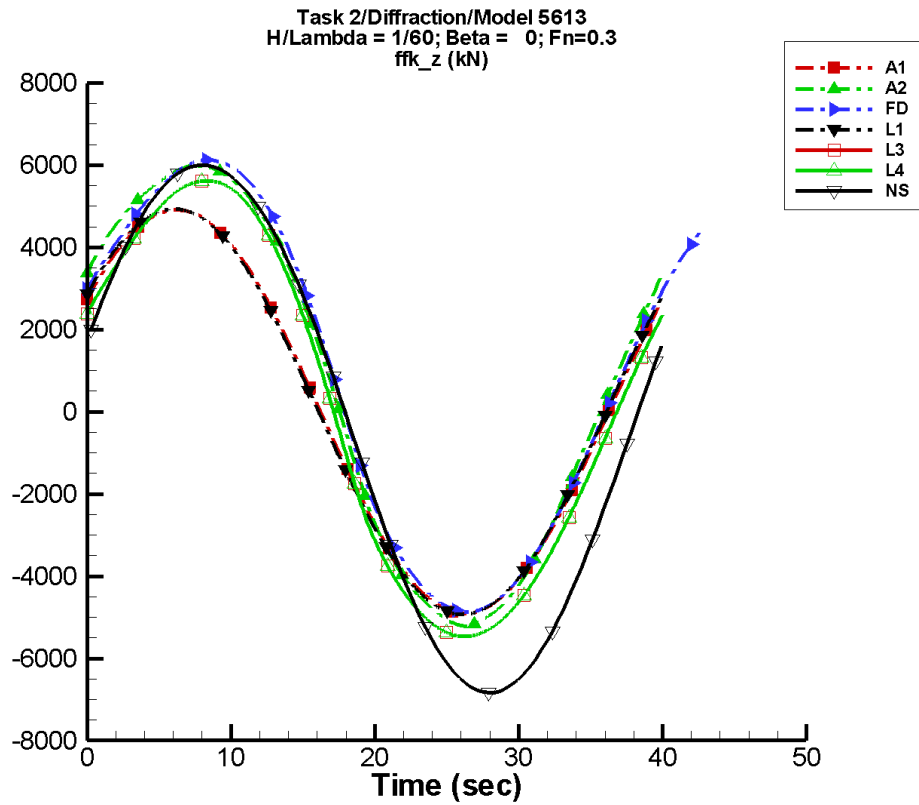
Table G-1239. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.32         | 2.96E+04      | -38               | 18.2          | -75               |
| A2   | 2.63E+04      | 2.04E+04      | -12               | 4.82E+03      | 132               |
| FD   | 2.75E+04      | 2.07E+04      | -9                | 3.67E+03      | 137               |
| L1   | 25.7          | 2.96E+04      | -38               | 25.7          | -7                |
| L3   | 1.75E+04      | 1.78E+04      | 0                 | 4.36E+03      | 156               |
| L4   | 1.75E+04      | 1.78E+04      | 0                 | 4.36E+03      | 156               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1240. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.95E+04       | 2.96E+04        | -2.92E+04       | 2.93E+04        |
| A2   | -472.           | 4.76E+04        | 3.79E+03        | 4.60E+04        |
| FD   | 3.15E+03        | 4.62E+04        | 5.46E+03        | 4.59E+04        |
| L1   | -2.96E+04       | 2.96E+04        | -2.95E+04       | 2.95E+04        |
| L3   | -6.44E+03       | 3.39E+04        | -3.84E+03       | 3.37E+04        |
| L4   | -6.44E+03       | 3.39E+04        | -3.84E+03       | 3.37E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-621. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1241. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

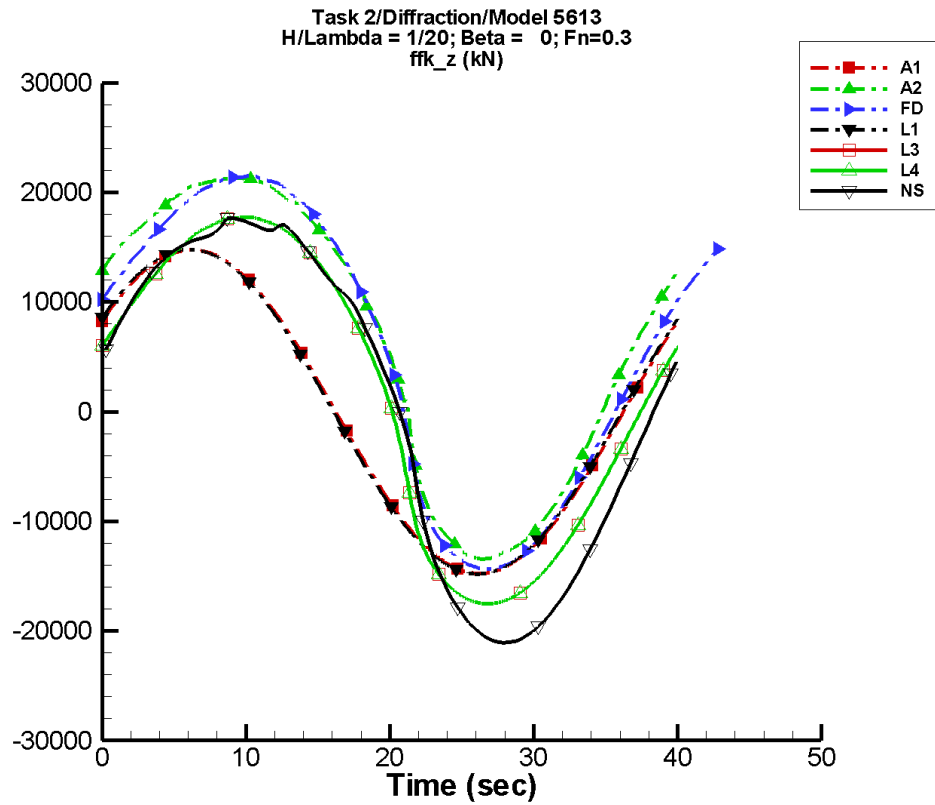
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.166        | 4.91E+03      | 34                | 0.233         | -2                |
| A2   | 606.          | 5.66E+03      | 30                | 429.          | -159              |
| FD   | 706.          | 5.55E+03      | 24                | 525.          | -149              |
| L1   | 0.699         | 4.93E+03      | 33                | 3.55          | 73                |
| L3   | 81.4          | 5.58E+03      | 25                | 521.          | -134              |
| L4   | 81.4          | 5.58E+03      | 25                | 521.          | -134              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -300.         | 6.45E+03      | 17                | 124.          | 136               |

Table G-1242. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.91E+03       | 4.91E+03        | -4.90E+03       | 4.90E+03        |
| A2   | -5.21E+03       | 5.99E+03        | -5.21E+03       | 5.99E+03        |
| FD   | -4.87E+03       | 6.13E+03        | -4.87E+03       | 6.13E+03        |
| L1   | -4.93E+03       | 4.93E+03        | -4.93E+03       | 4.93E+03        |
| L3   | -5.47E+03       | 5.62E+03        | -5.46E+03       | 5.62E+03        |
| L4   | -5.47E+03       | 5.62E+03        | -5.46E+03       | 5.62E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.84E+03       | 6.00E+03        | -6.77E+03       | 5.94E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-622. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

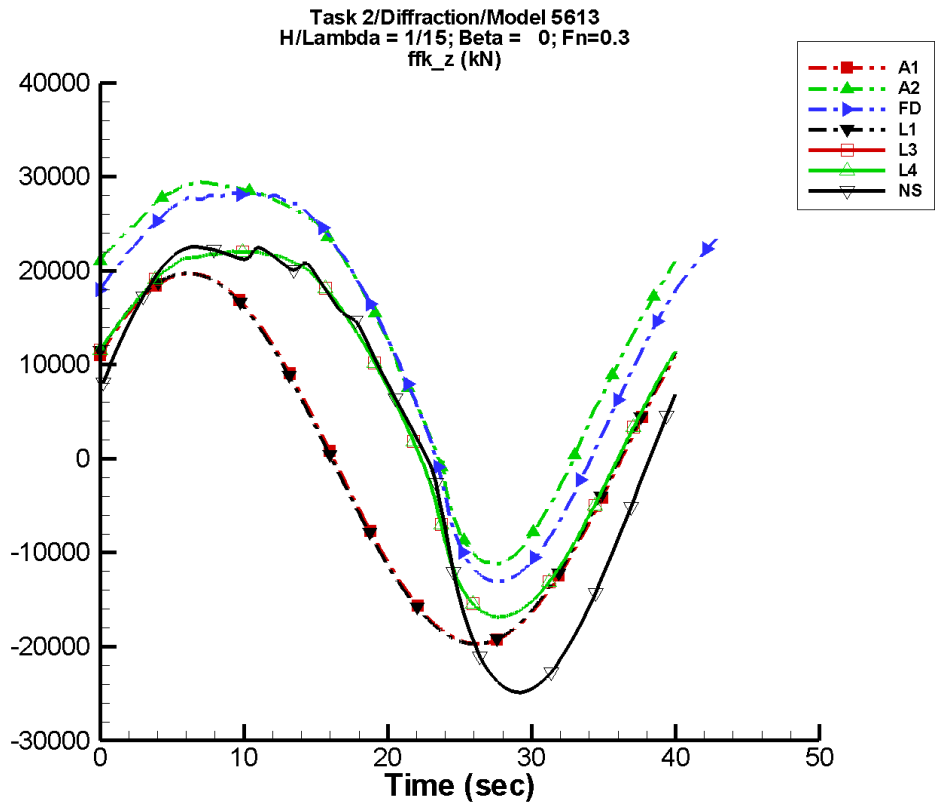
Table G-1243. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.498        | 1.48E+04      | 34                | 0.704         | -2                |
| A2   | 6.43E+03      | 1.74E+04      | 17                | 3.12E+03      | 150               |
| FD   | 5.45E+03      | 1.79E+04      | 11                | 3.11E+03      | 155               |
| L1   | 2.10          | 1.48E+04      | 33                | 10.7          | 73                |
| L3   | 1.63E+03      | 1.78E+04      | 11                | 2.89E+03      | 162               |
| L4   | 1.63E+03      | 1.78E+04      | 11                | 2.89E+03      | 162               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 566.          | 1.95E+04      | 7                 | 3.00E+03      | 129               |

Table G-1244. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.48E+04       | 1.48E+04        | -1.47E+04       | 1.47E+04        |
| A2   | -1.34E+04       | 2.14E+04        | -1.34E+04       | 2.13E+04        |
| FD   | -1.44E+04       | 2.16E+04        | -1.43E+04       | 2.15E+04        |
| L1   | -1.48E+04       | 1.48E+04        | -1.48E+04       | 1.48E+04        |
| L3   | -1.75E+04       | 1.78E+04        | -1.75E+04       | 1.78E+04        |
| L4   | -1.75E+04       | 1.78E+04        | -1.75E+04       | 1.78E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.11E+04       | 1.77E+04        | -2.08E+04       | 1.74E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-623. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

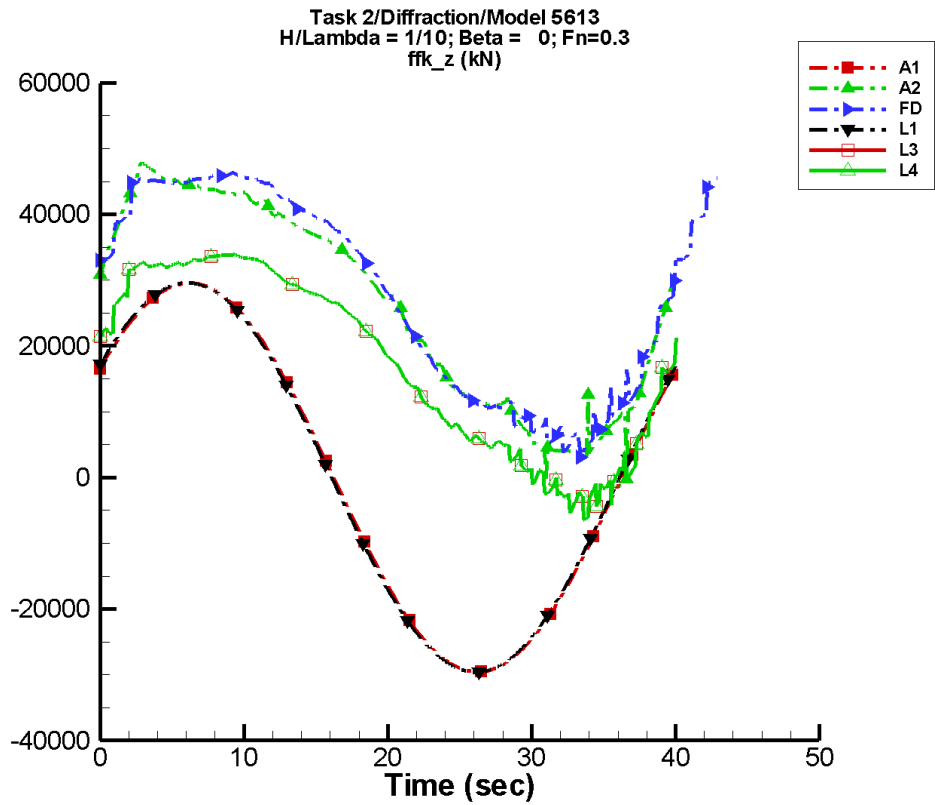
Table G-1245. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.664        | 1.97E+04      | 34                | 0.941         | -2                |
| A2   | 1.35E+04      | 1.93E+04      | 15                | 4.03E+03      | 128               |
| FD   | 1.18E+04      | 2.02E+04      | 8                 | 4.08E+03      | 120               |
| L1   | 2.79          | 1.97E+04      | 33                | 14.2          | 73                |
| L3   | 6.25E+03      | 1.93E+04      | 7                 | 3.81E+03      | 117               |
| L4   | 6.25E+03      | 1.93E+04      | 7                 | 3.81E+03      | 117               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 3.41E+03      | 2.34E+04      | 0                 | 4.73E+03      | 86                |

Table G-1246. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.97E+04       | 1.97E+04        | -1.97E+04       | 1.97E+04        |
| A2   | -1.12E+04       | 2.95E+04        | -1.12E+04       | 2.94E+04        |
| FD   | -1.31E+04       | 2.83E+04        | -1.31E+04       | 2.82E+04        |
| L1   | -1.97E+04       | 1.97E+04        | -1.97E+04       | 1.97E+04        |
| L3   | -1.68E+04       | 2.20E+04        | -1.68E+04       | 2.20E+04        |
| L4   | -1.68E+04       | 2.20E+04        | -1.68E+04       | 2.20E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.49E+04       | 2.26E+04        | -2.46E+04       | 2.24E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-624. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

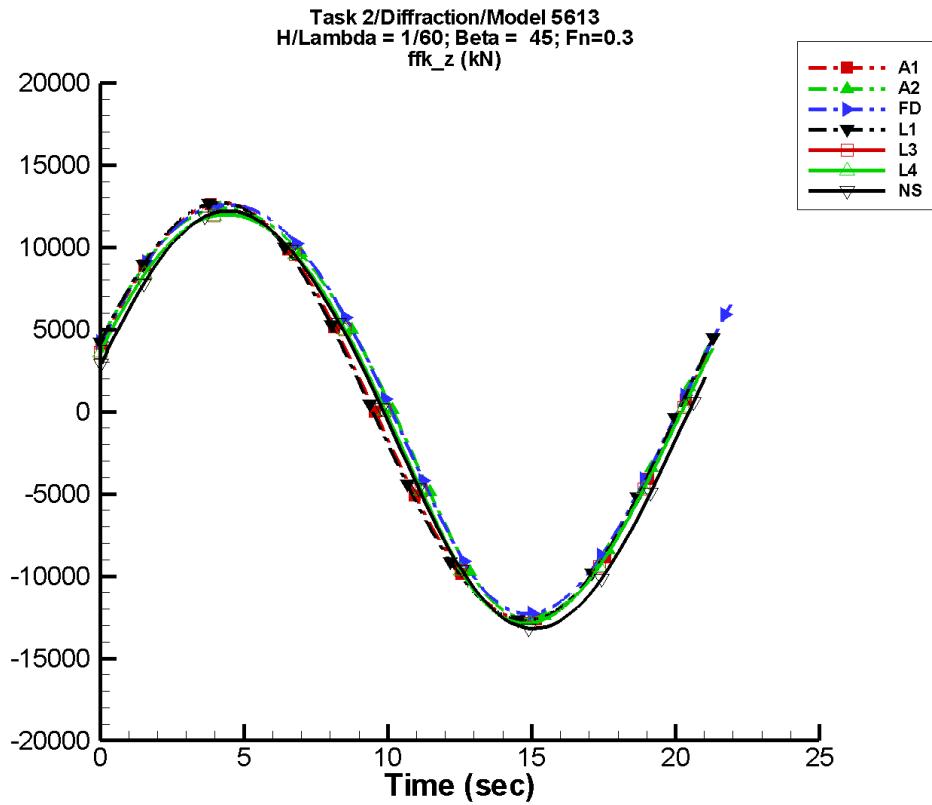
Table G-1247. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.998        | 2.96E+04      | 34                | 1.41          | -2                |
| A2   | 2.62E+04      | 2.01E+04      | 4                 | 5.52E+03      | 33                |
| FD   | 2.75E+04      | 2.08E+04      | 1                 | 3.53E+03      | 33                |
| L1   | 4.19          | 2.96E+04      | 33                | 21.3          | 73                |
| L3   | 1.75E+04      | 1.78E+04      | -2                | 3.69E+03      | 17                |
| L4   | 1.75E+04      | 1.78E+04      | -2                | 3.69E+03      | 17                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1248. Minimum and maximum of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.96E+04       | 2.96E+04        | -2.95E+04       | 2.95E+04        |
| A2   | -476.           | 4.80E+04        | 3.47E+03        | 4.74E+04        |
| FD   | 3.09E+03        | 4.63E+04        | 4.64E+03        | 4.61E+04        |
| L1   | -2.96E+04       | 2.96E+04        | -2.96E+04       | 2.96E+04        |
| L3   | -6.44E+03       | 3.39E+04        | -5.42E+03       | 3.39E+04        |
| L4   | -6.44E+03       | 3.39E+04        | -5.42E+03       | 3.39E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-625. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1249. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

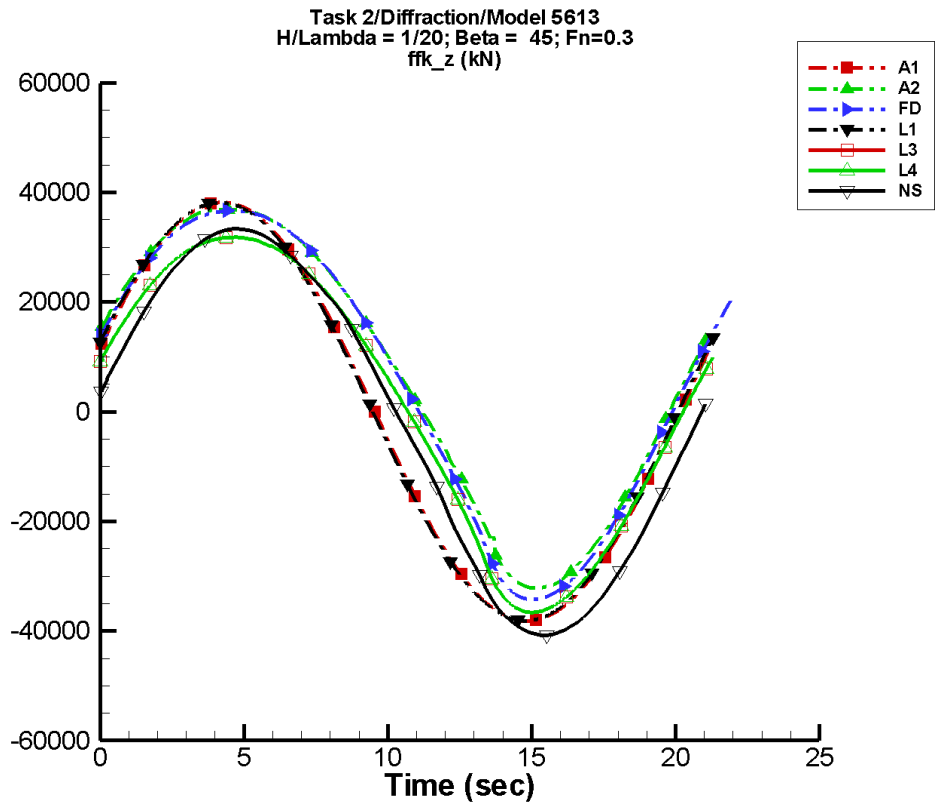
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.85          | 1.27E+04      | 19                | 5.48          | 175               |
| A2   | 618.          | 1.25E+04      | 16                | 743.          | 120               |
| FD   | 709.          | 1.25E+04      | 20                | 577.          | 139               |
| L1   | 2.40          | 1.27E+04      | 20                | 3.53          | 170               |
| L3   | 79.7          | 1.25E+04      | 16                | 544.          | 136               |
| L4   | 79.7          | 1.25E+04      | 16                | 544.          | 136               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -280.         | 1.27E+04      | 14                | 239.          | 117               |

Table G-1250. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.27E+04       | 1.27E+04        | -1.27E+04       | 1.27E+04        |
| A2   | -1.26E+04       | 1.24E+04        | -1.26E+04       | 1.24E+04        |
| FD   | -1.23E+04       | 1.26E+04        | -1.23E+04       | 1.26E+04        |
| L1   | -1.27E+04       | 1.27E+04        | -1.27E+04       | 1.27E+04        |
| L3   | -1.29E+04       | 1.20E+04        | -1.29E+04       | 1.20E+04        |
| L4   | -1.29E+04       | 1.20E+04        | -1.29E+04       | 1.20E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.32E+04       | 1.22E+04        | -1.31E+04       | 1.21E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-626. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

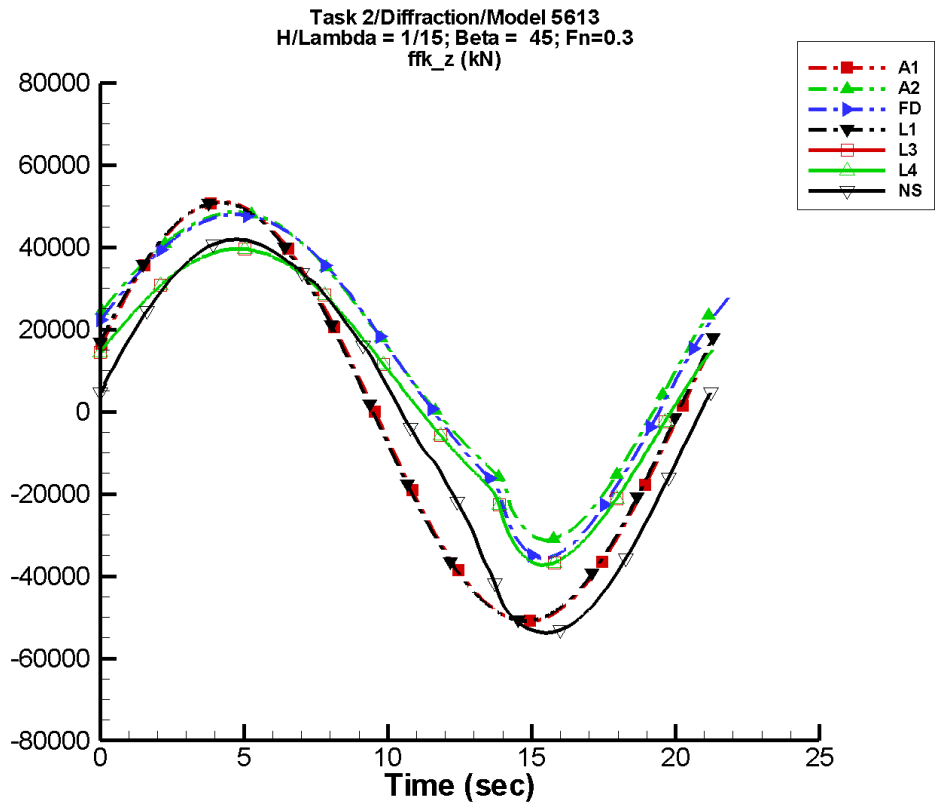
Table G-1251. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 11.6          | 3.82E+04      | 19                | 16.5          | 175               |
| A2   | 6.43E+03      | 3.37E+04      | 10                | 3.76E+03      | 91                |
| FD   | 5.39E+03      | 3.47E+04      | 14                | 3.79E+03      | 108               |
| L1   | 7.21          | 3.81E+04      | 20                | 10.6          | 170               |
| L3   | 1.59E+03      | 3.33E+04      | 9                 | 3.55E+03      | 101               |
| L4   | 1.59E+03      | 3.33E+04      | 9                 | 3.55E+03      | 101               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.86E+03     | 3.67E+04      | 6                 | 1.96E+03      | 90                |

Table G-1252. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.82E+04       | 3.82E+04        | -3.81E+04       | 3.81E+04        |
| A2   | -3.22E+04       | 3.70E+04        | -3.21E+04       | 3.69E+04        |
| FD   | -3.43E+04       | 3.67E+04        | -3.41E+04       | 3.66E+04        |
| L1   | -3.81E+04       | 3.81E+04        | -3.81E+04       | 3.81E+04        |
| L3   | -3.66E+04       | 3.18E+04        | -3.66E+04       | 3.18E+04        |
| L4   | -3.66E+04       | 3.18E+04        | -3.66E+04       | 3.18E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.08E+04       | 3.34E+04        | -4.03E+04       | 3.33E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-627. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

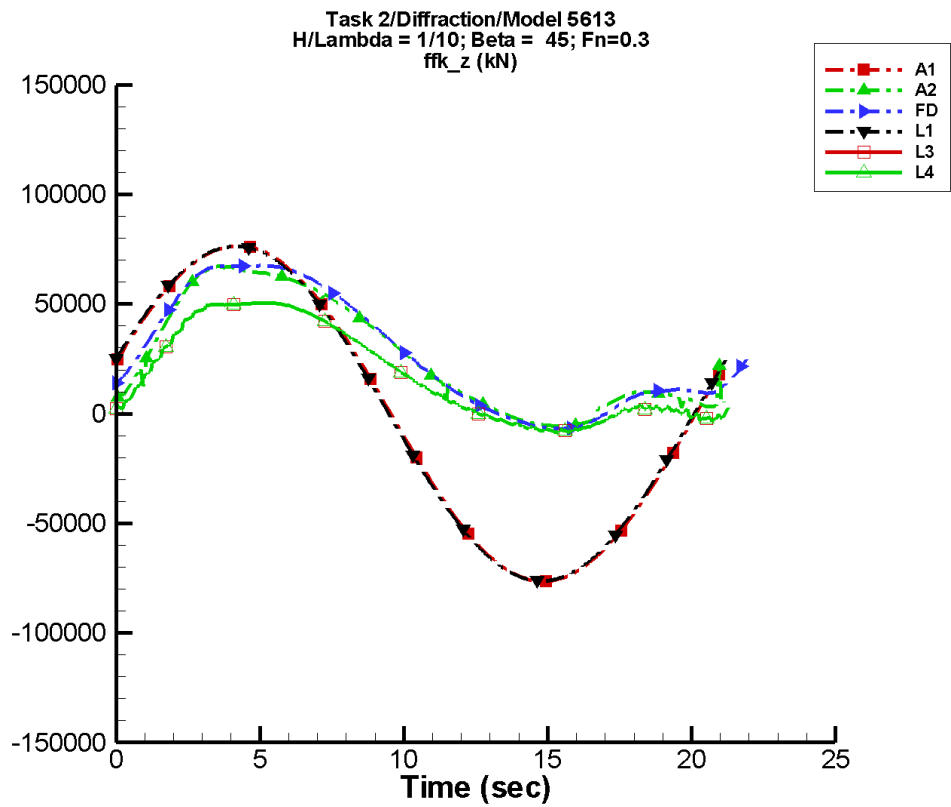
Table G–1253. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 15.5          | 5.10E+04      | 19                | 22.0          | 175               |
| A2   | 1.34E+04      | 3.74E+04      | 10                | 3.84E+03      | 83                |
| FD   | 1.18E+04      | 3.93E+04      | 13                | 4.38E+03      | 96                |
| L1   | 9.61          | 5.09E+04      | 20                | 14.1          | 170               |
| L3   | 6.25E+03      | 3.58E+04      | 7                 | 3.83E+03      | 86                |
| L4   | 6.25E+03      | 3.58E+04      | 7                 | 3.83E+03      | 86                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.90E+03     | 4.66E+04      | 4                 | 4.05E+03      | 79                |

Table G–1254. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.10E+04       | 5.10E+04        | -5.09E+04       | 5.09E+04        |
| A2   | -3.12E+04       | 4.88E+04        | -3.10E+04       | 4.86E+04        |
| FD   | -3.56E+04       | 4.80E+04        | -3.54E+04       | 4.79E+04        |
| L1   | -5.09E+04       | 5.09E+04        | -5.08E+04       | 5.08E+04        |
| L3   | -3.73E+04       | 3.97E+04        | -3.72E+04       | 3.96E+04        |
| L4   | -3.73E+04       | 3.97E+04        | -3.72E+04       | 3.96E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -5.38E+04       | 4.19E+04        | -5.34E+04       | 4.19E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-628. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

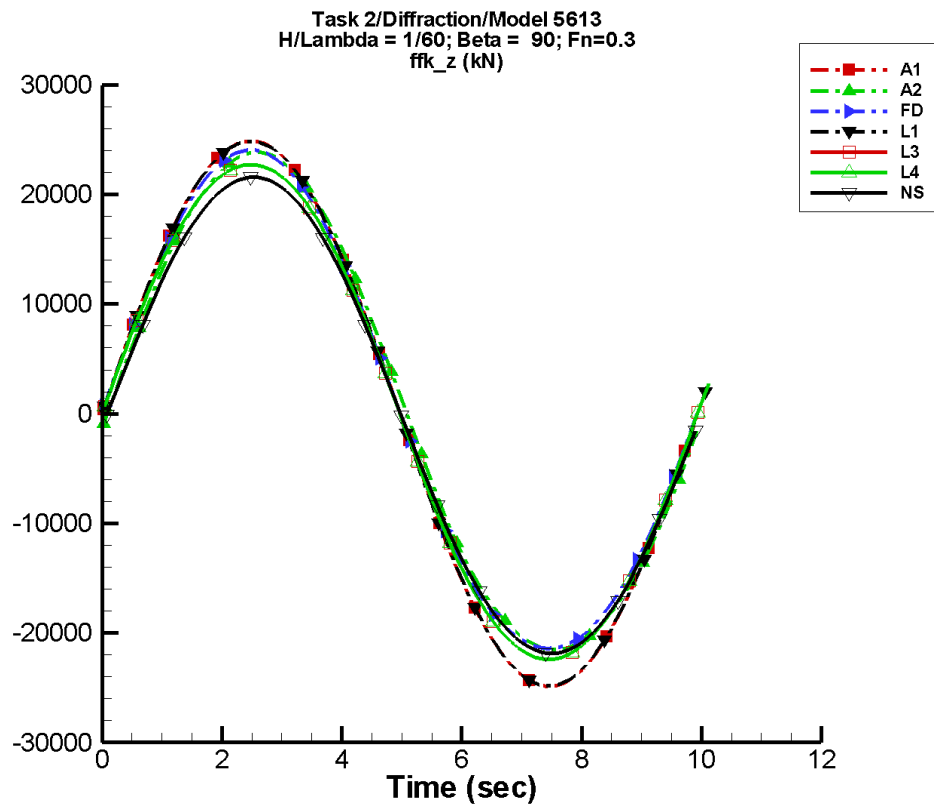
Table G–1255. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 23.2          | 7.65E+04      | 19                | 33.0          | 175               |
| A2   | 2.59E+04      | 3.46E+04      | 1                 | 8.50E+03      | -80               |
| FD   | 2.72E+04      | 3.64E+04      | 8                 | 6.41E+03      | -74               |
| L1   | 14.4          | 7.63E+04      | 20                | 21.2          | 170               |
| L3   | 1.73E+04      | 2.88E+04      | -1                | 7.34E+03      | -81               |
| L4   | 1.73E+04      | 2.88E+04      | -1                | 7.34E+03      | -81               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1256. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.65E+04       | 7.65E+04        | -7.63E+04       | 7.63E+04        |
| A2   | -5.79E+03       | 6.73E+04        | -5.58E+03       | 6.69E+04        |
| FD   | -6.89E+03       | 6.76E+04        | -6.71E+03       | 6.75E+04        |
| L1   | -7.63E+04       | 7.63E+04        | -7.62E+04       | 7.62E+04        |
| L3   | -8.37E+03       | 5.05E+04        | -7.95E+03       | 5.05E+04        |
| L4   | -8.37E+03       | 5.05E+04        | -7.95E+03       | 5.05E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-629. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1257. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

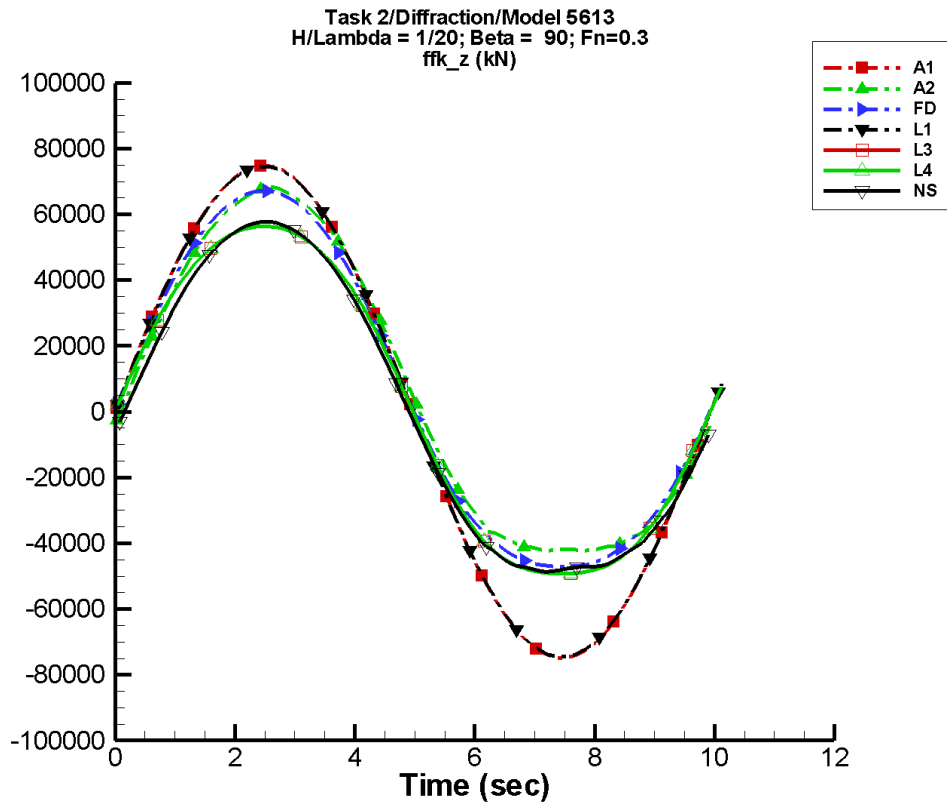
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -15.7         | 2.49E+04      | -4                | 23.8          | -25               |
| A2   | 610.          | 2.29E+04      | -8                | 519.          | -102              |
| FD   | 734.          | 2.30E+04      | -8                | 603.          | -108              |
| L1   | -10.3         | 2.48E+04      | -4                | 16.3          | -37               |
| L3   | 65.5          | 2.28E+04      | -4                | 50.6          | -37               |
| L4   | 65.5          | 2.28E+04      | -4                | 50.6          | -37               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -323.         | 2.18E+04      | -2                | 159.          | -88               |

Table G-1258. Minimum and maximum of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.49E+04       | 2.49E+04        | -2.46E+04       | 2.46E+04        |
| A2   | -2.15E+04       | 2.38E+04        | -2.13E+04       | 2.36E+04        |
| FD   | -2.14E+04       | 2.41E+04        | -2.14E+04       | 2.38E+04        |
| L1   | -2.48E+04       | 2.48E+04        | -2.47E+04       | 2.48E+04        |
| L3   | -2.24E+04       | 2.27E+04        | -2.23E+04       | 2.26E+04        |
| L4   | -2.24E+04       | 2.27E+04        | -2.23E+04       | 2.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.19E+04       | 2.16E+04        | -2.17E+04       | 2.14E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-630. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

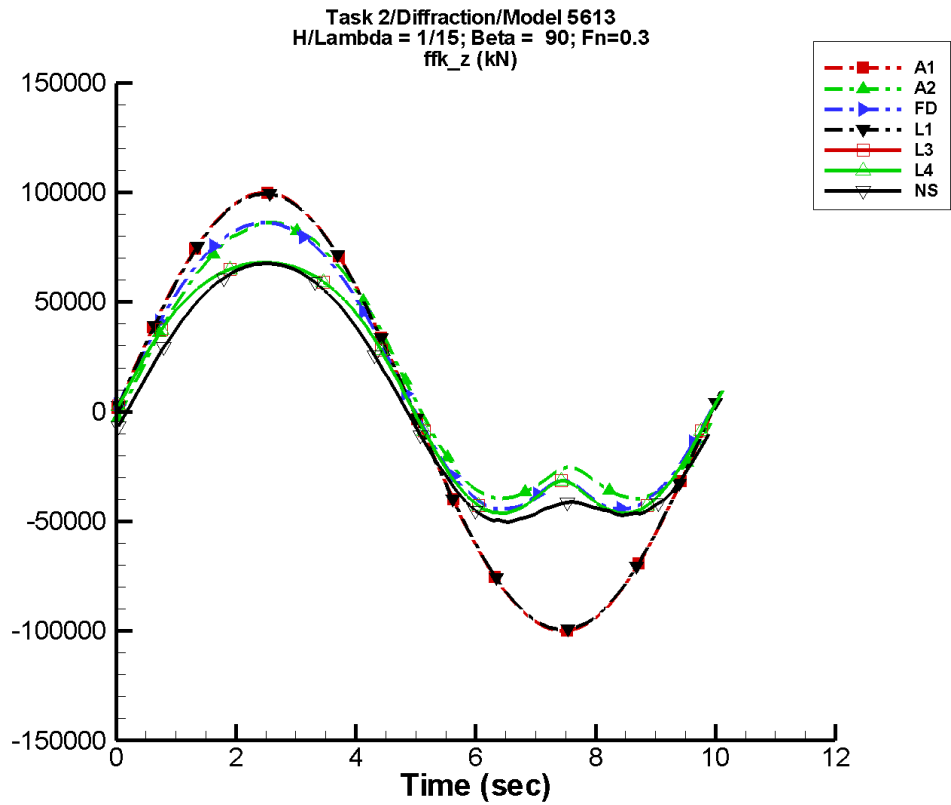
Table G-1259. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -47.3         | 7.48E+04      | -4                | 71.7          | -25               |
| A2   | 6.51E+03      | 5.76E+04      | -8                | 5.84E+03      | -104              |
| FD   | 5.56E+03      | 5.90E+04      | -7                | 4.44E+03      | -108              |
| L1   | -30.8         | 7.45E+04      | -4                | 49.0          | -37               |
| L3   | 1.56E+03      | 5.57E+04      | -4                | 1.18E+03      | -82               |
| L4   | 1.56E+03      | 5.57E+04      | -4                | 1.18E+03      | -82               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.99          | 5.53E+04      | -1                | 4.24E+03      | -95               |

Table G-1260. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.48E+04       | 7.48E+04        | -7.41E+04       | 7.40E+04        |
| A2   | -4.22E+04       | 6.82E+04        | -4.20E+04       | 6.71E+04        |
| FD   | -4.71E+04       | 6.71E+04        | -4.72E+04       | 6.65E+04        |
| L1   | -7.45E+04       | 7.45E+04        | -7.42E+04       | 7.43E+04        |
| L3   | -4.93E+04       | 5.64E+04        | -4.92E+04       | 5.63E+04        |
| L4   | -4.93E+04       | 5.64E+04        | -4.92E+04       | 5.63E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.86E+04       | 5.77E+04        | -4.81E+04       | 5.74E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-631. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

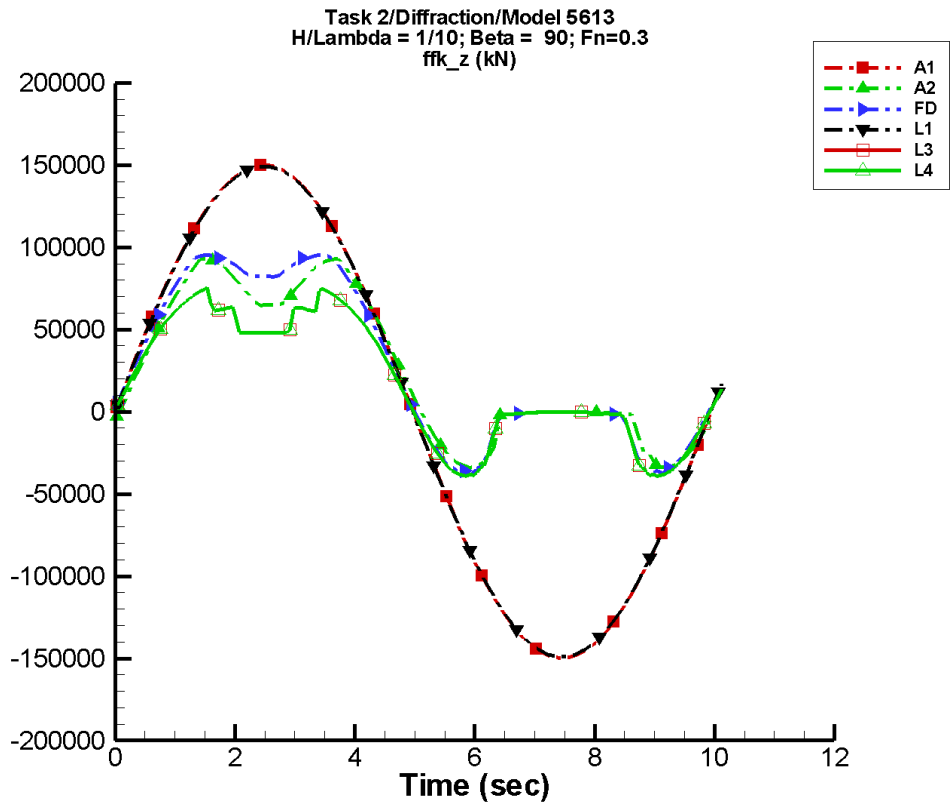
Table G-1261. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -63.1         | 9.99E+04      | -4                | 95.7          | -25               |
| A2   | 1.37E+04      | 6.47E+04      | -7                | 1.31E+04      | -104              |
| FD   | 1.25E+04      | 6.70E+04      | -7                | 1.17E+04      | -110              |
| L1   | -41.1         | 9.94E+04      | -4                | 65.4          | -37               |
| L3   | 6.30E+03      | 6.00E+04      | -3                | 6.53E+03      | -91               |
| L4   | 6.30E+03      | 6.00E+04      | -3                | 6.53E+03      | -91               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.53E+03      | 6.10E+04      | -1                | 9.09E+03      | -94               |

Table G-1262. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -9.99E+04       | 9.99E+04        | -9.89E+04       | 9.88E+04        |
| A2   | -3.99E+04       | 8.63E+04        | -3.86E+04       | 8.52E+04        |
| FD   | -4.43E+04       | 8.62E+04        | -4.34E+04       | 8.54E+04        |
| L1   | -9.93E+04       | 9.94E+04        | -9.90E+04       | 9.90E+04        |
| L3   | -4.64E+04       | 6.80E+04        | -4.59E+04       | 6.78E+04        |
| L4   | -4.64E+04       | 6.80E+04        | -4.59E+04       | 6.78E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -5.02E+04       | 6.76E+04        | -4.96E+04       | 6.76E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-632. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

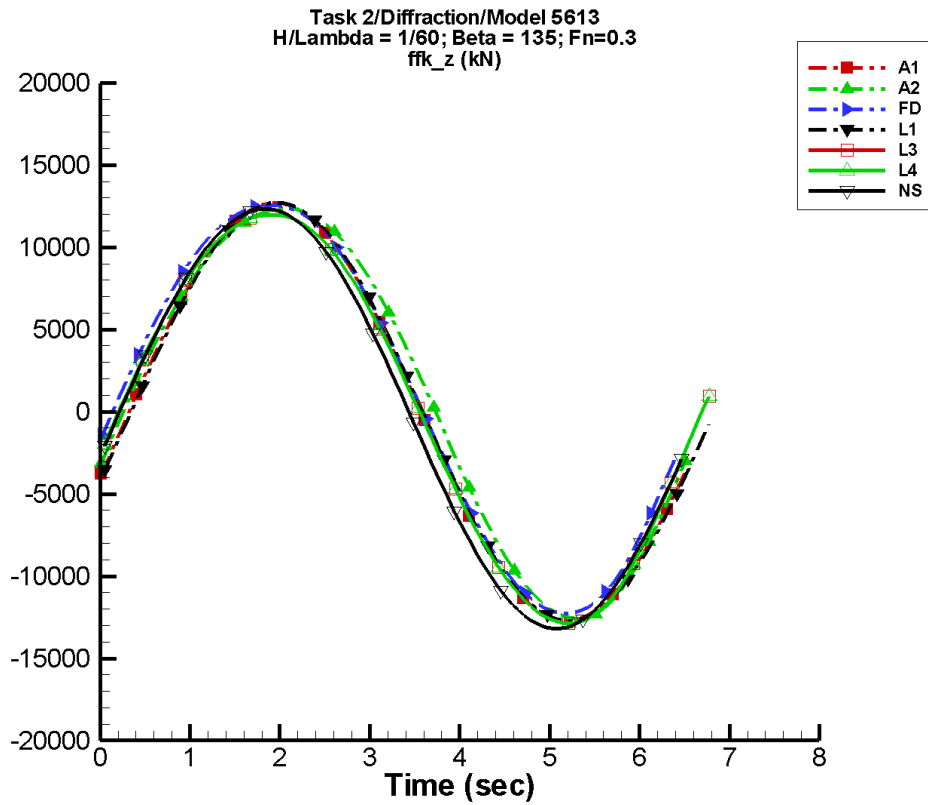
Table G-1263. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -94.7         | 1.50E+05      | -4                | 144.          | -25               |
| A2   | 2.69E+04      | 5.49E+04      | -6                | 1.81E+04      | -97               |
| FD   | 2.86E+04      | 5.83E+04      | -5                | 2.11E+04      | -110              |
| L1   | -61.6         | 1.49E+05      | -4                | 98.0          | -37               |
| L3   | 1.71E+04      | 4.19E+04      | 0                 | 1.11E+04      | -83               |
| L4   | 1.71E+04      | 4.19E+04      | 0                 | 1.11E+04      | -83               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1264. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.50E+05       | 1.50E+05        | -1.48E+05       | 1.48E+05        |
| A2   | -3.39E+04       | 9.33E+04        | -2.99E+04       | 8.84E+04        |
| FD   | -3.84E+04       | 9.53E+04        | -3.31E+04       | 9.29E+04        |
| L1   | -1.49E+05       | 1.49E+05        | -1.48E+05       | 1.49E+05        |
| L3   | -3.94E+04       | 7.55E+04        | -3.82E+04       | 7.03E+04        |
| L4   | -3.94E+04       | 7.55E+04        | -3.82E+04       | 7.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-633. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1265. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

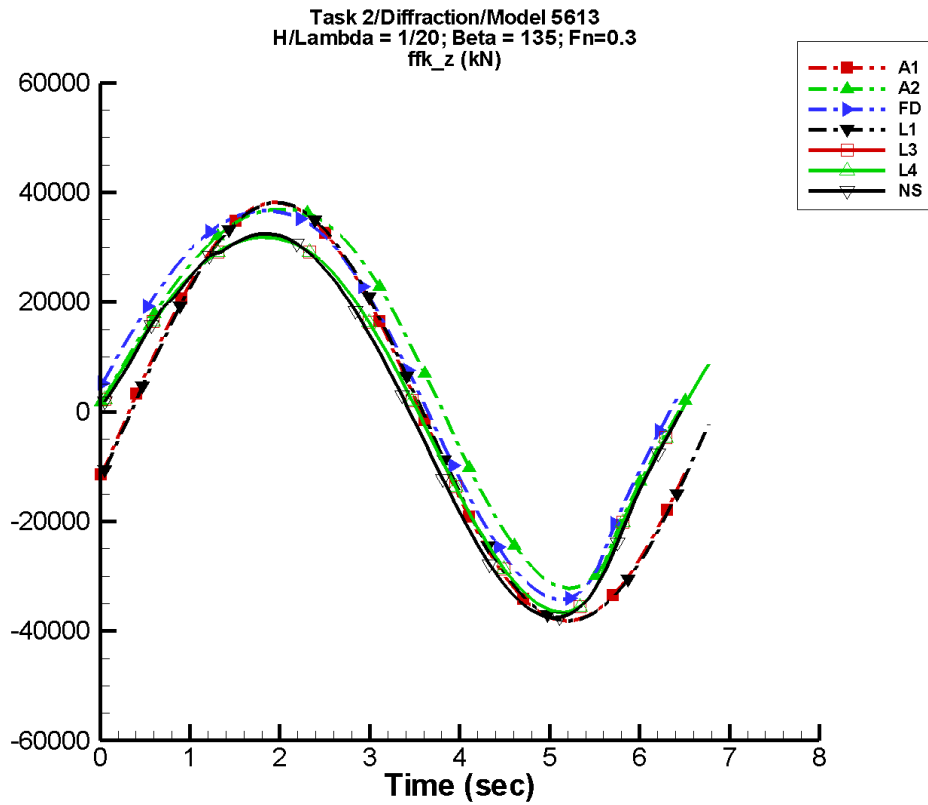
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.56         | 1.27E+04      | -21               | 5.62          | -30               |
| A2   | 608.          | 1.25E+04      | -24               | 779.          | 43                |
| FD   | 711.          | 1.25E+04      | -13               | 591.          | 53                |
| L1   | -1.24         | 1.27E+04      | -22               | 1.97          | -51               |
| L3   | 79.7          | 1.25E+04      | -18               | 564.          | 40                |
| L4   | 79.7          | 1.25E+04      | -18               | 564.          | 40                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -301.         | 1.27E+04      | -11               | 138.          | 71                |

Table G–1266. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.27E+04       | 1.27E+04        | -1.24E+04       | 1.24E+04        |
| A2   | -1.26E+04       | 1.24E+04        | -1.23E+04       | 1.21E+04        |
| FD   | -1.23E+04       | 1.26E+04        | -1.20E+04       | 1.24E+04        |
| L1   | -1.27E+04       | 1.27E+04        | -1.26E+04       | 1.26E+04        |
| L3   | -1.29E+04       | 1.20E+04        | -1.28E+04       | 1.19E+04        |
| L4   | -1.29E+04       | 1.20E+04        | -1.28E+04       | 1.19E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.32E+04       | 1.23E+04        | -1.31E+04       | 1.22E+04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-634. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

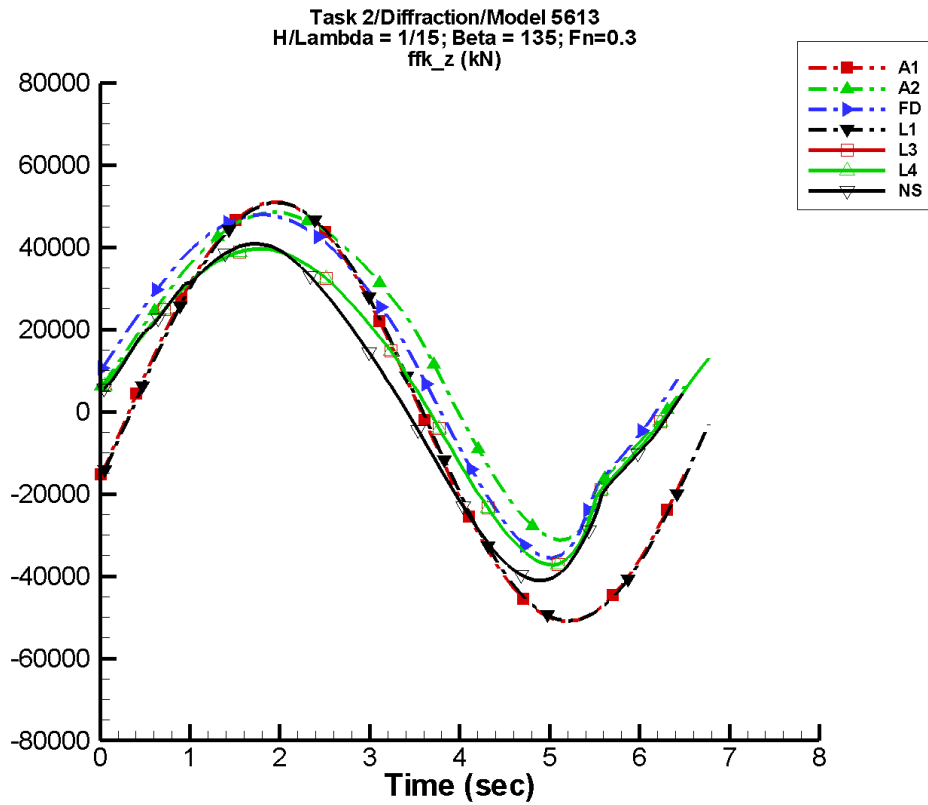
Table G-1267. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -10.7         | 3.82E+04      | -21               | 16.9          | -30               |
| A2   | 6.37E+03      | 3.37E+04      | -19               | 3.76E+03      | 72                |
| FD   | 5.33E+03      | 3.46E+04      | -7                | 3.84E+03      | 86                |
| L1   | -3.72         | 3.81E+04      | -22               | 5.91          | -51               |
| L3   | 1.56E+03      | 3.33E+04      | -11               | 3.55E+03      | 76                |
| L4   | 1.56E+03      | 3.33E+04      | -11               | 3.55E+03      | 76                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 378.          | 3.41E+04      | -7                | 3.11E+03      | 91                |

Table G-1268. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.82E+04       | 3.82E+04        | -3.73E+04       | 3.73E+04        |
| A2   | -3.22E+04       | 3.69E+04        | -3.09E+04       | 3.65E+04        |
| FD   | -3.43E+04       | 3.67E+04        | -3.29E+04       | 3.62E+04        |
| L1   | -3.81E+04       | 3.81E+04        | -3.78E+04       | 3.78E+04        |
| L3   | -3.66E+04       | 3.18E+04        | -3.62E+04       | 3.17E+04        |
| L4   | -3.66E+04       | 3.18E+04        | -3.62E+04       | 3.17E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.76E+04       | 3.25E+04        | -3.71E+04       | 3.21E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-635. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

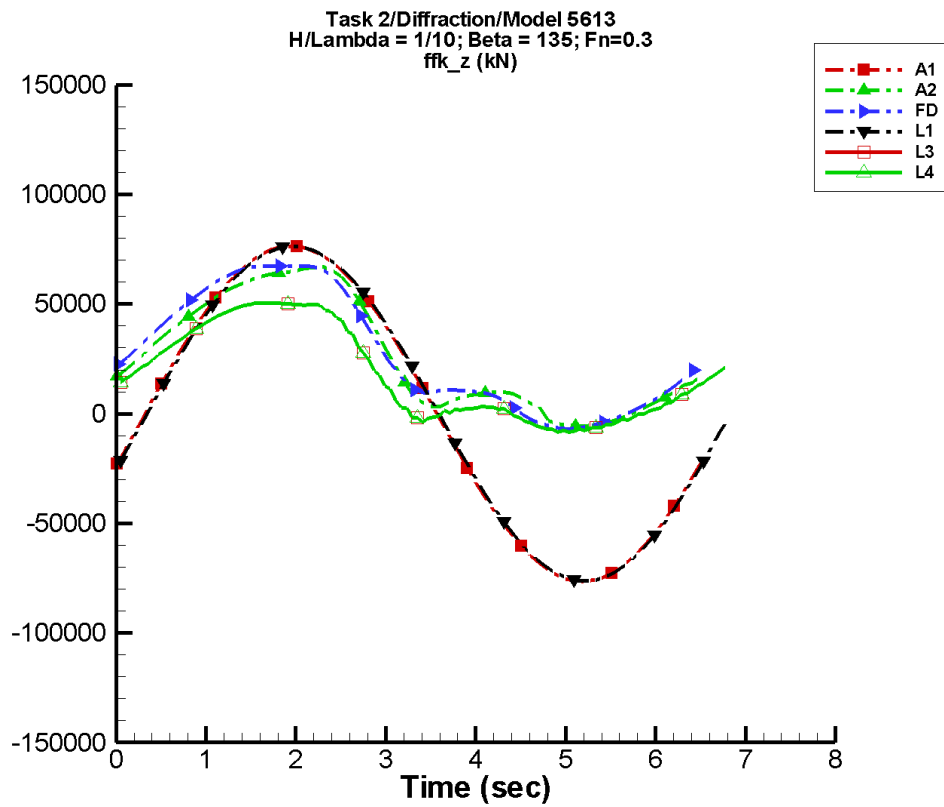
Table G-1269. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -14.3         | 5.10E+04      | -21               | 22.6          | -30               |
| A2   | 1.34E+04      | 3.76E+04      | -20               | 3.65E+03      | 84                |
| FD   | 1.18E+04      | 3.93E+04      | -7                | 4.43E+03      | 101               |
| L1   | -4.95         | 5.09E+04      | -22               | 7.87          | -51               |
| L3   | 6.22E+03      | 3.59E+04      | -10               | 3.72E+03      | 93                |
| L4   | 6.22E+03      | 3.59E+04      | -10               | 3.72E+03      | 93                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.98E+03      | 3.83E+04      | -1                | 3.05E+03      | 128               |

Table G-1270. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.10E+04       | 5.10E+04        | -4.98E+04       | 4.98E+04        |
| A2   | -3.12E+04       | 4.87E+04        | -2.87E+04       | 4.78E+04        |
| FD   | -3.56E+04       | 4.80E+04        | -3.30E+04       | 4.72E+04        |
| L1   | -5.09E+04       | 5.09E+04        | -5.04E+04       | 5.04E+04        |
| L3   | -3.73E+04       | 3.96E+04        | -3.66E+04       | 3.94E+04        |
| L4   | -3.73E+04       | 3.96E+04        | -3.66E+04       | 3.94E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.11E+04       | 4.08E+04        | -4.06E+04       | 4.05E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-636. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

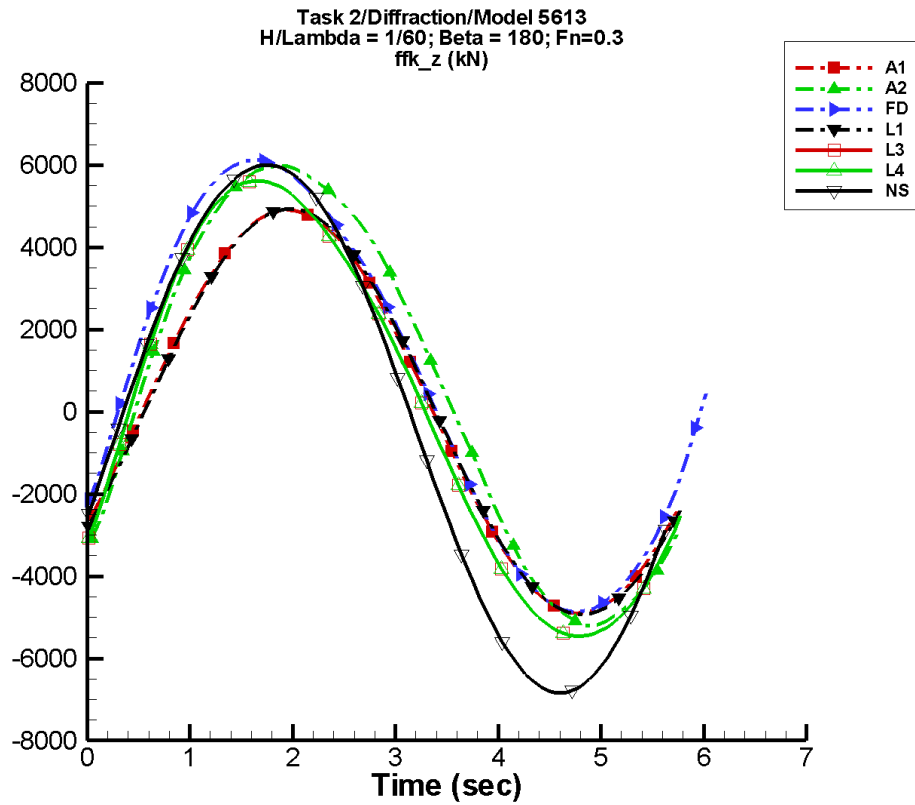
Table G-1271. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -21.5         | 7.65E+04      | -21               | 33.9          | -30               |
| A2   | 2.57E+04      | 3.35E+04      | -10               | 6.84E+03      | -114              |
| FD   | 2.73E+04      | 3.62E+04      | -1                | 5.87E+03      | -86               |
| L1   | -7.44         | 7.63E+04      | -22               | 11.8          | -51               |
| L3   | 1.75E+04      | 2.86E+04      | -2                | 6.55E+03      | -104              |
| L4   | 1.75E+04      | 2.86E+04      | -2                | 6.55E+03      | -104              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1272. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.65E+04       | 7.65E+04        | -7.47E+04       | 7.47E+04        |
| A2   | -5.77E+03       | 6.70E+04        | -4.53E+03       | 6.56E+04        |
| FD   | -6.83E+03       | 6.75E+04        | -5.59E+03       | 6.74E+04        |
| L1   | -7.63E+04       | 7.63E+04        | -7.56E+04       | 7.56E+04        |
| L3   | -8.29E+03       | 5.05E+04        | -7.64E+03       | 5.03E+04        |
| L4   | -8.29E+03       | 5.05E+04        | -7.64E+03       | 5.03E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-637. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1273. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

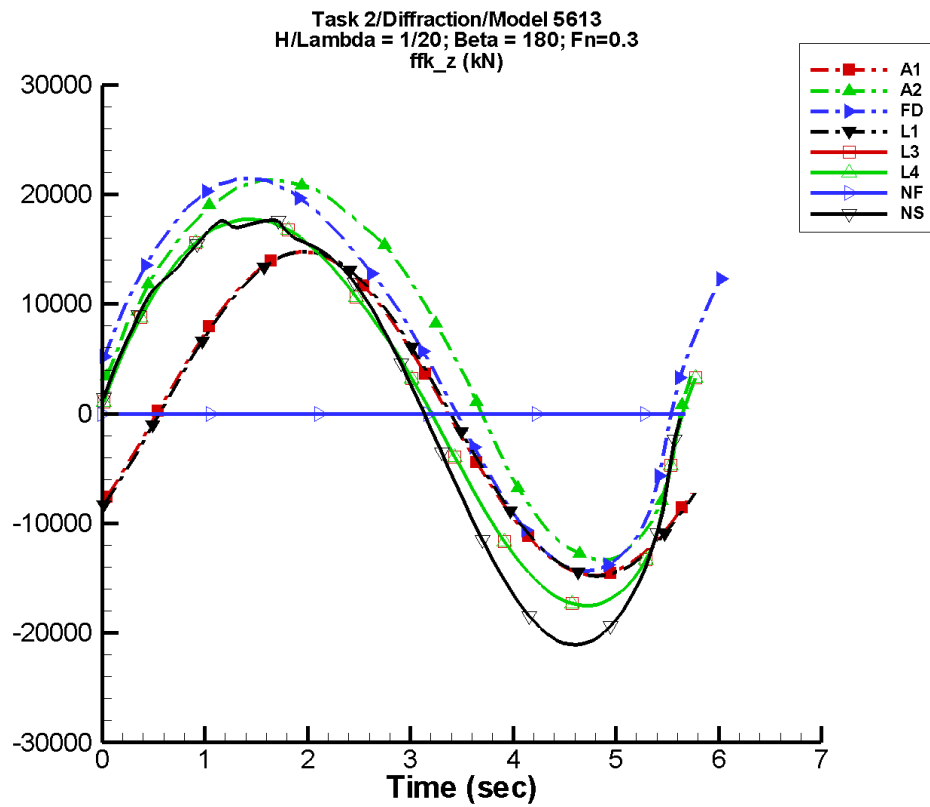
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.21         | 4.90E+03      | -42               | 3.56          | -50               |
| A2   | 601.          | 5.68E+03      | -45               | 468.          | -56               |
| FD   | 698.          | 5.55E+03      | -62               | 517.          | -111              |
| L1   | 7.89          | 4.93E+03      | -49               | 8.28          | -28               |
| L3   | 84.5          | 5.59E+03      | -41               | 504.          | -75               |
| L4   | 84.5          | 5.59E+03      | -41               | 504.          | -75               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -297.         | 6.45E+03      | -22               | 137.          | 21                |

Table G-1274. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.90E+03       | 4.91E+03        | -4.75E+03       | 4.76E+03        |
| A2   | -5.20E+03       | 5.98E+03        | -5.00E+03       | 5.83E+03        |
| FD   | -4.87E+03       | 6.13E+03        | -4.70E+03       | 5.96E+03        |
| L1   | -4.93E+03       | 4.93E+03        | -4.88E+03       | 4.88E+03        |
| L3   | -5.47E+03       | 5.62E+03        | -5.41E+03       | 5.56E+03        |
| L4   | -5.47E+03       | 5.62E+03        | -5.41E+03       | 5.56E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.84E+03       | 6.00E+03        | -6.78E+03       | 5.94E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-638. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

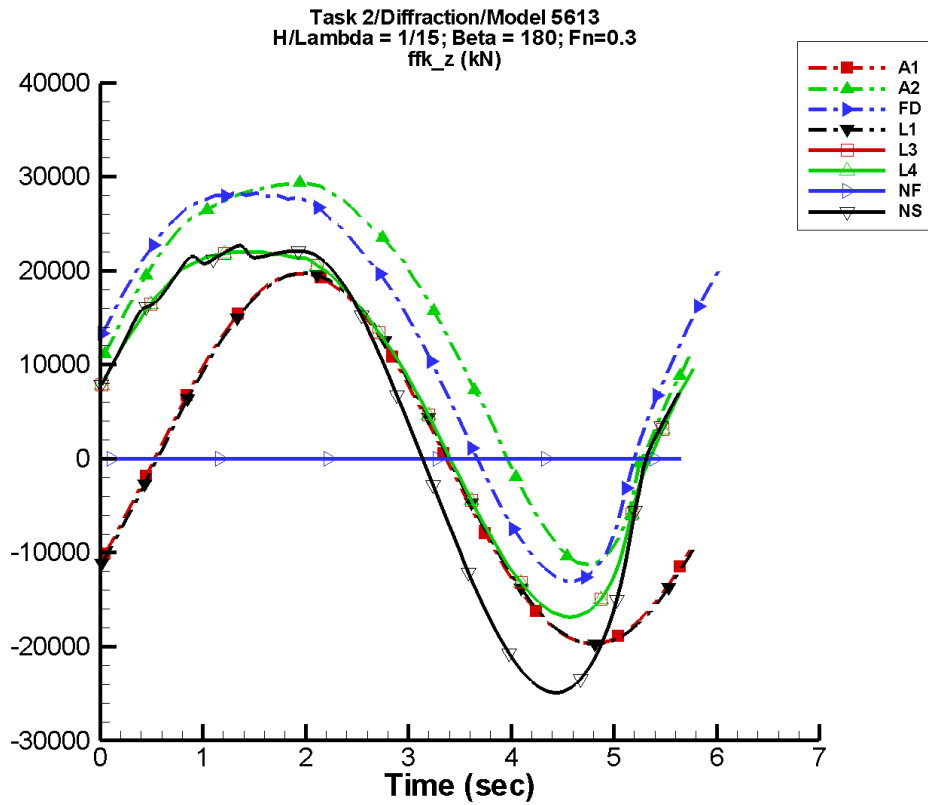
Table G-1275. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.65         | 1.48E+04      | -42               | 10.7          | -50               |
| A2   | 6.44E+03      | 1.73E+04      | -32               | 3.26E+03      | 4                 |
| FD   | 5.48E+03      | 1.79E+04      | -48               | 3.28E+03      | -53               |
| L1   | 23.7          | 1.48E+04      | -49               | 24.8          | -28               |
| L3   | 1.70E+03      | 1.76E+04      | -26               | 2.71E+03      | -11               |
| L4   | 1.70E+03      | 1.76E+04      | -26               | 2.71E+03      | -11               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 592.          | 1.95E+04      | -12               | 3.26E+03      | 38                |

Table G-1276. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.47E+04       | 1.48E+04        | -1.43E+04       | 1.43E+04        |
| A2   | -1.34E+04       | 2.13E+04        | -1.29E+04       | 2.15E+04        |
| FD   | -1.43E+04       | 2.15E+04        | -1.39E+04       | 2.11E+04        |
| L1   | -1.48E+04       | 1.48E+04        | -1.46E+04       | 1.46E+04        |
| L3   | -1.75E+04       | 1.78E+04        | -1.73E+04       | 1.76E+04        |
| L4   | -1.75E+04       | 1.78E+04        | -1.73E+04       | 1.76E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.11E+04       | 1.77E+04        | -2.09E+04       | 1.74E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-639. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

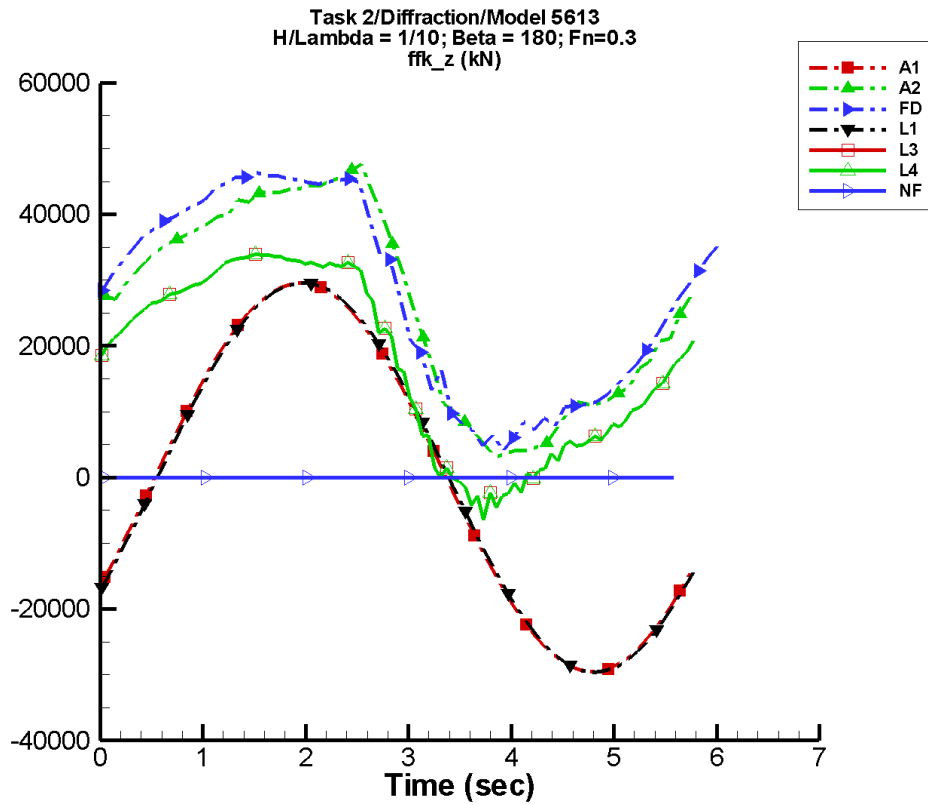
Table G-1277. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -8.87         | 1.97E+04      | -42               | 14.3          | -50               |
| A2   | 1.34E+04      | 1.92E+04      | -30               | 4.21E+03      | 24                |
| FD   | 1.18E+04      | 2.02E+04      | -46               | 4.25E+03      | -18               |
| L1   | 31.6          | 1.97E+04      | -49               | 33.1          | -28               |
| L3   | 6.22E+03      | 1.93E+04      | -23               | 3.69E+03      | 27                |
| L4   | 6.22E+03      | 1.93E+04      | -23               | 3.69E+03      | 27                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 3.38E+03      | 2.35E+04      | -4                | 4.83E+03      | 81                |

Table G-1278. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.97E+04       | 1.97E+04        | -1.91E+04       | 1.91E+04        |
| A2   | -1.12E+04       | 2.94E+04        | -9.77E+03       | 2.90E+04        |
| FD   | -1.31E+04       | 2.83E+04        | -1.19E+04       | 2.81E+04        |
| L1   | -1.97E+04       | 1.97E+04        | -1.95E+04       | 1.95E+04        |
| L3   | -1.68E+04       | 2.20E+04        | -1.65E+04       | 2.19E+04        |
| L4   | -1.68E+04       | 2.20E+04        | -1.65E+04       | 2.19E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.49E+04       | 2.27E+04        | -2.47E+04       | 2.21E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-640. Time history of  $F_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

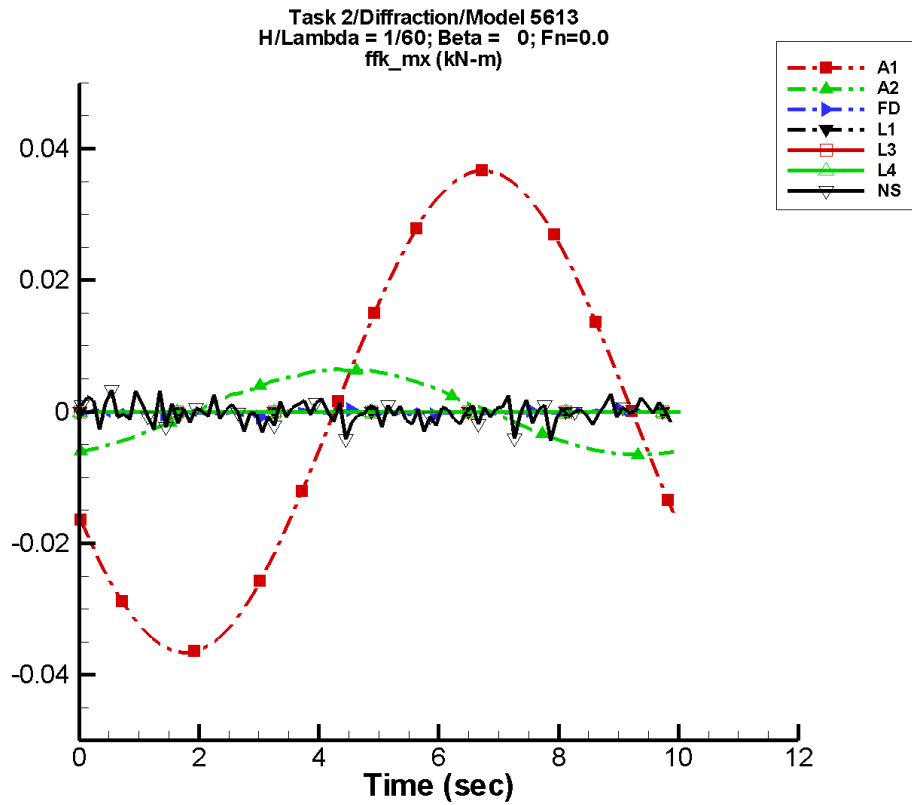
Table G-1279. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.3         | 2.95E+04      | -42               | 21.4          | -50               |
| A2   | 2.62E+04      | 2.02E+04      | -17               | 4.95E+03      | 119               |
| FD   | 2.74E+04      | 2.09E+04      | -39               | 3.29E+03      | 78                |
| L1   | 47.3          | 2.96E+04      | -49               | 49.7          | -28               |
| L3   | 1.74E+04      | 1.79E+04      | -12               | 4.19E+03      | 133               |
| L4   | 1.74E+04      | 1.79E+04      | -12               | 4.19E+03      | 133               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1280. Minimum and maximum of  $F_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.95E+04       | 2.96E+04        | -2.86E+04       | 2.86E+04        |
| A2   | 3.06E+03        | 4.76E+04        | 4.69E+03        | 4.53E+04        |
| FD   | 4.02E+03        | 4.63E+04        | 6.63E+03        | 4.57E+04        |
| L1   | -2.96E+04       | 2.96E+04        | -2.93E+04       | 2.93E+04        |
| L3   | -6.42E+03       | 3.39E+04        | -3.26E+03       | 3.37E+04        |
| L4   | -6.42E+03       | 3.39E+04        | -3.26E+03       | 3.37E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-641. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1281. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

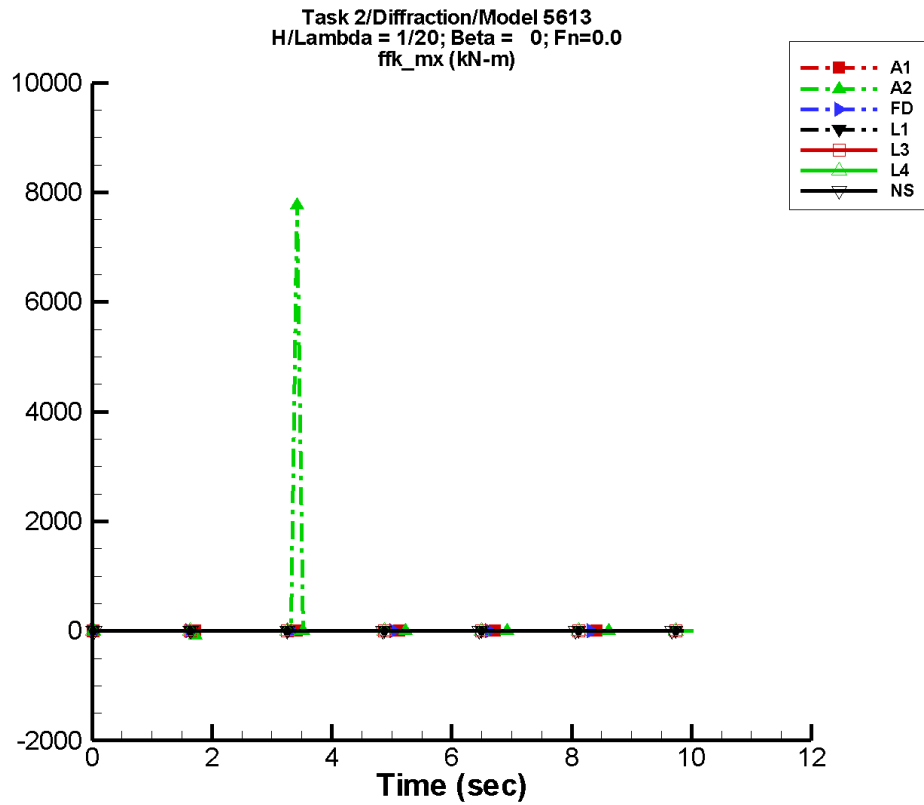
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.36E-05        | 3.66E-02        | -159              | 4.52E-05        | 172               |
| A2   | -8.55E-05       | 6.43E-03        | -73               | 3.01E-05        | 33                |
| FD   | -8.35E-05       | 5.25E-05        | 138               | 8.94E-05        | 128               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.56E-04       | 4.55E-04        | 73                | 2.33E-04        | 108               |

Table G–1282. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.66E-02         | 3.66E-02          | -3.63E-02         | 3.62E-02          |
| A2   | -6.53E-03         | 6.45E-03          | -6.46E-03         | 6.31E-03          |
| FD   | -8.90E-04         | 6.14E-04          | -2.95E-04         | 1.29E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.45E-03         | 3.24E-03          | -1.39E-03         | 1.02E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-642. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

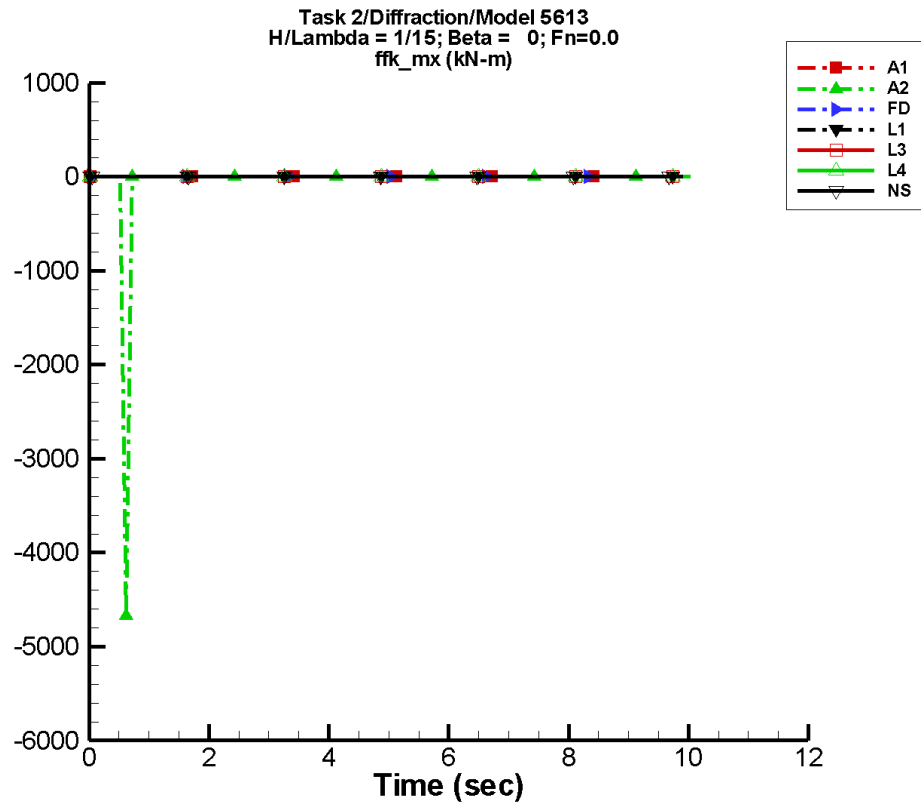
Table G-1283. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.01E-04        | 0.110           | -159              | 1.36E-04        | 172               |
| A2   | 48.5            | 140.            | -63               | 223.            | 179               |
| FD   | 3.60E-05        | 8.08E-05        | -179              | 4.17E-05        | 29                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.16E-04       | 1.36E-03        | -13               | 1.40E-03        | -142              |

Table G-1284. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.110            | 0.110             | -0.109            | 0.109             |
| A2   | -6.26E+03         | 7.77E+03          | -835.             | 1.04E+03          |
| FD   | -8.68E-04         | 9.99E-04          | -2.36E-04         | 2.96E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.21E-02         | 1.55E-02          | -5.40E-03         | 4.08E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-643. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

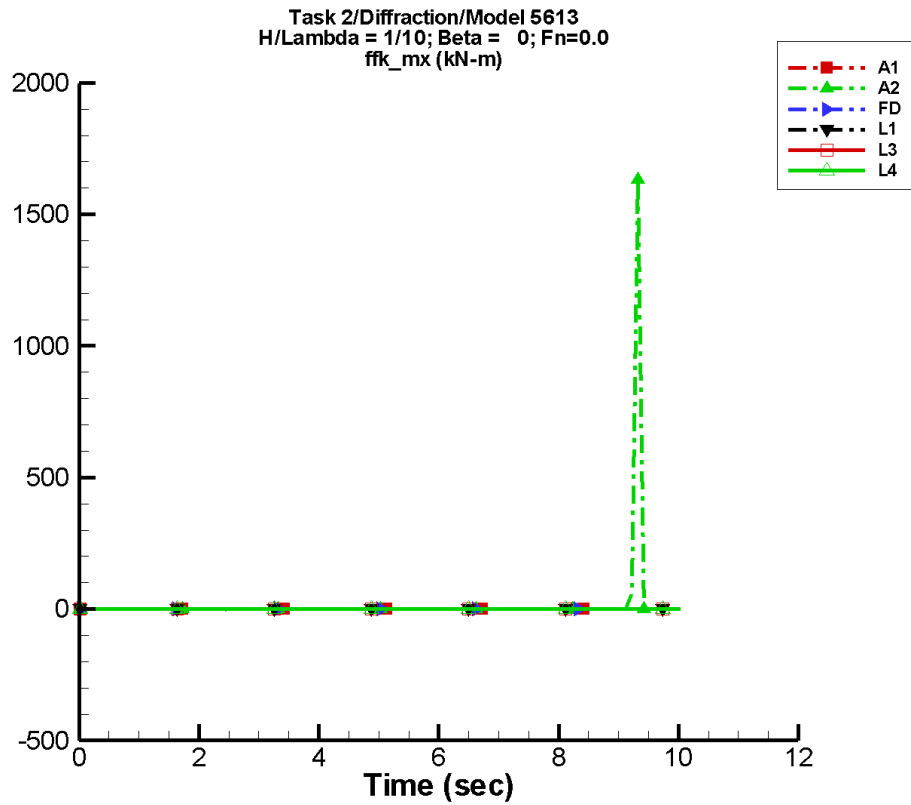
Table G–1285. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.35E-04        | 0.147           | -159              | 1.82E-04        | 172               |
| A2   | -24.6           | 52.6            | -110              | 61.1            | -135              |
| FD   | 4.51E-05        | 1.49E-04        | -61               | 1.73E-04        | 5                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.69E-04       | 1.26E-03        | 86                | 1.44E-03        | 74                |

Table G–1286. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.147            | 0.147             | -0.146            | 0.146             |
| A2   | -4.67E+03         | 2.59E-02          | -623.             | 53.2              |
| FD   | -8.15E-04         | 8.16E-04          | -3.56E-04         | 3.71E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.58E-02         | 2.54E-02          | -5.58E-03         | 5.24E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-644. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

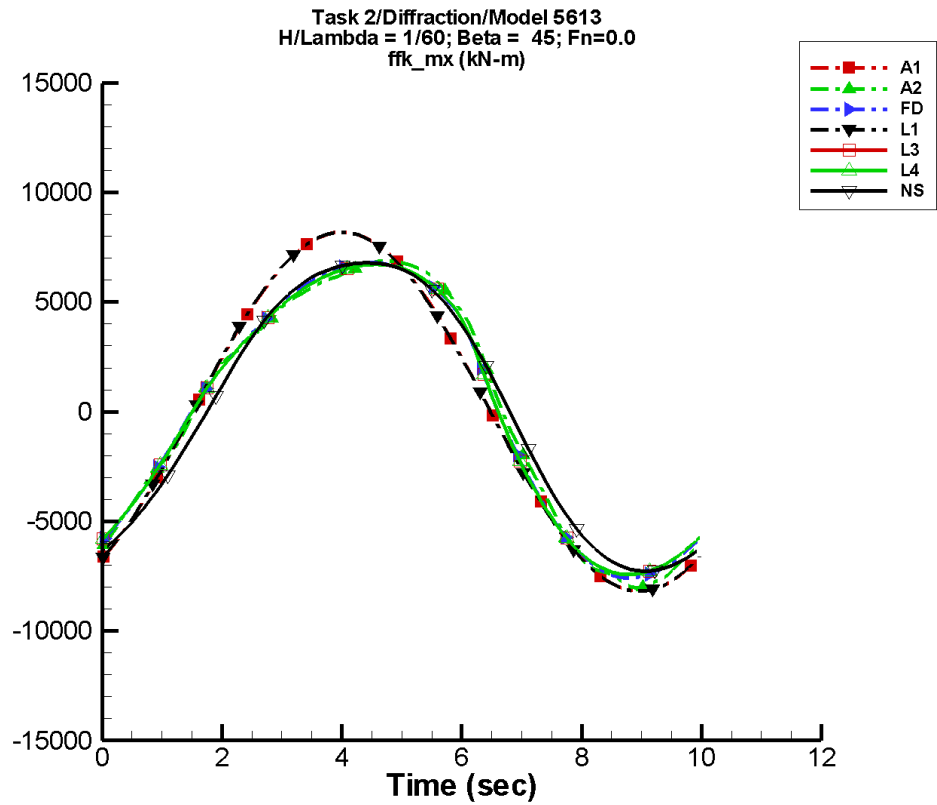
Table G–1287. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.03E-04        | 0.221           | -159              | 2.73E-04        | 172               |
| A2   | 8.93            | 22.8            | 136               | 37.2            | 159               |
| FD   | -5.06E-05       | 2.01E-04        | -83               | 1.70E-04        | 5                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1288. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.221            | 0.221             | -0.219            | 0.218             |
| A2   | -1.11E+03         | 1.63E+03          | -141.             | 221.              |
| FD   | -1.61E-03         | 1.21E-03          | -6.31E-04         | 3.65E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-645. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1289. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

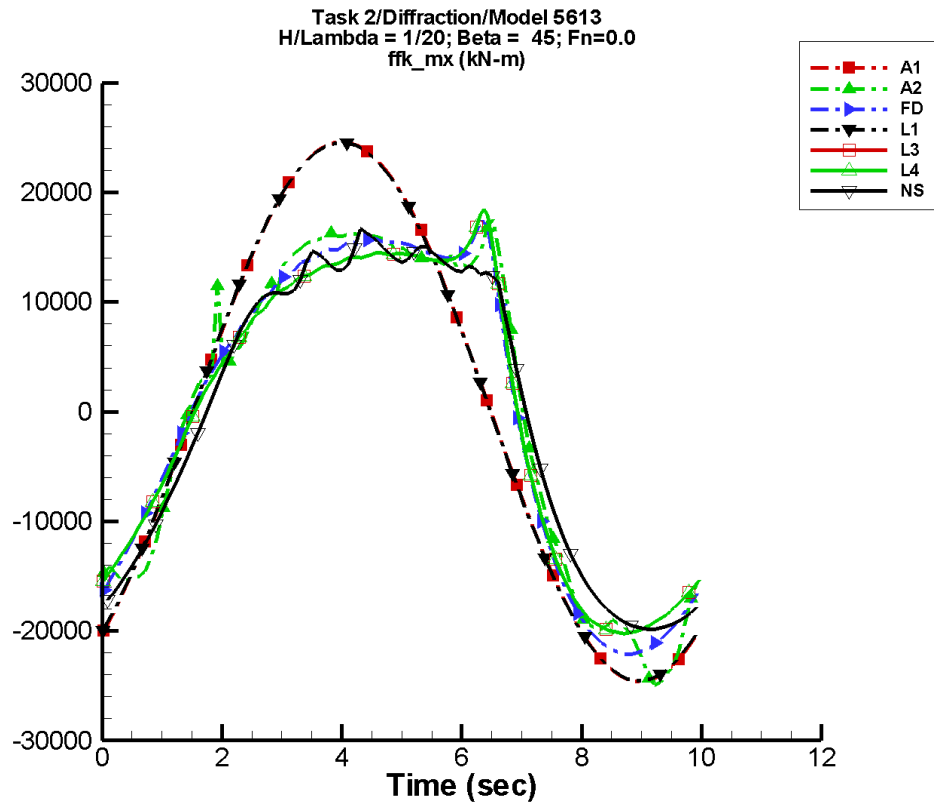
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.42            | 8.18E+03        | -59               | 5.73            | -119              |
| A2   | -4.00           | 7.44E+03        | -65               | 1.04E+03        | 12                |
| FD   | -26.0           | 7.39E+03        | -66               | 891.            | 14                |
| L1   | 5.05            | 8.18E+03        | -59               | 7.56            | 5                 |
| L3   | -0.329          | 7.29E+03        | -63               | 886.            | 21                |
| L4   | -0.329          | 7.29E+03        | -63               | 886.            | 21                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 22.9            | 7.27E+03        | -65               | 330.            | 9                 |

Table G–1290. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.18E+03         | 8.18E+03          | -8.10E+03         | 8.10E+03          |
| A2   | -8.04E+03         | 6.88E+03          | -7.84E+03         | 6.81E+03          |
| FD   | -7.58E+03         | 6.79E+03          | -7.50E+03         | 6.74E+03          |
| L1   | -8.18E+03         | 8.18E+03          | -8.15E+03         | 8.15E+03          |
| L3   | -7.43E+03         | 6.72E+03          | -7.40E+03         | 6.70E+03          |
| L4   | -7.43E+03         | 6.72E+03          | -7.40E+03         | 6.70E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.27E+03         | 6.79E+03          | -7.20E+03         | 6.75E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-646. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

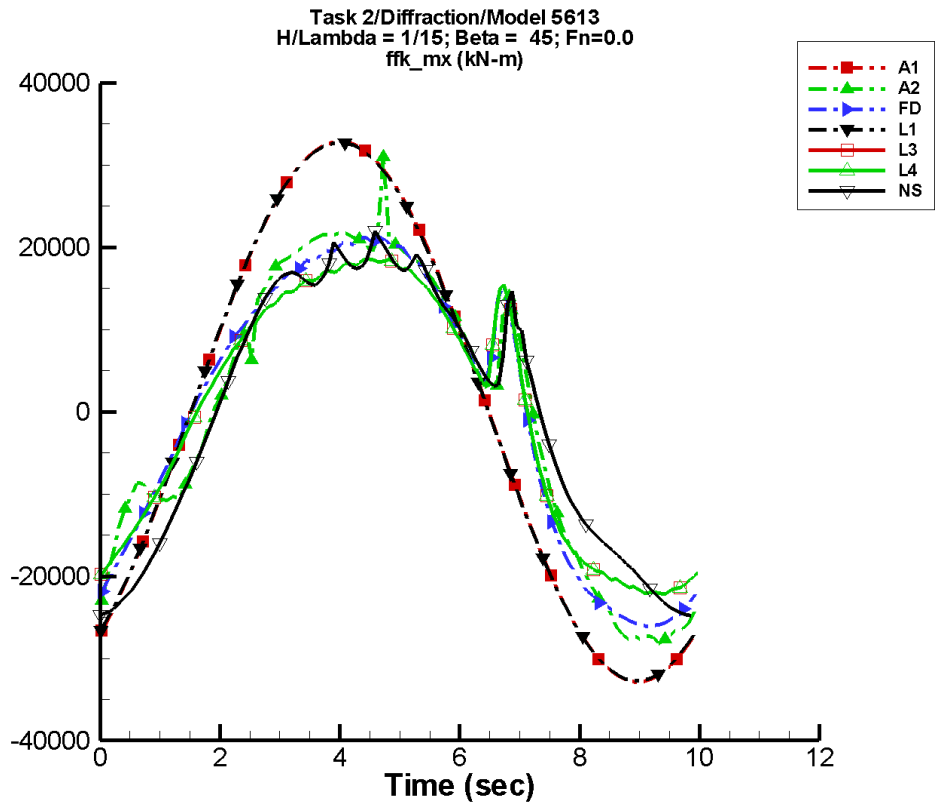
Table G–1291. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.29            | 2.46E+04        | -59               | 17.2            | -119              |
| A2   | -57.9           | 2.00E+04        | -72               | 3.86E+03        | -26               |
| FD   | -78.1           | 1.96E+04        | -72               | 4.77E+03        | -18               |
| L1   | 15.1            | 2.45E+04        | -59               | 22.7            | 5                 |
| L3   | 163.            | 1.82E+04        | -72               | 4.63E+03        | -15               |
| L4   | 163.            | 1.82E+04        | -72               | 4.63E+03        | -15               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -33.0           | 1.85E+04        | -71               | 3.19E+03        | -25               |

Table G–1292. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.46E+04         | 2.46E+04          | -2.44E+04         | 2.44E+04          |
| A2   | -2.49E+04         | 1.75E+04          | -2.31E+04         | 1.61E+04          |
| FD   | -2.21E+04         | 1.75E+04          | -2.18E+04         | 1.55E+04          |
| L1   | -2.45E+04         | 2.45E+04          | -2.45E+04         | 2.45E+04          |
| L3   | -2.02E+04         | 1.85E+04          | -2.01E+04         | 1.67E+04          |
| L4   | -2.02E+04         | 1.85E+04          | -2.01E+04         | 1.67E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.98E+04         | 1.67E+04          | -1.96E+04         | 1.51E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-647. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

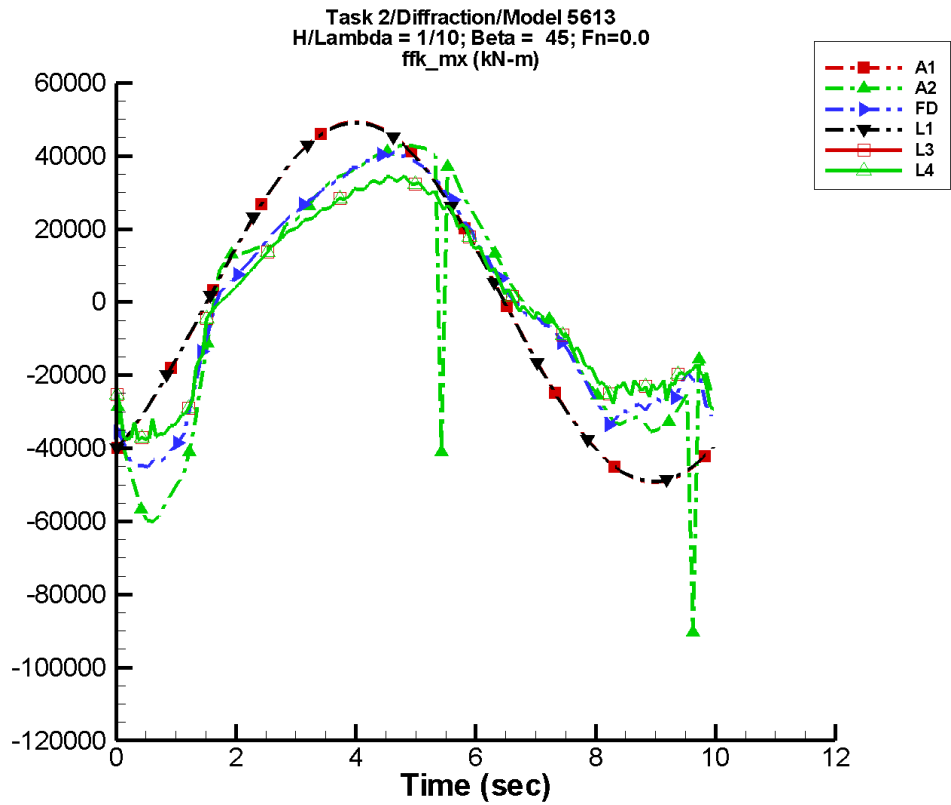
Table G–1293. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 9.73            | 3.29E+04        | -59               | 23.0            | -119              |
| A2   | 9.71            | 2.36E+04        | -72               | 1.92E+03        | -22               |
| FD   | 67.1            | 2.33E+04        | -72               | 3.56E+03        | -43               |
| L1   | 20.2            | 3.27E+04        | -59               | 30.2            | 5                 |
| L3   | 55.7            | 2.05E+04        | -71               | 2.82E+03        | -44               |
| L4   | 55.7            | 2.05E+04        | -71               | 2.82E+03        | -44               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -235.           | 2.18E+04        | -76               | 3.47E+03        | -99               |

Table G–1294. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.28E+04         | 3.29E+04          | -3.25E+04         | 3.25E+04          |
| A2   | -2.82E+04         | 3.10E+04          | -2.76E+04         | 2.19E+04          |
| FD   | -2.61E+04         | 2.12E+04          | -2.57E+04         | 2.08E+04          |
| L1   | -3.27E+04         | 3.27E+04          | -3.26E+04         | 3.26E+04          |
| L3   | -2.22E+04         | 1.86E+04          | -2.20E+04         | 1.84E+04          |
| L4   | -2.22E+04         | 1.86E+04          | -2.20E+04         | 1.84E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.48E+04         | 2.20E+04          | -2.47E+04         | 1.93E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-648. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

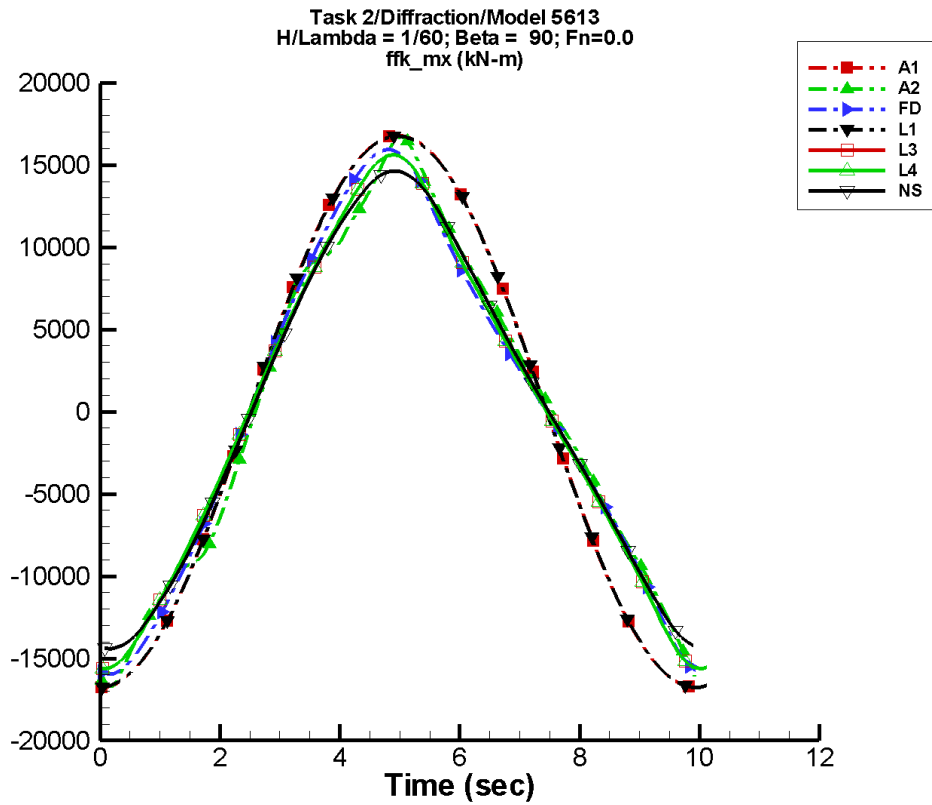
Table G–1295. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 14.6            | 4.93E+04        | -59               | 34.5            | -119              |
| A2   | -1.84E+03       | 4.29E+04        | -79               | 7.80E+03        | -144              |
| FD   | -467.           | 3.89E+04        | -79               | 4.76E+03        | 179               |
| L1   | 30.3            | 4.91E+04        | -59               | 45.4            | 5                 |
| L3   | -296.           | 3.25E+04        | -77               | 3.98E+03        | -174              |
| L4   | -296.           | 3.25E+04        | -77               | 3.98E+03        | -174              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1296. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.93E+04         | 4.93E+04          | -4.88E+04         | 4.88E+04          |
| A2   | -9.03E+04         | 4.29E+04          | -5.57E+04         | 4.22E+04          |
| FD   | -4.60E+04         | 4.10E+04          | -4.39E+04         | 3.98E+04          |
| L1   | -4.91E+04         | 4.91E+04          | -4.89E+04         | 4.89E+04          |
| L3   | -3.78E+04         | 3.45E+04          | -3.69E+04         | 3.37E+04          |
| L4   | -3.78E+04         | 3.45E+04          | -3.69E+04         | 3.37E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-649. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1297. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

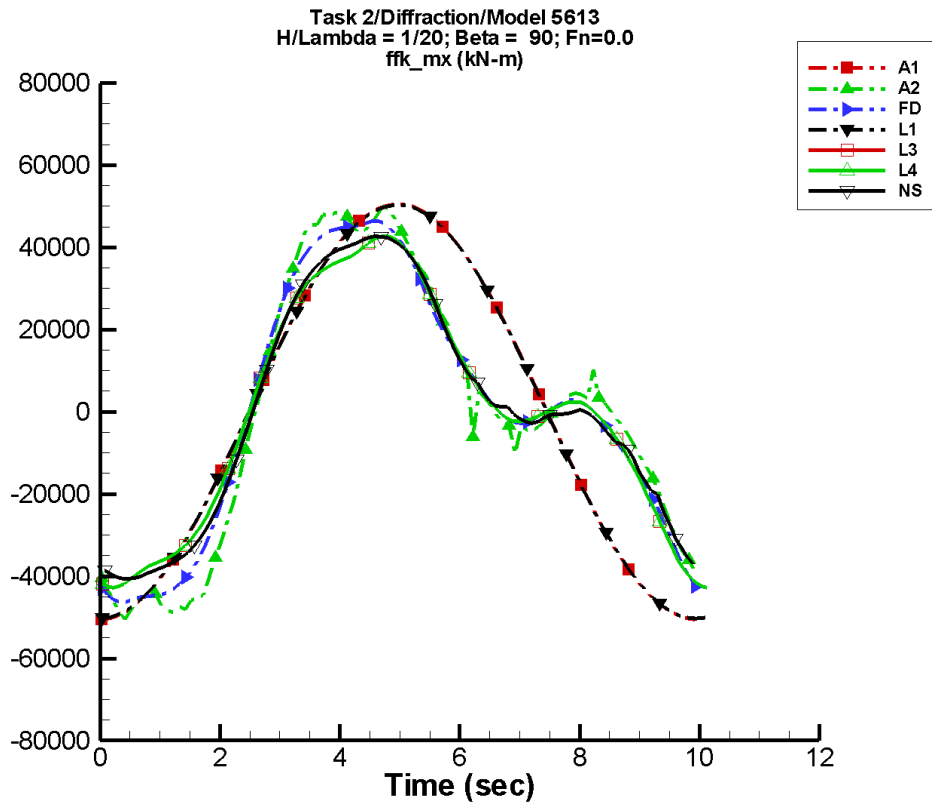
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 13.5            | 1.68E+04        | -94               | 18.8            | -156              |
| A2   | -6.89           | 1.42E+04        | -98               | 1.03E+03        | 169               |
| FD   | -41.9           | 1.43E+04        | -97               | 1.55E+03        | 161               |
| L1   | 4.26            | 1.68E+04        | -94               | 6.79            | 151               |
| L3   | -11.7           | 1.40E+04        | -94               | 811.            | 179               |
| L4   | -11.7           | 1.40E+04        | -94               | 811.            | 179               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 55.5            | 1.36E+04        | -92               | 858.            | 177               |

Table G-1298. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.68E+04         | 1.68E+04          | -1.68E+04         | 1.66E+04          |
| A2   | -1.68E+04         | 1.67E+04          | -1.64E+04         | 1.58E+04          |
| FD   | -1.59E+04         | 1.60E+04          | -1.59E+04         | 1.56E+04          |
| L1   | -1.68E+04         | 1.68E+04          | -1.68E+04         | 1.67E+04          |
| L3   | -1.56E+04         | 1.56E+04          | -1.57E+04         | 1.55E+04          |
| L4   | -1.56E+04         | 1.56E+04          | -1.57E+04         | 1.55E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.44E+04         | 1.46E+04          | -1.44E+04         | 1.44E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-650. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

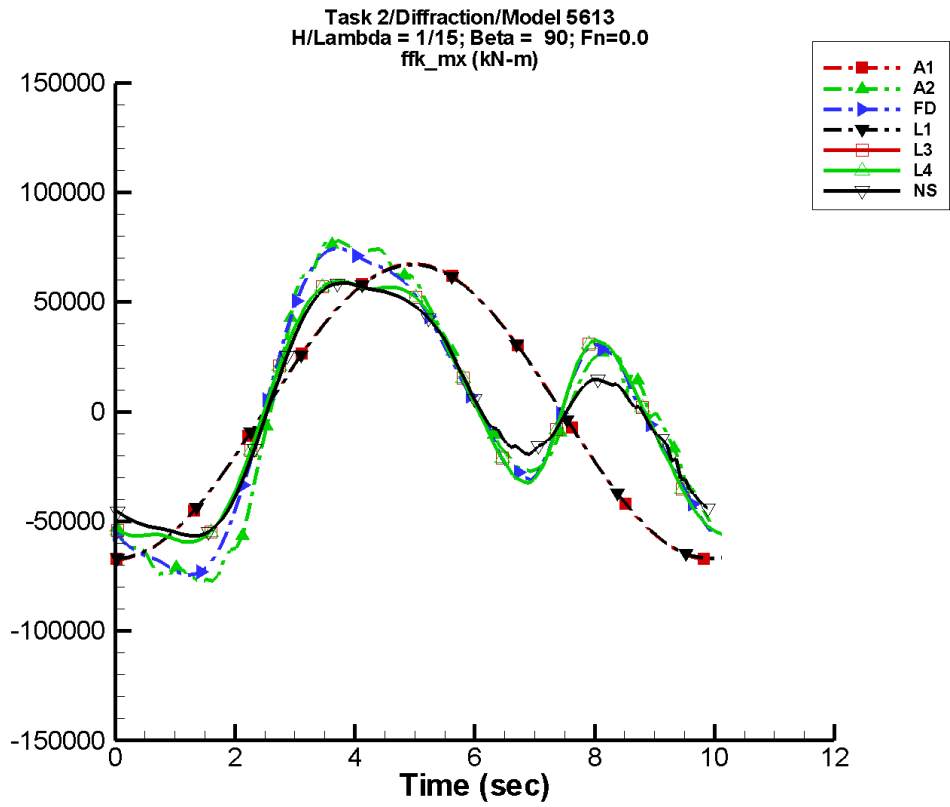
Table G-1299. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 40.5            | 5.05E+04        | -94               | 56.5            | -156              |
| A2   | -109.           | 3.88E+04        | -98               | 2.18E+04        | 164               |
| FD   | -64.6           | 3.83E+04        | -97               | 1.76E+04        | 163               |
| L1   | 12.8            | 5.03E+04        | -94               | 20.4            | 151               |
| L3   | 70.4            | 3.51E+04        | -94               | 1.30E+04        | 172               |
| L4   | 70.4            | 3.51E+04        | -94               | 1.30E+04        | 172               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 56.8            | 3.50E+04        | -91               | 1.44E+04        | 172               |

Table G-1300. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.05E+04         | 5.05E+04          | -5.05E+04         | 4.99E+04          |
| A2   | -5.05E+04         | 5.01E+04          | -4.70E+04         | 4.69E+04          |
| FD   | -4.64E+04         | 4.64E+04          | -4.56E+04         | 4.56E+04          |
| L1   | -5.03E+04         | 5.03E+04          | -5.04E+04         | 5.01E+04          |
| L3   | -4.28E+04         | 4.28E+04          | -4.26E+04         | 4.22E+04          |
| L4   | -4.28E+04         | 4.28E+04          | -4.26E+04         | 4.22E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.07E+04         | 4.27E+04          | -4.01E+04         | 4.19E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-651. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

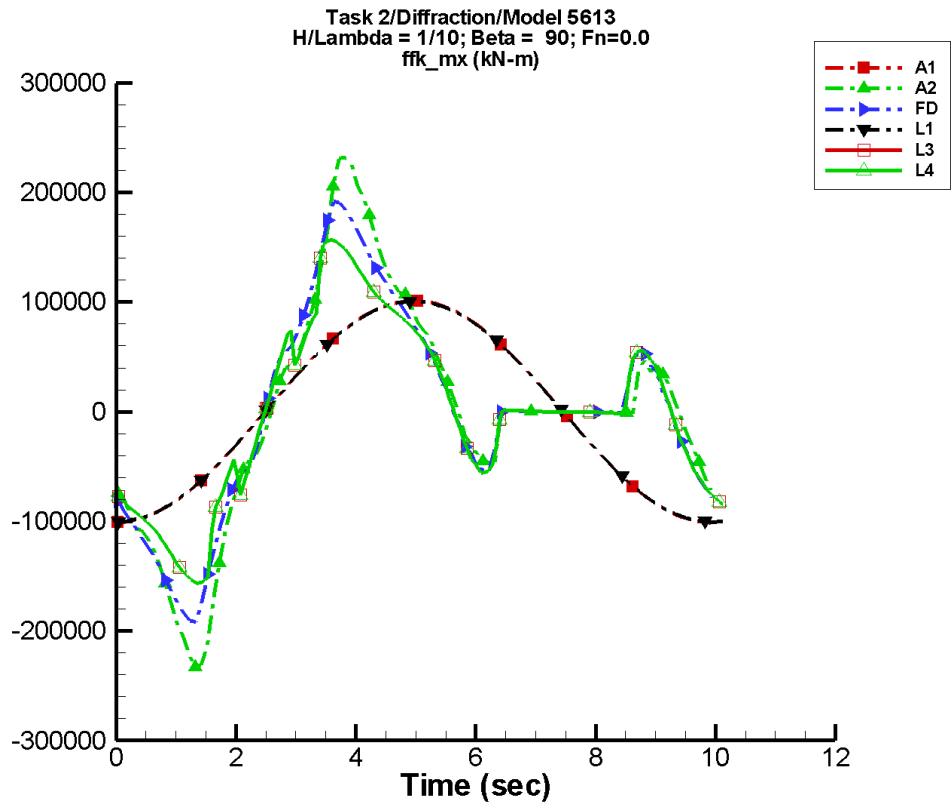
Table G–1301. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 54.1            | 6.74E+04        | -94               | 75.5            | -156              |
| A2   | -170.           | 5.05E+04        | -98               | 4.55E+04        | 163               |
| FD   | -150.           | 4.89E+04        | -97               | 4.25E+04        | 162               |
| L1   | 17.0            | 6.70E+04        | -94               | 27.2            | 151               |
| L3   | 318.            | 4.23E+04        | -93               | 3.50E+04        | 171               |
| L4   | 318.            | 4.23E+04        | -93               | 3.50E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -161.           | 4.18E+04        | -91               | 3.07E+04        | 172               |

Table G–1302. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.74E+04         | 6.74E+04          | -6.74E+04         | 6.67E+04          |
| A2   | -7.82E+04         | 7.81E+04          | -7.52E+04         | 7.52E+04          |
| FD   | -7.45E+04         | 7.45E+04          | -7.26E+04         | 7.25E+04          |
| L1   | -6.70E+04         | 6.70E+04          | -6.73E+04         | 6.68E+04          |
| L3   | -5.94E+04         | 5.94E+04          | -5.89E+04         | 5.89E+04          |
| L4   | -5.94E+04         | 5.94E+04          | -5.89E+04         | 5.89E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.67E+04         | 5.87E+04          | -5.60E+04         | 5.80E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-652. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

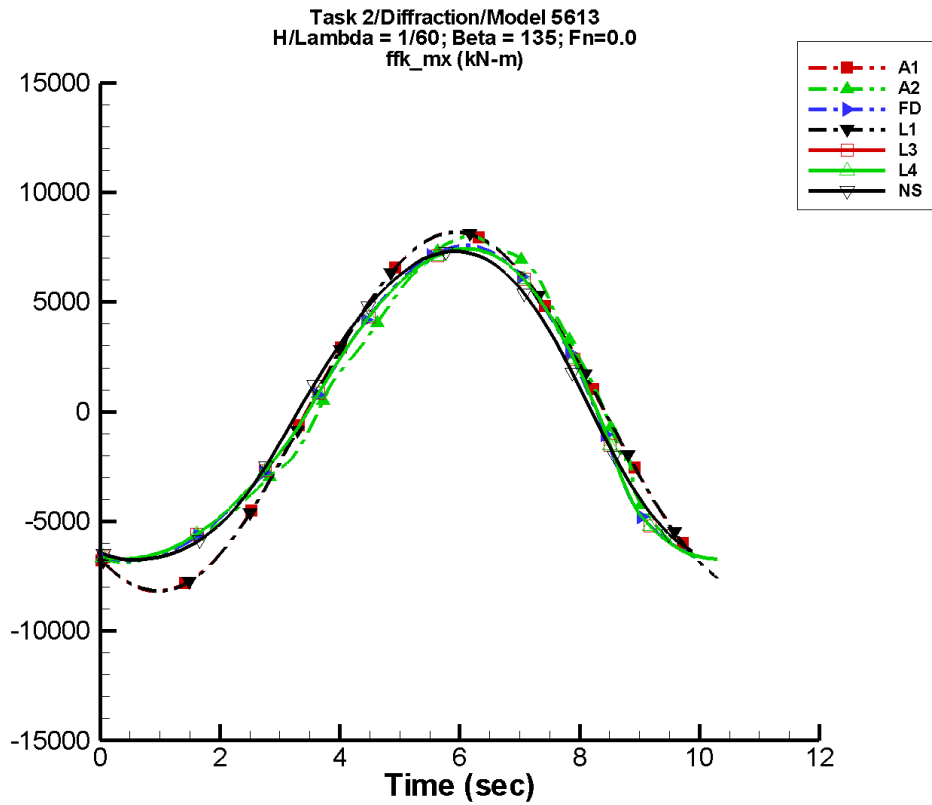
Table G–1303. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 81.2            | 1.01E+05        | -94               | 113.            | -156              |
| A2   | 291.            | 9.52E+04        | -99               | 1.05E+05        | 163               |
| FD   | 872.            | 8.57E+04        | -99               | 9.46E+04        | 166               |
| L1   | 25.5            | 1.01E+05        | -94               | 40.7            | 151               |
| L3   | -136.           | 7.15E+04        | -95               | 7.91E+04        | 171               |
| L4   | -136.           | 7.15E+04        | -95               | 7.91E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1304. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.01E+05         | 1.01E+05          | -1.01E+05         | 1.00E+05          |
| A2   | -2.33E+05         | 2.32E+05          | -2.03E+05         | 2.02E+05          |
| FD   | -1.94E+05         | 1.92E+05          | -1.71E+05         | 1.71E+05          |
| L1   | -1.01E+05         | 1.01E+05          | -1.01E+05         | 1.00E+05          |
| L3   | -1.56E+05         | 1.56E+05          | -1.52E+05         | 1.52E+05          |
| L4   | -1.56E+05         | 1.56E+05          | -1.52E+05         | 1.52E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-653. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1305. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

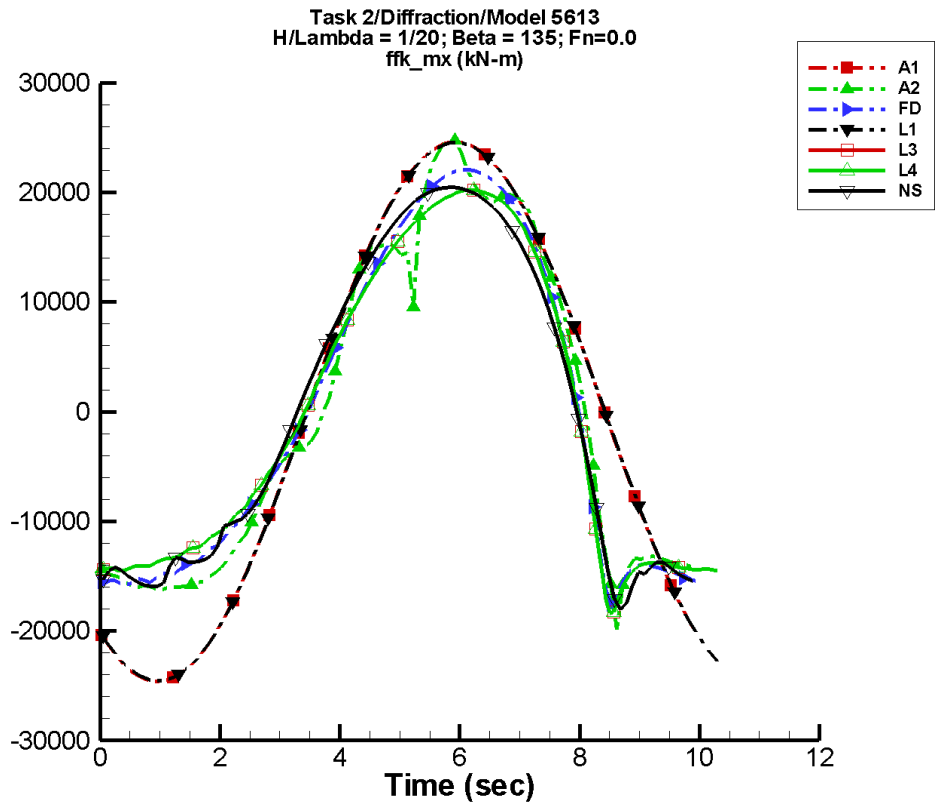
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 8.35            | 8.18E+03        | -129              | 11.0            | -174              |
| A2   | 31.6            | 7.38E+03        | -131              | 1.07E+03        | -45               |
| FD   | 23.9            | 7.30E+03        | -129              | 798.            | -47               |
| L1   | 6.47            | 8.18E+03        | -129              | 8.64            | -146              |
| L3   | 7.52            | 7.25E+03        | -125              | 860.            | -44               |
| L4   | 7.52            | 7.25E+03        | -125              | 860.            | -44               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 38.5            | 7.23E+03        | -119              | 372.            | -16               |

Table G–1306. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.18E+03         | 8.18E+03          | -8.11E+03         | 8.10E+03          |
| A2   | -6.88E+03         | 8.03E+03          | -6.80E+03         | 7.83E+03          |
| FD   | -6.79E+03         | 7.58E+03          | -6.74E+03         | 7.49E+03          |
| L1   | -8.18E+03         | 8.18E+03          | -8.15E+03         | 8.15E+03          |
| L3   | -6.72E+03         | 7.43E+03          | -6.70E+03         | 7.40E+03          |
| L4   | -6.72E+03         | 7.43E+03          | -6.70E+03         | 7.40E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.76E+03         | 7.31E+03          | -6.71E+03         | 7.24E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-654. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

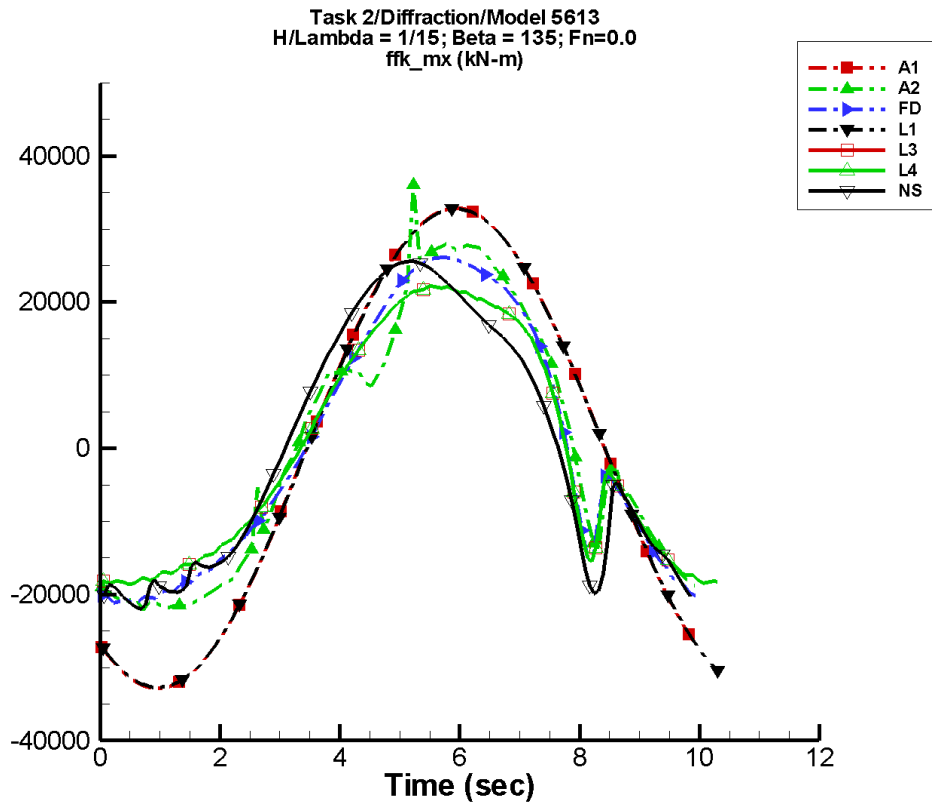
Table G-1307. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 25.1            | 2.46E+04        | -129              | 33.0            | -174              |
| A2   | -64.5           | 1.98E+04        | -125              | 3.98E+03        | -3                |
| FD   | 188.            | 1.94E+04        | -125              | 4.22E+03        | -19               |
| L1   | 19.4            | 2.45E+04        | -129              | 25.9            | -146              |
| L3   | -42.0           | 1.83E+04        | -118              | 4.49E+03        | -12               |
| L4   | -42.0           | 1.83E+04        | -118              | 4.49E+03        | -12               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 24.3            | 1.90E+04        | -113              | 3.60E+03        | 14                |

Table G-1308. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.46E+04         | 2.46E+04          | -2.44E+04         | 2.44E+04          |
| A2   | -1.98E+04         | 2.48E+04          | -1.61E+04         | 2.31E+04          |
| FD   | -1.76E+04         | 2.21E+04          | -1.56E+04         | 2.18E+04          |
| L1   | -2.45E+04         | 2.45E+04          | -2.45E+04         | 2.45E+04          |
| L3   | -1.85E+04         | 2.02E+04          | -1.66E+04         | 2.01E+04          |
| L4   | -1.85E+04         | 2.02E+04          | -1.66E+04         | 2.01E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.80E+04         | 2.05E+04          | -1.57E+04         | 2.03E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-655. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

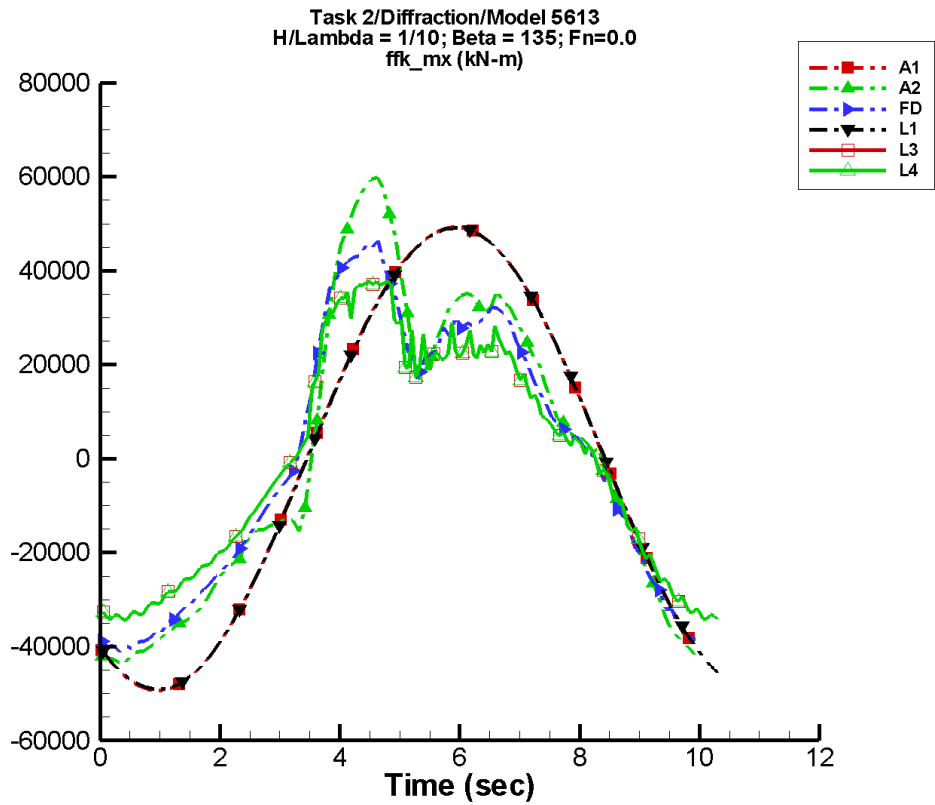
Table G–1309. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 33.5            | 3.29E+04        | -129              | 44.1            | -174              |
| A2   | 162.            | 2.42E+04        | -125              | 2.56E+03        | 19                |
| FD   | 85.4            | 2.35E+04        | -124              | 3.33E+03        | 3                 |
| L1   | 25.9            | 3.27E+04        | -129              | 34.5            | -145              |
| L3   | 20.2            | 2.06E+04        | -118              | 2.80E+03        | 22                |
| L4   | 20.2            | 2.06E+04        | -118              | 2.80E+03        | 22                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -239.           | 2.28E+04        | -105              | 3.69E+03        | 80                |

Table G–1310. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.29E+04         | 3.29E+04          | -3.26E+04         | 3.25E+04          |
| A2   | -2.22E+04         | 3.60E+04          | -2.15E+04         | 2.79E+04          |
| FD   | -2.12E+04         | 2.61E+04          | -2.08E+04         | 2.58E+04          |
| L1   | -3.27E+04         | 3.27E+04          | -3.26E+04         | 3.26E+04          |
| L3   | -1.86E+04         | 2.22E+04          | -1.84E+04         | 2.20E+04          |
| L4   | -1.86E+04         | 2.22E+04          | -1.84E+04         | 2.20E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.20E+04         | 2.56E+04          | -2.05E+04         | 2.53E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-656. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

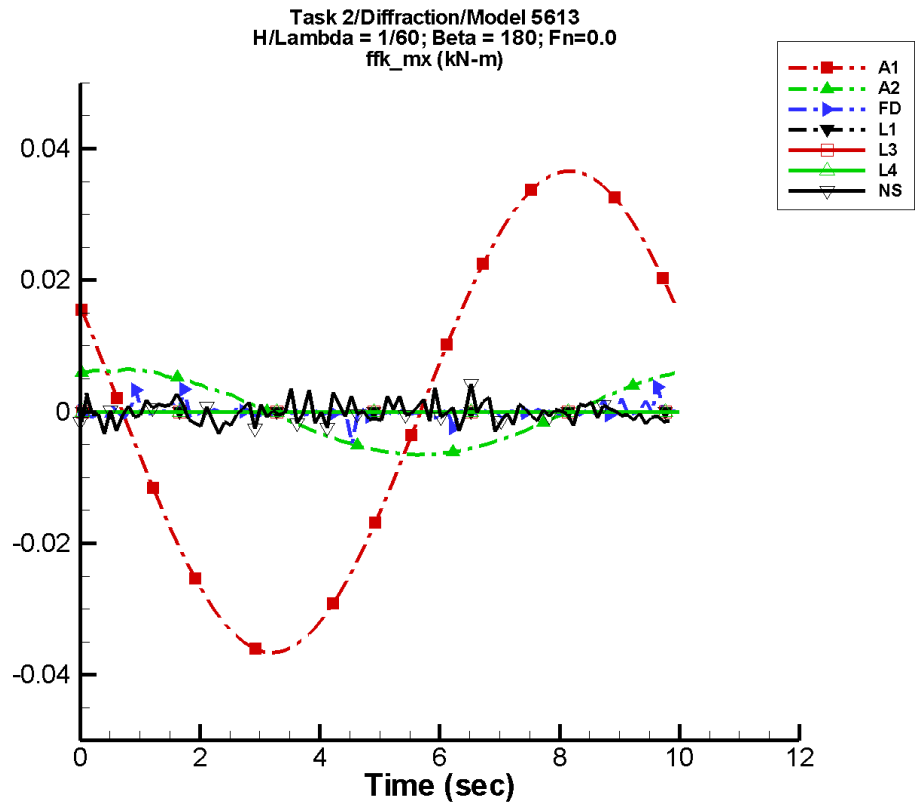
Table G–1311. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 50.3            | 4.93E+04        | -129              | 66.1            | -174              |
| A2   | 637.            | 4.13E+04        | -116              | 3.64E+03        | 150               |
| FD   | 166.            | 3.75E+04        | -117              | 5.25E+03        | 163               |
| L1   | 38.8            | 4.91E+04        | -129              | 51.8            | -145              |
| L3   | 131.            | 3.16E+04        | -112              | 4.29E+03        | 168               |
| L4   | 131.            | 3.16E+04        | -112              | 4.29E+03        | 168               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1312. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.93E+04         | 4.93E+04          | -4.88E+04         | 4.88E+04          |
| A2   | -4.35E+04         | 5.99E+04          | -4.26E+04         | 5.60E+04          |
| FD   | -4.11E+04         | 4.64E+04          | -3.98E+04         | 4.37E+04          |
| L1   | -4.91E+04         | 4.91E+04          | -4.89E+04         | 4.89E+04          |
| L3   | -3.44E+04         | 3.78E+04          | -3.37E+04         | 3.74E+04          |
| L4   | -3.44E+04         | 3.78E+04          | -3.37E+04         | 3.74E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-657. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1313. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

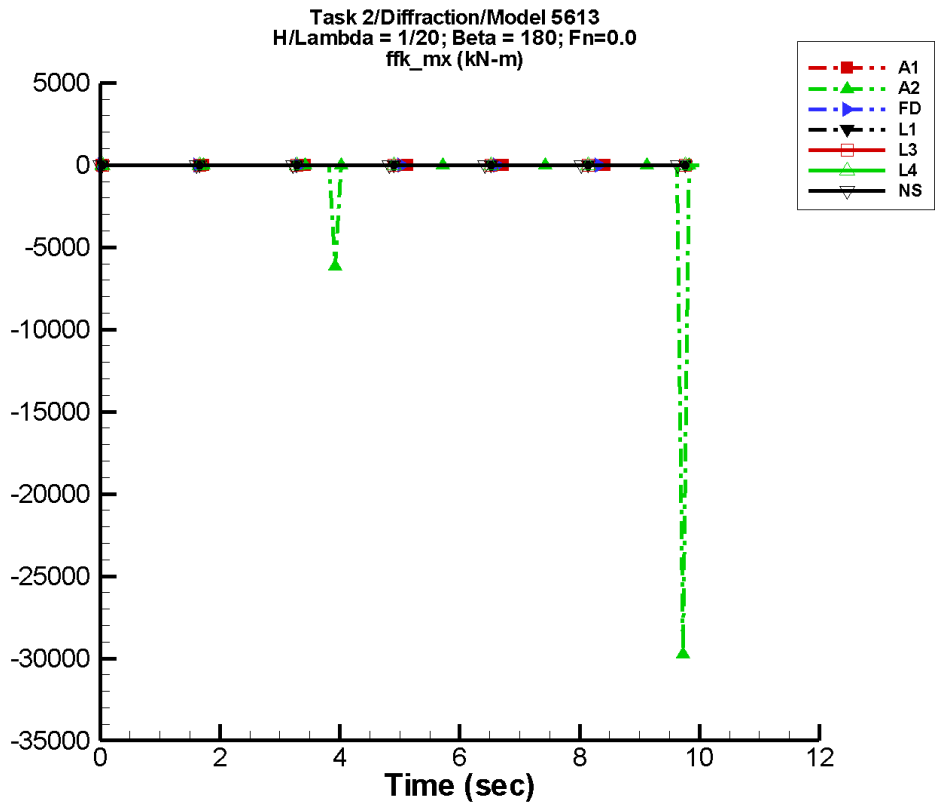
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 8.07E-06        | 3.66E-02        | 150               | 2.42E-05        | 121               |
| A2   | -1.07E-04       | 6.40E-03        | 61                | 5.70E-05        | 94                |
| FD   | -9.67E-05       | 2.79E-04        | 89                | 6.00E-05        | 1                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.09E-05       | 2.86E-04        | -89               | 2.57E-04        | 18                |

Table G–1314. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.66E-02         | 3.66E-02          | -3.62E-02         | 3.62E-02          |
| A2   | -6.53E-03         | 6.53E-03          | -6.46E-03         | 6.28E-03          |
| FD   | -4.90E-03         | 3.72E-03          | -8.05E-04         | 7.17E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.42E-03         | 4.22E-03          | -1.34E-03         | 9.45E-04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-658. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

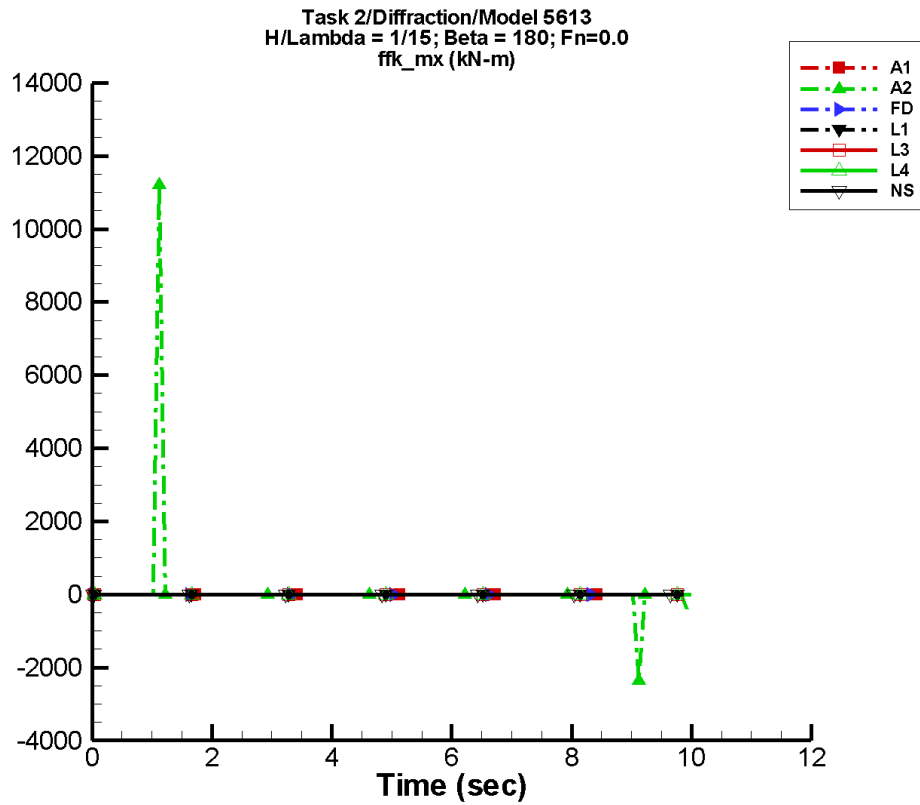
Table G-1315. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.43E-05        | 0.110           | 150               | 7.27E-05        | 121               |
| A2   | -322.           | 366.            | -101              | 490.            | -62               |
| FD   | 1.08E-02        | 9.46E-03        | 150               | 1.44E-02        | -106              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.05E-03       | 1.15E-03        | -39               | 5.50E-04        | -48               |

Table G-1316. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.110            | 0.110             | -0.109            | 0.109             |
| A2   | -2.97E+04         | 1.95E-02          | -3.95E+03         | 377.              |
| FD   | -1.76E-02         | 5.16E-02          | -2.58E-03         | 4.80E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.26E-02         | 1.18E-02          | -4.20E-03         | 1.86E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-659. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

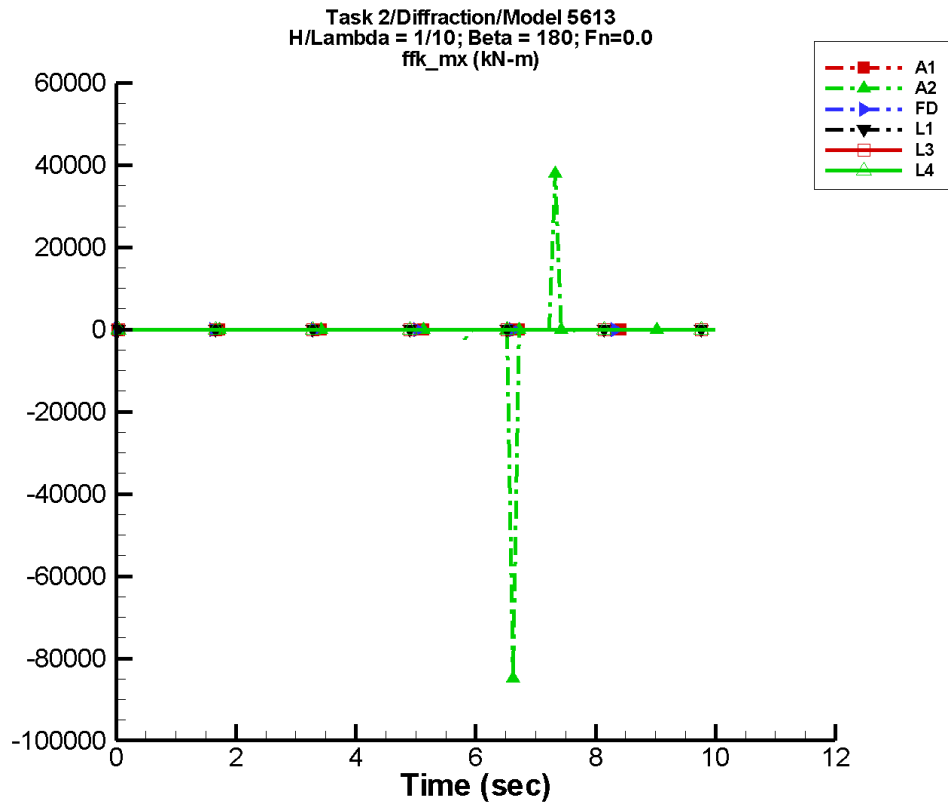
Table G–1317. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.24E-05        | 0.147           | 150               | 9.71E-05        | 121               |
| A2   | 30.9            | 112.            | 21                | 180.            | -10               |
| FD   | 1.12E-02        | 4.24E-03        | -7                | 8.89E-03        | -113              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.07E-04       | 1.17E-03        | -109              | 1.73E-03        | 125               |

Table G–1318. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.147            | 0.147             | -0.146            | 0.146             |
| A2   | -2.36E+03         | 1.12E+04          | -313.             | 1.50E+03          |
| FD   | -1.66E-02         | 5.03E-02          | -6.63E-03         | 3.23E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.09E-02         | 1.92E-02          | -5.10E-03         | 4.26E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-660. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

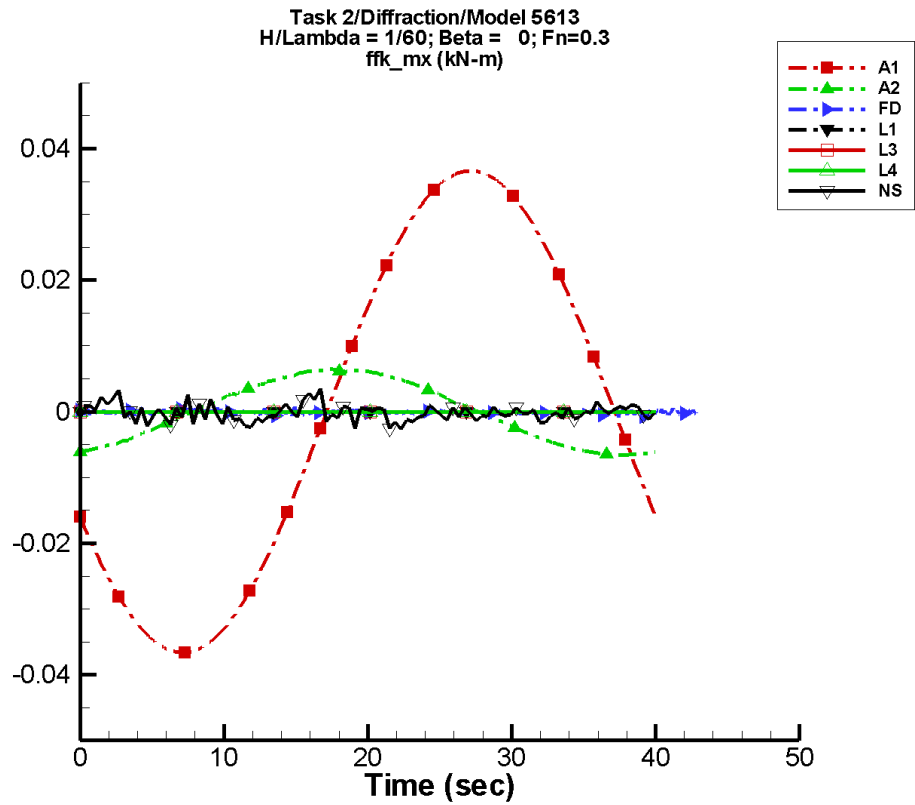
Table G–1319. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.86E-05        | 0.221           | 150               | 1.46E-04        | 121               |
| A2   | -475.           | 1.19E+03        | 42                | 1.34E+03        | 171               |
| FD   | 5.20E-03        | 2.56E-03        | 78                | 4.63E-03        | 56                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1320. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.221            | 0.221             | -0.218            | 0.218             |
| A2   | -8.49E+04         | 3.80E+04          | -1.12E+04         | 5.50E+03          |
| FD   | -0.100            | 9.24E-02          | -1.53E-02         | 2.13E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-661. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1321. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

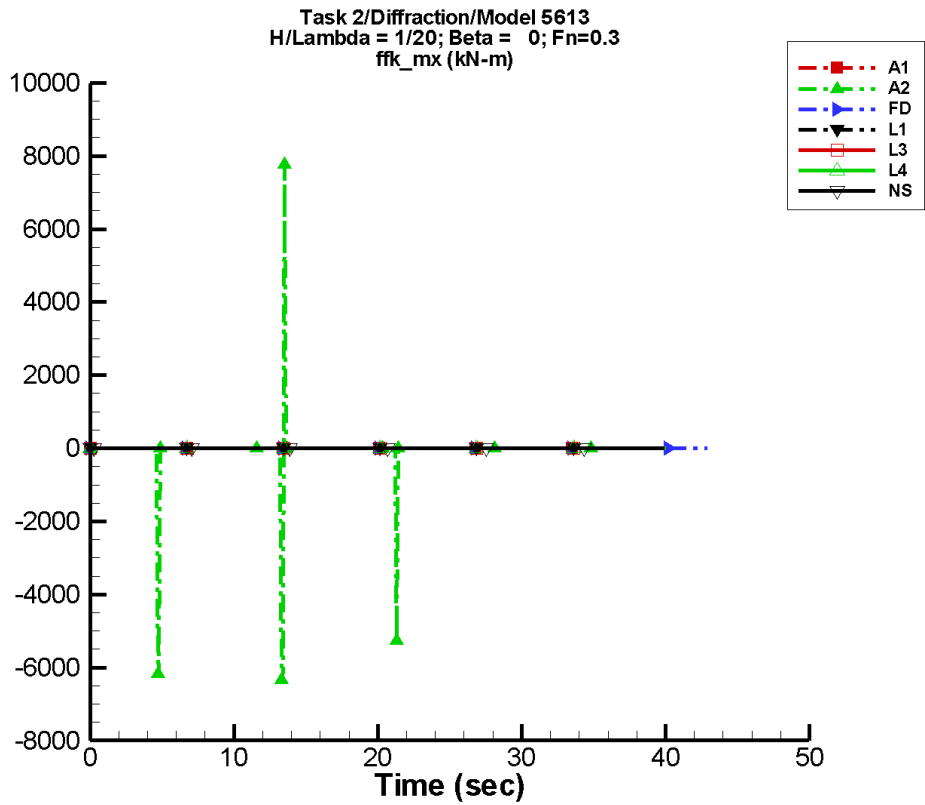
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.19E-06        | 3.66E-02        | -154              | 1.68E-06        | 175               |
| A2   | -9.61E-05       | 6.42E-03        | -70               | 4.05E-05        | 44                |
| FD   | -7.75E-05       | 2.86E-05        | -47               | 1.85E-05        | -46               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.77E-04       | 2.04E-04        | 41                | 2.75E-04        | 149               |

Table G–1322. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.66E-02         | 3.66E-02          | -3.66E-02         | 3.66E-02          |
| A2   | -6.53E-03         | 6.53E-03          | -6.53E-03         | 6.43E-03          |
| FD   | -8.83E-04         | 7.50E-04          | -3.44E-04         | 2.59E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.65E-03         | 3.55E-03          | -1.33E-03         | 1.21E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-662. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

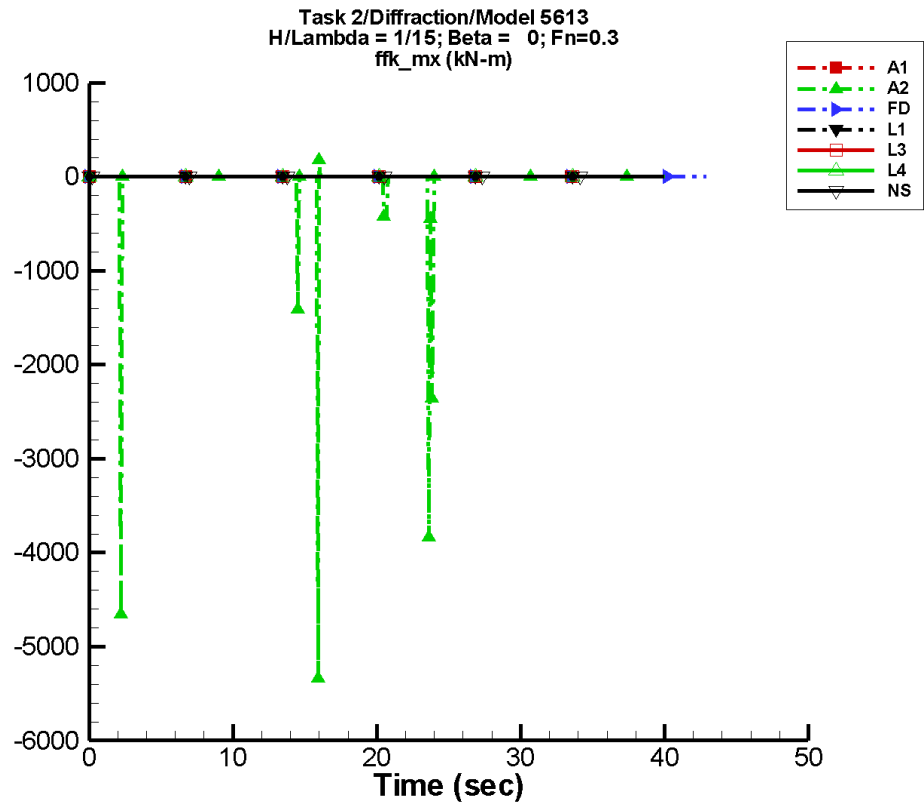
Table G-1323. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.56E-06        | 0.110           | -154              | 5.06E-06        | 175               |
| A2   | -52.9           | 56.7            | -170              | 69.6            | -164              |
| FD   | 2.75E-06        | 9.30E-05        | -136              | 2.14E-05        | 74                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.38E-03       | 1.45E-03        | 13                | 1.32E-03        | -120              |

Table G-1324. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.110            | 0.110             | -0.110            | 0.110             |
| A2   | -6.34E+03         | 7.76E+03          | -1.62E+03         | 189.              |
| FD   | -9.91E-04         | 9.94E-04          | -3.97E-04         | 5.07E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.09E-02         | 1.16E-02          | -3.98E-03         | 1.77E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-663. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

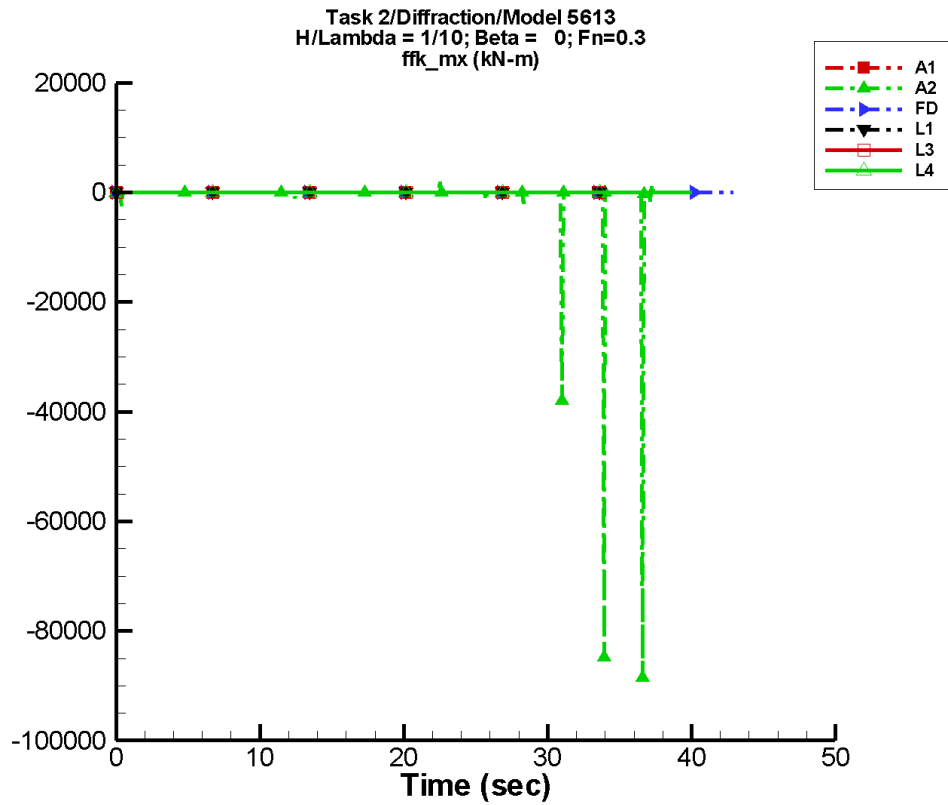
Table G-1325. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.76E-06        | 0.147           | -154              | 6.78E-06        | 175               |
| A2   | -53.3           | 41.7            | 93                | 60.4            | -114              |
| FD   | 5.06E-05        | 1.84E-04        | -66               | 1.63E-04        | 44                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.46E-04       | 1.35E-03        | 117               | 3.15E-03        | 42                |

Table G-1326. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.147            | 0.147             | -0.147            | 0.147             |
| A2   | -5.34E+03         | 176.              | -1.07E+03         | 72.5              |
| FD   | -1.08E-03         | 1.21E-03          | -4.91E-04         | 5.38E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.76E-02         | 1.41E-02          | -5.87E-03         | 5.86E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-664. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

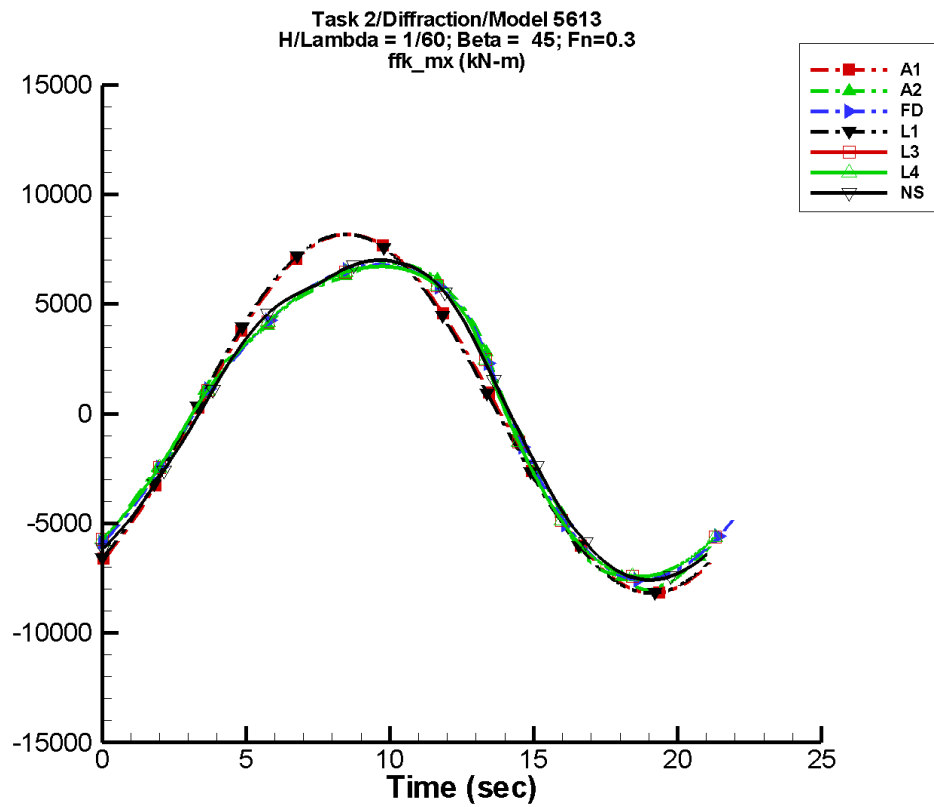
Table G–1327. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.16E-06        | 0.221           | -154              | 1.01E-05        | 175               |
| A2   | -543.           | 954.            | -42               | 826.            | 15                |
| FD   | -3.91E-06       | 2.80E-04        | -67               | 1.40E-04        | 21                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1328. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.221            | 0.221             | -0.220            | 0.220             |
| A2   | -8.85E+04         | 1.97E+03          | -1.19E+04         | 1.11E+03          |
| FD   | -1.30E-03         | 1.75E-03          | -7.01E-04         | 5.73E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-665. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1329. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

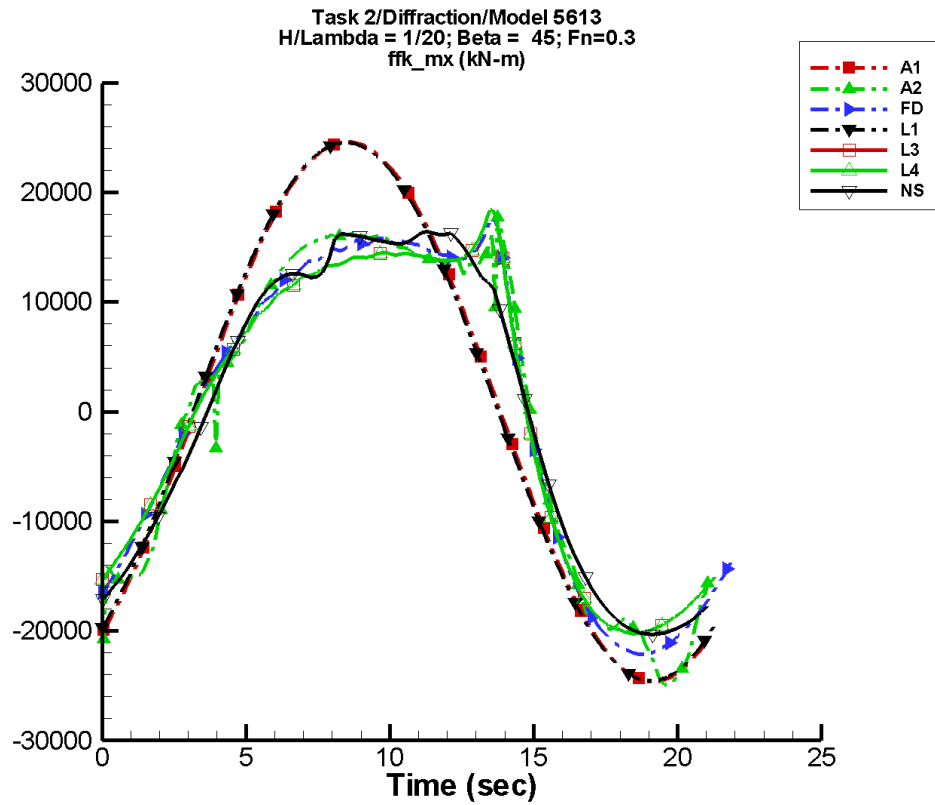
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -0.531          | 8.18E+03        | -53               | 1.49            | 65                |
| A2   | -3.44           | 7.45E+03        | -57               | 1.04E+03        | 28                |
| FD   | -4.99           | 7.37E+03        | -53               | 810.            | 40                |
| L1   | -0.169          | 8.18E+03        | -53               | 0.657           | 62                |
| L3   | -4.92           | 7.30E+03        | -57               | 812.            | 35                |
| L4   | -4.92           | 7.30E+03        | -57               | 812.            | 35                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.60           | 7.47E+03        | -59               | 569.            | 23                |

Table G–1330. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.18E+03         | 8.18E+03          | -8.17E+03         | 8.17E+03          |
| A2   | -8.04E+03         | 6.88E+03          | -7.98E+03         | 6.86E+03          |
| FD   | -7.58E+03         | 6.79E+03          | -7.56E+03         | 6.77E+03          |
| L1   | -8.18E+03         | 8.18E+03          | -8.18E+03         | 8.18E+03          |
| L3   | -7.43E+03         | 6.72E+03          | -7.42E+03         | 6.72E+03          |
| L4   | -7.43E+03         | 6.72E+03          | -7.42E+03         | 6.72E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.59E+03         | 7.00E+03          | -7.52E+03         | 6.94E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-666. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

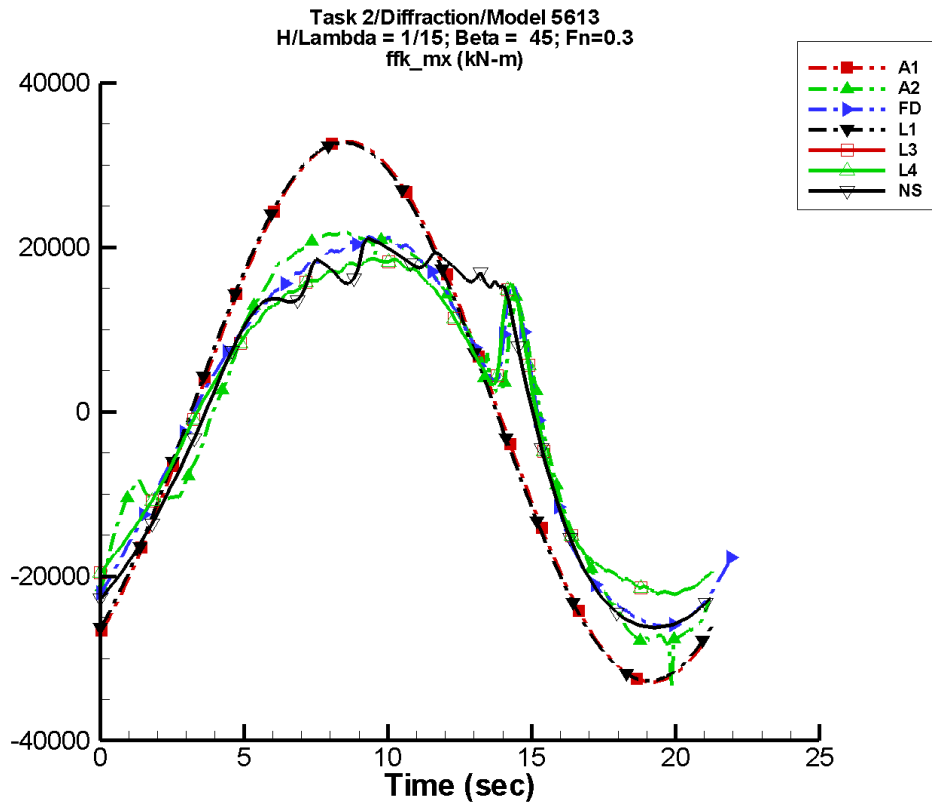
Table G-1331. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.60           | 2.46E+04        | -53               | 4.47            | 65                |
| A2   | -216.           | 2.00E+04        | -64               | 3.81E+03        | -11               |
| FD   | 3.93            | 1.96E+04        | -59               | 4.34E+03        | 10                |
| L1   | -0.511          | 2.45E+04        | -53               | 1.97            | 62                |
| L3   | -66.6           | 1.83E+04        | -65               | 4.24E+03        | 4                 |
| L4   | -66.6           | 1.83E+04        | -65               | 4.24E+03        | 4                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -134.           | 1.93E+04        | -67               | 2.80E+03        | -5                |

Table G-1332. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.46E+04         | 2.46E+04          | -2.46E+04         | 2.46E+04          |
| A2   | -2.49E+04         | 1.78E+04          | -2.45E+04         | 1.61E+04          |
| FD   | -2.21E+04         | 1.75E+04          | -2.20E+04         | 1.65E+04          |
| L1   | -2.45E+04         | 2.45E+04          | -2.45E+04         | 2.45E+04          |
| L3   | -2.02E+04         | 1.85E+04          | -2.02E+04         | 1.78E+04          |
| L4   | -2.02E+04         | 1.85E+04          | -2.02E+04         | 1.78E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.03E+04         | 1.65E+04          | -2.01E+04         | 1.61E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-667. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

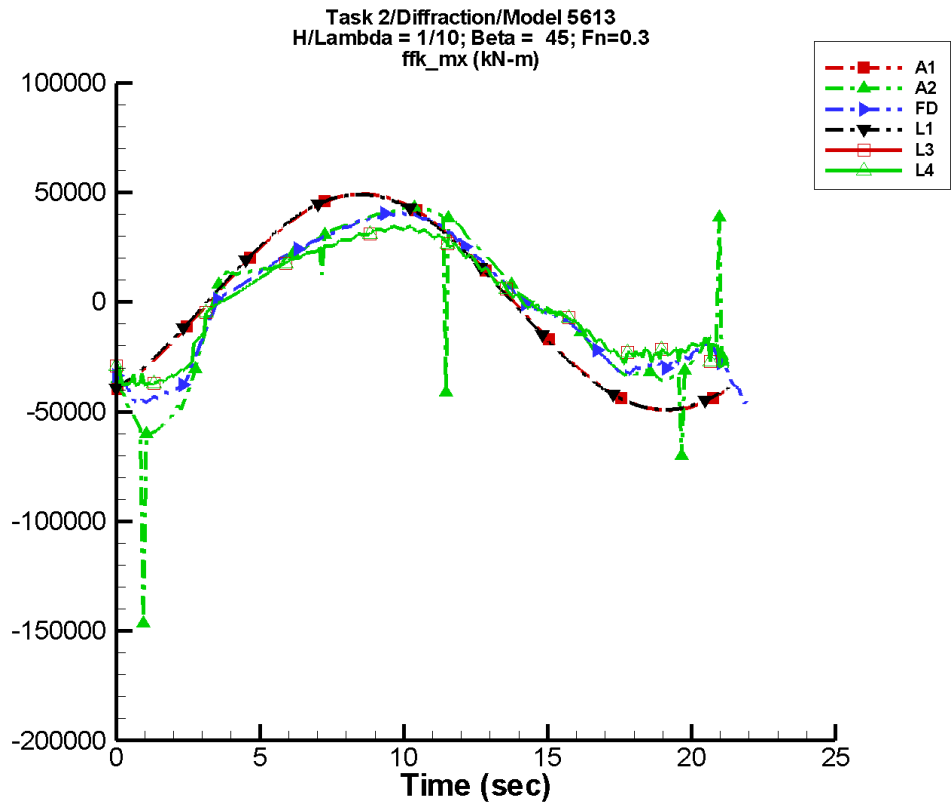
Table G–1333. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.14           | 3.29E+04        | -53               | 5.97            | 65                |
| A2   | -55.1           | 2.35E+04        | -63               | 2.06E+03        | -13               |
| FD   | -11.1           | 2.33E+04        | -59               | 3.48E+03        | -13               |
| L1   | -0.672          | 3.27E+04        | -53               | 2.62            | 62                |
| L3   | -19.5           | 2.06E+04        | -64               | 2.76E+03        | -28               |
| L4   | -19.5           | 2.06E+04        | -64               | 2.76E+03        | -28               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -436.           | 2.40E+04        | -69               | 4.36E+03        | -17               |

Table G–1334. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.29E+04         | 3.29E+04          | -3.28E+04         | 3.28E+04          |
| A2   | -3.34E+04         | 2.18E+04          | -2.84E+04         | 2.16E+04          |
| FD   | -2.61E+04         | 2.12E+04          | -2.60E+04         | 2.10E+04          |
| L1   | -3.27E+04         | 3.27E+04          | -3.27E+04         | 3.27E+04          |
| L3   | -2.22E+04         | 1.86E+04          | -2.21E+04         | 1.85E+04          |
| L4   | -2.22E+04         | 1.86E+04          | -2.21E+04         | 1.85E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.62E+04         | 2.12E+04          | -2.61E+04         | 2.01E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-668. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

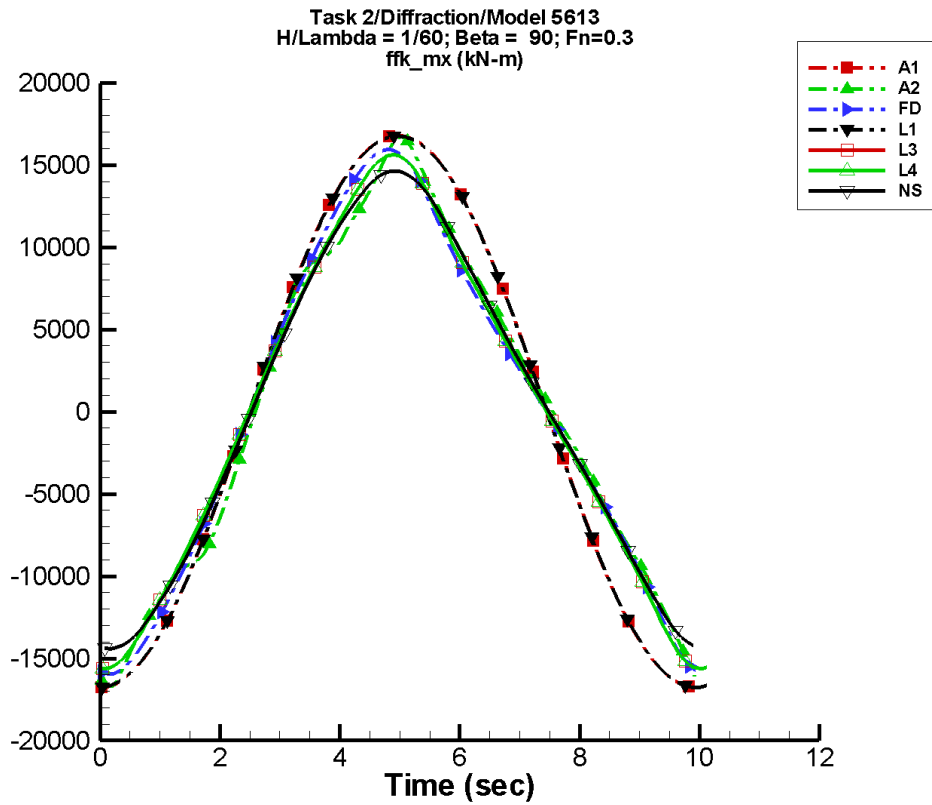
Table G-1335. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.21           | 4.93E+04        | -53               | 8.96            | 65                |
| A2   | -1.16E+03       | 4.31E+04        | -71               | 7.32E+03        | -134              |
| FD   | -449.           | 3.87E+04        | -66               | 5.27E+03        | -151              |
| L1   | -1.02           | 4.91E+04        | -53               | 3.93            | 62                |
| L3   | -168.           | 3.27E+04        | -71               | 4.96E+03        | -157              |
| L4   | -168.           | 3.27E+04        | -71               | 4.96E+03        | -157              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1336. Minimum and maximum of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.93E+04         | 4.93E+04          | -4.92E+04         | 4.92E+04          |
| A2   | -1.46E+05         | 4.33E+04          | -6.97E+04         | 4.36E+04          |
| FD   | -4.63E+04         | 4.10E+04          | -4.46E+04         | 4.03E+04          |
| L1   | -4.91E+04         | 4.91E+04          | -4.91E+04         | 4.91E+04          |
| L3   | -3.78E+04         | 3.45E+04          | -3.73E+04         | 3.39E+04          |
| L4   | -3.78E+04         | 3.45E+04          | -3.73E+04         | 3.39E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-669. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1337. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

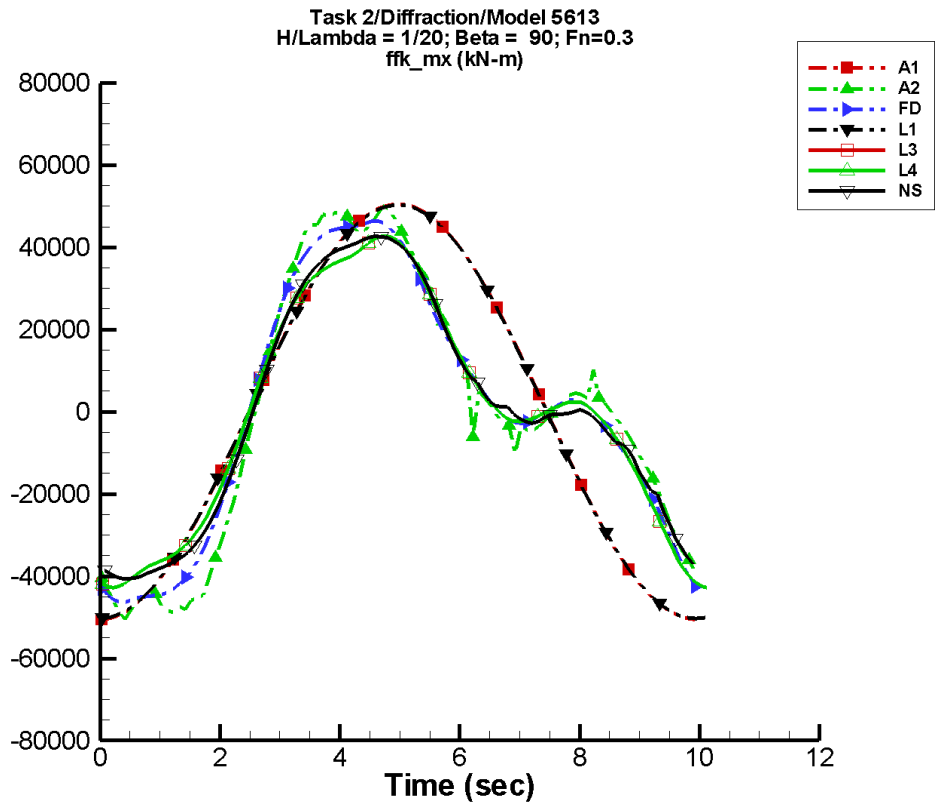
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 13.5            | 1.68E+04        | -94               | 18.8            | -156              |
| A2   | -6.89           | 1.42E+04        | -98               | 1.03E+03        | 169               |
| FD   | -41.9           | 1.43E+04        | -97               | 1.55E+03        | 161               |
| L1   | 4.26            | 1.68E+04        | -94               | 6.79            | 151               |
| L3   | -11.7           | 1.40E+04        | -94               | 811.            | 179               |
| L4   | -11.7           | 1.40E+04        | -94               | 811.            | 179               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 55.5            | 1.36E+04        | -92               | 858.            | 177               |

Table G-1338. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.68E+04         | 1.68E+04          | -1.68E+04         | 1.66E+04          |
| A2   | -1.68E+04         | 1.67E+04          | -1.64E+04         | 1.58E+04          |
| FD   | -1.59E+04         | 1.60E+04          | -1.59E+04         | 1.56E+04          |
| L1   | -1.68E+04         | 1.68E+04          | -1.68E+04         | 1.67E+04          |
| L3   | -1.56E+04         | 1.56E+04          | -1.57E+04         | 1.55E+04          |
| L4   | -1.56E+04         | 1.56E+04          | -1.57E+04         | 1.55E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.44E+04         | 1.46E+04          | -1.44E+04         | 1.44E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-670. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

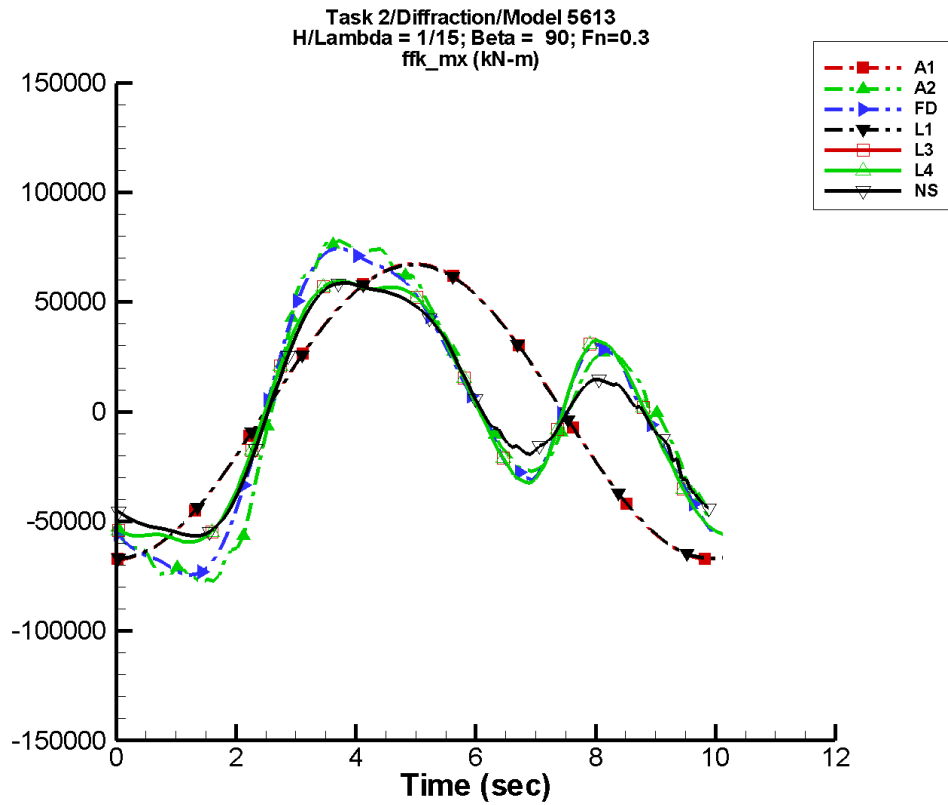
Table G–1339. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 40.5            | 5.05E+04        | -94               | 56.5            | -156              |
| A2   | -109.           | 3.88E+04        | -98               | 2.18E+04        | 164               |
| FD   | -64.6           | 3.83E+04        | -97               | 1.76E+04        | 163               |
| L1   | 12.8            | 5.03E+04        | -94               | 20.4            | 151               |
| L3   | 70.4            | 3.51E+04        | -94               | 1.30E+04        | 172               |
| L4   | 70.4            | 3.51E+04        | -94               | 1.30E+04        | 172               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 56.8            | 3.50E+04        | -91               | 1.44E+04        | 172               |

Table G–1340. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.05E+04         | 5.05E+04          | -5.05E+04         | 4.99E+04          |
| A2   | -5.05E+04         | 5.01E+04          | -4.70E+04         | 4.69E+04          |
| FD   | -4.64E+04         | 4.64E+04          | -4.56E+04         | 4.56E+04          |
| L1   | -5.03E+04         | 5.03E+04          | -5.04E+04         | 5.01E+04          |
| L3   | -4.28E+04         | 4.28E+04          | -4.26E+04         | 4.22E+04          |
| L4   | -4.28E+04         | 4.28E+04          | -4.26E+04         | 4.22E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.07E+04         | 4.27E+04          | -4.01E+04         | 4.19E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-671. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

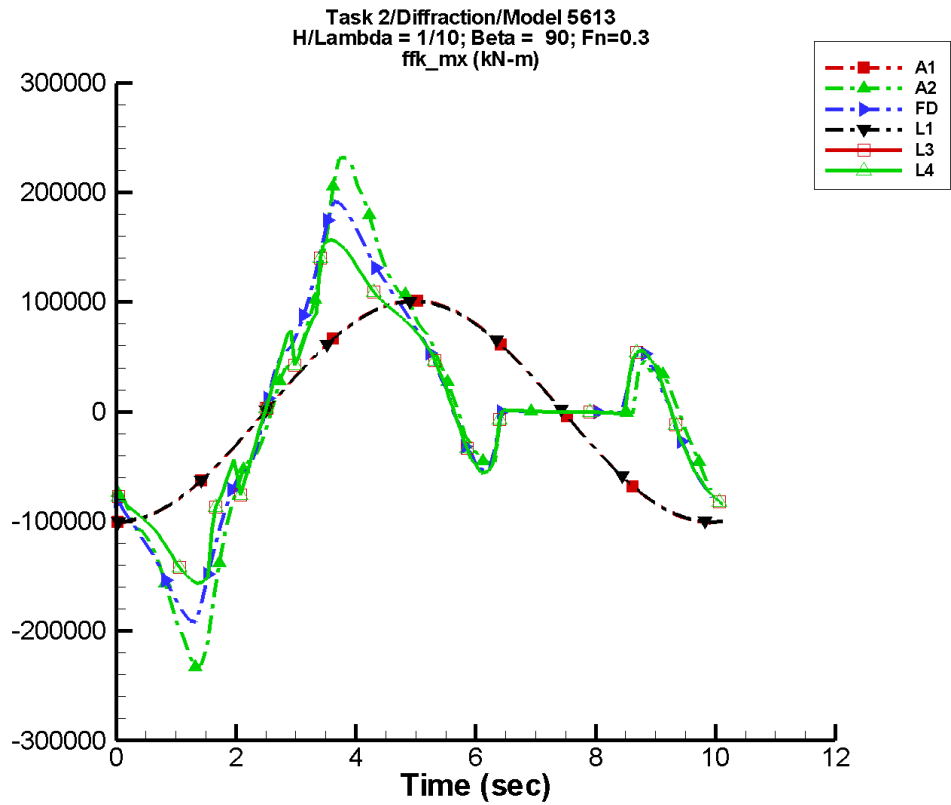
Table G-1341. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 54.1            | 6.74E+04        | -94               | 75.5            | -156              |
| A2   | -22.7           | 5.03E+04        | -98               | 4.57E+04        | 163               |
| FD   | -150.           | 4.89E+04        | -97               | 4.25E+04        | 162               |
| L1   | 17.0            | 6.70E+04        | -94               | 27.2            | 151               |
| L3   | 318.            | 4.23E+04        | -93               | 3.50E+04        | 171               |
| L4   | 318.            | 4.23E+04        | -93               | 3.50E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -161.           | 4.18E+04        | -91               | 3.07E+04        | 172               |

Table G-1342. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.74E+04         | 6.74E+04          | -6.74E+04         | 6.67E+04          |
| A2   | -7.82E+04         | 7.81E+04          | -7.52E+04         | 7.52E+04          |
| FD   | -7.45E+04         | 7.45E+04          | -7.26E+04         | 7.25E+04          |
| L1   | -6.70E+04         | 6.70E+04          | -6.73E+04         | 6.68E+04          |
| L3   | -5.94E+04         | 5.94E+04          | -5.89E+04         | 5.89E+04          |
| L4   | -5.94E+04         | 5.94E+04          | -5.89E+04         | 5.89E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.67E+04         | 5.87E+04          | -5.60E+04         | 5.80E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-672. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

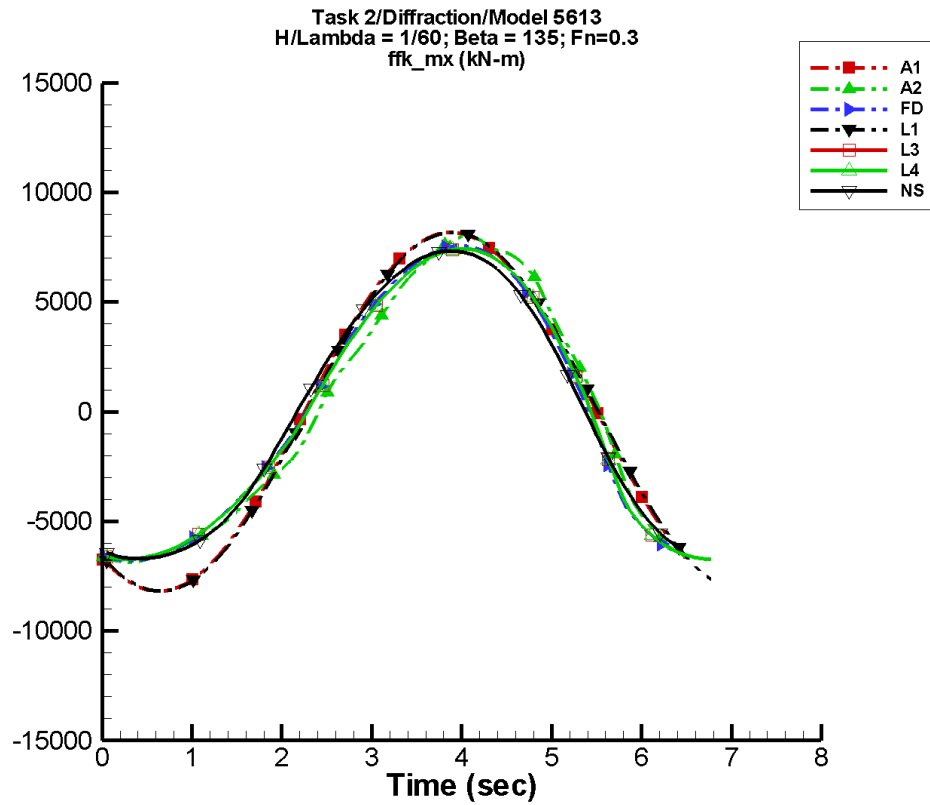
Table G-1343. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 81.2            | 1.01E+05        | -94               | 113.            | -156              |
| A2   | 291.            | 9.52E+04        | -99               | 1.05E+05        | 163               |
| FD   | 872.            | 8.57E+04        | -99               | 9.46E+04        | 166               |
| L1   | 25.6            | 1.01E+05        | -94               | 40.8            | 151               |
| L3   | -136.           | 7.15E+04        | -95               | 7.91E+04        | 171               |
| L4   | -136.           | 7.15E+04        | -95               | 7.91E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1344. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.01E+05         | 1.01E+05          | -1.01E+05         | 1.00E+05          |
| A2   | -2.33E+05         | 2.32E+05          | -2.03E+05         | 2.02E+05          |
| FD   | -1.94E+05         | 1.92E+05          | -1.71E+05         | 1.71E+05          |
| L1   | -1.01E+05         | 1.01E+05          | -1.01E+05         | 1.00E+05          |
| L3   | -1.56E+05         | 1.56E+05          | -1.52E+05         | 1.52E+05          |
| L4   | -1.56E+05         | 1.56E+05          | -1.52E+05         | 1.52E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-673. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1345. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

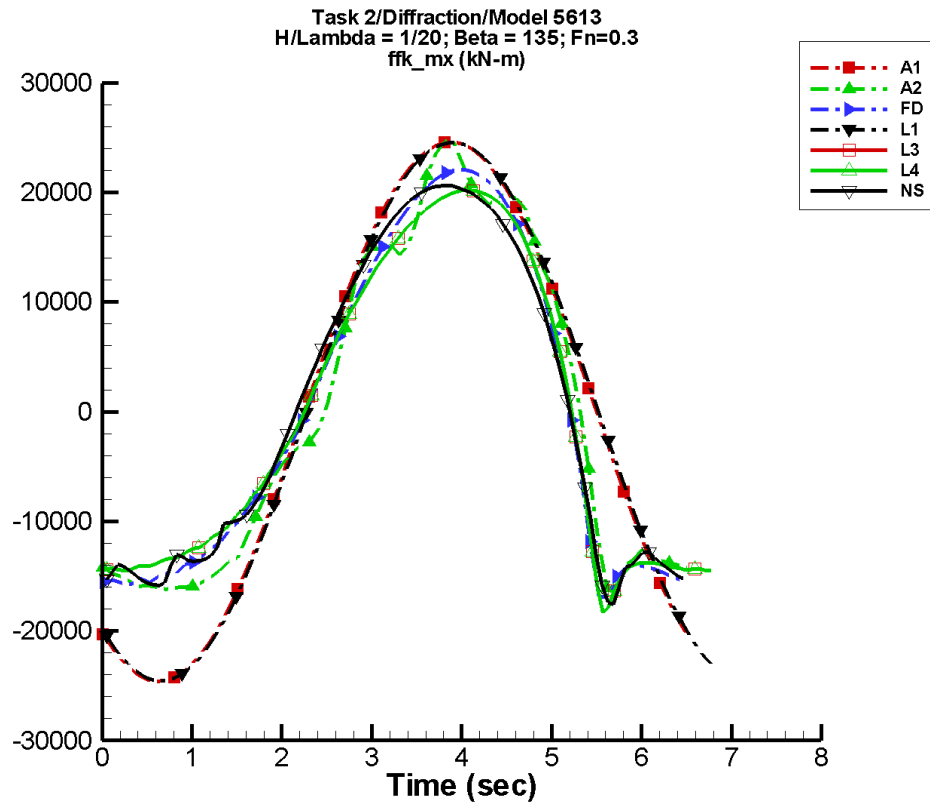
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.47            | 8.18E+03        | -128              | 6.72            | 171               |
| A2   | 13.5            | 7.39E+03        | -131              | 1.09E+03        | -45               |
| FD   | 16.5            | 7.30E+03        | -120              | 854.            | -27               |
| L1   | 0.871           | 8.18E+03        | -129              | 1.38            | 123               |
| L3   | 7.31            | 7.23E+03        | -125              | 853.            | -38               |
| L4   | 7.31            | 7.23E+03        | -125              | 853.            | -38               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 53.1            | 7.22E+03        | -120              | 389.            | -15               |

Table G-1346. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.18E+03         | 8.18E+03          | -8.00E+03         | 7.98E+03          |
| A2   | -6.88E+03         | 8.02E+03          | -6.75E+03         | 7.73E+03          |
| FD   | -6.79E+03         | 7.58E+03          | -6.70E+03         | 7.39E+03          |
| L1   | -8.18E+03         | 8.18E+03          | -8.12E+03         | 8.11E+03          |
| L3   | -6.72E+03         | 7.43E+03          | -6.70E+03         | 7.37E+03          |
| L4   | -6.72E+03         | 7.43E+03          | -6.70E+03         | 7.37E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.70E+03         | 7.33E+03          | -6.66E+03         | 7.26E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-674. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

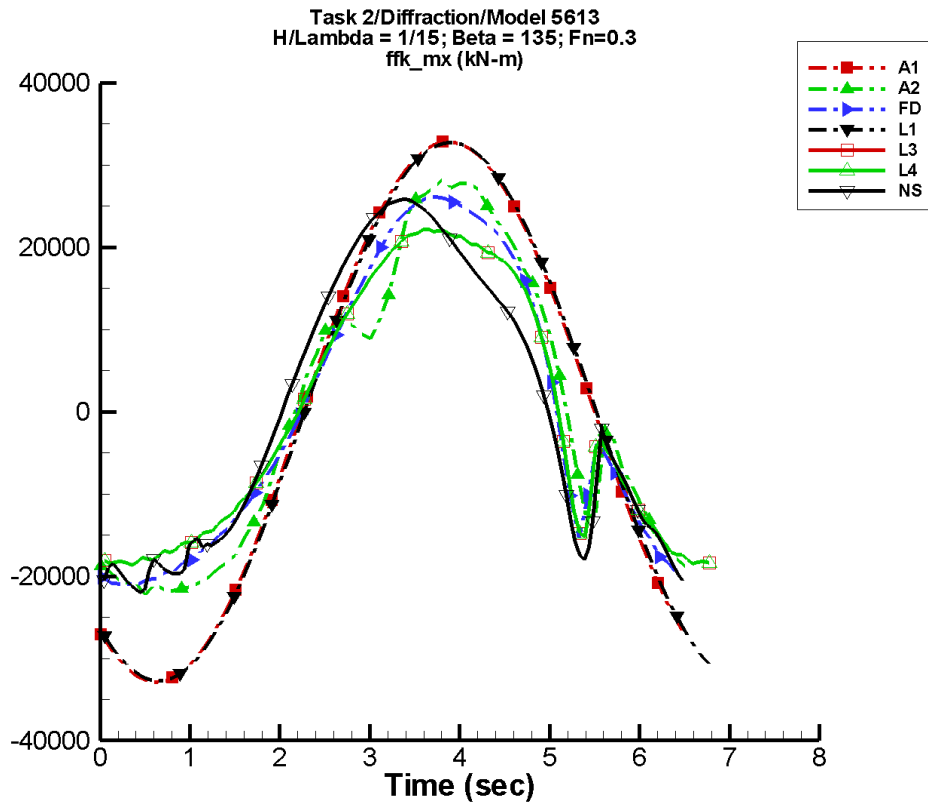
Table G–1347. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 13.4            | 2.46E+04        | -128              | 20.2            | 171               |
| A2   | 27.3            | 2.00E+04        | -126              | 3.97E+03        | -1                |
| FD   | 0.895           | 1.94E+04        | -115              | 4.53E+03        | 5                 |
| L1   | 2.62            | 2.45E+04        | -129              | 4.14            | 123               |
| L3   | 49.4            | 1.82E+04        | -118              | 4.26E+03        | -6                |
| L4   | 49.4            | 1.82E+04        | -118              | 4.26E+03        | -6                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 159.            | 1.90E+04        | -113              | 3.61E+03        | 15                |

Table G–1348. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.46E+04         | 2.46E+04          | -2.41E+04         | 2.40E+04          |
| A2   | -1.66E+04         | 2.47E+04          | -1.61E+04         | 2.17E+04          |
| FD   | -1.69E+04         | 2.21E+04          | -1.56E+04         | 2.14E+04          |
| L1   | -2.45E+04         | 2.45E+04          | -2.44E+04         | 2.43E+04          |
| L3   | -1.83E+04         | 2.02E+04          | -1.57E+04         | 2.00E+04          |
| L4   | -1.83E+04         | 2.02E+04          | -1.57E+04         | 2.00E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.76E+04         | 2.06E+04          | -1.51E+04         | 2.04E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-675. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

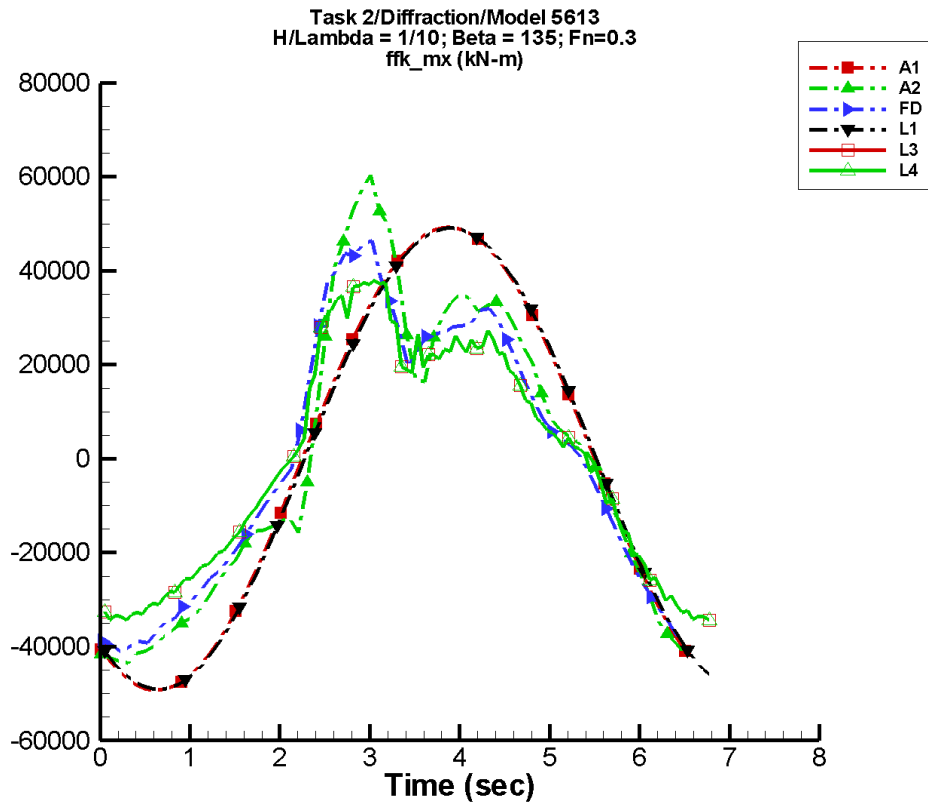
Table G-1349. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 17.9            | 3.29E+04        | -128              | 27.0            | 171               |
| A2   | -78.9           | 2.41E+04        | -126              | 2.51E+03        | 18                |
| FD   | -70.9           | 2.35E+04        | -115              | 3.44E+03        | 26                |
| L1   | 3.48            | 3.27E+04        | -129              | 5.53            | 123               |
| L3   | -21.6           | 2.07E+04        | -118              | 2.77E+03        | 22                |
| L4   | -21.6           | 2.07E+04        | -118              | 2.77E+03        | 22                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -122.           | 2.25E+04        | -105              | 3.81E+03        | 88                |

Table G-1350. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.29E+04         | 3.28E+04          | -3.21E+04         | 3.21E+04          |
| A2   | -2.22E+04         | 2.82E+04          | -2.14E+04         | 2.72E+04          |
| FD   | -2.11E+04         | 2.61E+04          | -2.07E+04         | 2.52E+04          |
| L1   | -3.27E+04         | 3.27E+04          | -3.25E+04         | 3.25E+04          |
| L3   | -1.86E+04         | 2.21E+04          | -1.84E+04         | 2.19E+04          |
| L4   | -1.86E+04         | 2.21E+04          | -1.84E+04         | 2.19E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.19E+04         | 2.58E+04          | -2.04E+04         | 2.55E+04          |

# TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-676. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

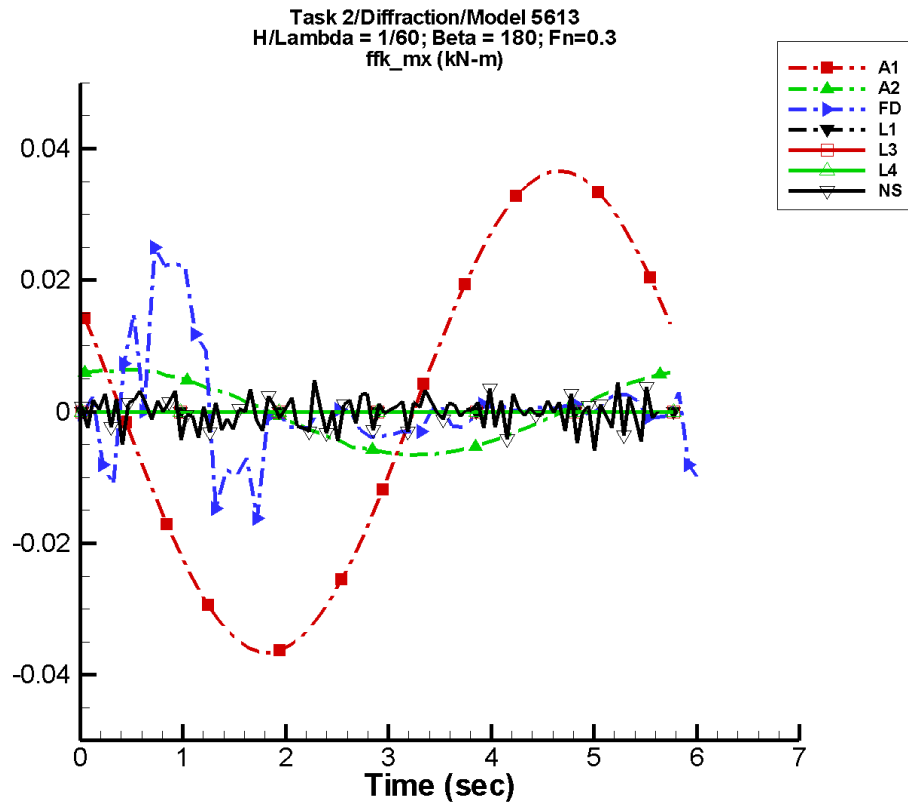
Table G–1351. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 26.9            | 4.93E+04        | -128              | 40.5            | 171               |
| A2   | 278.            | 4.10E+04        | -116              | 3.39E+03        | 152               |
| FD   | 220.            | 3.76E+04        | -107              | 4.28E+03        | -177              |
| L1   | 5.23            | 4.91E+04        | -129              | 8.30            | 123               |
| L3   | -45.6           | 3.16E+04        | -112              | 3.24E+03        | 160               |
| L4   | -45.6           | 3.16E+04        | -112              | 3.24E+03        | 160               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1352. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.93E+04         | 4.93E+04          | -4.82E+04         | 4.81E+04          |
| A2   | -4.36E+04         | 6.04E+04          | -4.24E+04         | 4.78E+04          |
| FD   | -4.11E+04         | 4.64E+04          | -3.96E+04         | 4.00E+04          |
| L1   | -4.91E+04         | 4.91E+04          | -4.87E+04         | 4.87E+04          |
| L3   | -3.44E+04         | 3.78E+04          | -3.36E+04         | 3.64E+04          |
| L4   | -3.44E+04         | 3.78E+04          | -3.36E+04         | 3.64E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-677. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1353. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

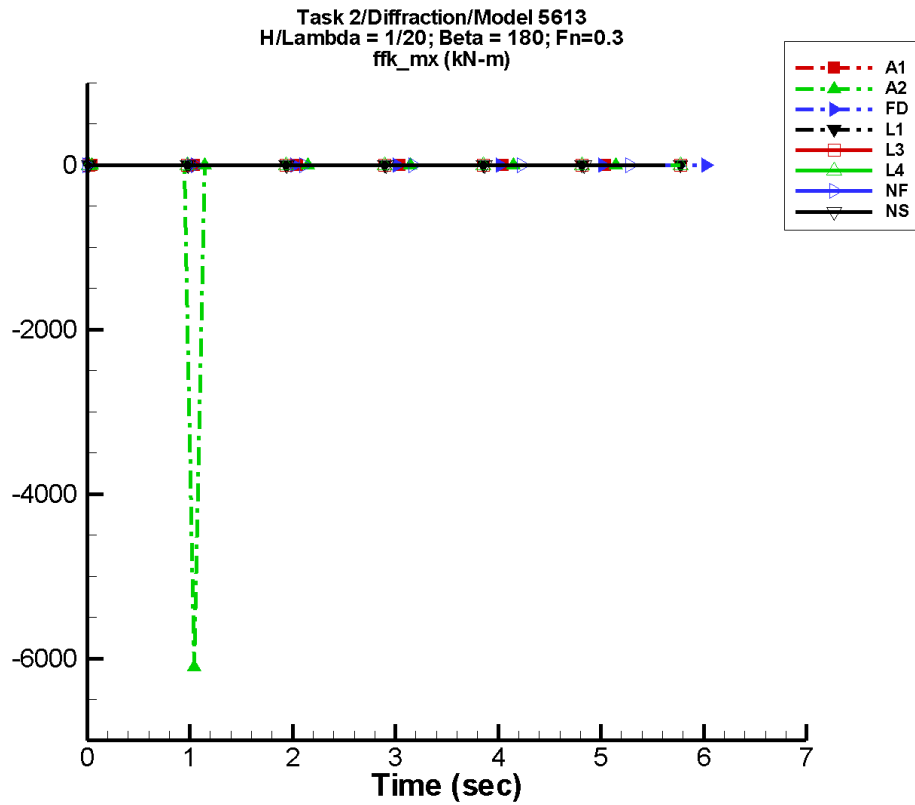
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.24E-05        | 3.66E-02        | 146               | 3.55E-05        | 135               |
| A2   | -1.09E-04       | 6.42E-03        | 55                | 4.77E-05        | 86                |
| FD   | 1.80E-04        | 2.90E-03        | 32                | 3.38E-03        | -97               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.45E-05       | 1.95E-04        | -140              | 5.28E-04        | 26                |

Table G-1354. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.66E-02         | 3.66E-02          | -3.55E-02         | 3.55E-02          |
| A2   | -6.53E-03         | 6.47E-03          | -6.33E-03         | 6.19E-03          |
| FD   | -1.62E-02         | 2.50E-02          | -6.88E-03         | 1.40E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.89E-03         | 4.74E-03          | -1.37E-03         | 8.88E-04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-678. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

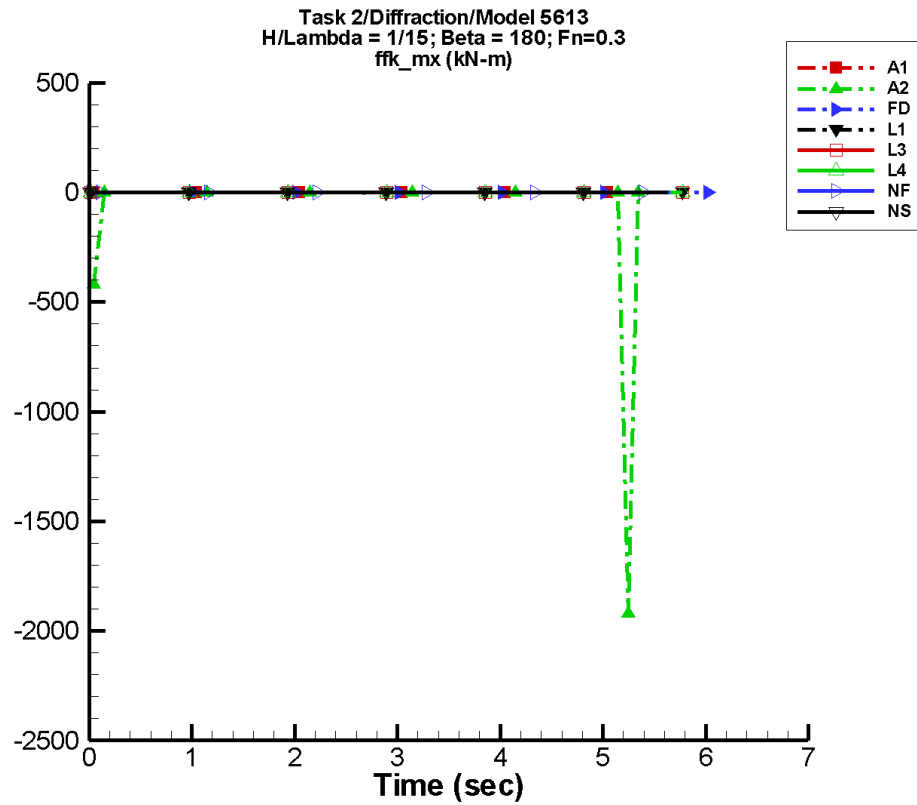
Table G–1355. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.75E-05        | 0.110           | 146               | 1.07E-04        | 135               |
| A2   | -47.7           | 107.            | -166              | 136.            | 120               |
| FD   | -4.26E-04       | 6.02E-03        | 78                | 2.27E-03        | 46                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -6.83E-04       | 5.93E-04        | -82               | 1.21E-03        | -65               |

Table G–1356. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.110            | 0.110             | -0.107            | 0.107             |
| A2   | -6.11E+03         | 1.95E-02          | -814.             | 69.9              |
| FD   | -3.27E-02         | 3.02E-02          | -8.18E-03         | 7.12E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.32E-02         | 1.82E-02          | -4.04E-03         | 3.69E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-679. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

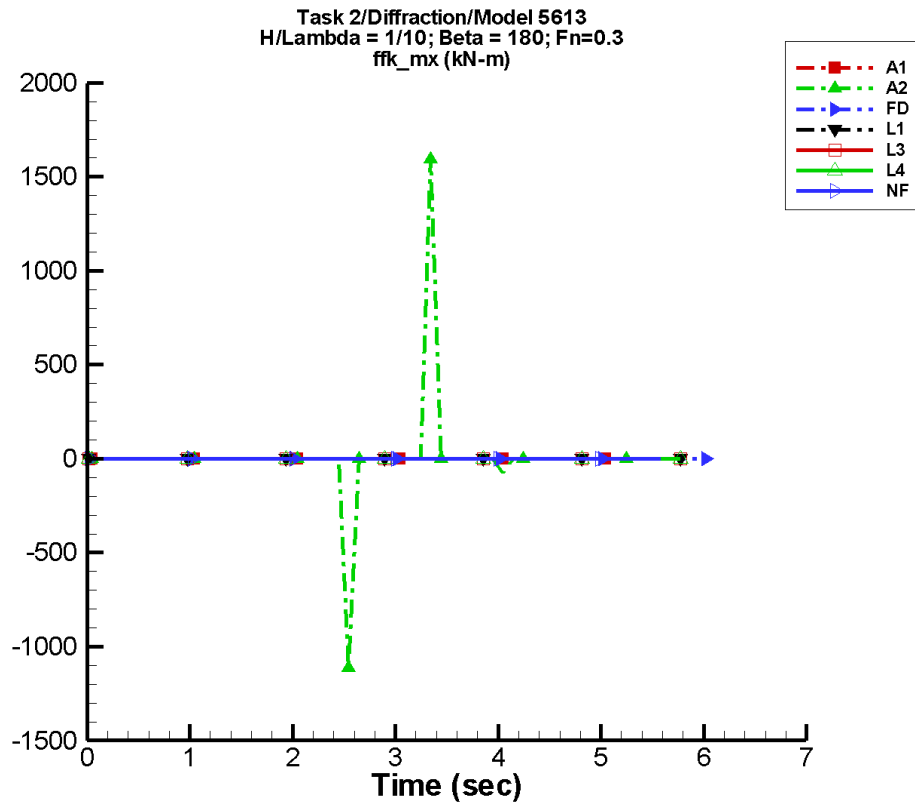
Table G–1357. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 9.01E-05        | 0.147           | 146               | 1.42E-04        | 135               |
| A2   | -36.6           | 66.3            | -74               | 67.8            | -47               |
| FD   | 2.40E-03        | 5.75E-03        | 20                | 5.95E-03        | 137               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 6.63E-05        | 1.59E-03        | -93               | 1.33E-03        | 89                |

Table G–1358. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.147            | 0.147             | -0.143            | 0.142             |
| A2   | -1.92E+03         | 2.59E-02          | -256.             | 21.8              |
| FD   | -4.71E-02         | 8.35E-02          | -7.98E-03         | 1.93E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.91E-02         | 3.39E-02          | -1.54E-02         | 5.80E-03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-680. Time history of  $M_x^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

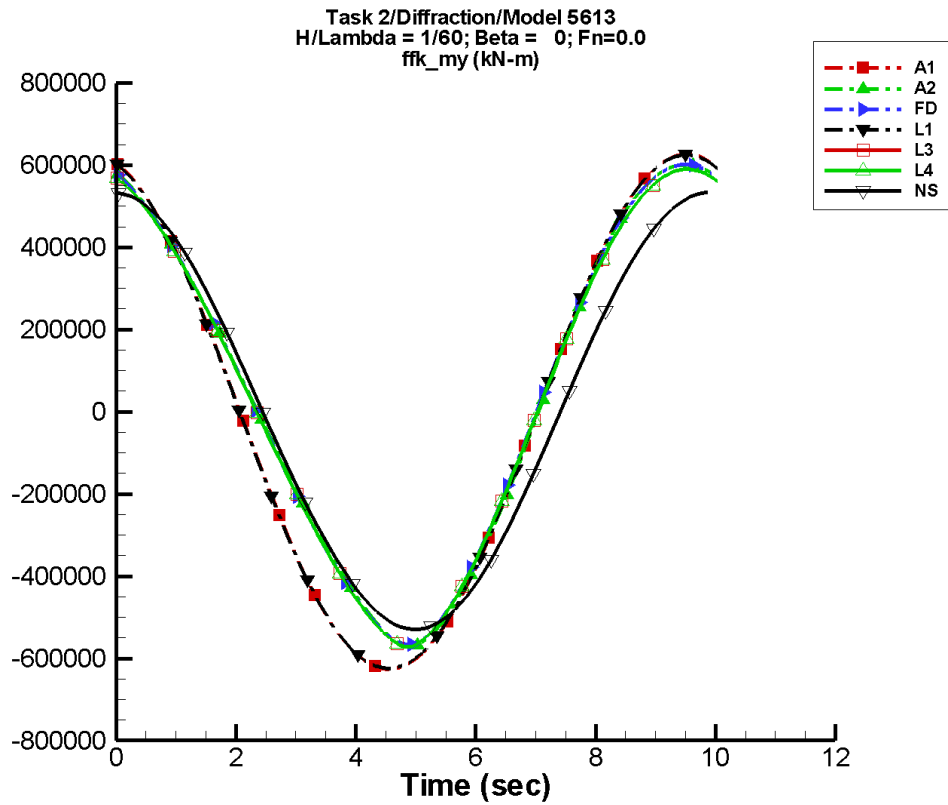
Table G-1359. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.35E-04        | 0.220           | 146               | 2.14E-04        | 135               |
| A2   | 6.36            | 42.5            | -167              | 65.6            | -24               |
| FD   | -6.86E-03       | 2.37E-02        | -87               | 3.64E-02        | -83               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1360. Minimum and maximum of  $M_x^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.221            | 0.221             | -0.214            | 0.214             |
| A2   | -1.11E+03         | 1.59E+03          | -161.             | 221.              |
| FD   | -0.271            | 0.184             | -0.129            | 6.84E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-681. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1361. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

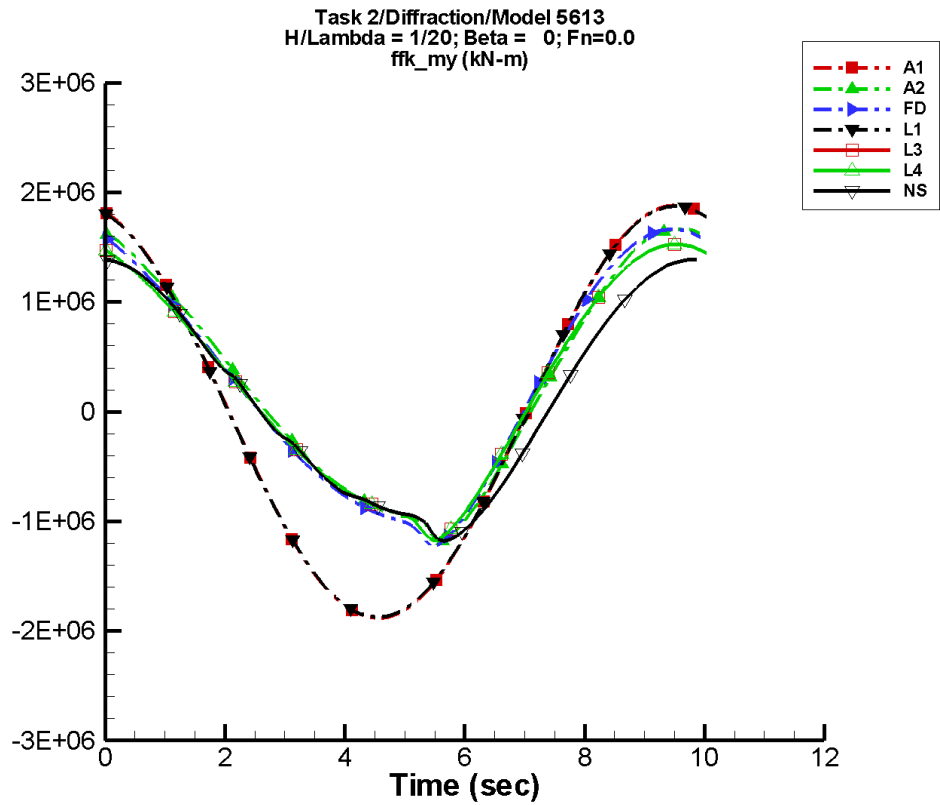
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -382.           | 6.26E+05        | 101               | 588.            | 36                |
| A2   | 3.62E+04        | 5.67E+05        | 96                | 4.04E+04        | -152              |
| FD   | 3.81E+04        | 5.65E+05        | 93                | 3.77E+04        | -150              |
| L1   | -604.           | 6.24E+05        | 101               | 508.            | 122               |
| L3   | 3.22E+04        | 5.59E+05        | 96                | 3.51E+04        | -138              |
| L4   | 3.22E+04        | 5.59E+05        | 96                | 3.51E+04        | -138              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 831.            | 5.30E+05        | 91                | 6.11E+03        | 165               |

Table G–1362. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.26E+05         | 6.26E+05          | -6.20E+05         | 6.20E+05          |
| A2   | -5.72E+05         | 6.00E+05          | -5.60E+05         | 5.95E+05          |
| FD   | -5.67E+05         | 6.02E+05          | -5.55E+05         | 5.95E+05          |
| L1   | -6.25E+05         | 6.25E+05          | -6.22E+05         | 6.22E+05          |
| L3   | -5.72E+05         | 5.90E+05          | -5.67E+05         | 5.87E+05          |
| L4   | -5.72E+05         | 5.90E+05          | -5.67E+05         | 5.87E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.30E+05         | 5.33E+05          | -5.24E+05         | 5.32E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-682. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

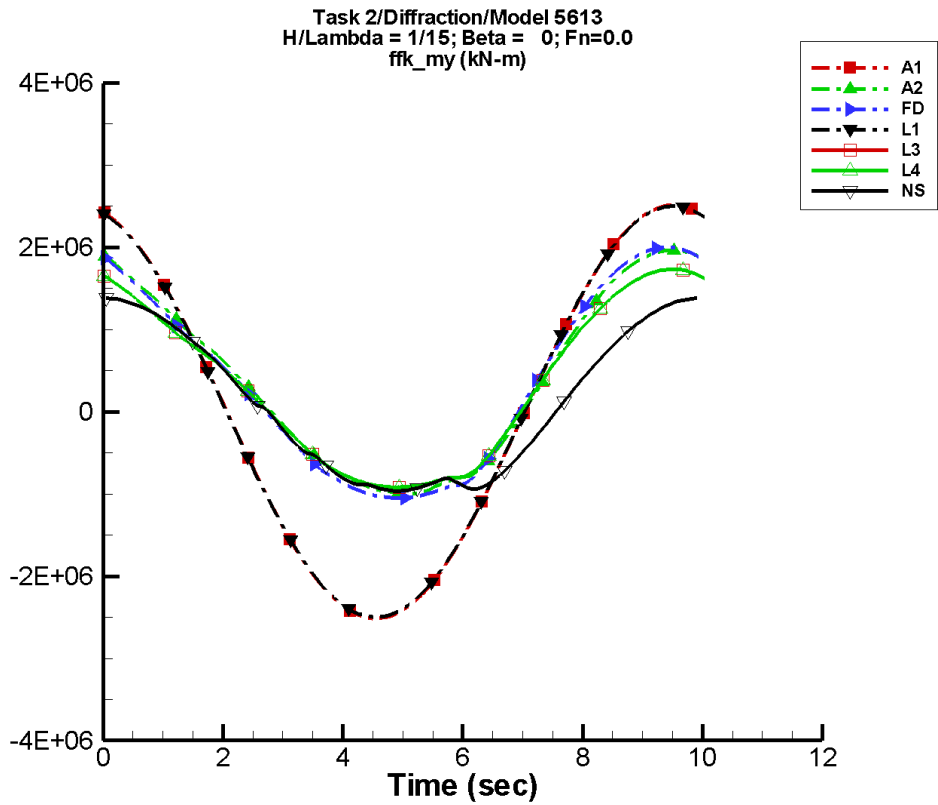
Table G-1363. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.15E+03       | 1.88E+06        | 101               | 1.77E+03        | 36                |
| A2   | 2.55E+05        | 1.33E+06        | 89                | 1.69E+05        | 161               |
| FD   | 2.51E+05        | 1.35E+06        | 90                | 1.85E+05        | 167               |
| L1   | -1.81E+03       | 1.87E+06        | 101               | 1.52E+03        | 122               |
| L3   | 2.20E+05        | 1.26E+06        | 92                | 1.64E+05        | 174               |
| L4   | 2.20E+05        | 1.26E+06        | 92                | 1.64E+05        | 174               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.12E+05        | 1.21E+06        | 88                | 1.42E+05        | 148               |

Table G-1364. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.88E+06         | 1.88E+06          | -1.86E+06         | 1.86E+06          |
| A2   | -1.18E+06         | 1.66E+06          | -1.10E+06         | 1.65E+06          |
| FD   | -1.23E+06         | 1.67E+06          | -1.14E+06         | 1.65E+06          |
| L1   | -1.87E+06         | 1.87E+06          | -1.87E+06         | 1.87E+06          |
| L3   | -1.17E+06         | 1.53E+06          | -1.14E+06         | 1.52E+06          |
| L4   | -1.17E+06         | 1.53E+06          | -1.14E+06         | 1.52E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.18E+06         | 1.39E+06          | -1.11E+06         | 1.38E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-683. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

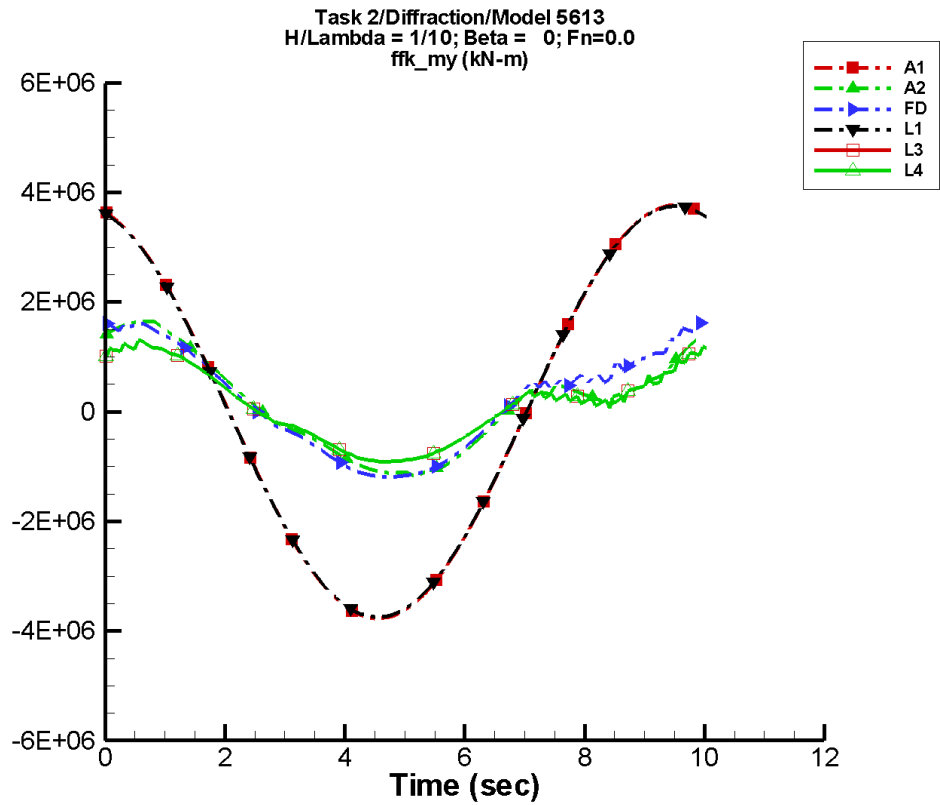
Table G–1365. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.53E+03       | 2.51E+06        | 101               | 2.36E+03        | 36                |
| A2   | 3.91E+05        | 1.46E+06        | 92                | 1.69E+05        | 161               |
| FD   | 3.74E+05        | 1.51E+06        | 92                | 1.80E+05        | 163               |
| L1   | -2.42E+03       | 2.50E+06        | 101               | 2.03E+03        | 122               |
| L3   | 3.22E+05        | 1.31E+06        | 93                | 1.42E+05        | 169               |
| L4   | 3.22E+05        | 1.31E+06        | 93                | 1.42E+05        | 169               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.11E+05        | 1.20E+06        | 84                | 1.00E+05        | 107               |

Table G–1366. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.51E+06         | 2.51E+06          | -2.49E+06         | 2.49E+06          |
| A2   | -1.00E+06         | 1.96E+06          | -9.80E+05         | 1.94E+06          |
| FD   | -1.05E+06         | 2.00E+06          | -1.04E+06         | 1.98E+06          |
| L1   | -2.50E+06         | 2.50E+06          | -2.49E+06         | 2.49E+06          |
| L3   | -9.20E+05         | 1.73E+06          | -9.15E+05         | 1.73E+06          |
| L4   | -9.20E+05         | 1.73E+06          | -9.15E+05         | 1.73E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.66E+05         | 1.38E+06          | -9.54E+05         | 1.38E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-684. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

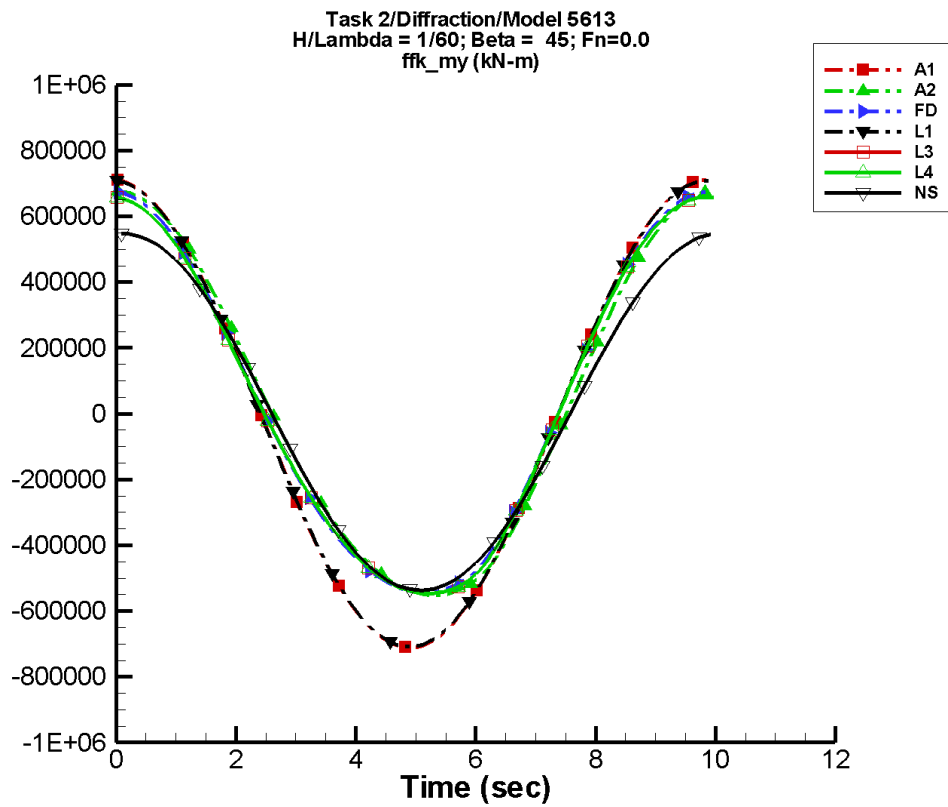
Table G-1367. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.30E+03       | 3.77E+06        | 101               | 3.54E+03        | 36                |
| A2   | 1.56E+05        | 1.16E+06        | 82                | 3.14E+05        | -15               |
| FD   | 2.30E+05        | 1.28E+06        | 88                | 1.88E+05        | -38               |
| L1   | -3.62E+03       | 3.75E+06        | 101               | 3.05E+03        | 122               |
| L3   | 1.27E+05        | 8.95E+05        | 86                | 2.41E+05        | -19               |
| L4   | 1.27E+05        | 8.95E+05        | 86                | 2.41E+05        | -19               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1368. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.77E+06         | 3.77E+06          | -3.73E+06         | 3.73E+06          |
| A2   | -1.17E+06         | 1.68E+06          | -1.12E+06         | 1.61E+06          |
| FD   | -1.19E+06         | 1.64E+06          | -1.18E+06         | 1.59E+06          |
| L1   | -3.75E+06         | 3.75E+06          | -3.73E+06         | 3.73E+06          |
| L3   | -9.14E+05         | 1.30E+06          | -9.05E+05         | 1.22E+06          |
| L4   | -9.14E+05         | 1.30E+06          | -9.05E+05         | 1.22E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-685. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1369. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

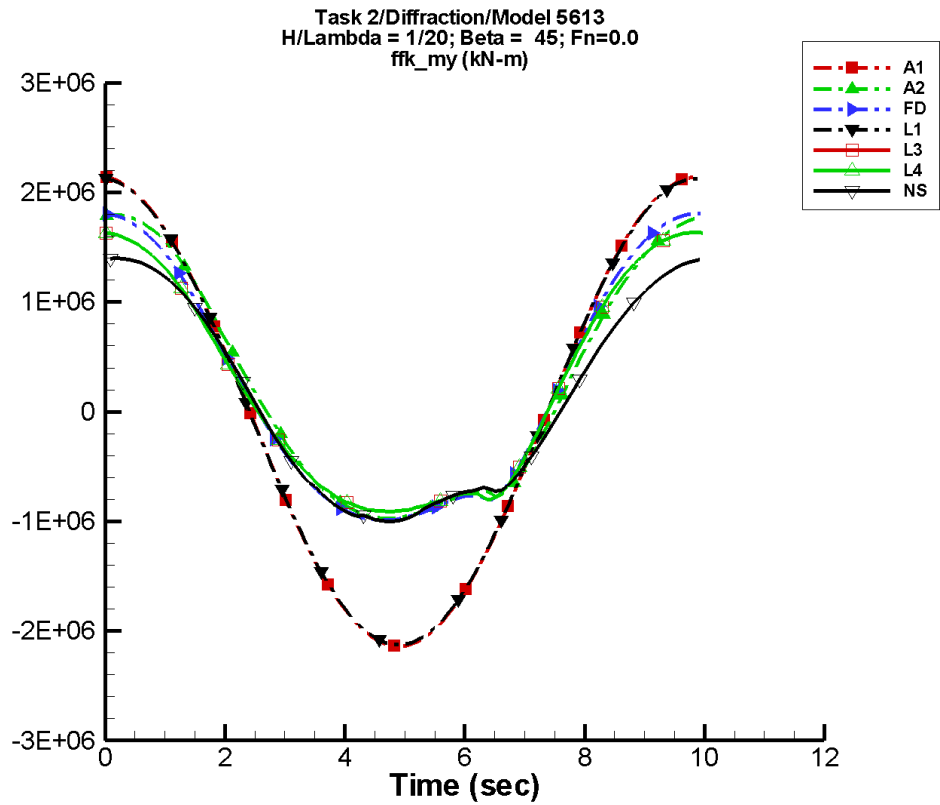
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -550.           | 7.12E+05        | 88                | 776.            | 26                |
| A2   | 3.66E+04        | 6.20E+05        | 82                | 3.36E+04        | 117               |
| FD   | 3.83E+04        | 6.18E+05        | 83                | 3.54E+04        | 114               |
| L1   | -278.           | 7.09E+05        | 89                | 479.            | 163               |
| L3   | 3.24E+04        | 6.11E+05        | 86                | 3.82E+04        | 130               |
| L4   | 3.24E+04        | 6.11E+05        | 86                | 3.82E+04        | 130               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 547.            | 5.45E+05        | 85                | 3.76E+03        | 59                |

Table G-1370. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.11E+05         | 7.11E+05          | -7.04E+05         | 7.09E+05          |
| A2   | -5.52E+05         | 6.76E+05          | -5.48E+05         | 6.77E+05          |
| FD   | -5.44E+05         | 6.74E+05          | -5.40E+05         | 6.70E+05          |
| L1   | -7.09E+05         | 7.09E+05          | -7.06E+05         | 7.08E+05          |
| L3   | -5.47E+05         | 6.59E+05          | -5.45E+05         | 6.58E+05          |
| L4   | -5.47E+05         | 6.59E+05          | -5.45E+05         | 6.58E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.37E+05         | 5.47E+05          | -5.32E+05         | 5.49E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-686. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

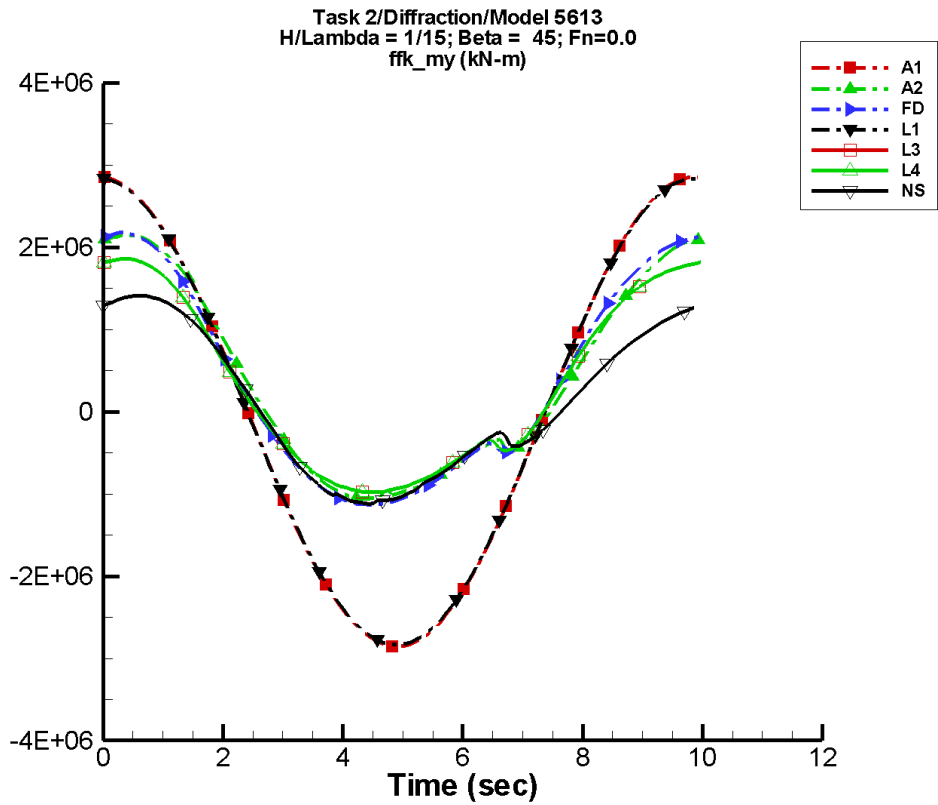
Table G-1371. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.65E+03       | 2.14E+06        | 88                | 2.33E+03        | 26                |
| A2   | 2.53E+05        | 1.41E+06        | 81                | 1.78E+05        | 69                |
| FD   | 2.44E+05        | 1.43E+06        | 83                | 1.92E+05        | 80                |
| L1   | -833.           | 2.13E+06        | 89                | 1.44E+03        | 163               |
| L3   | 2.15E+05        | 1.32E+06        | 86                | 1.74E+05        | 94                |
| L4   | 2.15E+05        | 1.32E+06        | 86                | 1.74E+05        | 94                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.07E+05        | 1.22E+06        | 85                | 1.32E+05        | 58                |

Table G-1372. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.14E+06         | 2.14E+06          | -2.12E+06         | 2.13E+06          |
| A2   | -9.76E+05         | 1.80E+06          | -9.63E+05         | 1.80E+06          |
| FD   | -9.89E+05         | 1.81E+06          | -9.79E+05         | 1.80E+06          |
| L1   | -2.13E+06         | 2.13E+06          | -2.12E+06         | 2.12E+06          |
| L3   | -9.09E+05         | 1.63E+06          | -9.07E+05         | 1.63E+06          |
| L4   | -9.09E+05         | 1.63E+06          | -9.07E+05         | 1.63E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.00E+06         | 1.40E+06          | -9.84E+05         | 1.41E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-687. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

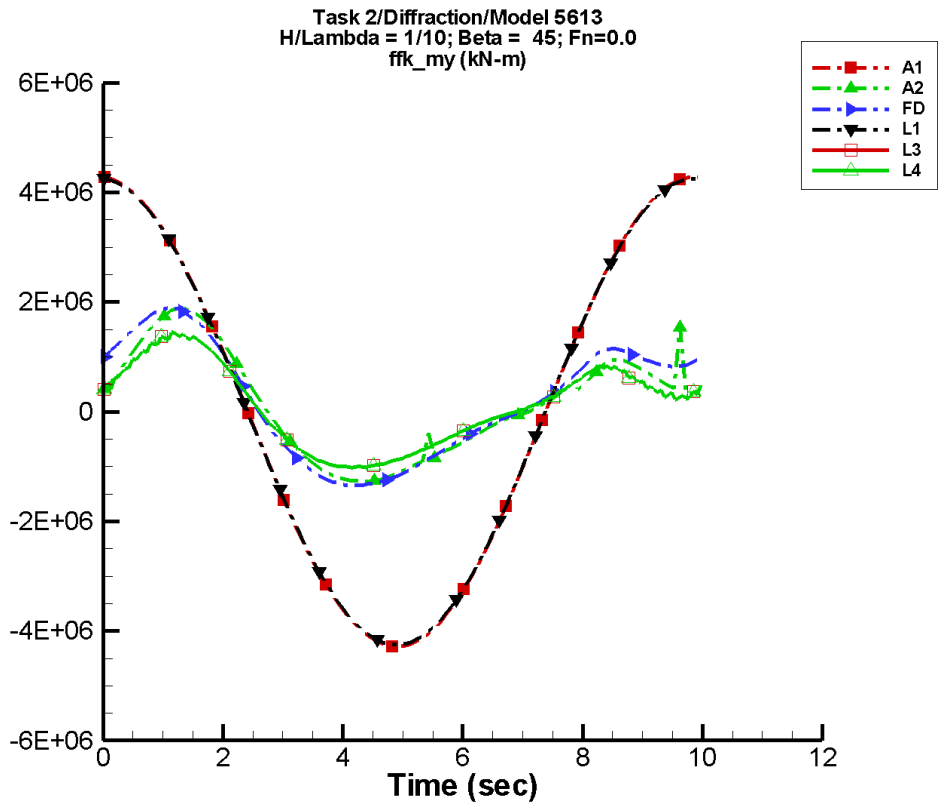
Table G-1373. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.21E+03       | 2.86E+06        | 88                | 3.12E+03        | 26                |
| A2   | 3.92E+05        | 1.58E+06        | 83                | 2.76E+05        | 40                |
| FD   | 3.70E+05        | 1.64E+06        | 84                | 2.68E+05        | 44                |
| L1   | -1.11E+03       | 2.83E+06        | 89                | 1.91E+03        | 163               |
| L3   | 3.25E+05        | 1.42E+06        | 88                | 2.13E+05        | 49                |
| L4   | 3.25E+05        | 1.42E+06        | 88                | 2.13E+05        | 49                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.09E+05        | 1.19E+06        | 86                | 2.45E+05        | 11                |

Table G-1374. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.86E+06         | 2.86E+06          | -2.83E+06         | 2.85E+06          |
| A2   | -1.06E+06         | 2.15E+06          | -1.03E+06         | 2.13E+06          |
| FD   | -1.13E+06         | 2.18E+06          | -1.12E+06         | 2.16E+06          |
| L1   | -2.83E+06         | 2.83E+06          | -2.82E+06         | 2.83E+06          |
| L3   | -9.76E+05         | 1.86E+06          | -9.73E+05         | 1.85E+06          |
| L4   | -9.76E+05         | 1.86E+06          | -9.73E+05         | 1.85E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.12E+06         | 1.41E+06          | -1.10E+06         | 1.40E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-688. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

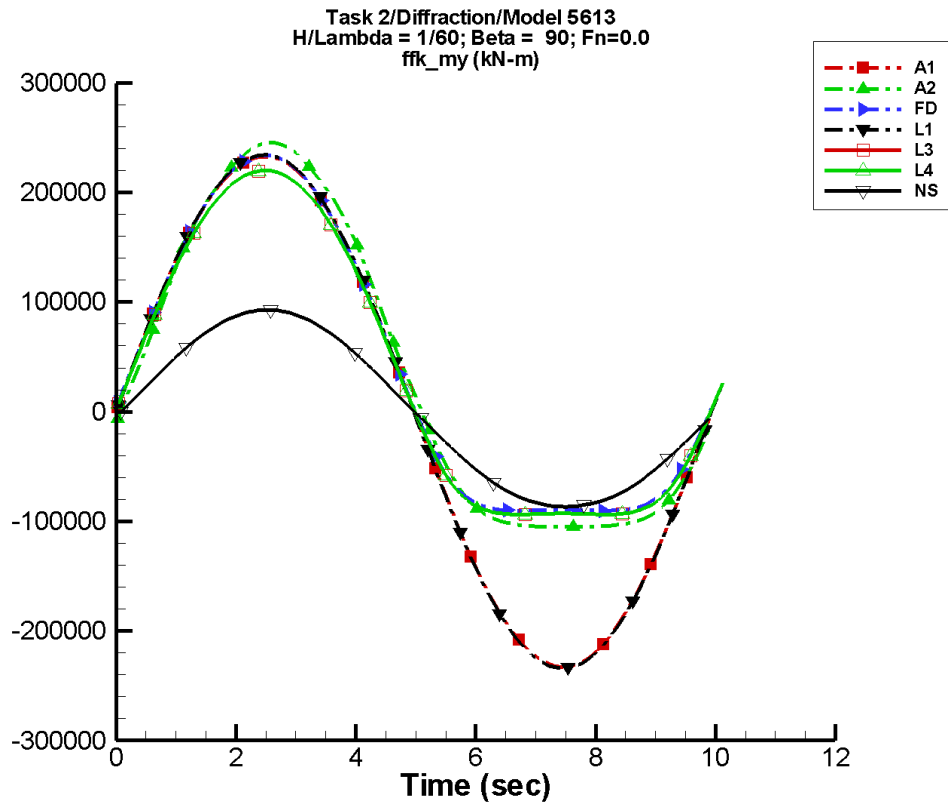
Table G-1375. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.31E+03       | 4.29E+06        | 88                | 4.67E+03        | 26                |
| A2   | 1.72E+05        | 1.16E+06        | 79                | 5.73E+05        | -45               |
| FD   | 2.06E+05        | 1.34E+06        | 83                | 4.63E+05        | -32               |
| L1   | -1.67E+03       | 4.25E+06        | 89                | 2.87E+03        | 163               |
| L3   | 1.13E+05        | 8.97E+05        | 85                | 4.34E+05        | -37               |
| L4   | 1.13E+05        | 8.97E+05        | 85                | 4.34E+05        | -37               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1376. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.29E+06         | 4.28E+06          | -4.24E+06         | 4.27E+06          |
| A2   | -1.27E+06         | 1.89E+06          | -1.25E+06         | 1.81E+06          |
| FD   | -1.34E+06         | 1.89E+06          | -1.32E+06         | 1.82E+06          |
| L1   | -4.25E+06         | 4.25E+06          | -4.24E+06         | 4.25E+06          |
| L3   | -1.02E+06         | 1.45E+06          | -1.01E+06         | 1.39E+06          |
| L4   | -1.02E+06         | 1.45E+06          | -1.01E+06         | 1.39E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-689. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1377. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

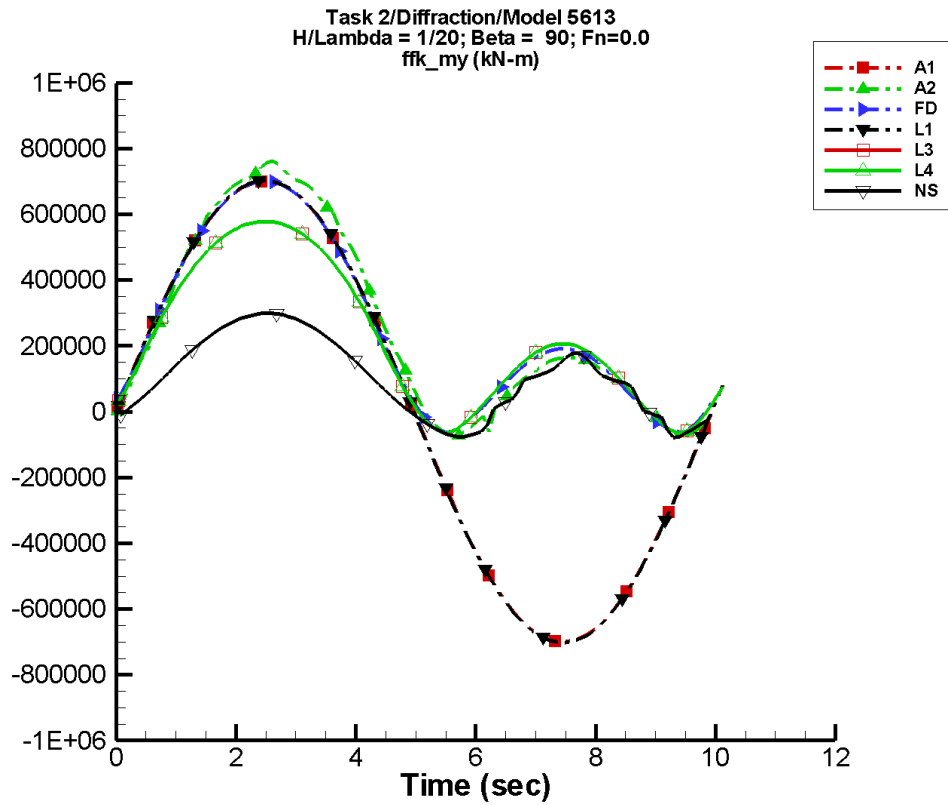
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -147.           | 2.33E+05        | -4                | 223.            | -25               |
| A2   | 3.70E+04        | 1.83E+05        | -8                | 3.34E+04        | -104              |
| FD   | 3.89E+04        | 1.70E+05        | -7                | 3.40E+04        | -107              |
| L1   | -96.8           | 2.34E+05        | -4                | 154.            | -37               |
| L3   | 3.29E+04        | 1.65E+05        | -4                | 2.92E+04        | -96               |
| L4   | 3.29E+04        | 1.65E+05        | -4                | 2.92E+04        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 254.            | 8.97E+04        | -2                | 2.53E+03        | -94               |

Table G-1378. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.33E+05         | 2.33E+05          | -2.30E+05         | 2.30E+05          |
| A2   | -1.05E+05         | 2.45E+05          | -1.05E+05         | 2.43E+05          |
| FD   | -9.03E+04         | 2.34E+05          | -9.01E+04         | 2.32E+05          |
| L1   | -2.34E+05         | 2.34E+05          | -2.33E+05         | 2.33E+05          |
| L3   | -9.38E+04         | 2.20E+05          | -9.37E+04         | 2.19E+05          |
| L4   | -9.38E+04         | 2.20E+05          | -9.37E+04         | 2.19E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.66E+04         | 9.28E+04          | -8.59E+04         | 9.20E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-690. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

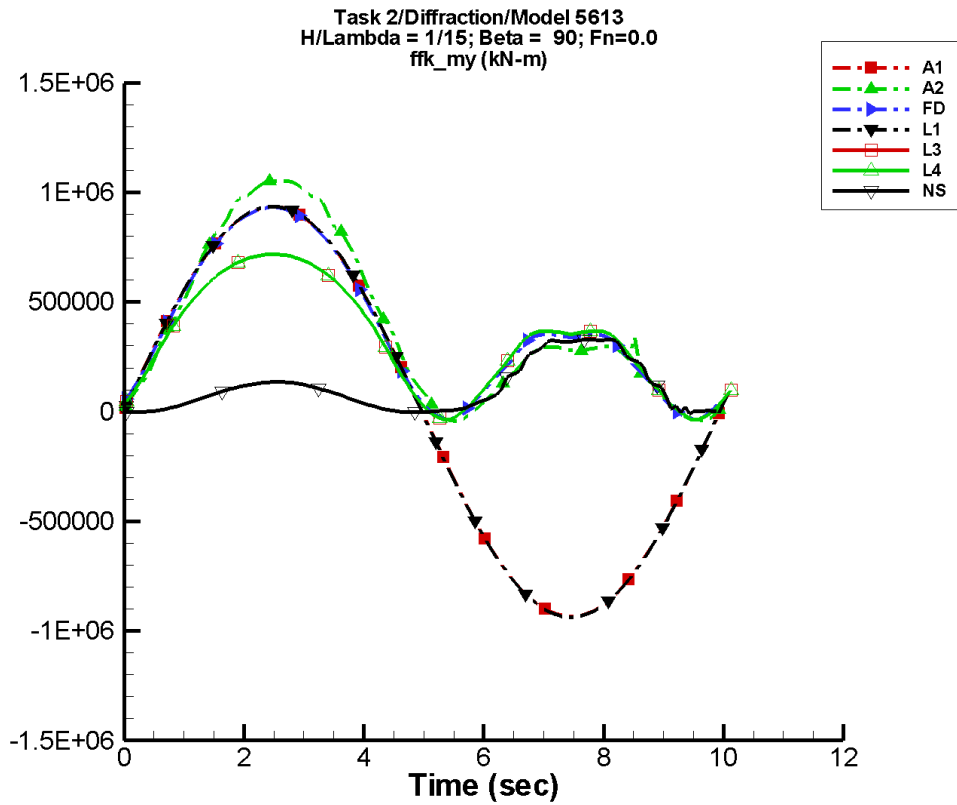
Table G-1379. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -442.           | 7.00E+05        | -4                | 670.            | -25               |
| A2   | 2.56E+05        | 3.31E+05        | -7                | 2.09E+05        | -105              |
| FD   | 2.51E+05        | 2.91E+05        | -7                | 2.04E+05        | -107              |
| L1   | -290.           | 7.03E+05        | -4                | 462.            | -37               |
| L3   | 2.19E+05        | 2.28E+05        | -2                | 1.75E+05        | -96               |
| L4   | 2.19E+05        | 2.28E+05        | -2                | 1.75E+05        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.01E+05        | 1.02E+05        | 4                 | 1.21E+05        | -98               |

Table G-1380. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.00E+05         | 7.00E+05          | -6.93E+05         | 6.92E+05          |
| A2   | -7.26E+04         | 7.60E+05          | -5.76E+04         | 7.36E+05          |
| FD   | -6.25E+04         | 7.01E+05          | -4.61E+04         | 6.94E+05          |
| L1   | -7.02E+05         | 7.02E+05          | -7.00E+05         | 7.00E+05          |
| L3   | -6.40E+04         | 5.78E+05          | -5.72E+04         | 5.77E+05          |
| L4   | -6.40E+04         | 5.78E+05          | -5.72E+04         | 5.77E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.97E+04         | 2.99E+05          | -6.80E+04         | 2.95E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-691. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

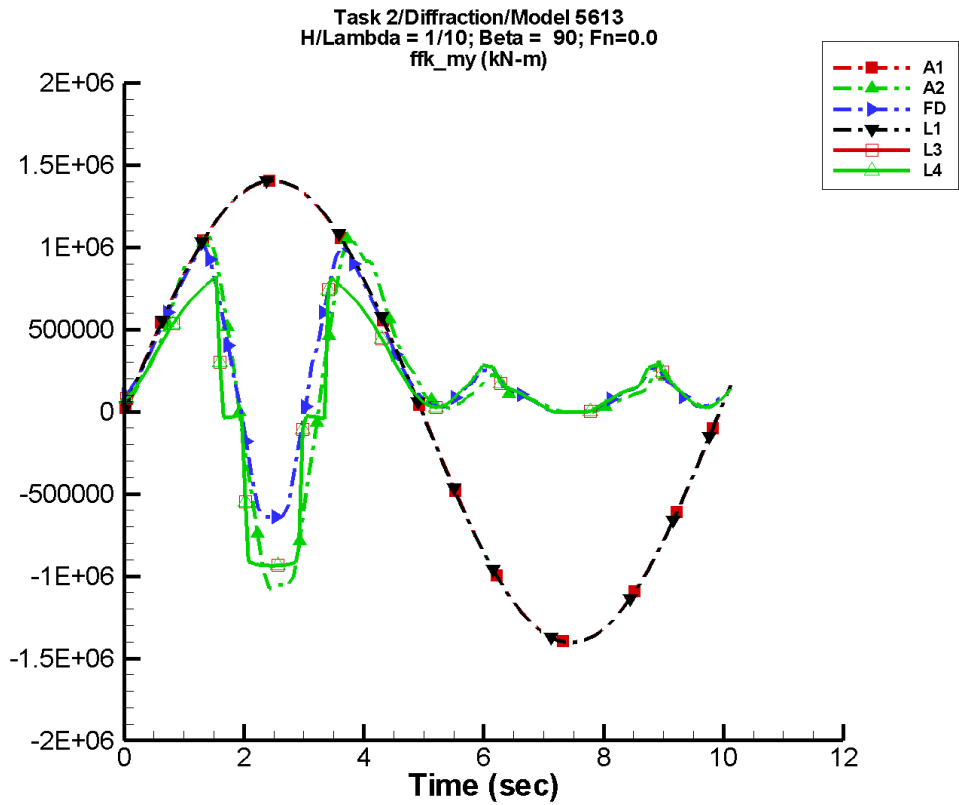
Table G-1381. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -591.           | 9.34E+05        | -4                | 895.            | -25               |
| A2   | 3.96E+05        | 3.95E+05        | -7                | 3.18E+05        | -105              |
| FD   | 3.79E+05        | 3.18E+05        | -7                | 2.95E+05        | -106              |
| L1   | -387.           | 9.37E+05        | -4                | 616.            | -37               |
| L3   | 3.25E+05        | 2.10E+05        | -2                | 2.44E+05        | -96               |
| L4   | 3.25E+05        | 2.10E+05        | -2                | 2.44E+05        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.08E+05        | 7.99E+04        | 171               | 1.23E+05        | -98               |

Table G-1382. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.34E+05         | 9.34E+05          | -9.25E+05         | 9.25E+05          |
| A2   | -4.19E+04         | 1.05E+06          | -1.89E+04         | 1.04E+06          |
| FD   | -3.65E+04         | 9.31E+05          | -1.11E+04         | 9.22E+05          |
| L1   | -9.37E+05         | 9.37E+05          | -9.33E+05         | 9.33E+05          |
| L3   | -3.64E+04         | 7.18E+05          | -2.68E+04         | 7.16E+05          |
| L4   | -3.64E+04         | 7.18E+05          | -2.68E+04         | 7.16E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.90E+03         | 3.30E+05          | -627.             | 3.28E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-692. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

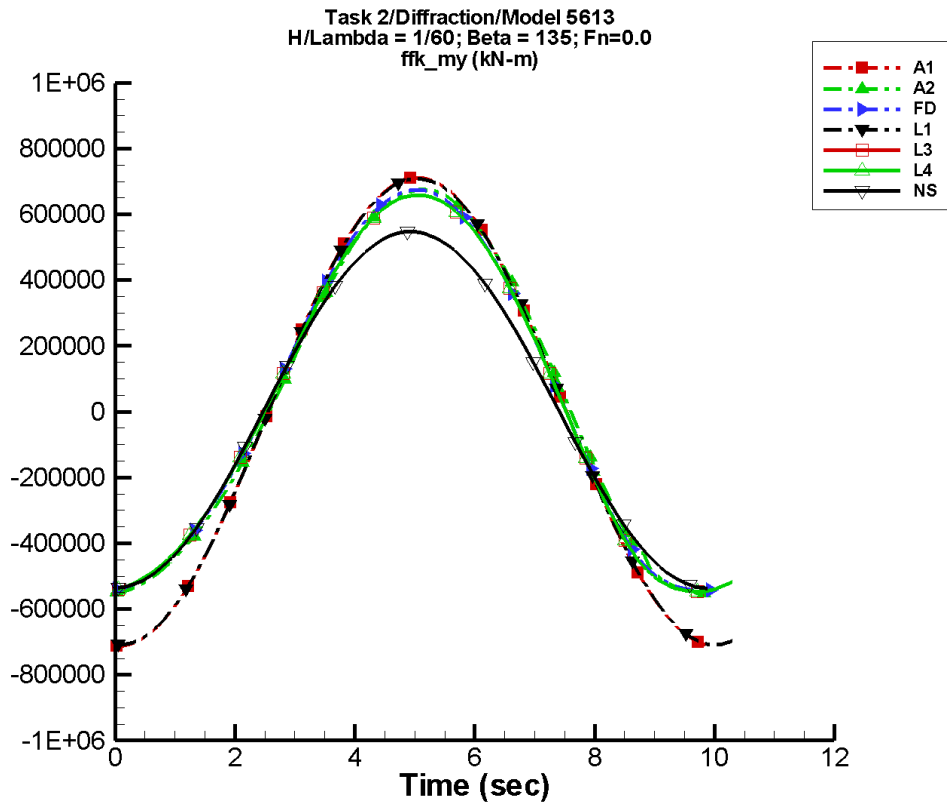
Table G–1383. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -886.           | 1.40E+06        | -4                | 1.34E+03        | -25               |
| A2   | 1.91E+05        | 8.13E+04        | 15                | 2.72E+05        | 58                |
| FD   | 2.27E+05        | 1.09E+05        | 5                 | 2.03E+05        | 77                |
| L1   | -581.           | 1.41E+06        | -4                | 924.            | -37               |
| L3   | 1.02E+05        | 1.00E+05        | 156               | 3.34E+05        | 69                |
| L4   | 1.02E+05        | 1.00E+05        | 156               | 3.34E+05        | 69                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1384. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.40E+06         | 1.40E+06          | -1.39E+06         | 1.39E+06          |
| A2   | -1.08E+06         | 1.07E+06          | -9.59E+05         | 9.15E+05          |
| FD   | -6.39E+05         | 1.01E+06          | -5.54E+05         | 8.56E+05          |
| L1   | -1.40E+06         | 1.40E+06          | -1.40E+06         | 1.40E+06          |
| L3   | -9.36E+05         | 8.25E+05          | -9.75E+05         | 7.27E+05          |
| L4   | -9.36E+05         | 8.25E+05          | -9.75E+05         | 7.27E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-693. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1385. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

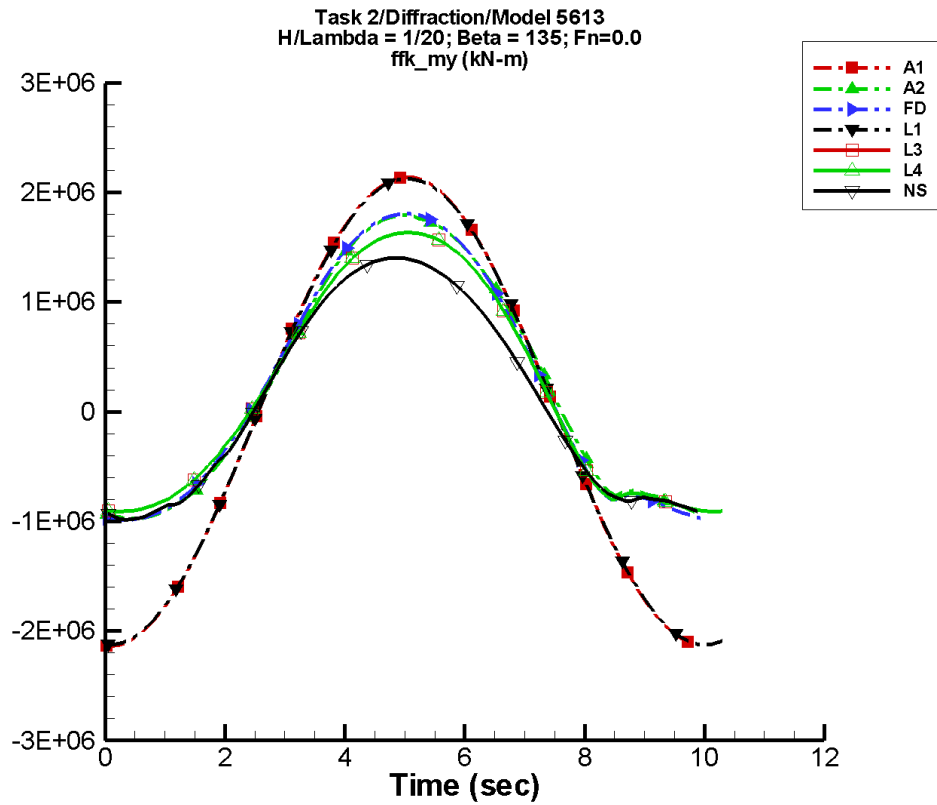
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 591.            | 7.11E+05        | -97               | 817.            | -157              |
| A2   | 3.77E+04        | 6.18E+05        | -98               | 3.50E+04        | 32                |
| FD   | 3.93E+04        | 6.16E+05        | -99               | 3.23E+04        | 36                |
| L1   | 747.            | 7.08E+05        | -97               | 505.            | -103              |
| L3   | 3.34E+04        | 6.10E+05        | -95               | 3.53E+04        | 29                |
| L4   | 3.34E+04        | 6.10E+05        | -95               | 3.53E+04        | 29                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 663.            | 5.45E+05        | -89               | 4.67E+03        | 106               |

Table G–1386. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.11E+05         | 7.11E+05          | -7.13E+05         | 7.04E+05          |
| A2   | -5.52E+05         | 6.76E+05          | -5.49E+05         | 6.69E+05          |
| FD   | -5.44E+05         | 6.75E+05          | -5.40E+05         | 6.68E+05          |
| L1   | -7.09E+05         | 7.09E+05          | -7.08E+05         | 7.06E+05          |
| L3   | -5.47E+05         | 6.59E+05          | -5.45E+05         | 6.57E+05          |
| L4   | -5.47E+05         | 6.59E+05          | -5.45E+05         | 6.57E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.37E+05         | 5.47E+05          | -5.36E+05         | 5.41E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-694. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

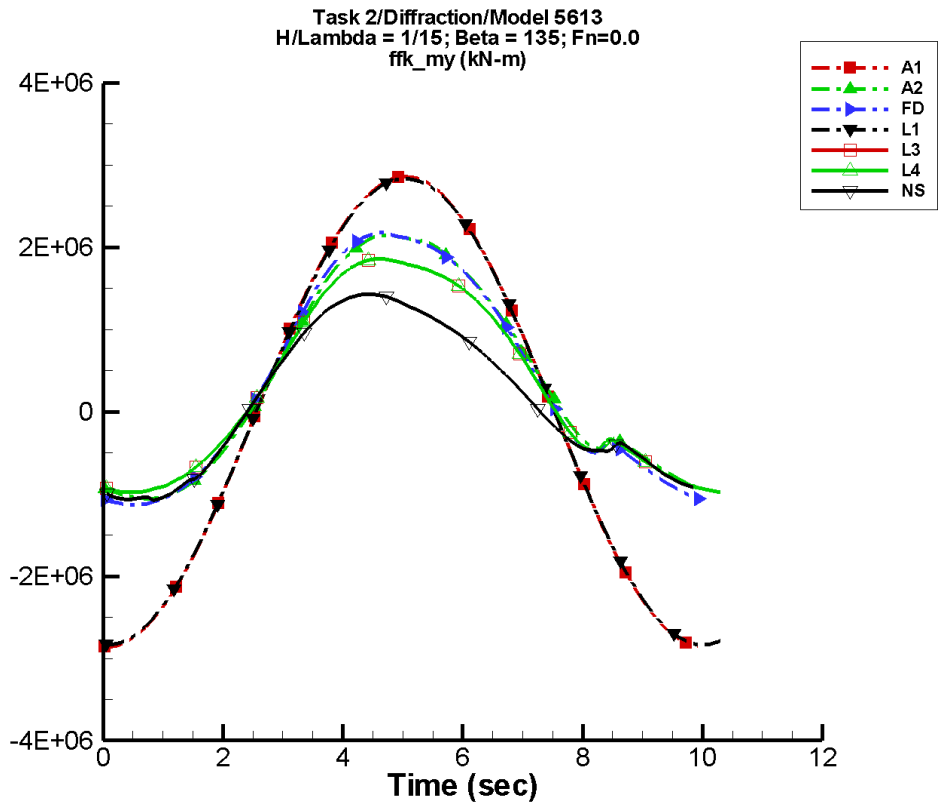
Table G-1387. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.78E+03        | 2.14E+06        | -97               | 2.46E+03        | -157              |
| A2   | 2.54E+05        | 1.42E+06        | -98               | 1.82E+05        | 80                |
| FD   | 2.50E+05        | 1.44E+06        | -99               | 1.71E+05        | 67                |
| L1   | 2.24E+03        | 2.12E+06        | -97               | 1.52E+03        | -103              |
| L3   | 2.19E+05        | 1.33E+06        | -95               | 1.66E+05        | 65                |
| L4   | 2.19E+05        | 1.33E+06        | -95               | 1.66E+05        | 65                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.03E+05        | 1.22E+06        | -89               | 1.45E+05        | 106               |

Table G-1388. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.14E+06         | 2.14E+06          | -2.14E+06         | 2.12E+06          |
| A2   | -9.76E+05         | 1.79E+06          | -9.62E+05         | 1.77E+06          |
| FD   | -9.89E+05         | 1.81E+06          | -9.85E+05         | 1.79E+06          |
| L1   | -2.13E+06         | 2.13E+06          | -2.12E+06         | 2.12E+06          |
| L3   | -9.09E+05         | 1.63E+06          | -9.07E+05         | 1.63E+06          |
| L4   | -9.09E+05         | 1.63E+06          | -9.07E+05         | 1.63E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.86E+05         | 1.40E+06          | -9.63E+05         | 1.39E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-695. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

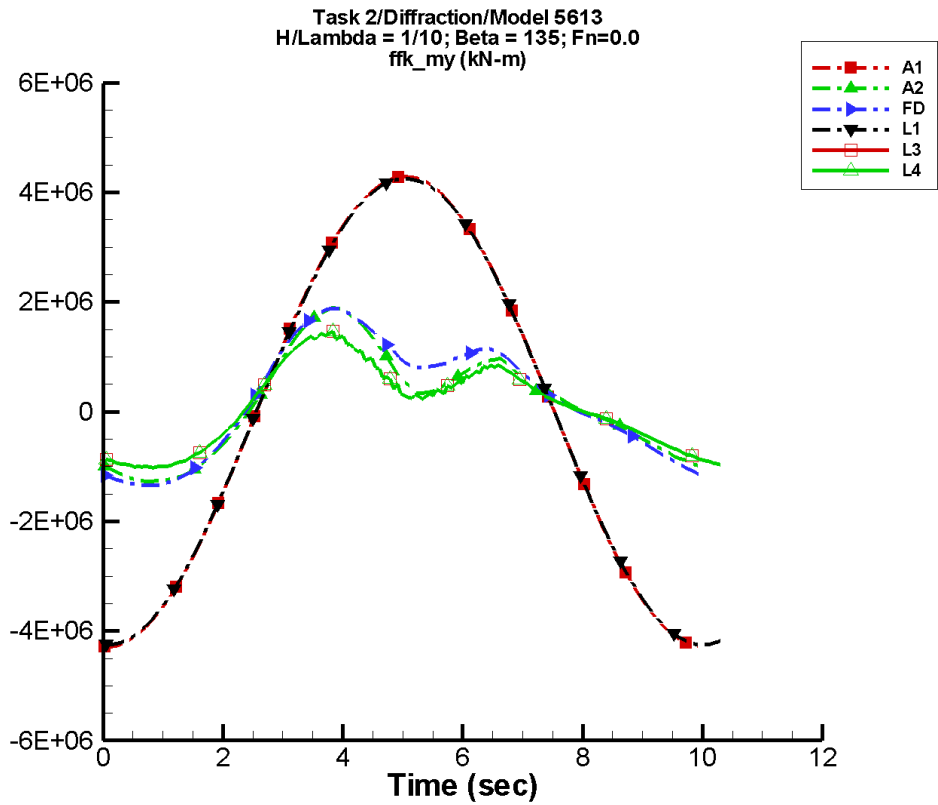
Table G-1389. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.37E+03        | 2.86E+06        | -97               | 3.28E+03        | -157              |
| A2   | 3.92E+05        | 1.59E+06        | -99               | 2.79E+05        | 108               |
| FD   | 3.76E+05        | 1.65E+06        | -100              | 2.41E+05        | 104               |
| L1   | 2.99E+03        | 2.83E+06        | -97               | 2.02E+03        | -103              |
| L3   | 3.26E+05        | 1.43E+06        | -96               | 2.04E+05        | 111               |
| L4   | 3.26E+05        | 1.43E+06        | -96               | 2.04E+05        | 111               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.08E+05        | 1.19E+06        | -88               | 2.48E+05        | 154               |

Table G-1390. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.86E+06         | 2.86E+06          | -2.86E+06         | 2.83E+06          |
| A2   | -1.06E+06         | 2.15E+06          | -1.04E+06         | 2.13E+06          |
| FD   | -1.13E+06         | 2.18E+06          | -1.12E+06         | 2.15E+06          |
| L1   | -2.83E+06         | 2.83E+06          | -2.83E+06         | 2.82E+06          |
| L3   | -9.76E+05         | 1.86E+06          | -9.72E+05         | 1.85E+06          |
| L4   | -9.76E+05         | 1.86E+06          | -9.72E+05         | 1.85E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.07E+06         | 1.43E+06          | -1.06E+06         | 1.42E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-696. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

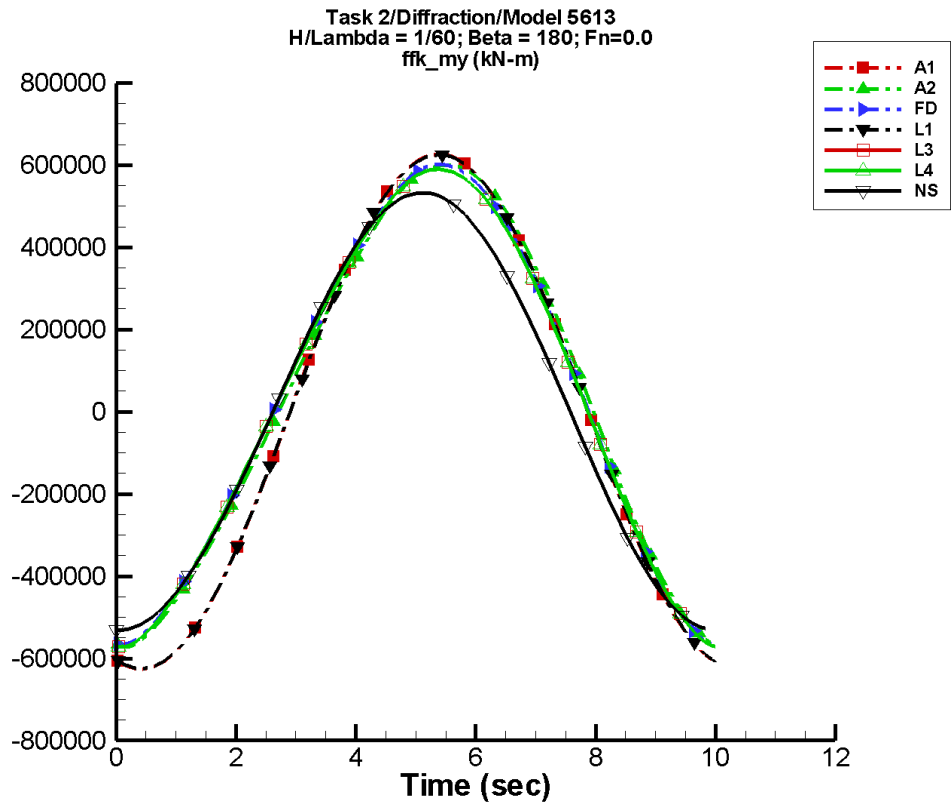
Table G-1391. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.56E+03        | 4.29E+06        | -97               | 4.92E+03        | -157              |
| A2   | 1.53E+05        | 1.14E+06        | -97               | 5.21E+05        | -170              |
| FD   | 2.25E+05        | 1.33E+06        | -100              | 4.69E+05        | -171              |
| L1   | 4.48E+03        | 4.25E+06        | -97               | 3.03E+03        | -103              |
| L3   | 1.16E+05        | 9.05E+05        | -95               | 4.25E+05        | -153              |
| L4   | 1.16E+05        | 9.05E+05        | -95               | 4.25E+05        | -153              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1392. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.29E+06         | 4.29E+06          | -4.30E+06         | 4.24E+06          |
| A2   | -1.27E+06         | 1.89E+06          | -1.25E+06         | 1.80E+06          |
| FD   | -1.34E+06         | 1.88E+06          | -1.32E+06         | 1.81E+06          |
| L1   | -4.25E+06         | 4.25E+06          | -4.25E+06         | 4.24E+06          |
| L3   | -1.02E+06         | 1.46E+06          | -1.01E+06         | 1.39E+06          |
| L4   | -1.02E+06         | 1.46E+06          | -1.01E+06         | 1.39E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-697. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1393. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

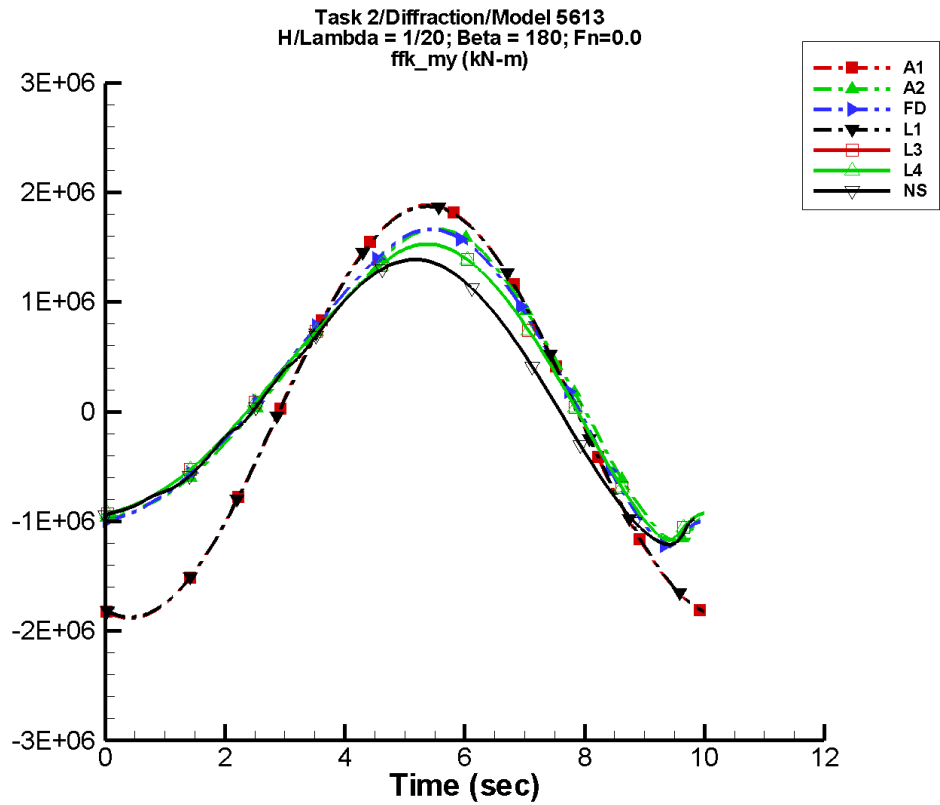
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 589.            | 6.26E+05        | -109              | 788.            | -164              |
| A2   | 3.72E+04        | 5.67E+05        | -108              | 4.34E+04        | -57               |
| FD   | 3.76E+04        | 5.65E+05        | -108              | 3.71E+04        | -58               |
| L1   | 378.            | 6.25E+05        | -109              | 552.            | -80               |
| L3   | 3.28E+04        | 5.60E+05        | -104              | 3.54E+04        | -56               |
| L4   | 3.28E+04        | 5.60E+05        | -104              | 3.54E+04        | -56               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.19E+03        | 5.30E+05        | -95               | 6.56E+03        | -7                |

Table G-1394. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.26E+05         | 6.26E+05          | -6.20E+05         | 6.20E+05          |
| A2   | -5.73E+05         | 6.00E+05          | -5.70E+05         | 5.95E+05          |
| FD   | -5.67E+05         | 6.02E+05          | -5.67E+05         | 5.96E+05          |
| L1   | -6.25E+05         | 6.25E+05          | -6.22E+05         | 6.22E+05          |
| L3   | -5.72E+05         | 5.90E+05          | -5.72E+05         | 5.87E+05          |
| L4   | -5.72E+05         | 5.90E+05          | -5.72E+05         | 5.87E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.31E+05         | 5.32E+05          | -5.32E+05         | 5.27E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-698. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

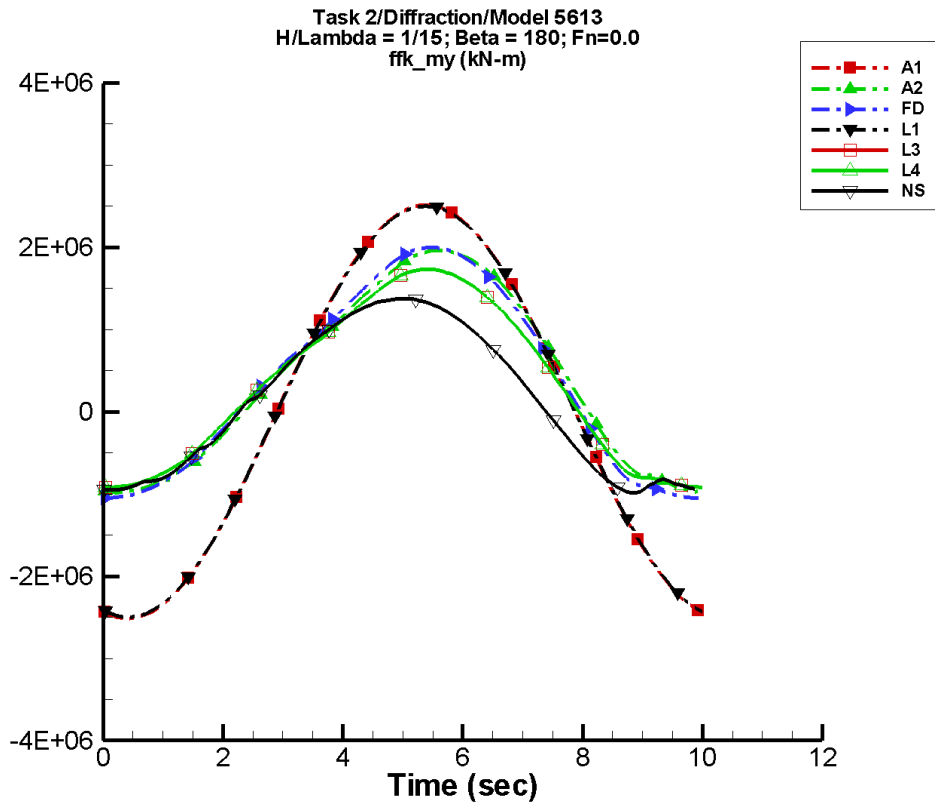
Table G-1395. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.77E+03        | 1.88E+06        | -109              | 2.37E+03        | -164              |
| A2   | 2.58E+05        | 1.32E+06        | -105              | 1.71E+05        | -10               |
| FD   | 2.53E+05        | 1.34E+06        | -106              | 1.71E+05        | -16               |
| L1   | 1.13E+03        | 1.87E+06        | -109              | 1.65E+03        | -80               |
| L3   | 2.25E+05        | 1.24E+06        | -101              | 1.51E+05        | -9                |
| L4   | 2.25E+05        | 1.24E+06        | -101              | 1.51E+05        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.14E+05        | 1.21E+06        | -91               | 1.48E+05        | 22                |

Table G-1396. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.88E+06         | 1.88E+06          | -1.86E+06         | 1.86E+06          |
| A2   | -1.18E+06         | 1.67E+06          | -1.11E+06         | 1.65E+06          |
| FD   | -1.23E+06         | 1.67E+06          | -1.14E+06         | 1.65E+06          |
| L1   | -1.87E+06         | 1.87E+06          | -1.87E+06         | 1.87E+06          |
| L3   | -1.17E+06         | 1.53E+06          | -1.13E+06         | 1.52E+06          |
| L4   | -1.17E+06         | 1.53E+06          | -1.13E+06         | 1.52E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.21E+06         | 1.39E+06          | -1.15E+06         | 1.37E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-699. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

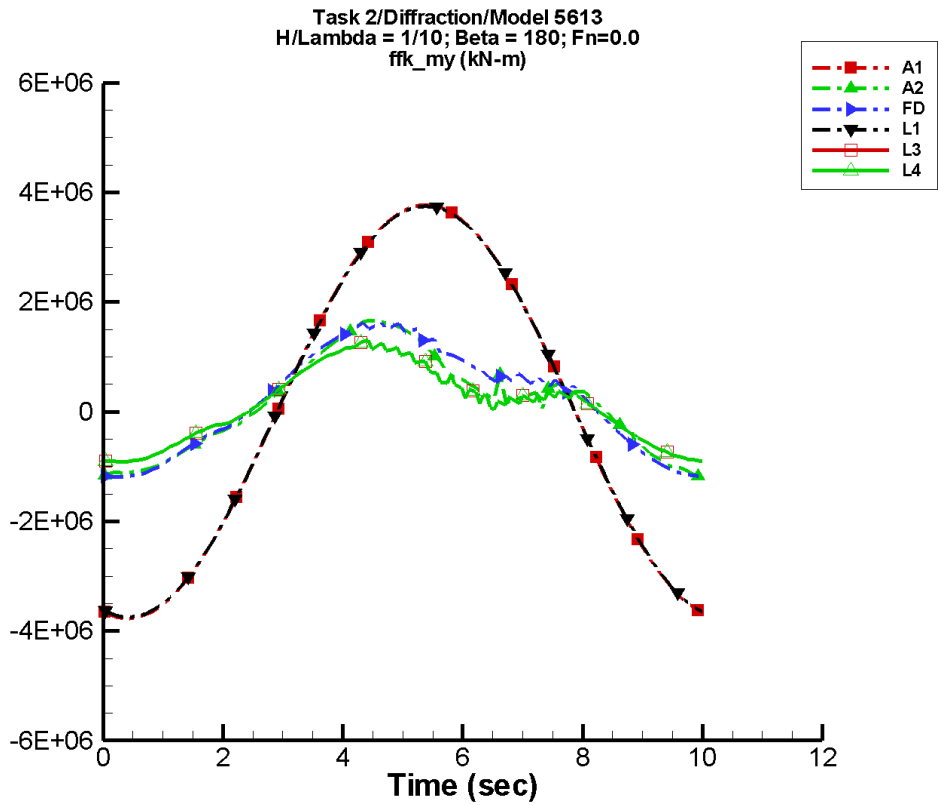
Table G-1397. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.36E+03        | 2.51E+06        | -109              | 3.16E+03        | -164              |
| A2   | 3.93E+05        | 1.46E+06        | -108              | 1.58E+05        | -9                |
| FD   | 3.77E+05        | 1.52E+06        | -107              | 1.79E+05        | -16               |
| L1   | 1.51E+03        | 2.50E+06        | -109              | 2.21E+03        | -80               |
| L3   | 3.26E+05        | 1.32E+06        | -102              | 1.40E+05        | -9                |
| L4   | 3.26E+05        | 1.32E+06        | -102              | 1.40E+05        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.09E+05        | 1.20E+06        | -86               | 1.06E+05        | 67                |

Table G-1398. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.51E+06         | 2.51E+06          | -2.49E+06         | 2.49E+06          |
| A2   | -9.86E+05         | 1.96E+06          | -9.80E+05         | 1.94E+06          |
| FD   | -1.05E+06         | 2.00E+06          | -1.05E+06         | 1.98E+06          |
| L1   | -2.50E+06         | 2.50E+06          | -2.49E+06         | 2.49E+06          |
| L3   | -9.20E+05         | 1.73E+06          | -9.21E+05         | 1.73E+06          |
| L4   | -9.20E+05         | 1.73E+06          | -9.21E+05         | 1.73E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.89E+05         | 1.38E+06          | -9.52E+05         | 1.37E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-700. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

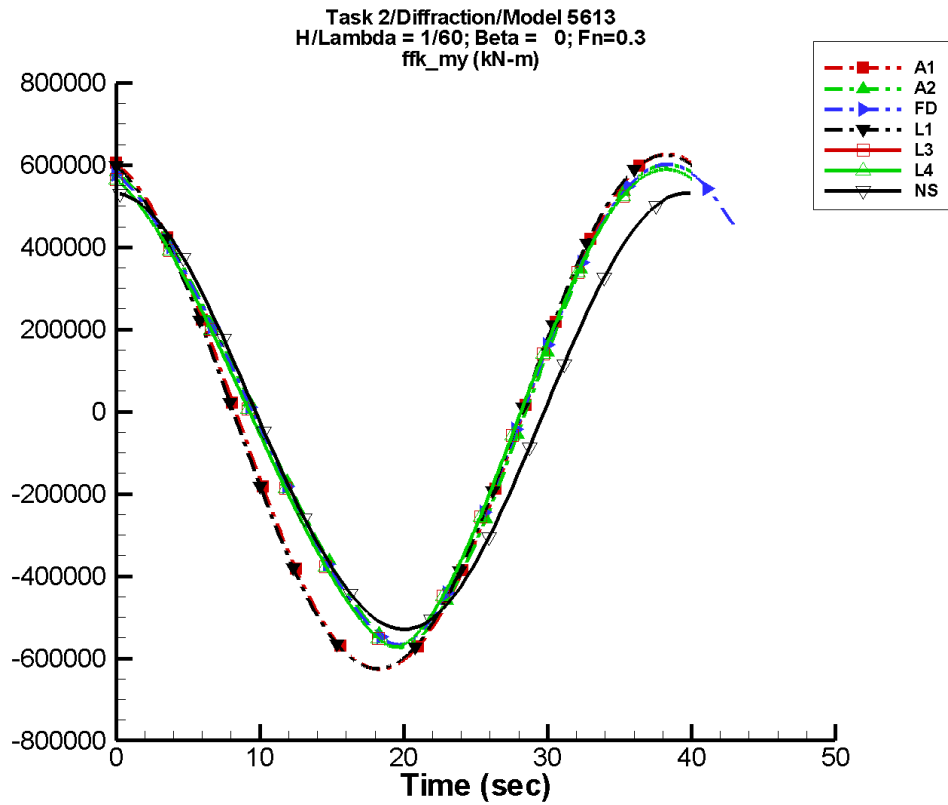
Table G-1399. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.55E+03        | 3.77E+06        | -109              | 4.74E+03        | -164              |
| A2   | 1.66E+05        | 1.13E+06        | -96               | 2.85E+05        | 174               |
| FD   | 2.19E+05        | 1.25E+06        | -102              | 2.09E+05        | 176               |
| L1   | 2.27E+03        | 3.75E+06        | -109              | 3.31E+03        | -80               |
| L3   | 1.29E+05        | 8.65E+05        | -93               | 2.68E+05        | 178               |
| L4   | 1.29E+05        | 8.65E+05        | -93               | 2.68E+05        | 178               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1400. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.77E+06         | 3.77E+06          | -3.73E+06         | 3.73E+06          |
| A2   | -1.17E+06         | 1.66E+06          | -1.15E+06         | 1.61E+06          |
| FD   | -1.19E+06         | 1.67E+06          | -1.19E+06         | 1.59E+06          |
| L1   | -3.75E+06         | 3.75E+06          | -3.73E+06         | 3.73E+06          |
| L3   | -9.14E+05         | 1.31E+06          | -9.05E+05         | 1.23E+06          |
| L4   | -9.14E+05         | 1.31E+06          | -9.05E+05         | 1.23E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-701. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1401. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

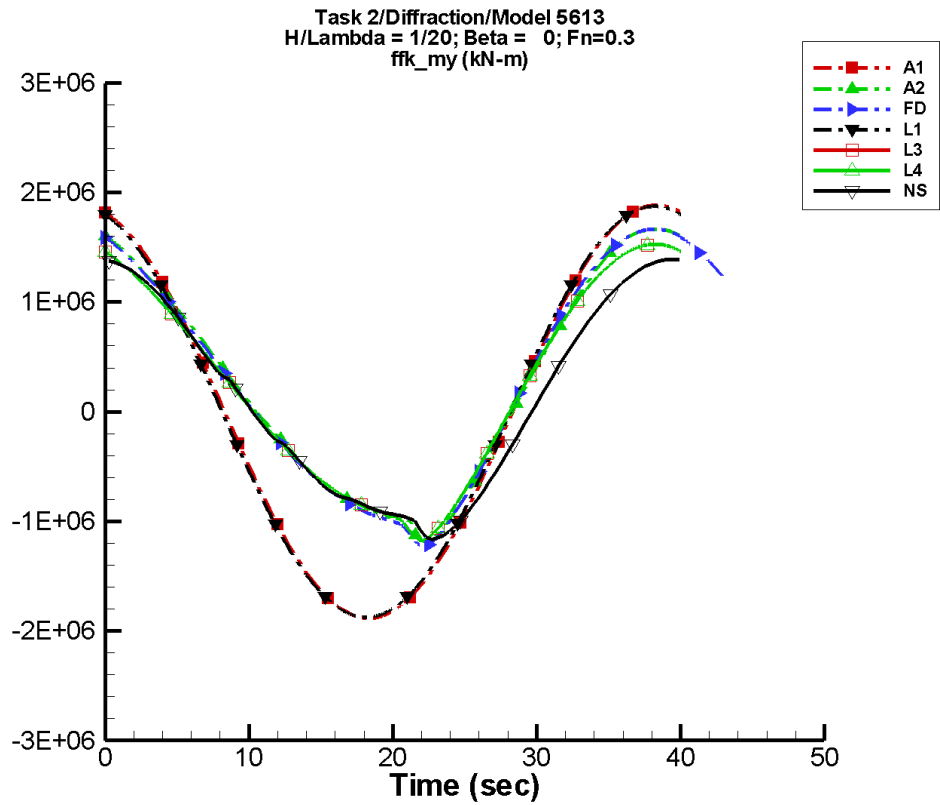
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -11.0           | 6.26E+05        | 105               | 17.6            | 30                |
| A2   | 3.66E+04        | 5.67E+05        | 99                | 4.09E+04        | -145              |
| FD   | 3.81E+04        | 5.65E+05        | 99                | 3.82E+04        | -141              |
| L1   | -477.           | 6.25E+05        | 105               | 591.            | 155               |
| L3   | 3.29E+04        | 5.60E+05        | 100               | 3.65E+04        | -131              |
| L4   | 3.29E+04        | 5.60E+05        | 100               | 3.65E+04        | -131              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 653.            | 5.30E+05        | 92                | 5.88E+03        | 165               |

Table G-1402. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.26E+05         | 6.26E+05          | -6.26E+05         | 6.26E+05          |
| A2   | -5.73E+05         | 6.00E+05          | -5.72E+05         | 6.00E+05          |
| FD   | -5.67E+05         | 6.02E+05          | -5.68E+05         | 6.01E+05          |
| L1   | -6.25E+05         | 6.25E+05          | -6.25E+05         | 6.25E+05          |
| L3   | -5.72E+05         | 5.90E+05          | -5.72E+05         | 5.90E+05          |
| L4   | -5.72E+05         | 5.90E+05          | -5.72E+05         | 5.90E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.30E+05         | 5.32E+05          | -5.24E+05         | 5.29E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-702. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

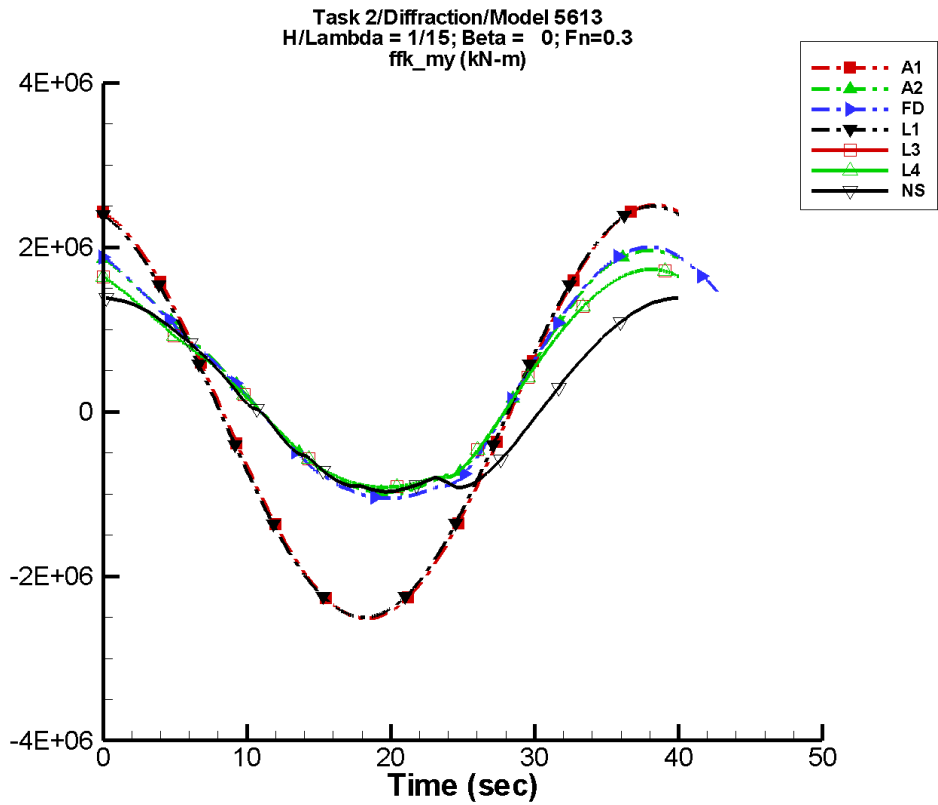
Table G-1403. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -33.4           | 1.88E+06        | 105               | 53.1            | 30                |
| A2   | 2.56E+05        | 1.33E+06        | 96                | 1.70E+05        | 175               |
| FD   | 2.51E+05        | 1.35E+06        | 96                | 1.76E+05        | 176               |
| L1   | -1.43E+03       | 1.87E+06        | 105               | 1.77E+03        | 155               |
| L3   | 2.21E+05        | 1.26E+06        | 96                | 1.66E+05        | -178              |
| L4   | 2.21E+05        | 1.26E+06        | 96                | 1.66E+05        | -178              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.11E+05        | 1.21E+06        | 89                | 1.41E+05        | 148               |

Table G-1404. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.88E+06         | 1.88E+06          | -1.88E+06         | 1.88E+06          |
| A2   | -1.18E+06         | 1.67E+06          | -1.18E+06         | 1.66E+06          |
| FD   | -1.23E+06         | 1.67E+06          | -1.22E+06         | 1.67E+06          |
| L1   | -1.87E+06         | 1.87E+06          | -1.87E+06         | 1.87E+06          |
| L3   | -1.17E+06         | 1.53E+06          | -1.17E+06         | 1.53E+06          |
| L4   | -1.17E+06         | 1.53E+06          | -1.17E+06         | 1.53E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.17E+06         | 1.39E+06          | -1.10E+06         | 1.38E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-703. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

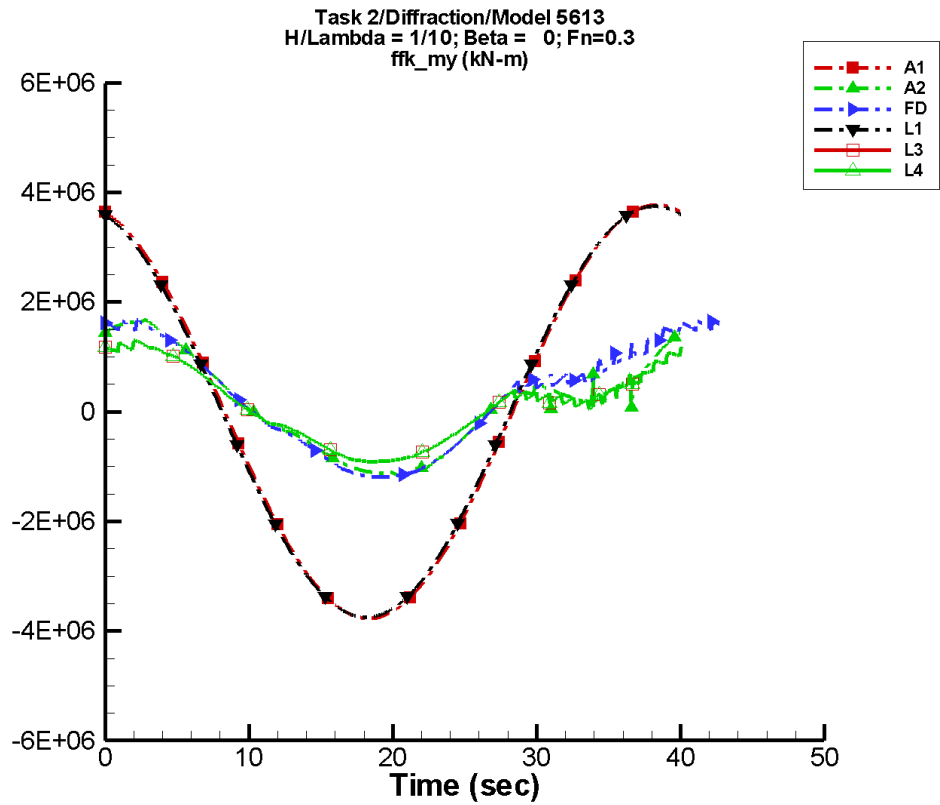
Table G-1405. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -44.5           | 2.51E+06        | 105               | 71.1            | 30                |
| A2   | 3.94E+05        | 1.46E+06        | 99                | 1.68E+05        | 176               |
| FD   | 3.74E+05        | 1.51E+06        | 97                | 1.77E+05        | 178               |
| L1   | -1.91E+03       | 2.50E+06        | 105               | 2.36E+03        | 155               |
| L3   | 3.22E+05        | 1.31E+06        | 97                | 1.41E+05        | 177               |
| L4   | 3.22E+05        | 1.31E+06        | 97                | 1.41E+05        | 177               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.10E+05        | 1.20E+06        | 85                | 9.97E+04        | 107               |

Table G-1406. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.51E+06         | 2.51E+06          | -2.51E+06         | 2.51E+06          |
| A2   | -1.00E+06         | 1.96E+06          | -9.82E+05         | 1.96E+06          |
| FD   | -1.05E+06         | 2.00E+06          | -1.05E+06         | 2.00E+06          |
| L1   | -2.50E+06         | 2.50E+06          | -2.50E+06         | 2.50E+06          |
| L3   | -9.20E+05         | 1.73E+06          | -9.20E+05         | 1.73E+06          |
| L4   | -9.20E+05         | 1.73E+06          | -9.20E+05         | 1.73E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.72E+05         | 1.38E+06          | -9.59E+05         | 1.38E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-704. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

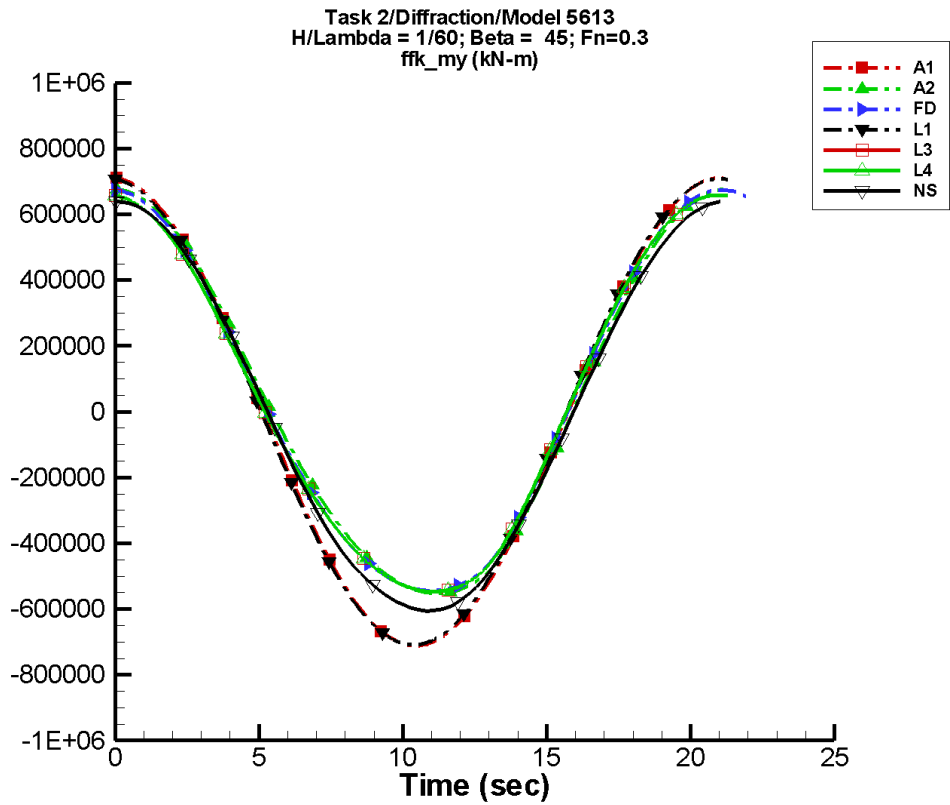
Table G-1407. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -66.2           | 3.77E+06        | 105               | 106.            | 30                |
| A2   | 1.51E+05        | 1.15E+06        | 89                | 3.13E+05        | 0                 |
| FD   | 2.25E+05        | 1.27E+06        | 93                | 1.82E+05        | -15               |
| L1   | -2.86E+03       | 3.75E+06        | 105               | 3.54E+03        | 155               |
| L3   | 1.31E+05        | 8.99E+05        | 90                | 2.35E+05        | -13               |
| L4   | 1.31E+05        | 8.99E+05        | 90                | 2.35E+05        | -13               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1408. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.77E+06         | 3.77E+06          | -3.77E+06         | 3.77E+06          |
| A2   | -1.17E+06         | 1.67E+06          | -1.16E+06         | 1.66E+06          |
| FD   | -1.19E+06         | 1.67E+06          | -1.19E+06         | 1.60E+06          |
| L1   | -3.75E+06         | 3.75E+06          | -3.75E+06         | 3.75E+06          |
| L3   | -9.14E+05         | 1.31E+06          | -9.13E+05         | 1.29E+06          |
| L4   | -9.14E+05         | 1.31E+06          | -9.13E+05         | 1.29E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-705. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1409. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

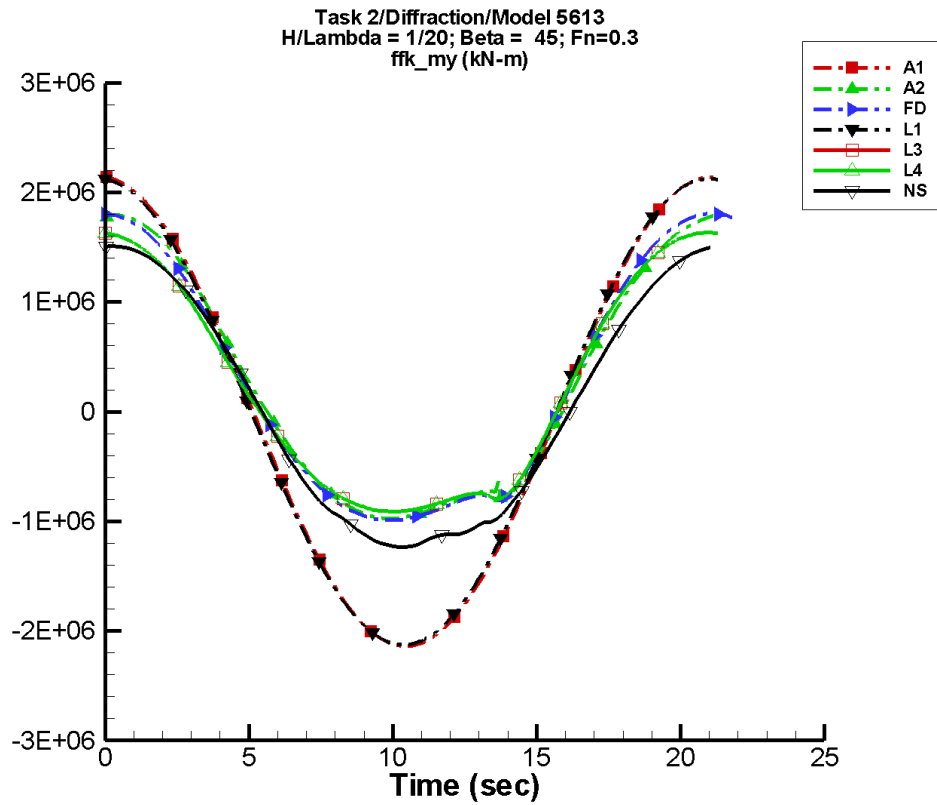
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 167.            | 7.12E+05        | 94                | 249.            | -156              |
| A2   | 3.72E+04        | 6.20E+05        | 90                | 3.41E+04        | 133               |
| FD   | 3.81E+04        | 6.18E+05        | 96                | 3.35E+04        | 137               |
| L1   | 90.2            | 7.09E+05        | 94                | 140.            | -167              |
| L3   | 3.33E+04        | 6.11E+05        | 92                | 3.51E+04        | 143               |
| L4   | 3.33E+04        | 6.11E+05        | 92                | 3.51E+04        | 143               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 6.23E+03        | 6.28E+05        | 90                | 1.17E+04        | 116               |

Table G-1410. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.12E+05         | 7.12E+05          | -7.10E+05         | 7.11E+05          |
| A2   | -5.52E+05         | 6.76E+05          | -5.51E+05         | 6.76E+05          |
| FD   | -5.44E+05         | 6.74E+05          | -5.43E+05         | 6.74E+05          |
| L1   | -7.09E+05         | 7.09E+05          | -7.08E+05         | 7.08E+05          |
| L3   | -5.47E+05         | 6.59E+05          | -5.46E+05         | 6.58E+05          |
| L4   | -5.47E+05         | 6.59E+05          | -5.46E+05         | 6.58E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.05E+05         | 6.40E+05          | -6.00E+05         | 6.41E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-706. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

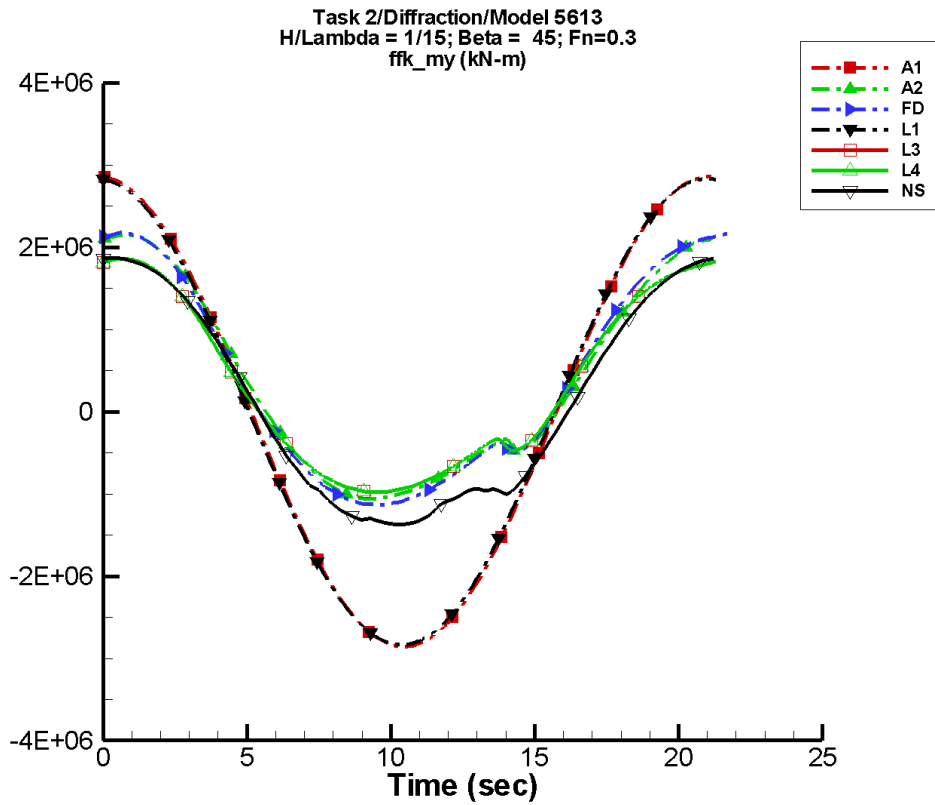
Table G–1411. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 503.            | 2.14E+06        | 94                | 748.            | -156              |
| A2   | 2.56E+05        | 1.41E+06        | 89                | 1.76E+05        | 85                |
| FD   | 2.48E+05        | 1.44E+06        | 96                | 1.79E+05        | 107               |
| L1   | 271.            | 2.13E+06        | 94                | 419.            | -167              |
| L3   | 2.20E+05        | 1.32E+06        | 92                | 1.61E+05        | 109               |
| L4   | 2.20E+05        | 1.32E+06        | 92                | 1.61E+05        | 109               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 5.84E+04        | 1.40E+06        | 87                | 8.46E+04        | 76                |

Table G–1412. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.14E+06         | 2.14E+06          | -2.14E+06         | 2.14E+06          |
| A2   | -9.76E+05         | 1.80E+06          | -9.73E+05         | 1.79E+06          |
| FD   | -9.89E+05         | 1.81E+06          | -9.87E+05         | 1.80E+06          |
| L1   | -2.13E+06         | 2.13E+06          | -2.12E+06         | 2.12E+06          |
| L3   | -9.09E+05         | 1.63E+06          | -9.09E+05         | 1.63E+06          |
| L4   | -9.09E+05         | 1.63E+06          | -9.09E+05         | 1.63E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.23E+06         | 1.51E+06          | -1.22E+06         | 1.52E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-707. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

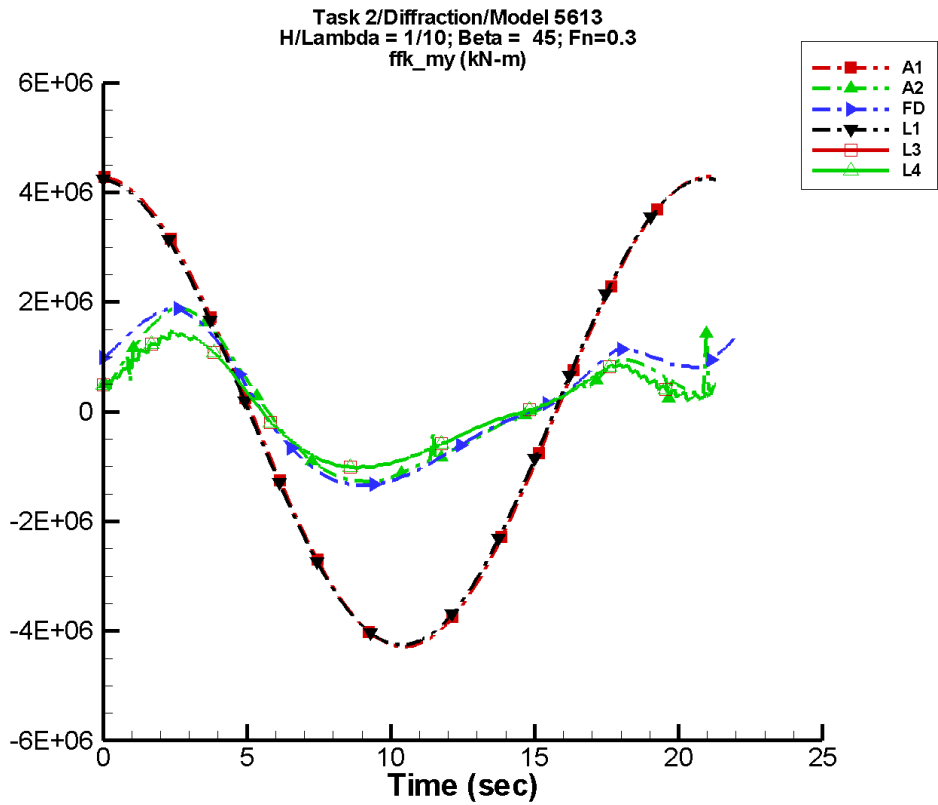
Table G-1413. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 672.            | 2.86E+06        | 94                | 999.            | -156              |
| A2   | 3.93E+05        | 1.58E+06        | 91                | 2.73E+05        | 56                |
| FD   | 3.77E+05        | 1.64E+06        | 97                | 2.53E+05        | 70                |
| L1   | 361.            | 2.83E+06        | 94                | 559.            | -167              |
| L3   | 3.25E+05        | 1.43E+06        | 93                | 2.06E+05        | 62                |
| L4   | 3.25E+05        | 1.43E+06        | 93                | 2.06E+05        | 62                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.31E+05        | 1.64E+06        | 87                | 1.71E+05        | 62                |

Table G-1414. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.86E+06         | 2.86E+06          | -2.85E+06         | 2.85E+06          |
| A2   | -1.06E+06         | 2.15E+06          | -1.06E+06         | 2.14E+06          |
| FD   | -1.13E+06         | 2.18E+06          | -1.13E+06         | 2.17E+06          |
| L1   | -2.83E+06         | 2.83E+06          | -2.83E+06         | 2.83E+06          |
| L3   | -9.76E+05         | 1.86E+06          | -9.74E+05         | 1.86E+06          |
| L4   | -9.76E+05         | 1.86E+06          | -9.74E+05         | 1.86E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.37E+06         | 1.87E+06          | -1.36E+06         | 1.88E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-708. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

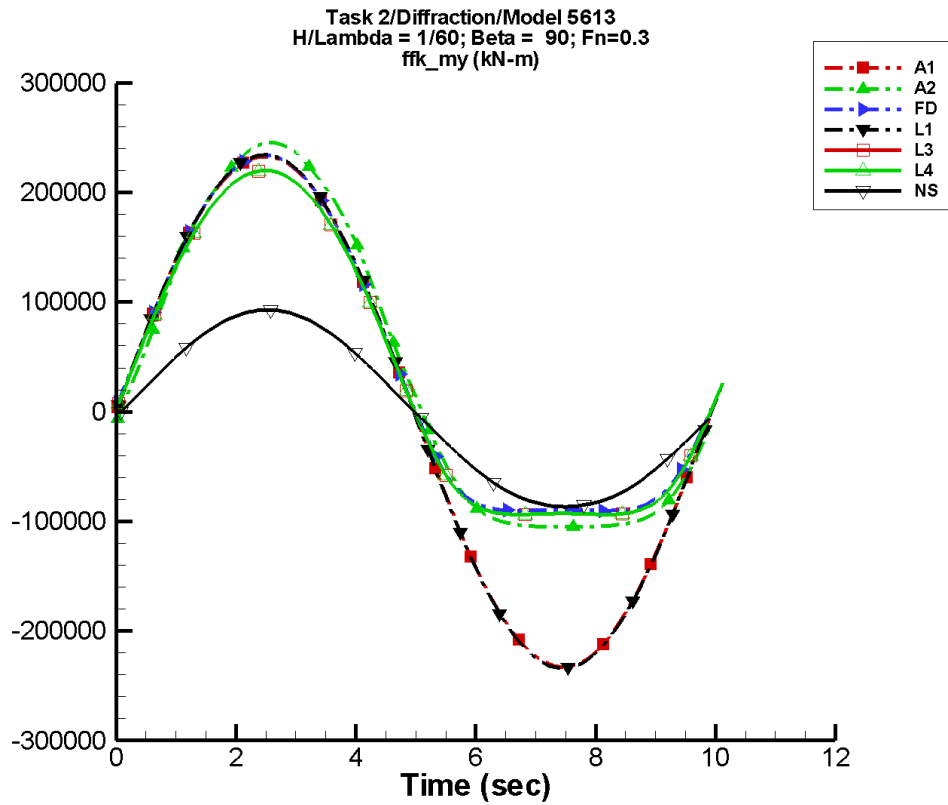
Table G–1415. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.01E+03        | 4.29E+06        | 94                | 1.50E+03        | -156              |
| A2   | 1.61E+05        | 1.15E+06        | 87                | 5.81E+05        | -30               |
| FD   | 2.10E+05        | 1.35E+06        | 97                | 4.97E+05        | -10               |
| L1   | 541.            | 4.25E+06        | 94                | 839.            | -167              |
| L3   | 1.23E+05        | 9.05E+05        | 91                | 4.60E+05        | -30               |
| L4   | 1.23E+05        | 9.05E+05        | 91                | 4.60E+05        | -30               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1416. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.29E+06         | 4.29E+06          | -4.28E+06         | 4.28E+06          |
| A2   | -1.27E+06         | 1.89E+06          | -1.27E+06         | 1.87E+06          |
| FD   | -1.34E+06         | 1.89E+06          | -1.34E+06         | 1.86E+06          |
| L1   | -4.25E+06         | 4.25E+06          | -4.25E+06         | 4.25E+06          |
| L3   | -1.02E+06         | 1.47E+06          | -1.01E+06         | 1.41E+06          |
| L4   | -1.02E+06         | 1.47E+06          | -1.01E+06         | 1.41E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-709. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1417. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

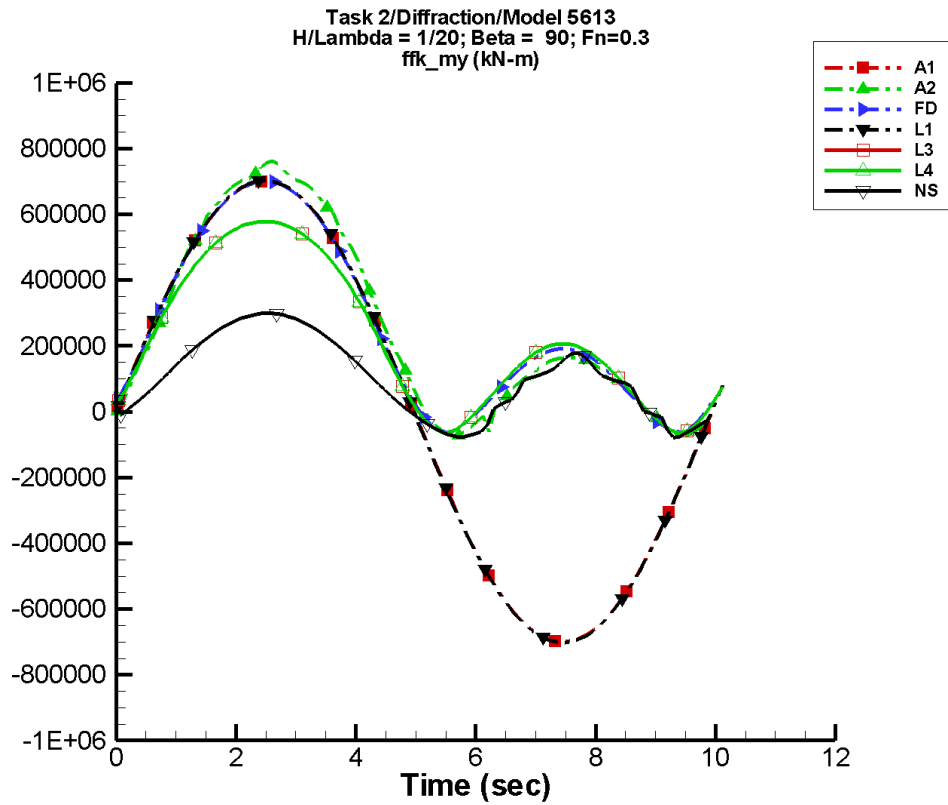
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -147.           | 2.33E+05        | -4                | 223.            | -25               |
| A2   | 3.70E+04        | 1.83E+05        | -8                | 3.34E+04        | -104              |
| FD   | 3.89E+04        | 1.70E+05        | -7                | 3.40E+04        | -107              |
| L1   | -96.8           | 2.34E+05        | -4                | 154.            | -37               |
| L3   | 3.29E+04        | 1.65E+05        | -4                | 2.92E+04        | -96               |
| L4   | 3.29E+04        | 1.65E+05        | -4                | 2.92E+04        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 254.            | 8.97E+04        | -2                | 2.53E+03        | -94               |

Table G-1418. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.33E+05         | 2.33E+05          | -2.30E+05         | 2.30E+05          |
| A2   | -1.05E+05         | 2.45E+05          | -1.05E+05         | 2.43E+05          |
| FD   | -9.03E+04         | 2.34E+05          | -9.01E+04         | 2.32E+05          |
| L1   | -2.34E+05         | 2.34E+05          | -2.33E+05         | 2.33E+05          |
| L3   | -9.38E+04         | 2.20E+05          | -9.37E+04         | 2.19E+05          |
| L4   | -9.38E+04         | 2.20E+05          | -9.37E+04         | 2.19E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.66E+04         | 9.28E+04          | -8.59E+04         | 9.20E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-710. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

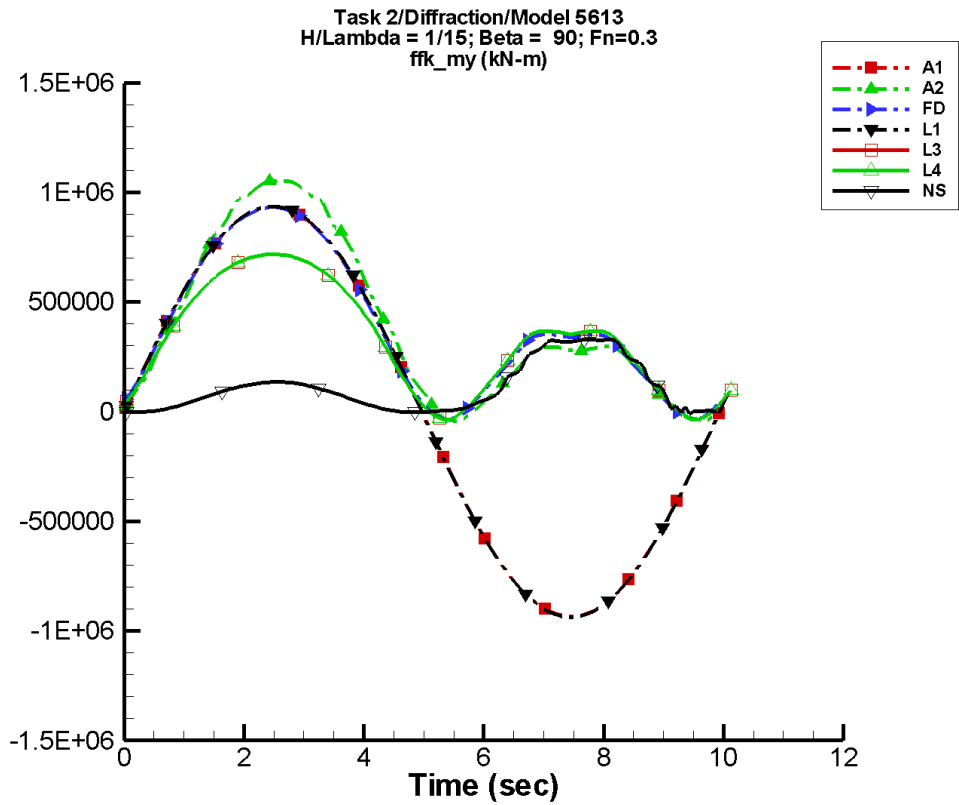
Table G-1419. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -443.           | 7.00E+05        | -4                | 670.            | -25               |
| A2   | 2.56E+05        | 3.31E+05        | -7                | 2.09E+05        | -105              |
| FD   | 2.51E+05        | 2.91E+05        | -7                | 2.04E+05        | -107              |
| L1   | -290.           | 7.03E+05        | -4                | 462.            | -37               |
| L3   | 2.19E+05        | 2.28E+05        | -2                | 1.75E+05        | -96               |
| L4   | 2.19E+05        | 2.28E+05        | -2                | 1.75E+05        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.01E+05        | 1.02E+05        | 4                 | 1.21E+05        | -98               |

Table G-1420. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.00E+05         | 7.00E+05          | -6.93E+05         | 6.92E+05          |
| A2   | -7.26E+04         | 7.60E+05          | -5.76E+04         | 7.36E+05          |
| FD   | -6.25E+04         | 7.01E+05          | -4.61E+04         | 6.94E+05          |
| L1   | -7.02E+05         | 7.02E+05          | -7.00E+05         | 7.00E+05          |
| L3   | -6.40E+04         | 5.78E+05          | -5.72E+04         | 5.77E+05          |
| L4   | -6.40E+04         | 5.78E+05          | -5.72E+04         | 5.77E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.97E+04         | 2.99E+05          | -6.80E+04         | 2.95E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-711. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

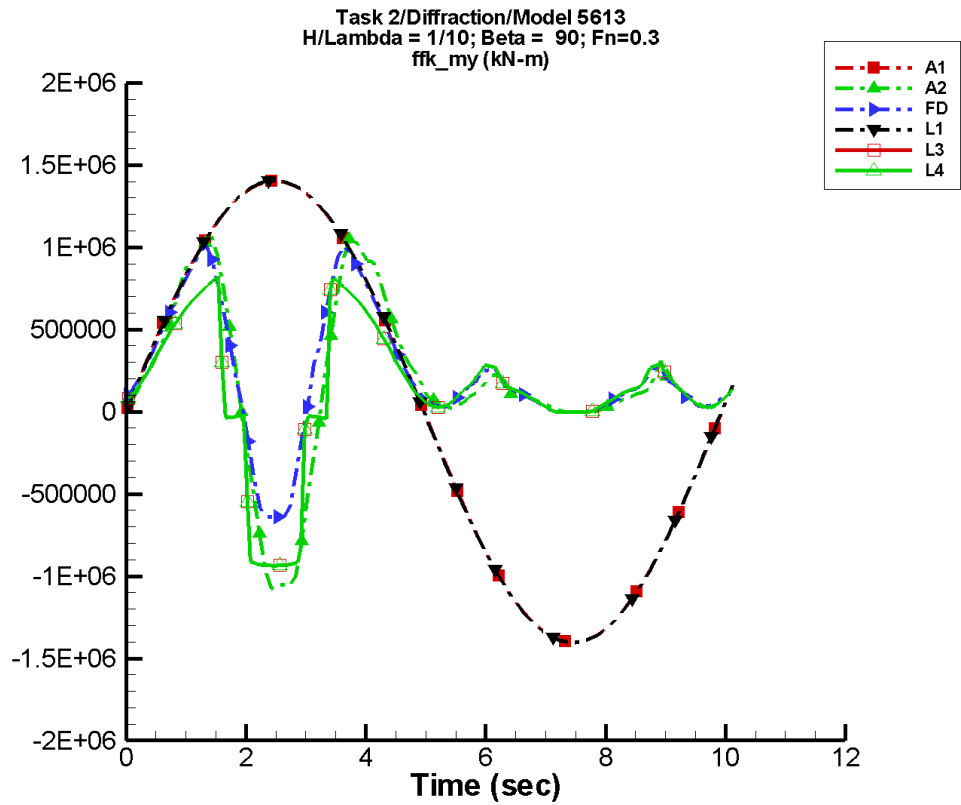
Table G-1421. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -591.           | 9.34E+05        | -4                | 895.            | -25               |
| A2   | 3.94E+05        | 3.97E+05        | -7                | 3.17E+05        | -105              |
| FD   | 3.79E+05        | 3.18E+05        | -7                | 2.95E+05        | -106              |
| L1   | -387.           | 9.37E+05        | -4                | 616.            | -37               |
| L3   | 3.25E+05        | 2.10E+05        | -2                | 2.44E+05        | -96               |
| L4   | 3.25E+05        | 2.10E+05        | -2                | 2.44E+05        | -96               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.08E+05        | 7.99E+04        | 171               | 1.23E+05        | -98               |

Table G-1422. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.34E+05         | 9.34E+05          | -9.25E+05         | 9.25E+05          |
| A2   | -4.19E+04         | 1.05E+06          | -1.88E+04         | 1.04E+06          |
| FD   | -3.65E+04         | 9.31E+05          | -1.11E+04         | 9.22E+05          |
| L1   | -9.37E+05         | 9.37E+05          | -9.33E+05         | 9.33E+05          |
| L3   | -3.64E+04         | 7.18E+05          | -2.68E+04         | 7.16E+05          |
| L4   | -3.64E+04         | 7.18E+05          | -2.68E+04         | 7.16E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.90E+03         | 3.30E+05          | -627.             | 3.28E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-712. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

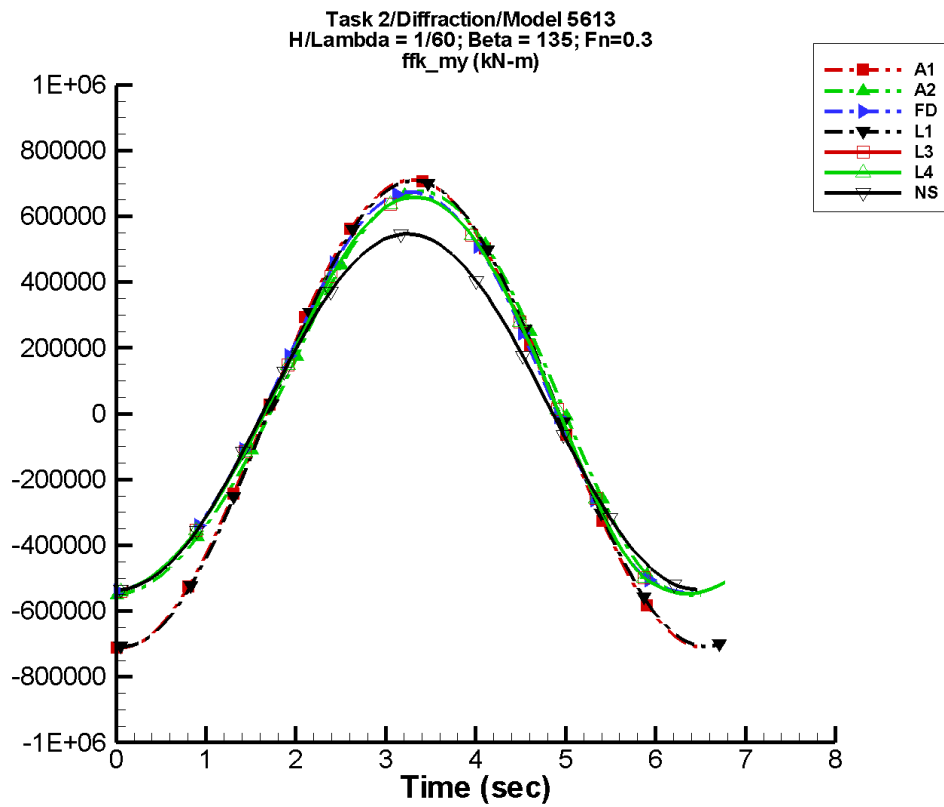
Table G-1423. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -886.           | 1.40E+06        | -4                | 1.34E+03        | -25               |
| A2   | 1.91E+05        | 8.13E+04        | 15                | 2.72E+05        | 58                |
| FD   | 2.27E+05        | 1.09E+05        | 5                 | 2.03E+05        | 77                |
| L1   | -581.           | 1.41E+06        | -4                | 924.            | -37               |
| L3   | 1.02E+05        | 1.00E+05        | 156               | 3.34E+05        | 69                |
| L4   | 1.02E+05        | 1.00E+05        | 156               | 3.34E+05        | 69                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1424. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.40E+06         | 1.40E+06          | -1.39E+06         | 1.39E+06          |
| A2   | -1.08E+06         | 1.07E+06          | -9.59E+05         | 9.15E+05          |
| FD   | -6.39E+05         | 1.01E+06          | -5.54E+05         | 8.56E+05          |
| L1   | -1.40E+06         | 1.40E+06          | -1.40E+06         | 1.40E+06          |
| L3   | -9.36E+05         | 8.25E+05          | -9.75E+05         | 7.27E+05          |
| L4   | -9.36E+05         | 8.25E+05          | -9.75E+05         | 7.27E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-713. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1425. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

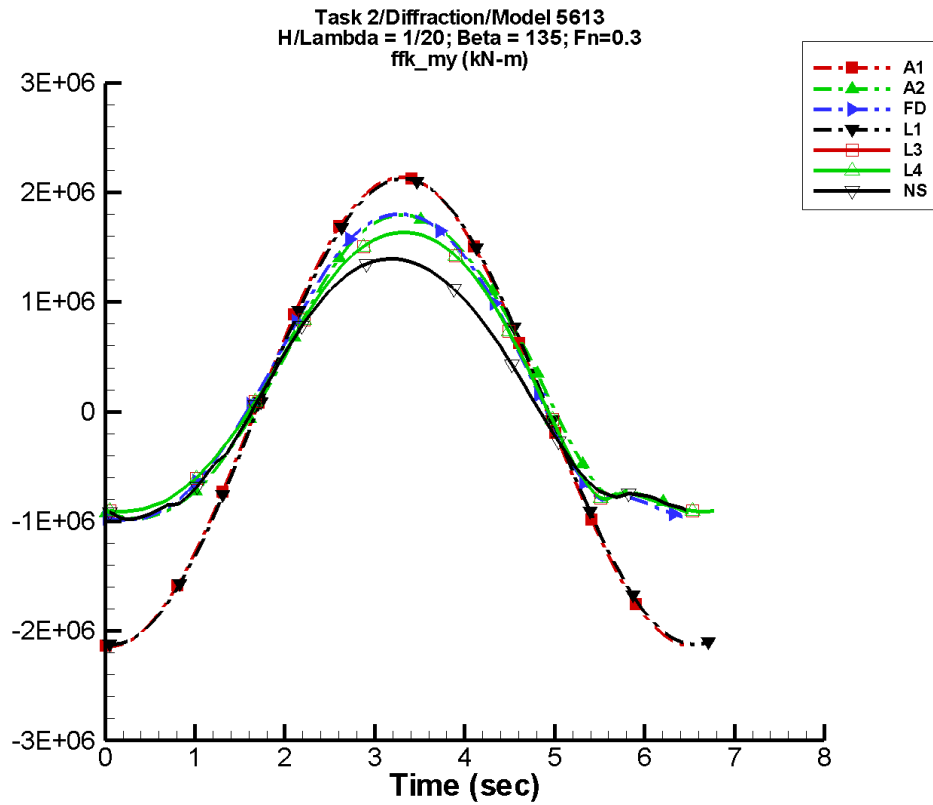
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 281.            | 7.12E+05        | -96               | 429.            | 179               |
| A2   | 3.71E+04        | 6.18E+05        | -98               | 3.61E+04        | 31                |
| FD   | 3.84E+04        | 6.16E+05        | -90               | 3.49E+04        | 54                |
| L1   | 37.4            | 7.08E+05        | -97               | 59.7            | 117               |
| L3   | 3.35E+04        | 6.10E+05        | -95               | 3.65E+04        | 35                |
| L4   | 3.35E+04        | 6.10E+05        | -95               | 3.65E+04        | 35                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 675.            | 5.44E+05        | -90               | 5.02E+03        | 103               |

Table G-1426. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.11E+05         | 7.11E+05          | -7.14E+05         | 6.95E+05          |
| A2   | -5.52E+05         | 6.76E+05          | -5.51E+05         | 6.59E+05          |
| FD   | -5.44E+05         | 6.74E+05          | -5.35E+05         | 6.58E+05          |
| L1   | -7.08E+05         | 7.08E+05          | -7.14E+05         | 7.02E+05          |
| L3   | -5.47E+05         | 6.59E+05          | -5.43E+05         | 6.53E+05          |
| L4   | -5.47E+05         | 6.59E+05          | -5.43E+05         | 6.53E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.35E+05         | 5.46E+05          | -5.35E+05         | 5.41E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-714. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

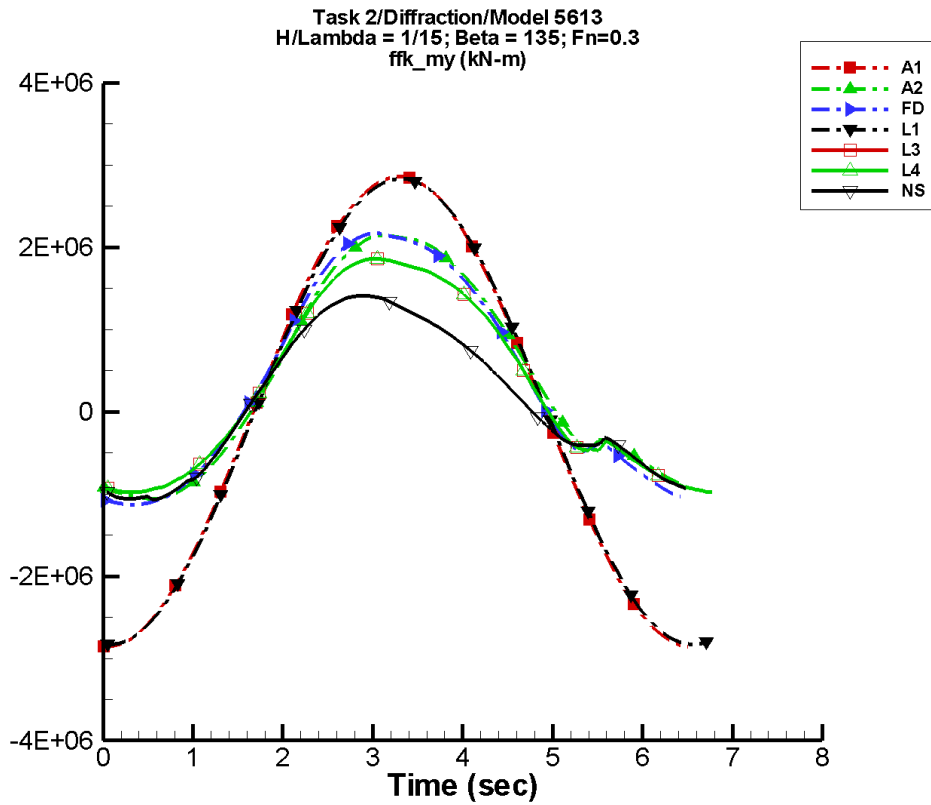
Table G-1427. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 844.            | 2.14E+06        | -96               | 1.29E+03        | 179               |
| A2   | 2.54E+05        | 1.42E+06        | -98               | 1.83E+05        | 78                |
| FD   | 2.46E+05        | 1.44E+06        | -90               | 1.85E+05        | 87                |
| L1   | 112.            | 2.13E+06        | -97               | 179.            | 117               |
| L3   | 2.20E+05        | 1.33E+06        | -95               | 1.65E+05        | 69                |
| L4   | 2.20E+05        | 1.33E+06        | -95               | 1.65E+05        | 69                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.06E+05        | 1.21E+06        | -90               | 1.47E+05        | 107               |

Table G-1428. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.14E+06         | 2.14E+06          | -2.15E+06         | 2.09E+06          |
| A2   | -9.76E+05         | 1.80E+06          | -9.56E+05         | 1.75E+06          |
| FD   | -9.89E+05         | 1.80E+06          | -9.87E+05         | 1.77E+06          |
| L1   | -2.13E+06         | 2.13E+06          | -2.14E+06         | 2.11E+06          |
| L3   | -9.09E+05         | 1.63E+06          | -9.20E+05         | 1.62E+06          |
| L4   | -9.09E+05         | 1.63E+06          | -9.20E+05         | 1.62E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.78E+05         | 1.39E+06          | -9.54E+05         | 1.38E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-715. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

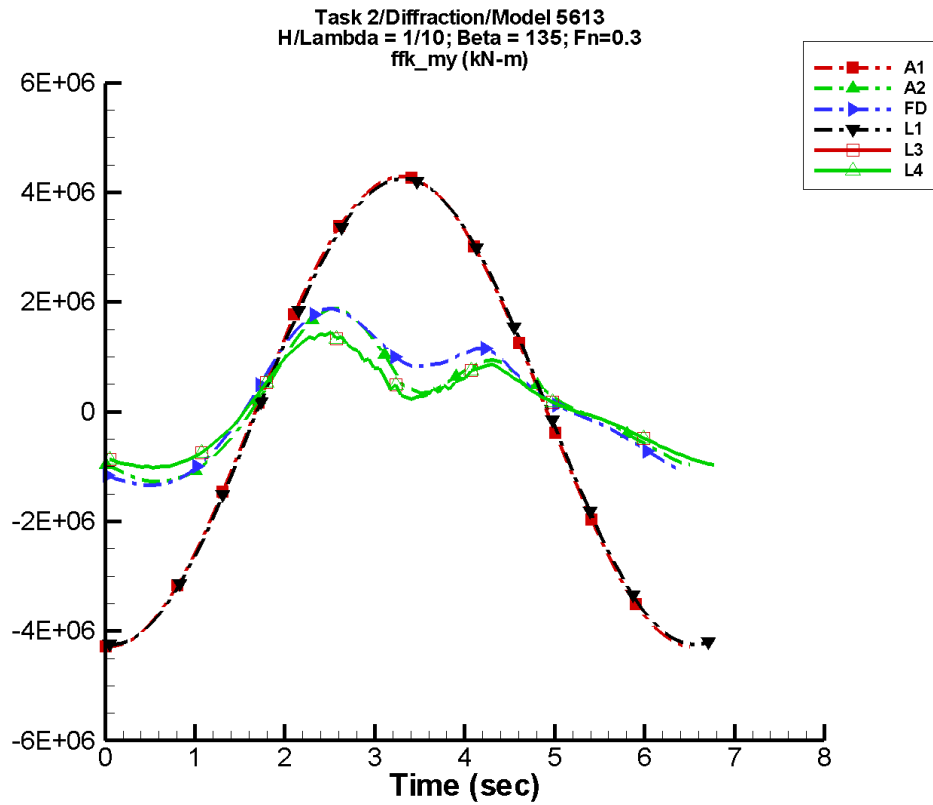
Table G-1429. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.13E+03        | 2.86E+06        | -96               | 1.72E+03        | 179               |
| A2   | 3.92E+05        | 1.59E+06        | -100              | 2.79E+05        | 106               |
| FD   | 3.75E+05        | 1.65E+06        | -91               | 2.51E+05        | 123               |
| L1   | 149.            | 2.83E+06        | -97               | 239.            | 117               |
| L3   | 3.25E+05        | 1.43E+06        | -96               | 2.09E+05        | 112               |
| L4   | 3.25E+05        | 1.43E+06        | -96               | 2.09E+05        | 112               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.08E+05        | 1.17E+06        | -89               | 2.59E+05        | 156               |

Table G-1430. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.86E+06         | 2.86E+06          | -2.87E+06         | 2.79E+06          |
| A2   | -1.06E+06         | 2.15E+06          | -1.02E+06         | 2.11E+06          |
| FD   | -1.13E+06         | 2.18E+06          | -1.10E+06         | 2.12E+06          |
| L1   | -2.83E+06         | 2.83E+06          | -2.86E+06         | 2.81E+06          |
| L3   | -9.76E+05         | 1.86E+06          | -9.67E+05         | 1.84E+06          |
| L4   | -9.76E+05         | 1.86E+06          | -9.67E+05         | 1.84E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.07E+06         | 1.41E+06          | -1.06E+06         | 1.40E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-716. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

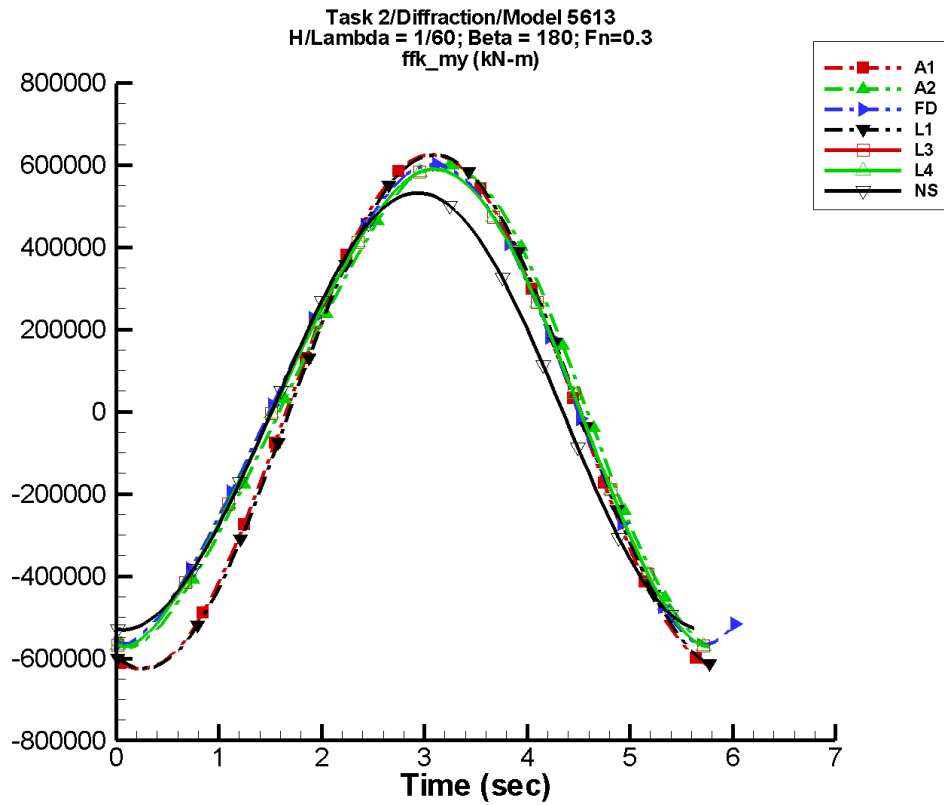
Table G-1431. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.69E+03        | 4.29E+06        | -96               | 2.58E+03        | 179               |
| A2   | 1.46E+05        | 1.13E+06        | -98               | 5.15E+05        | -173              |
| FD   | 2.17E+05        | 1.33E+06        | -91               | 4.44E+05        | -158              |
| L1   | 224.            | 4.25E+06        | -97               | 359.            | 118               |
| L3   | 1.30E+05        | 9.08E+05        | -95               | 4.38E+05        | -160              |
| L4   | 1.30E+05        | 9.08E+05        | -95               | 4.38E+05        | -160              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1432. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.28E+06         | 4.29E+06          | -4.30E+06         | 4.18E+06          |
| A2   | -1.27E+06         | 1.88E+06          | -1.22E+06         | 1.70E+06          |
| FD   | -1.34E+06         | 1.88E+06          | -1.29E+06         | 1.74E+06          |
| L1   | -4.25E+06         | 4.25E+06          | -4.28E+06         | 4.21E+06          |
| L3   | -1.02E+06         | 1.45E+06          | -1.00E+06         | 1.39E+06          |
| L4   | -1.02E+06         | 1.45E+06          | -1.00E+06         | 1.39E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-717. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1433. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

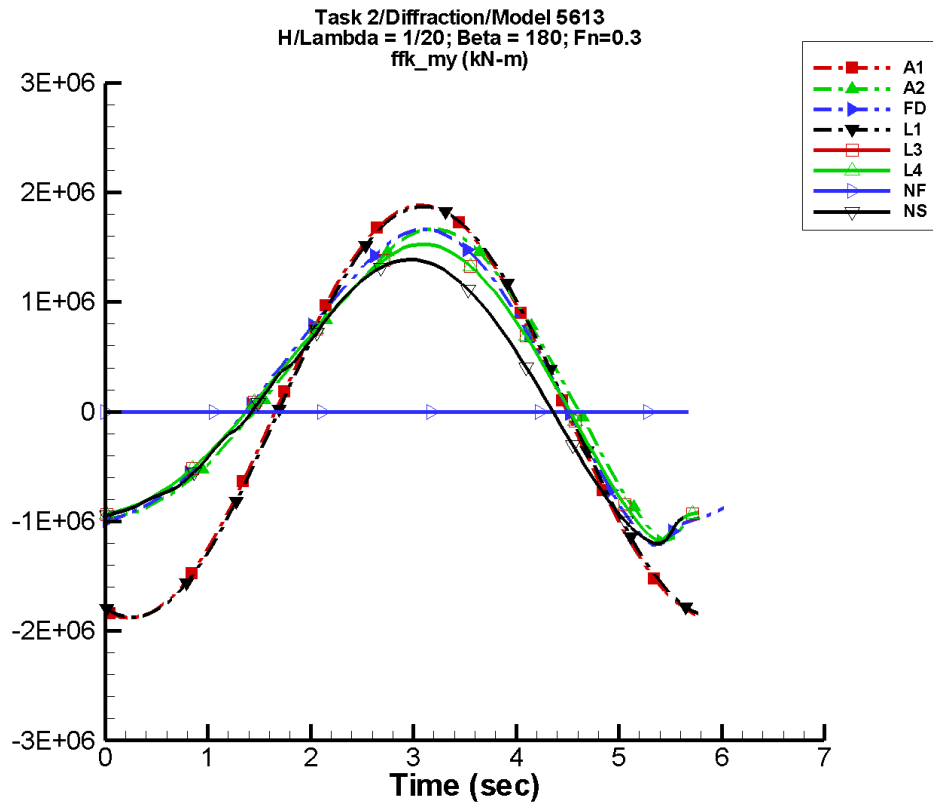
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 617.            | 6.26E+05        | -113              | 962.            | 150               |
| A2   | 3.70E+04        | 5.68E+05        | -114              | 4.29E+04        | -68               |
| FD   | 3.81E+04        | 5.66E+05        | -137              | 3.74E+04        | -120              |
| L1   | 967.            | 6.24E+05        | -121              | 1.08E+03        | -130              |
| L3   | 3.41E+04        | 5.59E+05        | -116              | 3.50E+04        | -81               |
| L4   | 3.41E+04        | 5.59E+05        | -116              | 3.50E+04        | -81               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.44E+03        | 5.30E+05        | -97               | 6.28E+03        | -10               |

Table G-1434. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.26E+05         | 6.26E+05          | -6.26E+05         | 6.06E+05          |
| A2   | -5.73E+05         | 6.00E+05          | -5.68E+05         | 5.83E+05          |
| FD   | -5.67E+05         | 6.01E+05          | -5.55E+05         | 5.82E+05          |
| L1   | -6.25E+05         | 6.25E+05          | -6.18E+05         | 6.18E+05          |
| L3   | -5.72E+05         | 5.90E+05          | -5.69E+05         | 5.83E+05          |
| L4   | -5.72E+05         | 5.90E+05          | -5.69E+05         | 5.83E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.31E+05         | 5.32E+05          | -5.32E+05         | 5.27E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-718. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

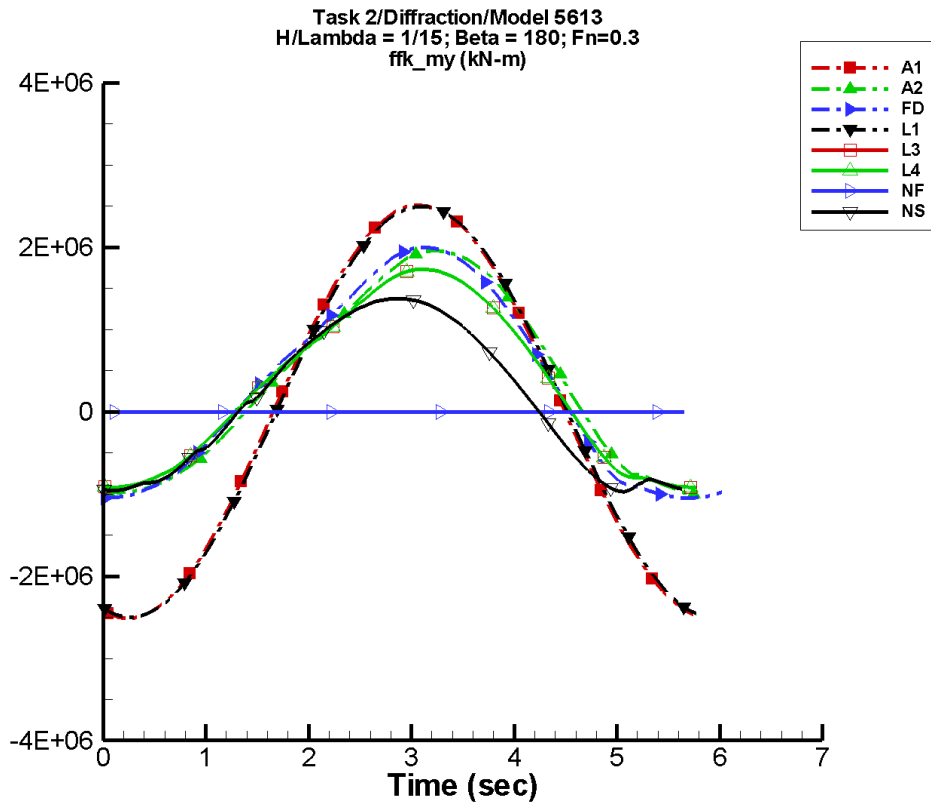
Table G-1435. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.85E+03        | 1.88E+06        | -113              | 2.89E+03        | 150               |
| A2   | 2.59E+05        | 1.32E+06        | -111              | 1.69E+05        | -21               |
| FD   | 2.55E+05        | 1.34E+06        | -134              | 1.81E+05        | -74               |
| L1   | 2.90E+03        | 1.87E+06        | -121              | 3.23E+03        | -130              |
| L3   | 2.27E+05        | 1.24E+06        | -112              | 1.50E+05        | -32               |
| L4   | 2.27E+05        | 1.24E+06        | -112              | 1.50E+05        | -32               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.14E+05        | 1.21E+06        | -93               | 1.46E+05        | 20                |

Table G-1436. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.88E+06         | 1.88E+06          | -1.88E+06         | 1.82E+06          |
| A2   | -1.18E+06         | 1.66E+06          | -1.04E+06         | 1.61E+06          |
| FD   | -1.22E+06         | 1.67E+06          | -1.07E+06         | 1.61E+06          |
| L1   | -1.87E+06         | 1.87E+06          | -1.85E+06         | 1.85E+06          |
| L3   | -1.17E+06         | 1.53E+06          | -1.08E+06         | 1.51E+06          |
| L4   | -1.17E+06         | 1.53E+06          | -1.08E+06         | 1.51E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.20E+06         | 1.39E+06          | -1.14E+06         | 1.37E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-719. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

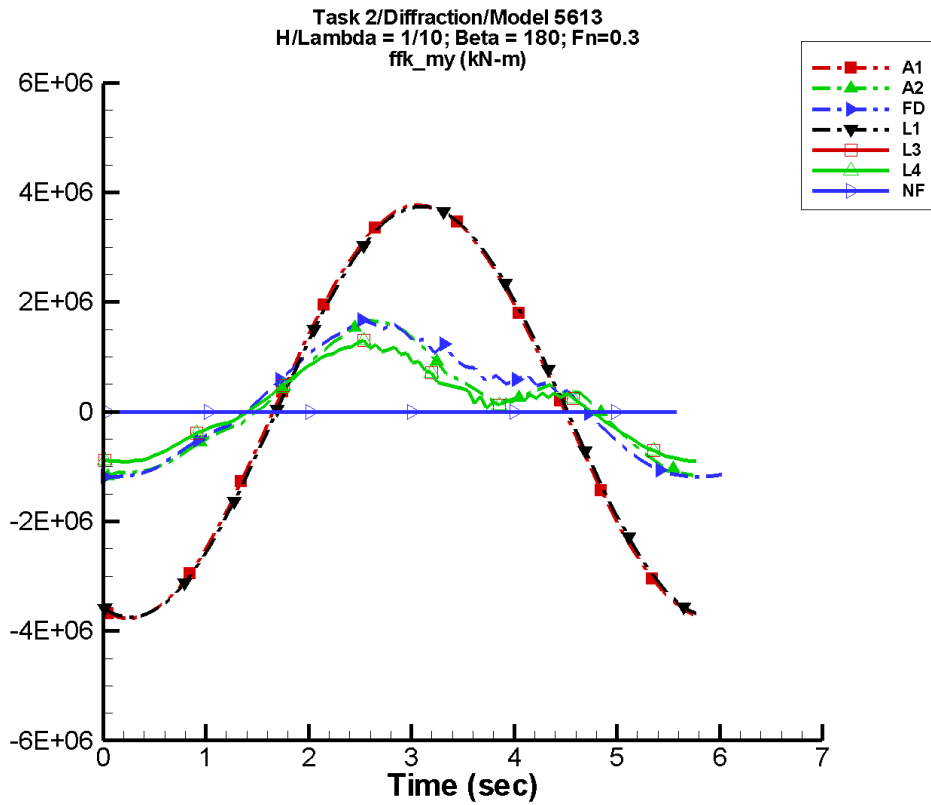
Table G-1437. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.48E+03        | 2.51E+06        | -113              | 3.86E+03        | 150               |
| A2   | 3.96E+05        | 1.46E+06        | -114              | 1.56E+05        | -23               |
| FD   | 3.79E+05        | 1.51E+06        | -136              | 1.82E+05        | -71               |
| L1   | 3.87E+03        | 2.50E+06        | -121              | 4.30E+03        | -130              |
| L3   | 3.24E+05        | 1.32E+06        | -113              | 1.45E+05        | -31               |
| L4   | 3.24E+05        | 1.32E+06        | -113              | 1.45E+05        | -31               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.09E+05        | 1.20E+06        | -88               | 1.04E+05        | 66                |

Table G-1438. Minimum and maximum of  $M_y^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.51E+06         | 2.51E+06          | -2.51E+06         | 2.43E+06          |
| A2   | -1.00E+06         | 1.96E+06          | -9.86E+05         | 1.90E+06          |
| FD   | -1.05E+06         | 2.00E+06          | -1.04E+06         | 1.93E+06          |
| L1   | -2.50E+06         | 2.50E+06          | -2.47E+06         | 2.47E+06          |
| L3   | -9.20E+05         | 1.73E+06          | -9.16E+05         | 1.71E+06          |
| L4   | -9.20E+05         | 1.73E+06          | -9.16E+05         | 1.71E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.72E+05         | 1.38E+06          | -9.57E+05         | 1.37E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-720. Time history of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

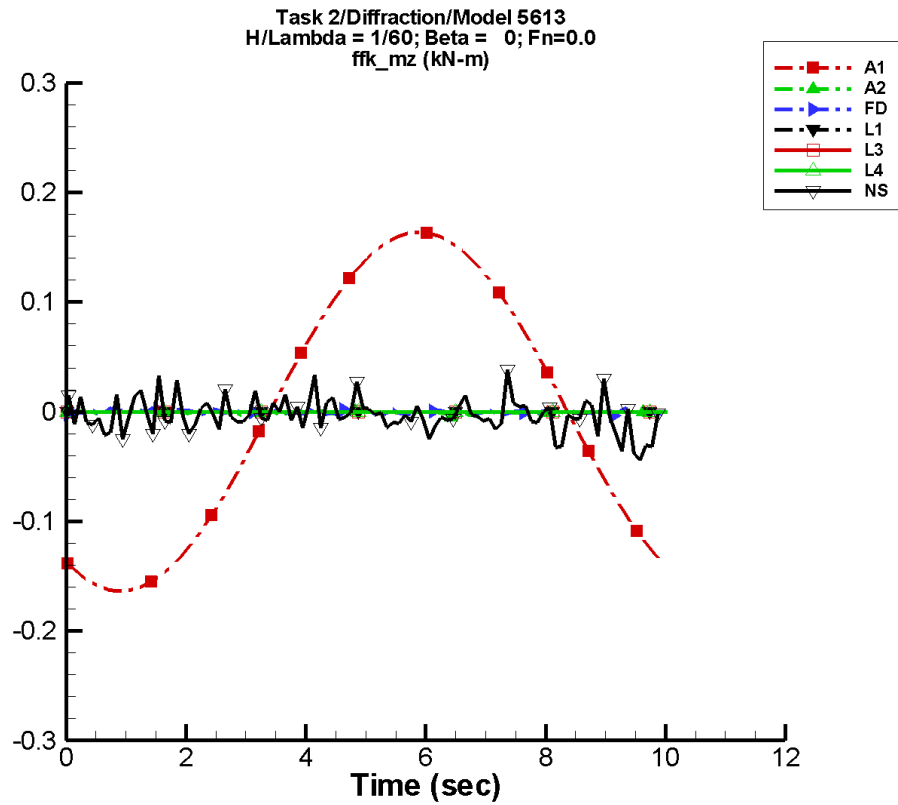
Table G-1439. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.71E+03        | 3.77E+06        | -113              | 5.79E+03        | 150               |
| A2   | 1.52E+05        | 1.12E+06        | -103              | 2.86E+05        | 158               |
| FD   | 2.18E+05        | 1.27E+06        | -131              | 2.06E+05        | 125               |
| L1   | 5.80E+03        | 3.75E+06        | -121              | 6.46E+03        | -130              |
| L3   | 1.29E+05        | 8.66E+05        | -105              | 2.67E+05        | 156               |
| L4   | 1.29E+05        | 8.66E+05        | -105              | 2.67E+05        | 156               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1440. Minimum and maximum of  $M_y^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.77E+06         | 3.77E+06          | -3.77E+06         | 3.65E+06          |
| A2   | -1.17E+06         | 1.68E+06          | -1.16E+06         | 1.52E+06          |
| FD   | -1.19E+06         | 1.68E+06          | -1.18E+06         | 1.53E+06          |
| L1   | -3.75E+06         | 3.75E+06          | -3.71E+06         | 3.71E+06          |
| L3   | -9.13E+05         | 1.30E+06          | -9.02E+05         | 1.19E+06          |
| L4   | -9.13E+05         | 1.30E+06          | -9.02E+05         | 1.19E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-721. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1441. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

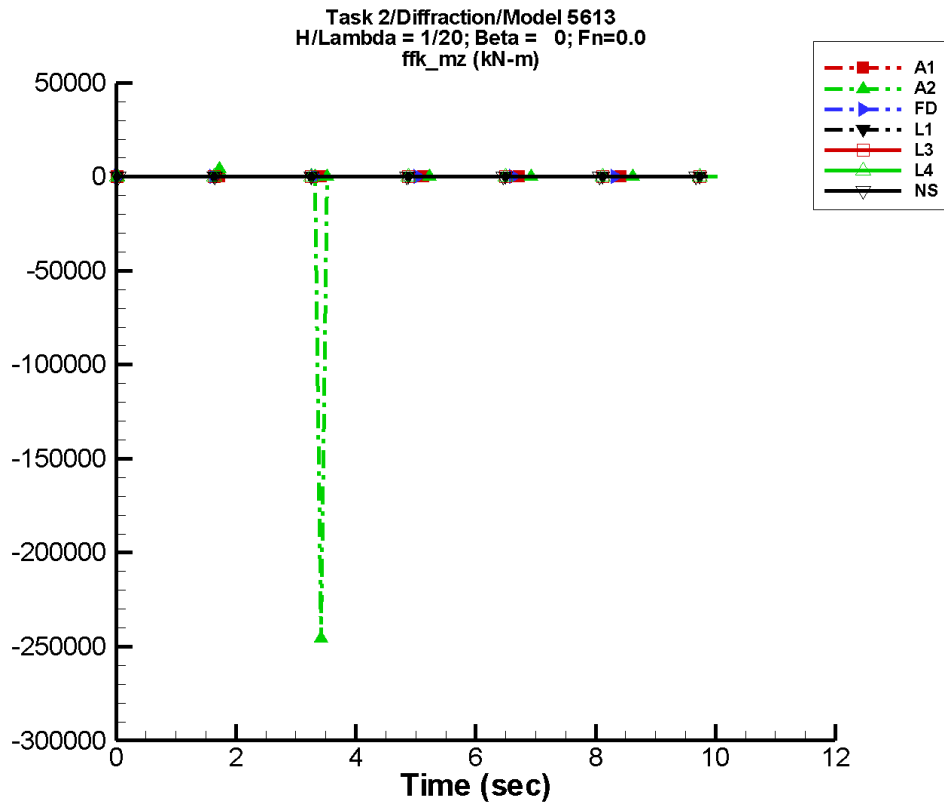
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.67E-04        | 0.164           | -128              | 2.19E-04        | -173              |
| A2   | -5.69E-04       | 4.67E-04        | 50                | 4.19E-04        | 79                |
| FD   | -2.92E-04       | 6.08E-04        | 22                | 1.86E-04        | 5                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.25E-03       | 6.04E-03        | -49               | 4.14E-03        | -75               |

Table G-1442. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.164            | 0.164             | -0.162            | 0.162             |
| A2   | -4.83E-03         | 1.71E-03          | -2.05E-03         | 5.53E-04          |
| FD   | -6.14E-03         | 3.97E-03          | -1.50E-03         | 1.53E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.40E-02         | 3.82E-02          | -2.72E-02         | 8.85E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-722. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

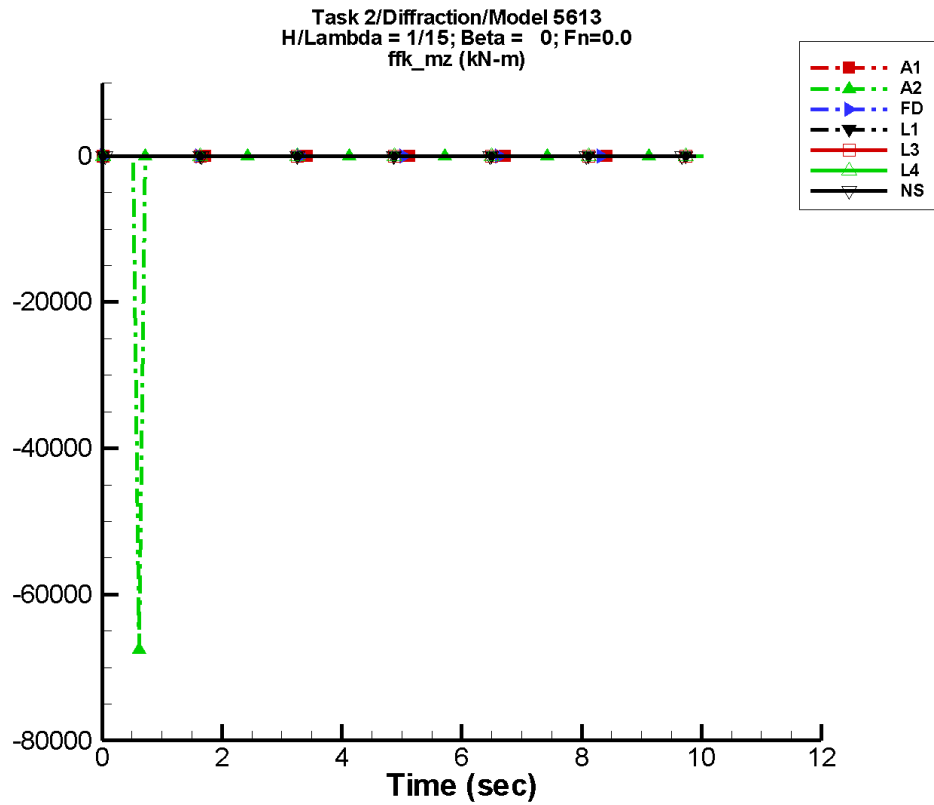
Table G-1443. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.01E-04        | 0.492           | -128              | 6.59E-04        | -173              |
| A2   | -2.97E+03       | 5.02E+03        | 154               | 3.70E+03        | 14                |
| FD   | 1.15E-05        | 5.49E-04        | -169              | 1.15E-04        | -130              |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.36E-03       | 7.61E-03        | -154              | 1.70E-02        | -163              |

Table G-1444. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.492            | 0.492             | -0.487            | 0.487             |
| A2   | -2.46E+05         | 4.29E+03          | -3.28E+04         | 2.82E+03          |
| FD   | -5.26E-03         | 5.92E-03          | -2.75E-03         | 2.70E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.115            | 0.159             | -4.43E-02         | 3.17E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-723. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

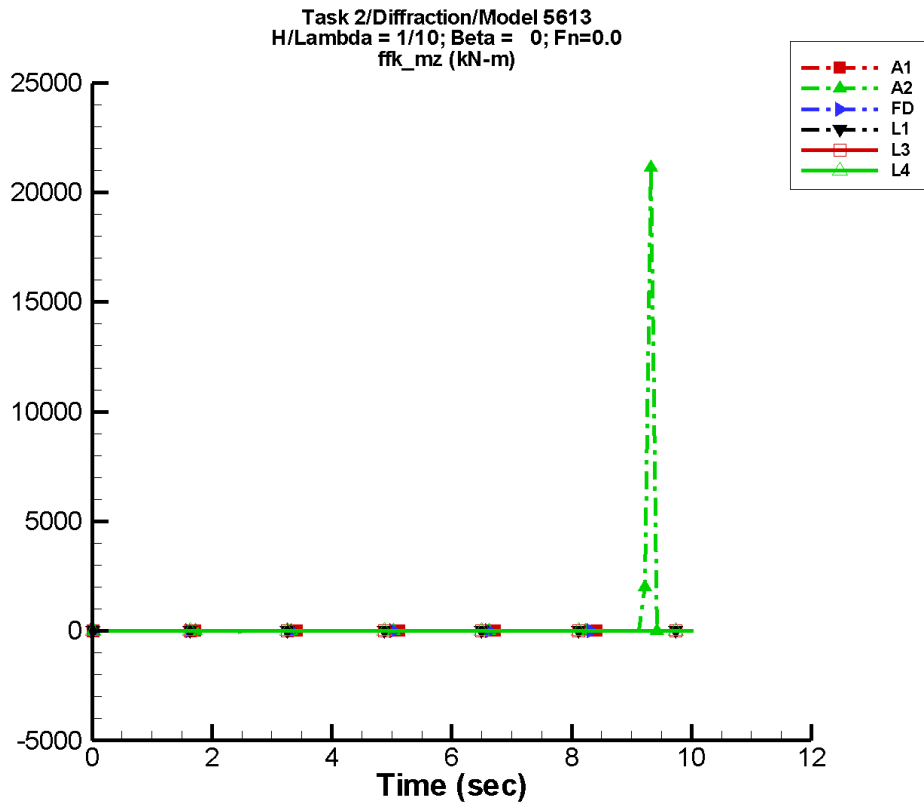
Table G-1445. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.69E-04        | 0.657           | -128              | 8.80E-04        | -173              |
| A2   | -355.           | 761.            | -110              | 884.            | -135              |
| FD   | 8.91E-05        | 9.67E-04        | -113              | 7.58E-04        | 0                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 9.17E-04        | 1.18E-02        | 48                | 1.79E-02        | 41                |

Table G-1446. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.657            | 0.657             | -0.651            | 0.650             |
| A2   | -6.75E+04         | 4.56E-02          | -9.01E+03         | 770.              |
| FD   | -6.45E-03         | 6.96E-03          | -1.96E-03         | 3.19E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.206            | 0.184             | -2.71E-02         | 6.51E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-724. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

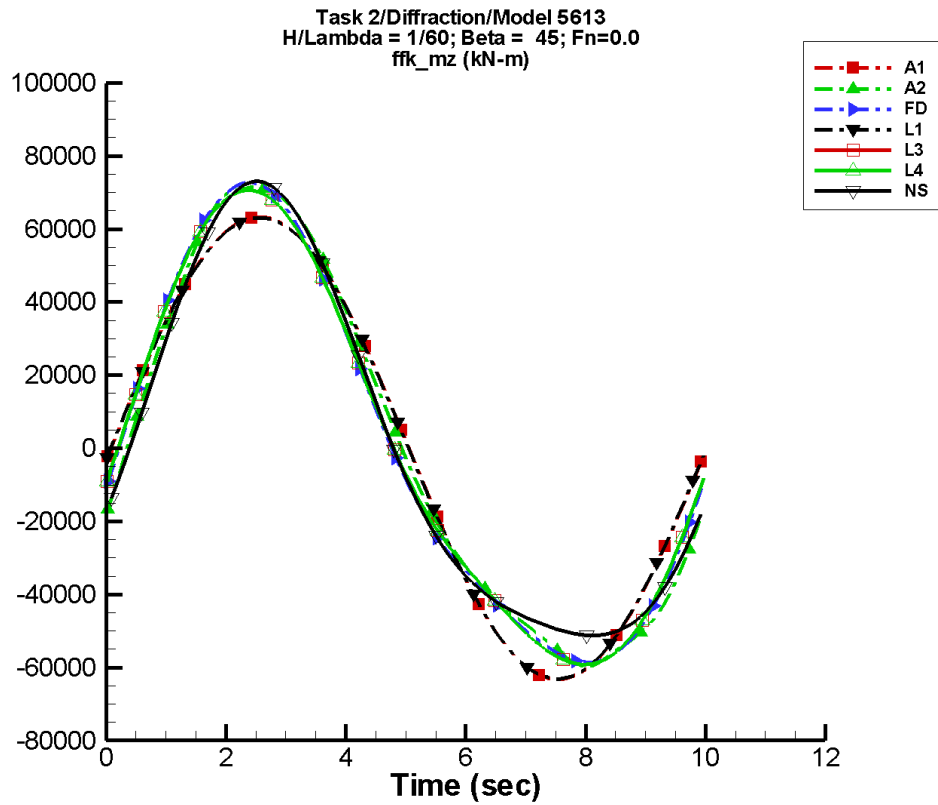
Table G-1447. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.00E-03        | 0.986           | -128              | 1.32E-03        | -173              |
| A2   | 168.            | 351.            | 121               | 447.            | 148               |
| FD   | -3.96E-04       | 1.41E-03        | -43               | 7.84E-04        | 37                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1448. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.986            | 0.985             | -0.976            | 0.975             |
| A2   | -6.30E+03         | 2.11E+04          | -745.             | 3.05E+03          |
| FD   | -9.75E-03         | 1.01E-02          | -3.46E-03         | 3.43E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-725. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1449. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

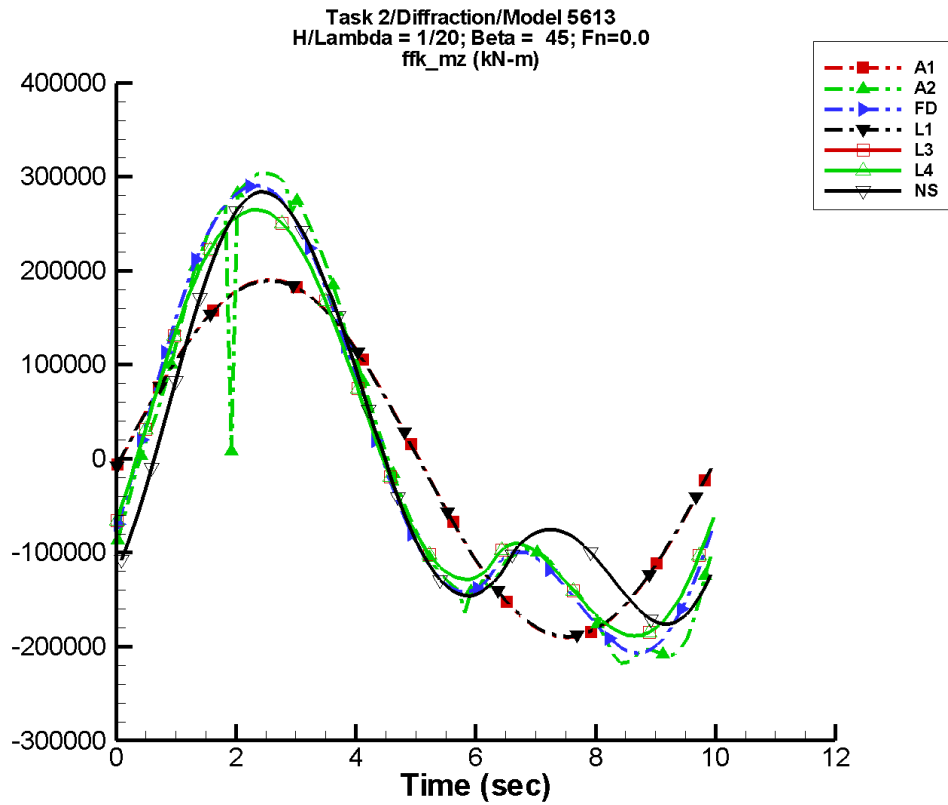
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -37.4           | 6.33E+04        | -7                | 58.3            | -28               |
| A2   | 39.6            | 6.48E+04        | -11               | 1.03E+04        | -76               |
| FD   | 81.2            | 6.42E+04        | -10               | 1.04E+04        | -74               |
| L1   | 35.9            | 6.31E+04        | -7                | 54.7            | 29                |
| L3   | 83.9            | 6.36E+04        | -7                | 9.24E+03        | -62               |
| L4   | 83.9            | 6.36E+04        | -7                | 9.24E+03        | -62               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -23.1           | 6.15E+04        | -5                | 1.20E+04        | -83               |

Table G-1450. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.33E+04         | 6.32E+04          | -6.26E+04         | 6.26E+04          |
| A2   | -5.97E+04         | 7.15E+04          | -5.85E+04         | 7.10E+04          |
| FD   | -5.86E+04         | 7.27E+04          | -5.81E+04         | 7.17E+04          |
| L1   | -6.31E+04         | 6.31E+04          | -6.29E+04         | 6.29E+04          |
| L3   | -5.92E+04         | 7.07E+04          | -5.90E+04         | 7.03E+04          |
| L4   | -5.92E+04         | 7.07E+04          | -5.90E+04         | 7.03E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.12E+04         | 7.30E+04          | -5.09E+04         | 7.31E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-726. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

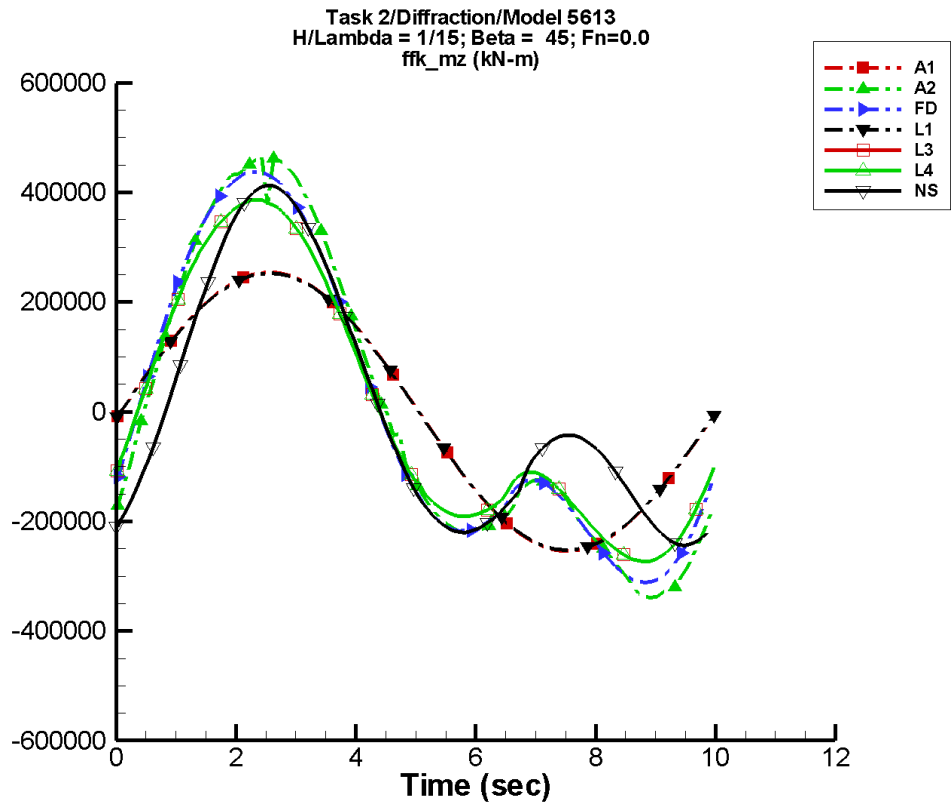
Table G-1451. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -112.           | 1.90E+05        | -7                | 175.            | -28               |
| A2   | -189.           | 2.27E+05        | -8                | 8.86E+04        | -79               |
| FD   | 1.38E+03        | 2.21E+05        | -8                | 8.68E+04        | -84               |
| L1   | 107.            | 1.89E+05        | -7                | 164.            | 29                |
| L3   | 651.            | 2.04E+05        | -4                | 7.62E+04        | -76               |
| L4   | 651.            | 2.04E+05        | -4                | 7.62E+04        | -76               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -203.           | 1.93E+05        | -5                | 1.02E+05        | -87               |

Table G-1452. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.90E+05         | 1.90E+05          | -1.88E+05         | 1.88E+05          |
| A2   | -2.18E+05         | 5.61E+05          | -2.10E+05         | 2.94E+05          |
| FD   | -2.07E+05         | 2.91E+05          | -2.03E+05         | 2.86E+05          |
| L1   | -1.89E+05         | 1.89E+05          | -1.89E+05         | 1.89E+05          |
| L3   | -1.88E+05         | 2.65E+05          | -1.87E+05         | 2.63E+05          |
| L4   | -1.88E+05         | 2.65E+05          | -1.87E+05         | 2.63E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.76E+05         | 2.84E+05          | -1.72E+05         | 2.85E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-727. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

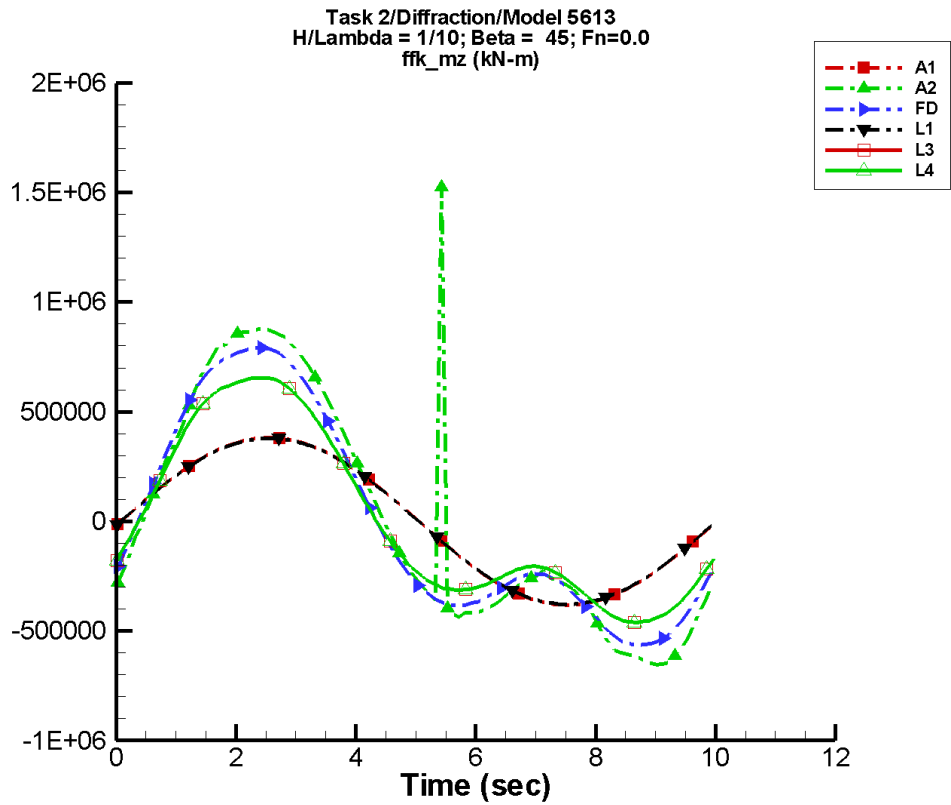
Table G-1453. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -150.           | 2.54E+05        | -7                | 234.            | -28               |
| A2   | 1.36E+03        | 3.39E+05        | -9                | 1.54E+05        | -82               |
| FD   | 2.80E+03        | 3.22E+05        | -7                | 1.44E+05        | -86               |
| L1   | 143.            | 2.52E+05        | -7                | 219.            | 29                |
| L3   | 683.            | 2.88E+05        | -4                | 1.22E+05        | -78               |
| L4   | 683.            | 2.88E+05        | -4                | 1.22E+05        | -78               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -61.1           | 2.43E+05        | -5                | 1.79E+05        | -98               |

Table G-1454. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.54E+05         | 2.54E+05          | -2.51E+05         | 2.51E+05          |
| A2   | -3.40E+05         | 4.66E+05          | -3.29E+05         | 4.45E+05          |
| FD   | -3.12E+05         | 4.38E+05          | -3.05E+05         | 4.31E+05          |
| L1   | -2.52E+05         | 2.52E+05          | -2.51E+05         | 2.51E+05          |
| L3   | -2.73E+05         | 3.86E+05          | -2.71E+05         | 3.84E+05          |
| L4   | -2.73E+05         | 3.86E+05          | -2.71E+05         | 3.84E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.44E+05         | 4.12E+05          | -2.39E+05         | 4.13E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-728. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

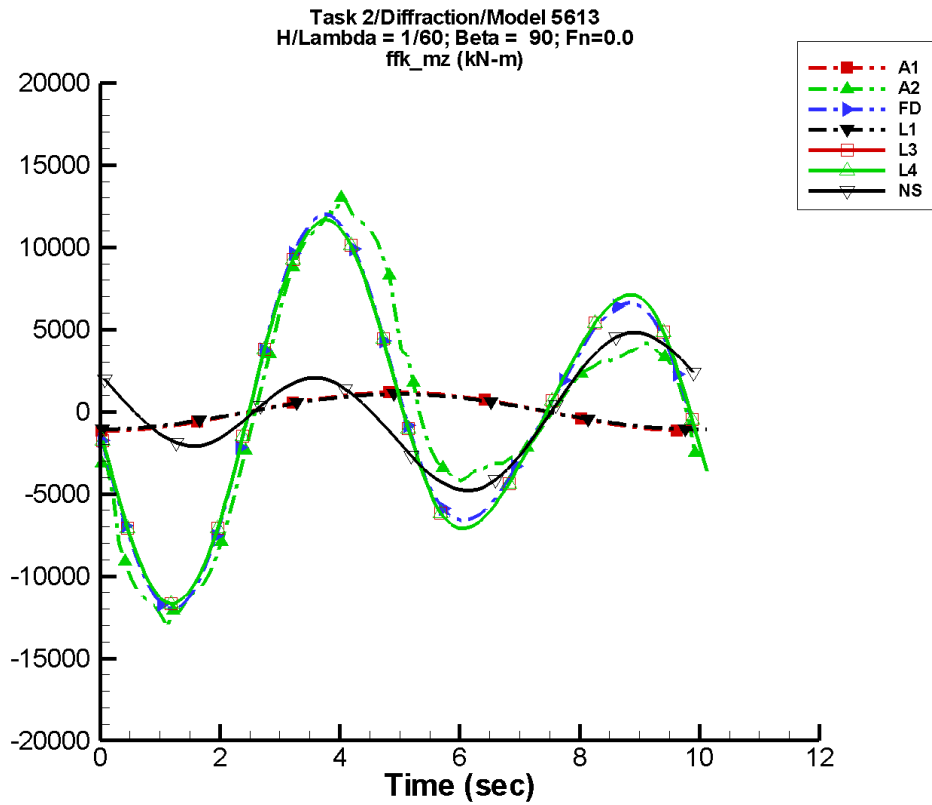
Table G-1455. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -225.           | 3.81E+05        | -7                | 351.            | -28               |
| A2   | 2.12E+04        | 6.44E+05        | -11               | 2.77E+05        | -74               |
| FD   | 4.52E+03        | 5.84E+05        | -7                | 2.67E+05        | -84               |
| L1   | 215.            | 3.79E+05        | -7                | 328.            | 29                |
| L3   | 878.            | 4.90E+05        | -3                | 2.12E+05        | -77               |
| L4   | 878.            | 4.90E+05        | -3                | 2.12E+05        | -77               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1456. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.81E+05         | 3.81E+05          | -3.77E+05         | 3.77E+05          |
| A2   | -6.55E+05         | 1.53E+06          | -6.37E+05         | 8.65E+05          |
| FD   | -5.65E+05         | 7.92E+05          | -5.55E+05         | 7.81E+05          |
| L1   | -3.79E+05         | 3.79E+05          | -3.77E+05         | 3.77E+05          |
| L3   | -4.61E+05         | 6.55E+05          | -4.57E+05         | 6.52E+05          |
| L4   | -4.61E+05         | 6.55E+05          | -4.57E+05         | 6.52E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-729. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1457. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

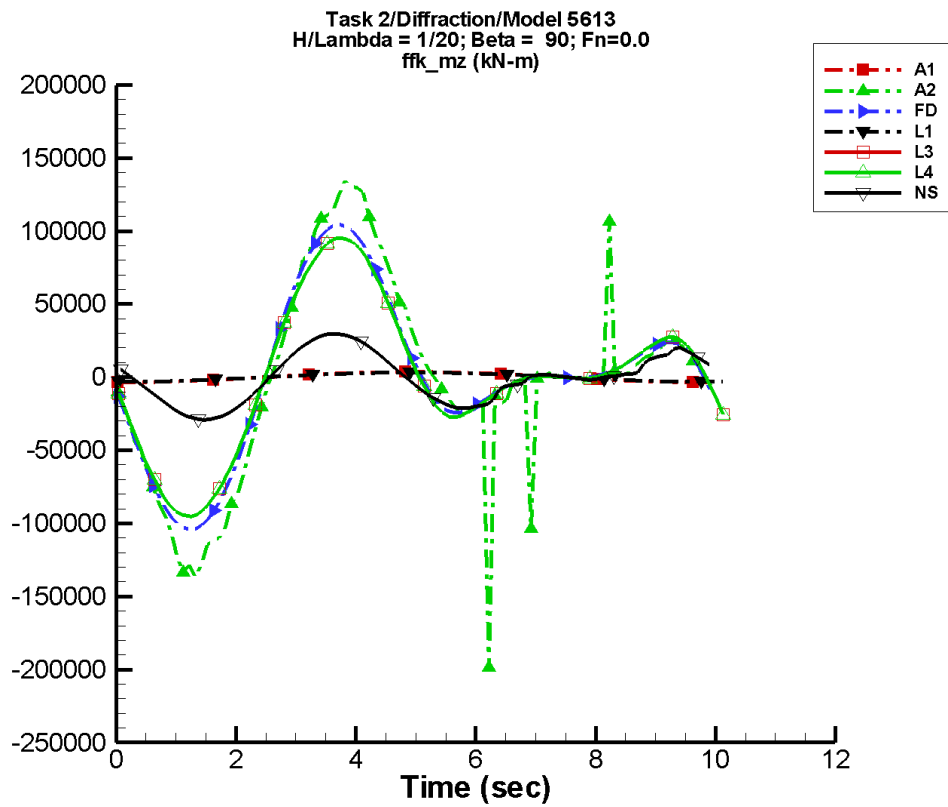
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 0.941           | 1.17E+03        | -94               | 1.31            | -156              |
| A2   | -30.8           | 4.92E+03        | -99               | 8.60E+03        | 164               |
| FD   | 44.3            | 2.59E+03        | -101              | 9.41E+03        | 166               |
| L1   | 0.274           | 1.07E+03        | -94               | 0.432           | 151               |
| L3   | -5.21           | 2.26E+03        | -95               | 9.51E+03        | 172               |
| L4   | -5.21           | 2.26E+03        | -95               | 9.51E+03        | 172               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -29.3           | 2.01E+03        | 88                | 3.33E+03        | 174               |

Table G-1458. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.17E+03         | 1.17E+03          | -1.17E+03         | 1.16E+03          |
| A2   | -1.31E+04         | 1.30E+04          | -1.21E+04         | 1.21E+04          |
| FD   | -1.20E+04         | 1.20E+04          | -1.15E+04         | 1.15E+04          |
| L1   | -1.07E+03         | 1.07E+03          | -1.08E+03         | 1.07E+03          |
| L3   | -1.17E+04         | 1.17E+04          | -1.15E+04         | 1.15E+04          |
| L4   | -1.17E+04         | 1.17E+04          | -1.15E+04         | 1.15E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.80E+03         | 4.82E+03          | -4.65E+03         | 4.65E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-730. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

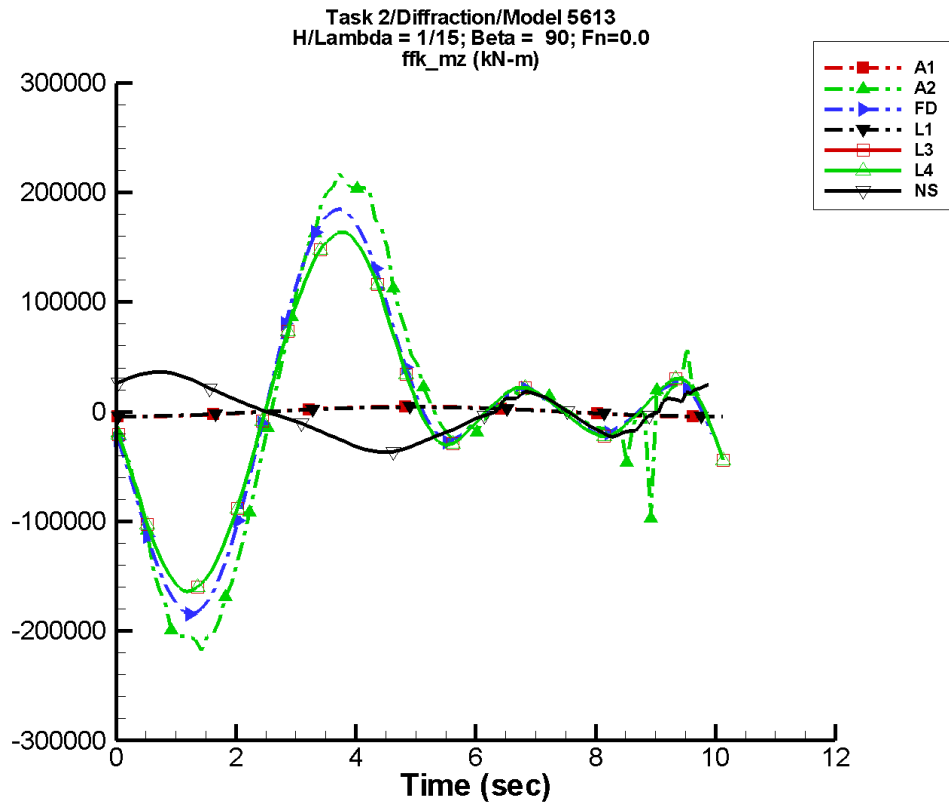
Table G-1459. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.83            | 3.52E+03        | -94               | 3.95            | -156              |
| A2   | -2.18E+03       | 4.28E+04        | -97               | 7.91E+04        | 162               |
| FD   | 949.            | 3.67E+04        | -102              | 6.22E+04        | 167               |
| L1   | 0.822           | 3.21E+03        | -94               | 1.28            | 151               |
| L3   | 12.8            | 3.24E+04        | -96               | 5.89E+04        | 171               |
| L4   | 12.8            | 3.24E+04        | -96               | 5.89E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -969.           | 2.46E+03        | -96               | 2.07E+04        | 171               |

Table G-1460. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.52E+03         | 3.52E+03          | -3.52E+03         | 3.49E+03          |
| A2   | -1.99E+05         | 1.34E+05          | -1.23E+05         | 1.22E+05          |
| FD   | -1.04E+05         | 1.04E+05          | -1.00E+05         | 9.98E+04          |
| L1   | -3.21E+03         | 3.21E+03          | -3.23E+03         | 3.20E+03          |
| L3   | -9.54E+04         | 9.54E+04          | -9.39E+04         | 9.39E+04          |
| L4   | -9.54E+04         | 9.54E+04          | -9.39E+04         | 9.39E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.92E+04         | 2.96E+04          | -2.77E+04         | 2.82E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-731. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

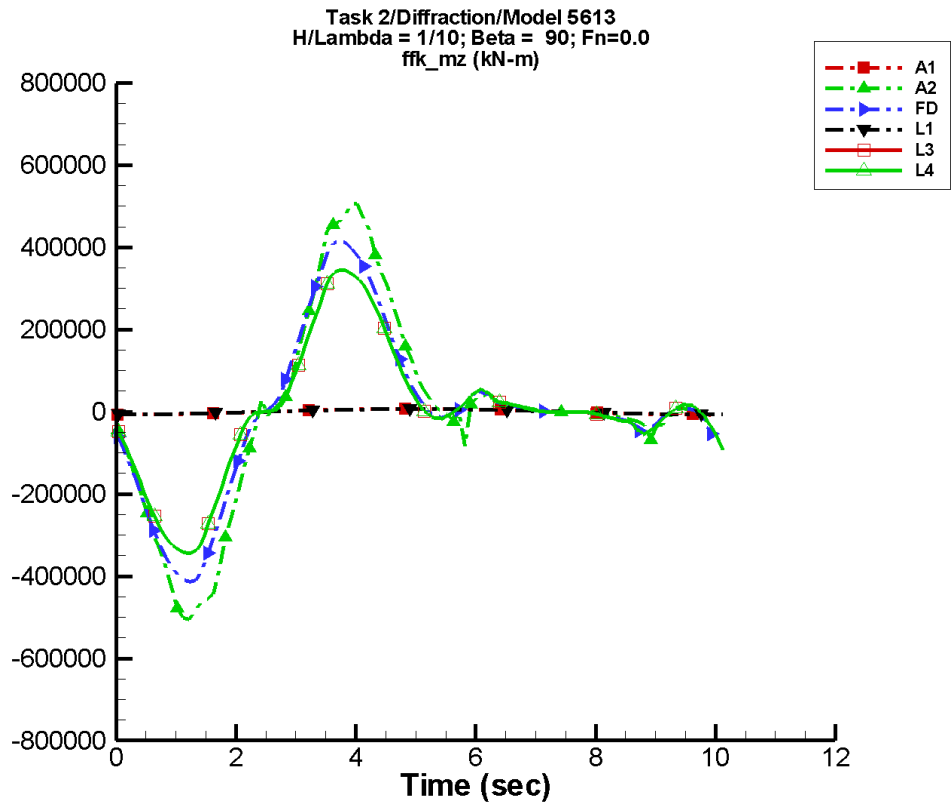
Table G-1461. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.78            | 4.70E+03        | -94               | 5.27            | -156              |
| A2   | -1.56E+03       | 9.23E+04        | -100              | 1.12E+05        | 160               |
| FD   | 2.01E+03        | 7.54E+04        | -102              | 9.78E+04        | 168               |
| L1   | 1.10            | 4.29E+03        | -94               | 1.72            | 151               |
| L3   | 61.5            | 6.68E+04        | -96               | 8.80E+04        | 170               |
| L4   | 61.5            | 6.68E+04        | -96               | 8.80E+04        | 170               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.29E+03       | 2.23E+04        | 87                | 1.71E+04        | -2                |

Table G-1462. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.70E+03         | 4.70E+03          | -4.70E+03         | 4.65E+03          |
| A2   | -2.18E+05         | 2.17E+05          | -2.06E+05         | 2.06E+05          |
| FD   | -1.85E+05         | 1.85E+05          | -1.77E+05         | 1.77E+05          |
| L1   | -4.29E+03         | 4.29E+03          | -4.30E+03         | 4.27E+03          |
| L3   | -1.64E+05         | 1.64E+05          | -1.61E+05         | 1.61E+05          |
| L4   | -1.64E+05         | 1.64E+05          | -1.61E+05         | 1.61E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.70E+04         | 3.65E+04          | -3.62E+04         | 3.56E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-732. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

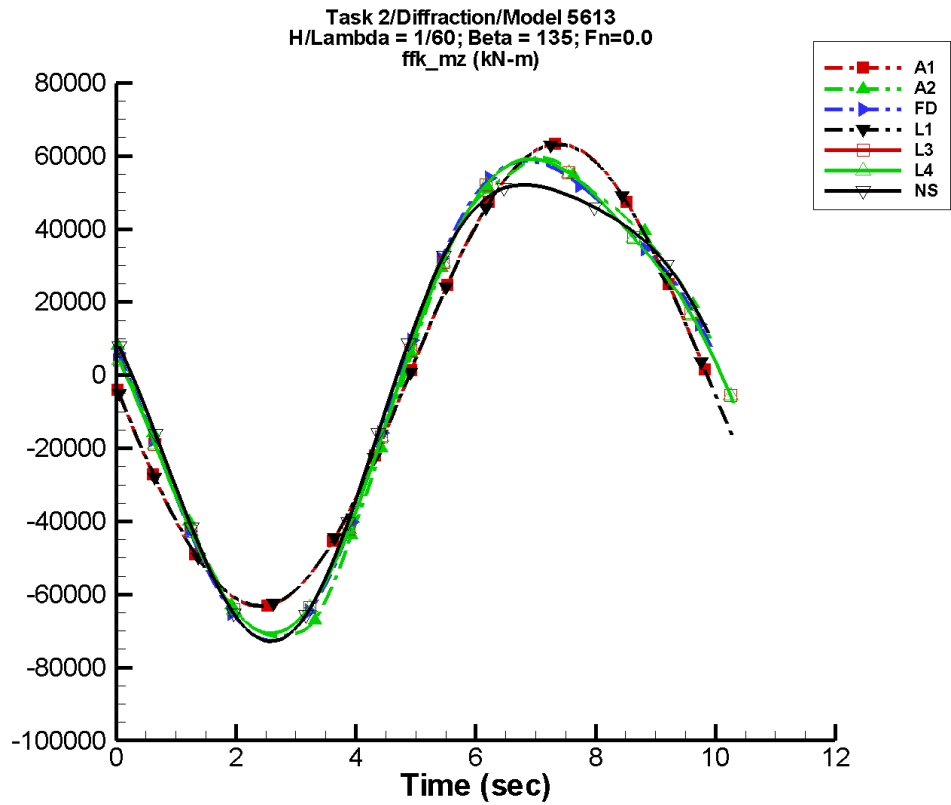
Table G-1463. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.67            | 7.06E+03        | -94               | 7.90            | -156              |
| A2   | -1.16E+03       | 2.08E+05        | -100              | 2.30E+05        | 162               |
| FD   | 3.10E+03        | 1.76E+05        | -101              | 1.86E+05        | 167               |
| L1   | 1.65            | 6.43E+03        | -94               | 2.56            | 151               |
| L3   | -1.42E+03       | 1.47E+05        | -96               | 1.48E+05        | 171               |
| L4   | -1.42E+03       | 1.47E+05        | -96               | 1.48E+05        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1464. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.06E+03         | 7.05E+03          | -7.06E+03         | 6.98E+03          |
| A2   | -5.05E+05         | 5.06E+05          | -4.67E+05         | 4.68E+05          |
| FD   | -4.14E+05         | 4.14E+05          | -3.87E+05         | 3.87E+05          |
| L1   | -6.43E+03         | 6.43E+03          | -6.45E+03         | 6.41E+03          |
| L3   | -3.45E+05         | 3.45E+05          | -3.38E+05         | 3.38E+05          |
| L4   | -3.45E+05         | 3.45E+05          | -3.38E+05         | 3.38E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-733. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G-1465. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

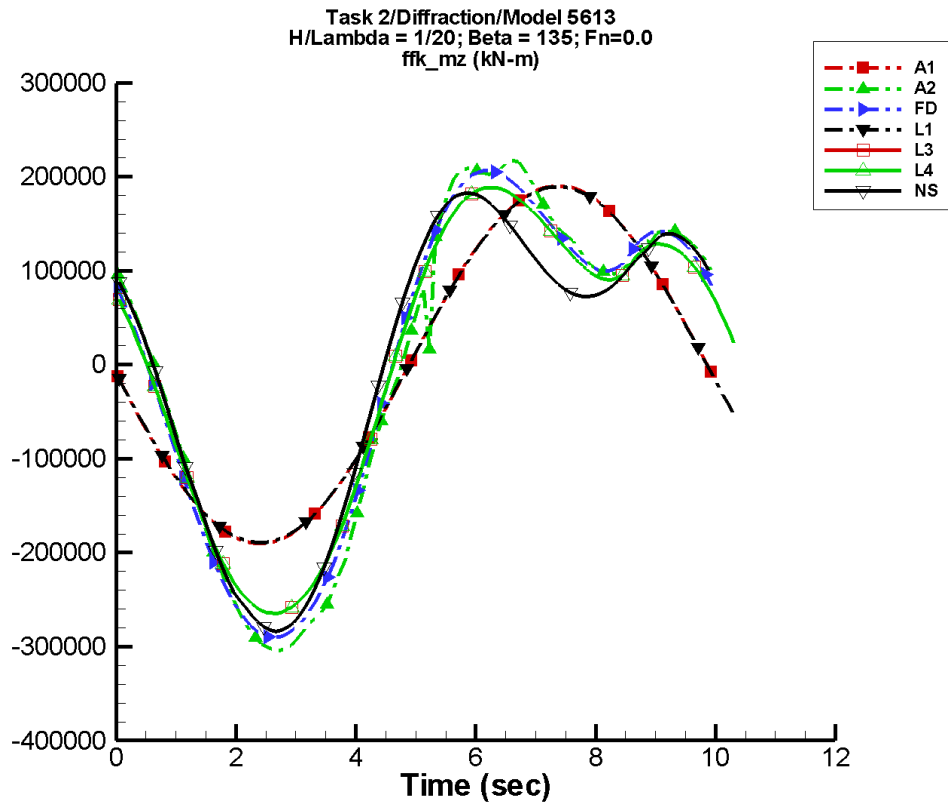
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 42.5            | 6.33E+04        | 179               | 62.9            | 157               |
| A2   | 2.72            | 6.48E+04        | 176               | 9.94E+03        | 46                |
| FD   | -11.3           | 6.44E+04        | 175               | 1.03E+04        | 43                |
| L1   | -5.04           | 6.31E+04        | 179               | 86.7            | -176              |
| L3   | -43.7           | 6.37E+04        | 178               | 9.14E+03        | 45                |
| L4   | -43.7           | 6.37E+04        | 178               | 9.14E+03        | 45                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -11.2           | 6.15E+04        | -179              | 1.21E+04        | 70                |

Table G-1466. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.33E+04         | 6.32E+04          | -6.26E+04         | 6.26E+04          |
| A2   | -7.16E+04         | 5.96E+04          | -7.10E+04         | 5.85E+04          |
| FD   | -7.27E+04         | 5.86E+04          | -7.17E+04         | 5.81E+04          |
| L1   | -6.31E+04         | 6.31E+04          | -6.29E+04         | 6.29E+04          |
| L3   | -7.07E+04         | 5.92E+04          | -7.03E+04         | 5.90E+04          |
| L4   | -7.07E+04         | 5.92E+04          | -7.03E+04         | 5.90E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.29E+04         | 5.21E+04          | -7.18E+04         | 5.17E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-734. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

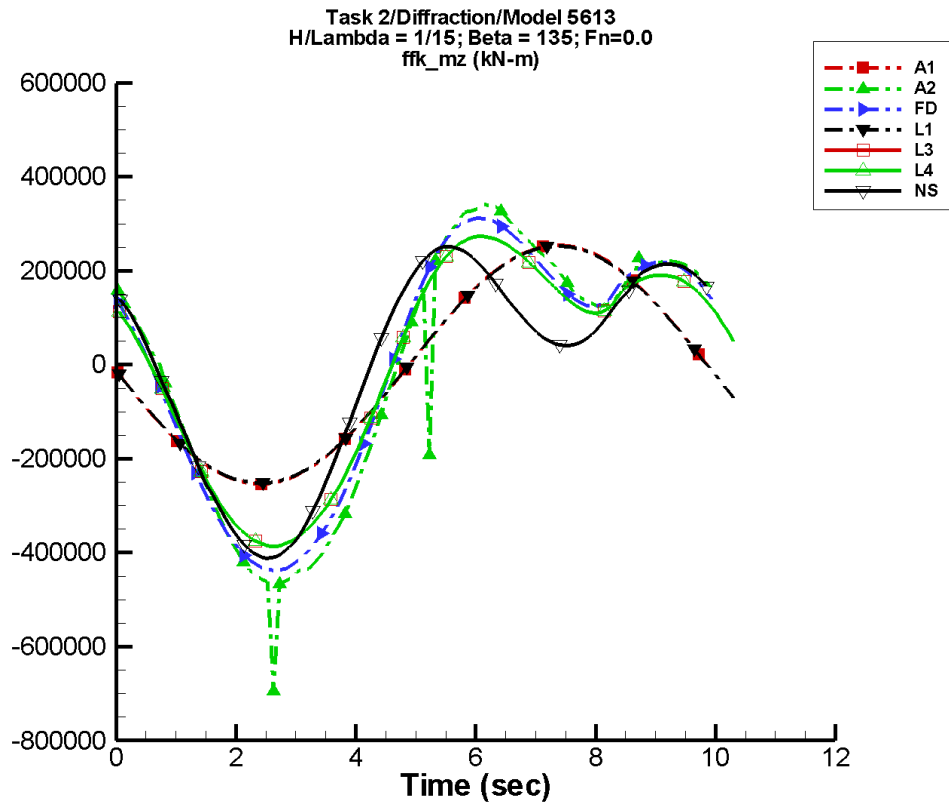
Table G-1467. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 128.            | 1.90E+05        | 179               | 189.            | 157               |
| A2   | -1.81E+03       | 2.31E+05        | 173               | 9.14E+04        | 51                |
| FD   | -603.           | 2.23E+05        | 173               | 8.53E+04        | 51                |
| L1   | -15.1           | 1.89E+05        | 179               | 260.            | -176              |
| L3   | -385.           | 2.04E+05        | 177               | 7.72E+04        | 58                |
| L4   | -385.           | 2.04E+05        | 177               | 7.72E+04        | 58                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -894.           | 1.93E+05        | -179              | 1.02E+05        | 75                |

Table G-1468. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.90E+05         | 1.90E+05          | -1.88E+05         | 1.88E+05          |
| A2   | -3.04E+05         | 2.17E+05          | -2.98E+05         | 2.11E+05          |
| FD   | -2.91E+05         | 2.07E+05          | -2.86E+05         | 2.03E+05          |
| L1   | -1.89E+05         | 1.89E+05          | -1.89E+05         | 1.89E+05          |
| L3   | -2.65E+05         | 1.88E+05          | -2.63E+05         | 1.87E+05          |
| L4   | -2.65E+05         | 1.88E+05          | -2.63E+05         | 1.87E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.84E+05         | 1.83E+05          | -2.78E+05         | 1.78E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-735. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

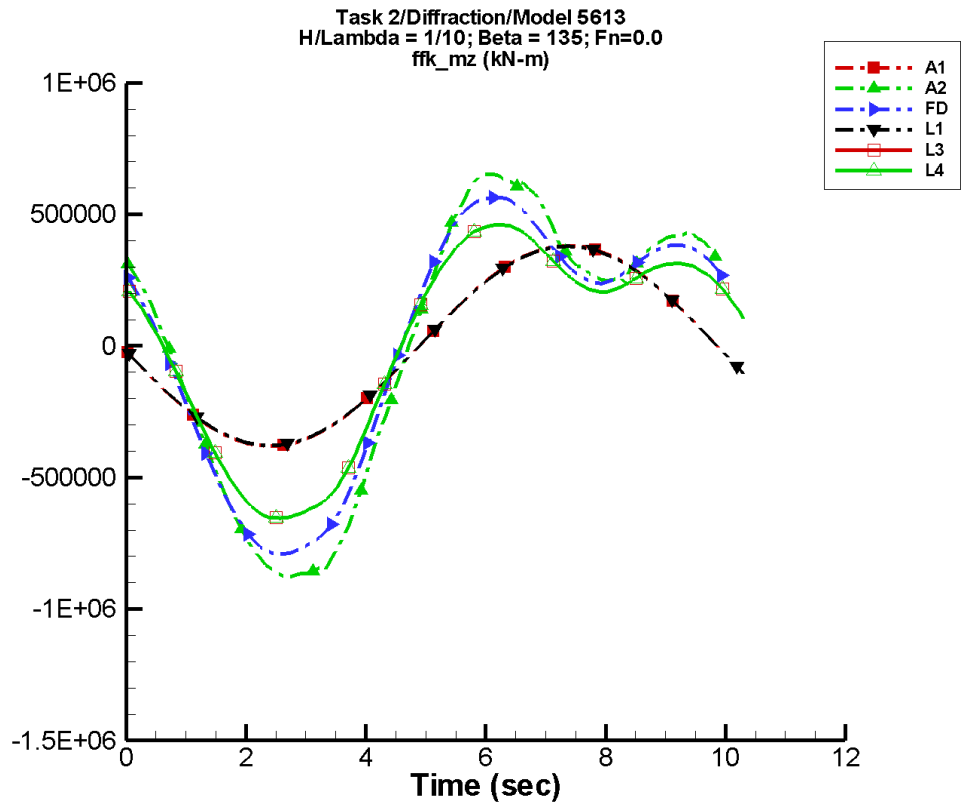
Table G-1469. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 171.            | 2.54E+05        | 179               | 253.            | 157               |
| A2   | -7.10E+03       | 3.47E+05        | 172               | 1.55E+05        | 52                |
| FD   | -1.63E+03       | 3.25E+05        | 173               | 1.43E+05        | 52                |
| L1   | -20.2           | 2.53E+05        | 179               | 347.            | -176              |
| L3   | -480.           | 2.88E+05        | 176               | 1.26E+05        | 60                |
| L4   | -480.           | 2.88E+05        | 176               | 1.26E+05        | 60                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -732.           | 2.41E+05        | -177              | 1.77E+05        | 88                |

Table G-1470. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.54E+05         | 2.54E+05          | -2.51E+05         | 2.51E+05          |
| A2   | -6.95E+05         | 3.41E+05          | -4.88E+05         | 3.34E+05          |
| FD   | -4.38E+05         | 3.12E+05          | -4.31E+05         | 3.05E+05          |
| L1   | -2.52E+05         | 2.52E+05          | -2.51E+05         | 2.51E+05          |
| L3   | -3.86E+05         | 2.73E+05          | -3.84E+05         | 2.71E+05          |
| L4   | -3.86E+05         | 2.73E+05          | -3.84E+05         | 2.71E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.12E+05         | 2.52E+05          | -4.07E+05         | 2.47E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-736. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

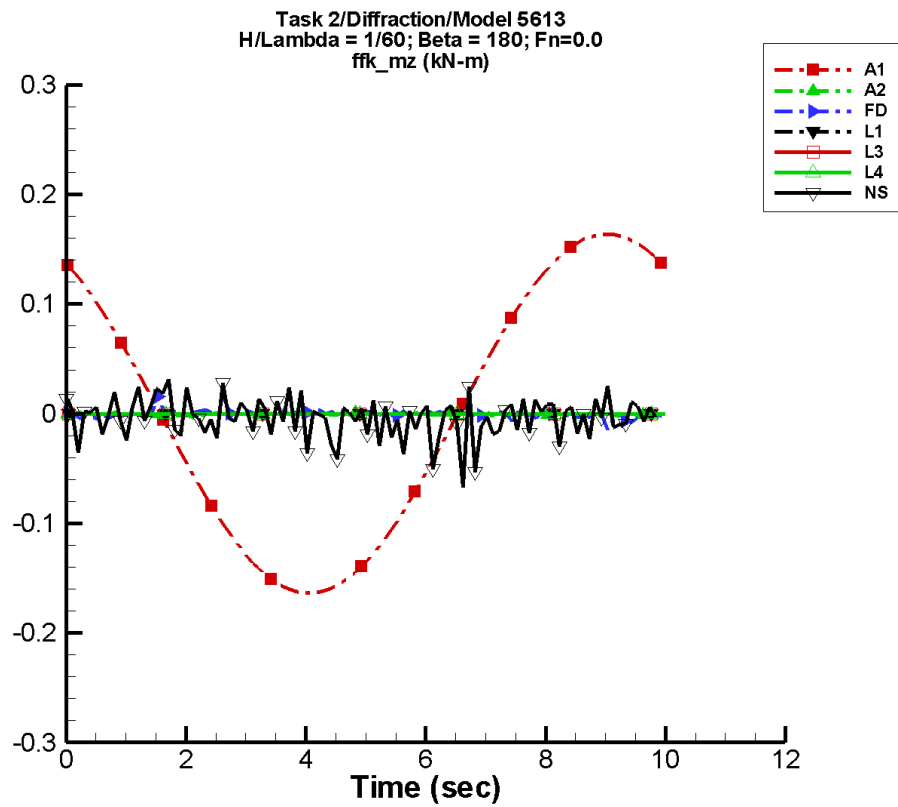
Table G-1471. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 256.            | 3.81E+05        | 179               | 379.            | 157               |
| A2   | -2.71E+03       | 6.56E+05        | 173               | 3.01E+05        | 50                |
| FD   | -2.47E+03       | 5.89E+05        | 173               | 2.66E+05        | 51                |
| L1   | -30.2           | 3.79E+05        | 179               | 520.            | -176              |
| L3   | -853.           | 4.90E+05        | 176               | 2.16E+05        | 59                |
| L4   | -853.           | 4.90E+05        | 176               | 2.16E+05        | 59                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1472. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.81E+05         | 3.81E+05          | -3.77E+05         | 3.77E+05          |
| A2   | -8.78E+05         | 6.53E+05          | -8.68E+05         | 6.39E+05          |
| FD   | -7.92E+05         | 5.65E+05          | -7.81E+05         | 5.55E+05          |
| L1   | -3.79E+05         | 3.79E+05          | -3.77E+05         | 3.77E+05          |
| L3   | -6.55E+05         | 4.61E+05          | -6.52E+05         | 4.58E+05          |
| L4   | -6.55E+05         | 4.61E+05          | -6.52E+05         | 4.58E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-737. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1473. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

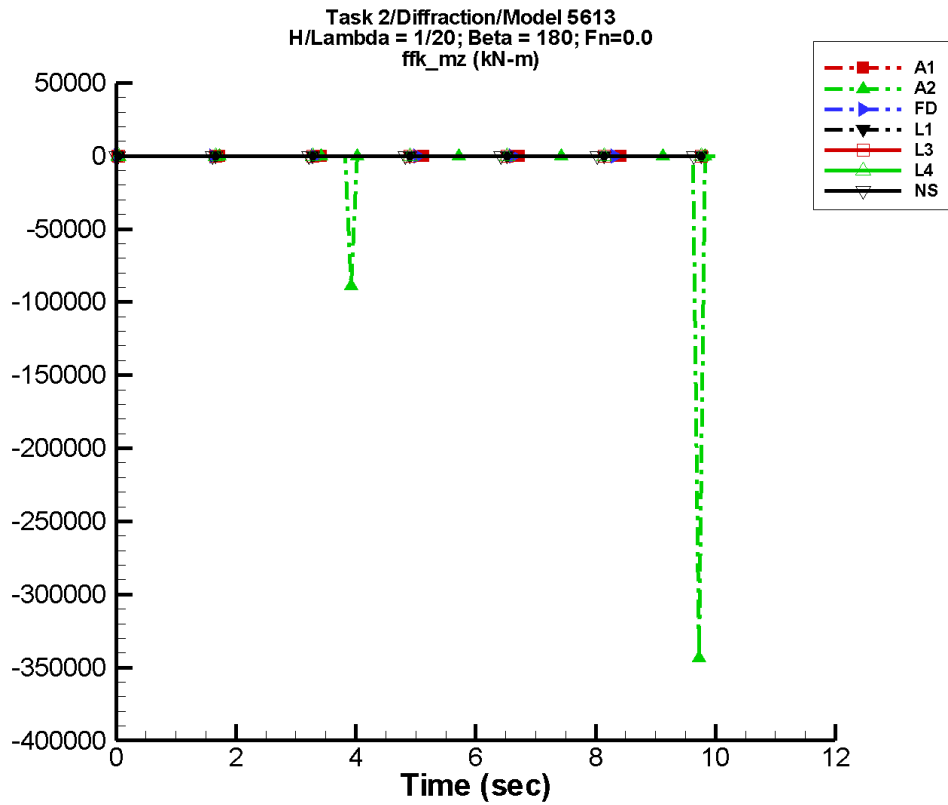
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -5.33E-05       | 0.164           | 119               | 1.17E-04        | 58                |
| A2   | -6.78E-04       | 6.32E-04        | -82               | 5.59E-04        | 69                |
| FD   | -4.57E-04       | 2.02E-03        | -45               | 1.13E-03        | -74               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.31E-03       | 8.34E-03        | 52                | 1.33E-03        | -143              |

Table G-1474. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.164            | 0.164             | -0.162            | 0.162             |
| A2   | -3.75E-03         | 1.43E-03          | -2.52E-03         | 2.86E-04          |
| FD   | -1.49E-02         | 1.56E-02          | -4.47E-03         | 3.44E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.68E-02         | 4.12E-02          | -1.72E-02         | 1.20E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-738. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

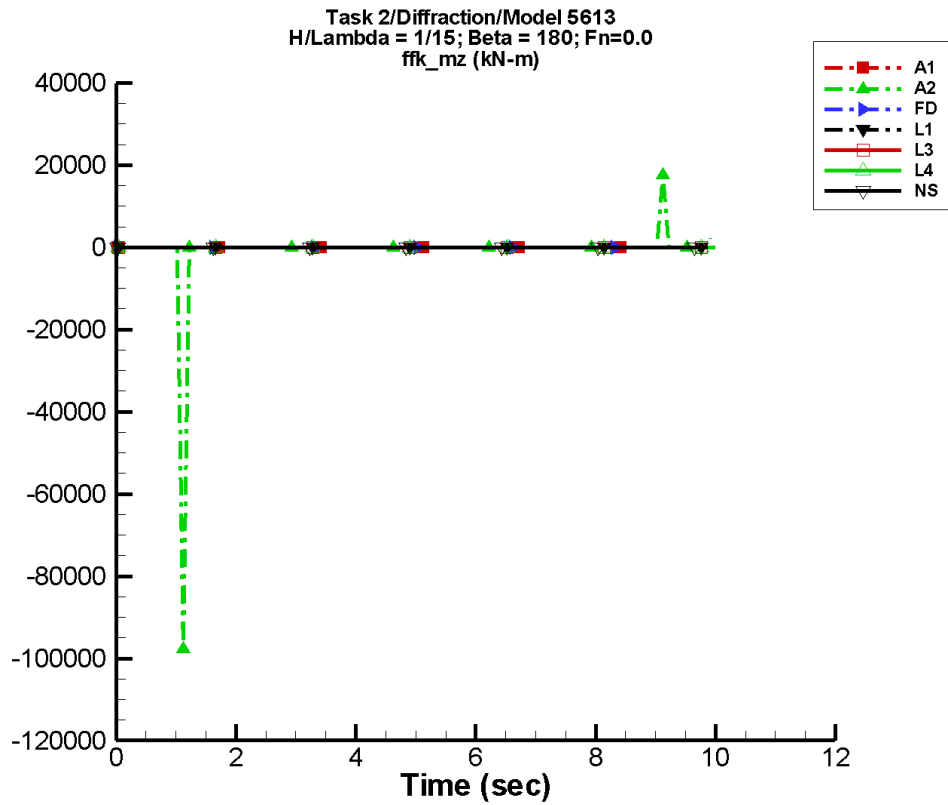
Table G-1475. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.60E-04       | 0.492           | 119               | 3.53E-04        | 58                |
| A2   | -4.02E+03       | 4.10E+03        | -108              | 5.69E+03        | -60               |
| FD   | -8.66E-03       | 1.93E-02        | 180               | 9.90E-03        | 106               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.01E-03       | 3.98E-03        | -54               | 2.76E-03        | -43               |

Table G-1476. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.492            | 0.492             | -0.487            | 0.487             |
| A2   | -3.43E+05         | 1.07E-02          | -4.56E+04         | 4.46E+03          |
| FD   | -0.110            | 2.86E-02          | -4.12E-02         | 2.01E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.157            | 0.142             | -2.87E-02         | 1.83E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-739. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

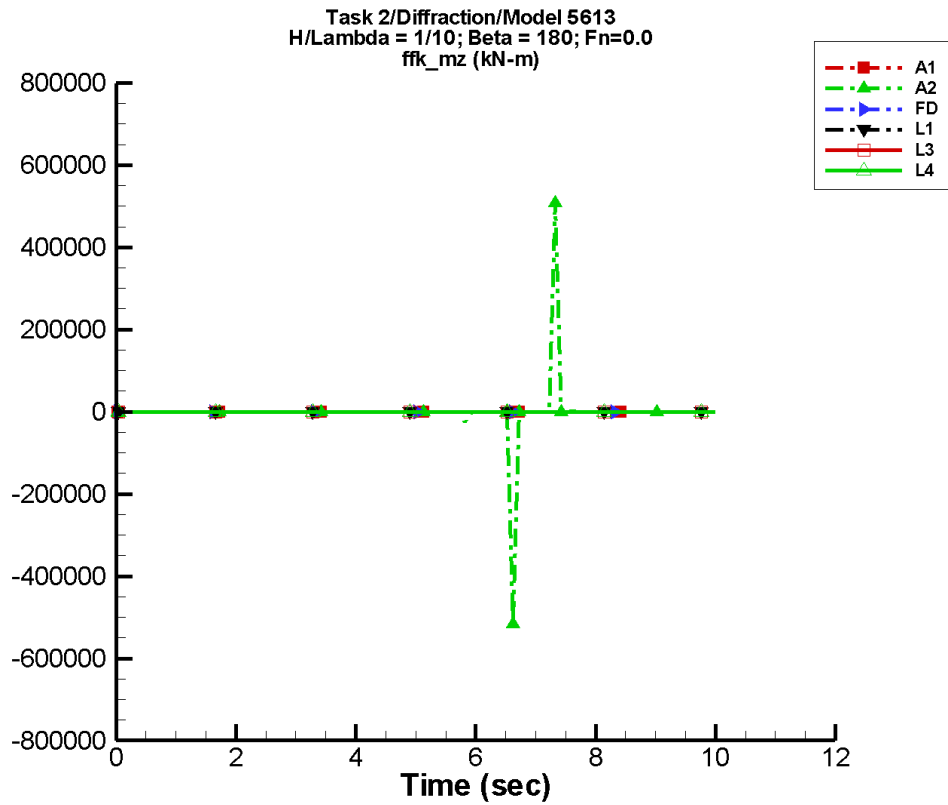
Table G-1477. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.14E-04       | 0.657           | 119               | 4.71E-04        | 58                |
| A2   | -305.           | 974.            | -155              | 1.52E+03        | 172               |
| FD   | 8.26E-04        | 7.82E-03        | -32               | 1.18E-02        | -95               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 5.18E-03        | 4.77E-03        | -42               | 8.42E-03        | -144              |

Table G-1478. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.657            | 0.657             | -0.650            | 0.650             |
| A2   | -9.78E+04         | 1.76E+04          | -1.30E+04         | 2.34E+03          |
| FD   | -4.87E-02         | 6.80E-02          | -2.83E-02         | 3.35E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.222            | 0.200             | -3.78E-02         | 3.84E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-740. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

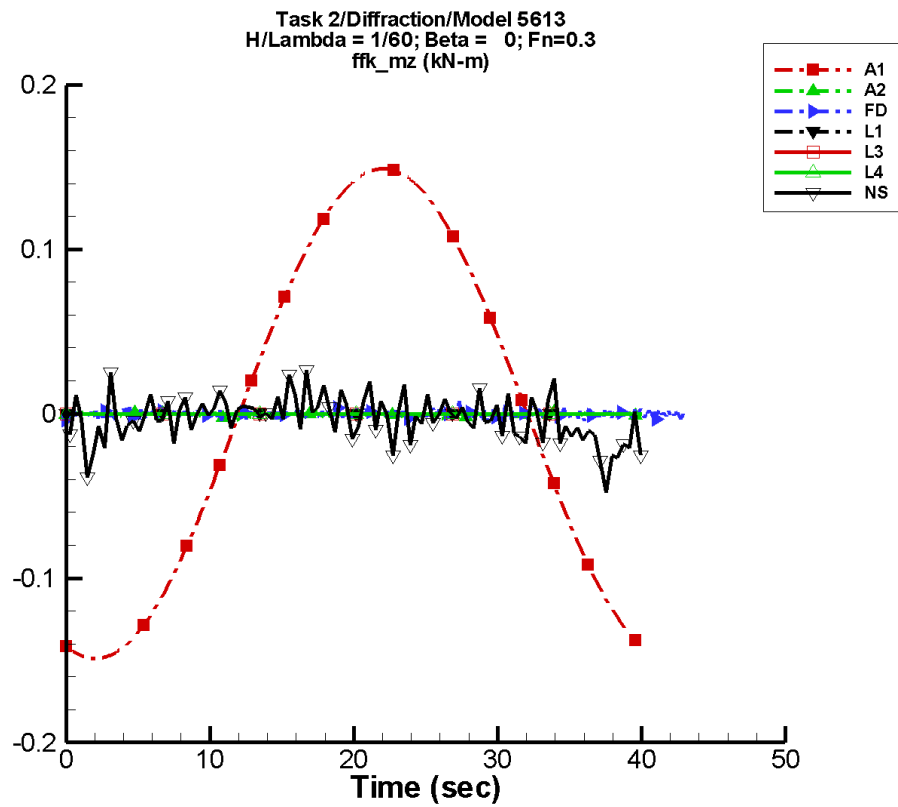
Table G-1479. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.21E-04       | 0.986           | 119               | 7.07E-04        | 58                |
| A2   | -221.           | 5.06E+03        | 93                | 9.36E+03        | -153              |
| FD   | -1.52E-03       | 7.31E-03        | -11               | 8.66E-03        | -72               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1480. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.985            | 0.986             | -0.975            | 0.976             |
| A2   | -5.16E+05         | 5.08E+05          | -7.03E+04         | 6.93E+04          |
| FD   | -8.58E-02         | 0.134             | -2.15E-02         | 2.56E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-741. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1481. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

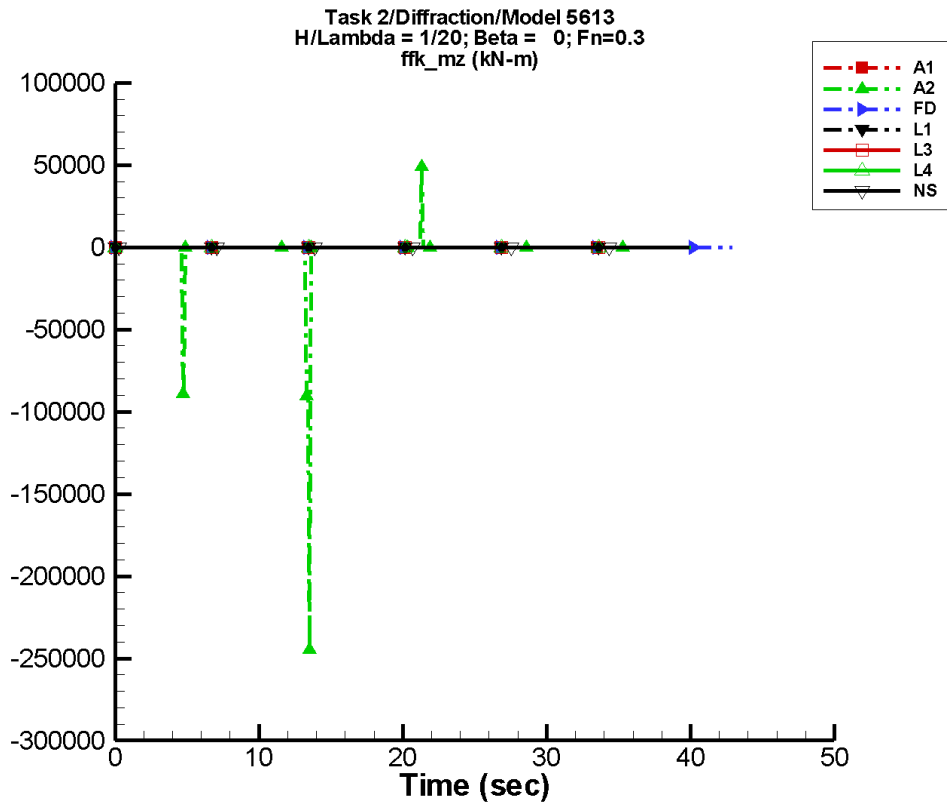
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.64E-06        | 0.149           | -109              | 6.60E-06        | -170              |
| A2   | -6.23E-04       | 5.21E-04        | 64                | 3.91E-04        | 86                |
| FD   | -2.22E-04       | 1.43E-04        | 60                | 3.02E-04        | -26               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.69E-03       | 7.64E-03        | -64               | 3.34E-03        | -56               |

Table G-1482. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.149            | 0.149             | -0.149            | 0.149             |
| A2   | -4.42E-03         | 2.03E-03          | -3.15E-03         | 1.09E-03          |
| FD   | -5.50E-03         | 7.50E-03          | -2.05E-03         | 1.66E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.80E-02         | 3.29E-02          | -2.44E-02         | 8.22E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-742. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

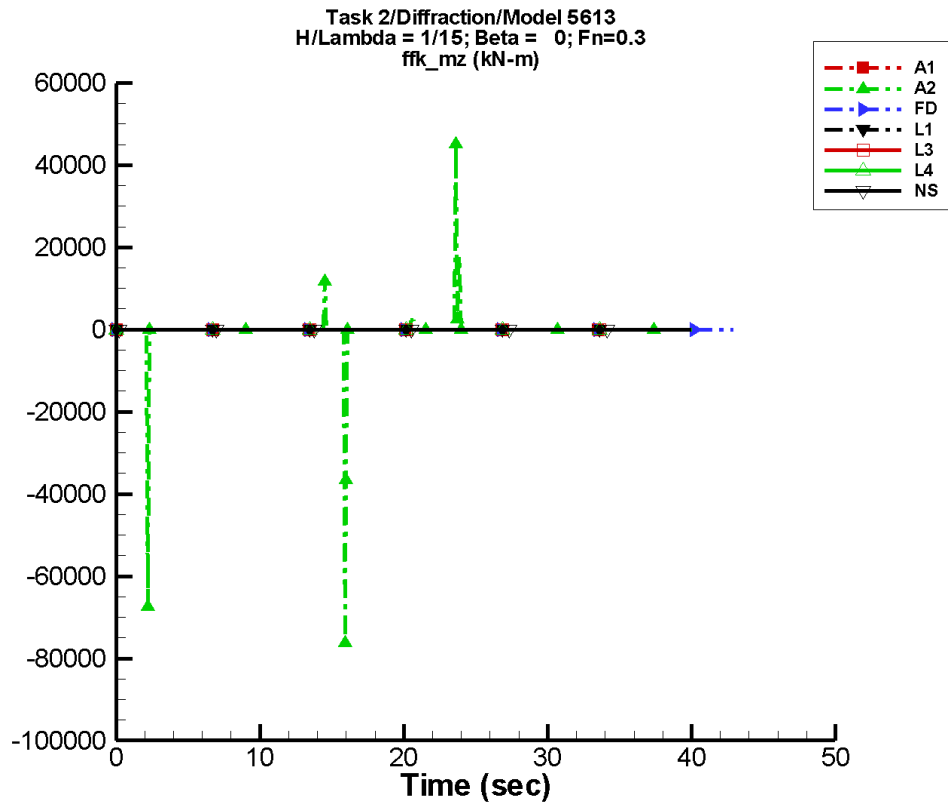
Table G-1483. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.39E-05        | 0.448           | -109              | 1.98E-05        | -170              |
| A2   | -1.31E+03       | 2.25E+03        | 179               | 1.10E+03        | 39                |
| FD   | -8.56E-05       | 3.80E-04        | -114              | 5.28E-04        | 11                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.12E-03       | 1.14E-02        | -59               | 7.79E-03        | -100              |

Table G-1484. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.448            | 0.448             | -0.448            | 0.448             |
| A2   | -2.45E+05         | 4.88E+04          | -5.48E+04         | 6.53E+03          |
| FD   | -7.43E-03         | 6.93E-03          | -2.01E-03         | 2.83E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.101            | 6.40E-02          | -4.30E-02         | 3.14E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-743. Time history of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

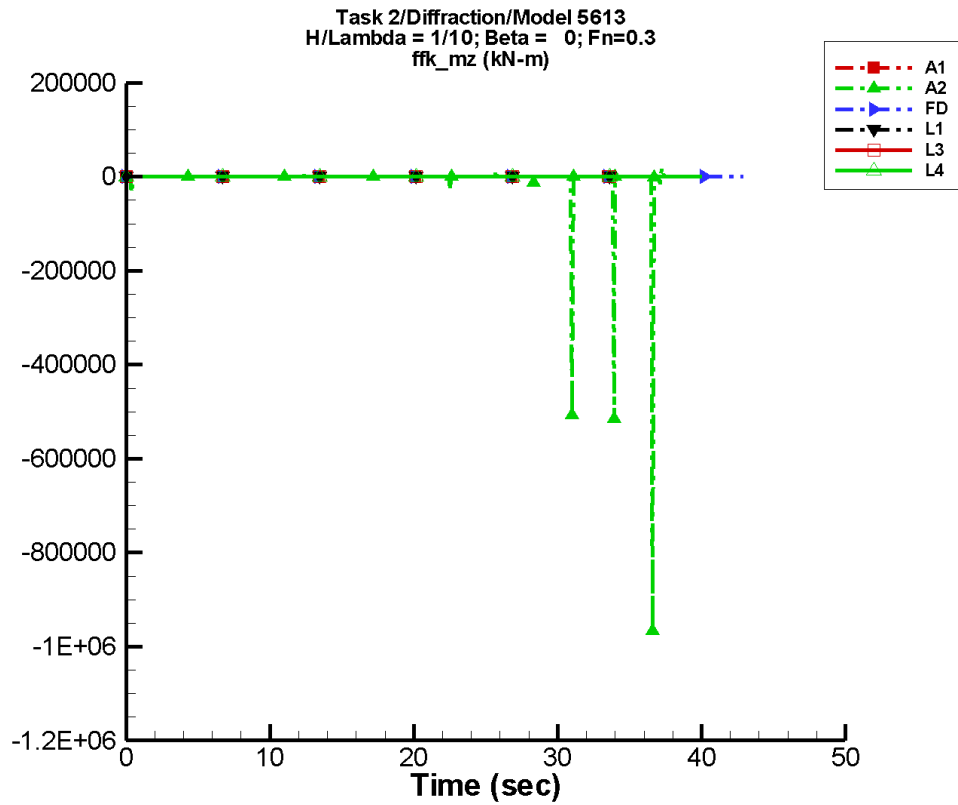
Table G-1485. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.86E-05        | 0.598           | -109              | 2.64E-05        | -170              |
| A2   | -240.           | 734.            | -148              | 709.            | -35               |
| FD   | -2.57E-05       | 9.61E-04        | -107              | 6.71E-04        | 15                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.36E-03        | 1.60E-02        | 78                | 1.02E-02        | 75                |

Table G-1486. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.598            | 0.598             | -0.598            | 0.597             |
| A2   | -7.62E+04         | 4.52E+04          | -1.48E+04         | 1.01E+04          |
| FD   | -8.91E-03         | 9.74E-03          | -3.14E-03         | 3.72E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.123            | 0.126             | -3.46E-02         | 5.95E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-744. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

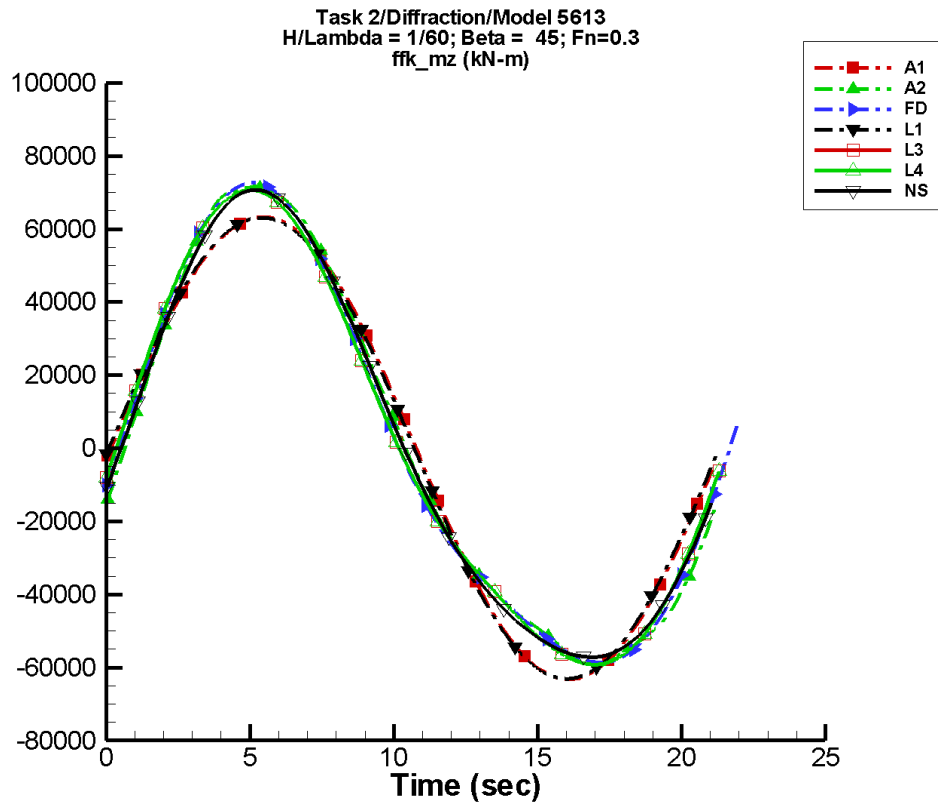
Table G-1487. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.78E-05        | 0.897           | -109              | 3.99E-05        | -170              |
| A2   | -5.03E+03       | 8.80E+03        | -41               | 7.14E+03        | 14                |
| FD   | -1.23E-04       | 1.10E-03        | -51               | 3.32E-04        | 59                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1488. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.897            | 0.897             | -0.896            | 0.896             |
| A2   | -9.67E+05         | 1.99E+04          | -1.29E+05         | 1.30E+04          |
| FD   | -1.12E-02         | 9.39E-03          | -5.13E-03         | 2.95E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

# TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-745. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1489. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

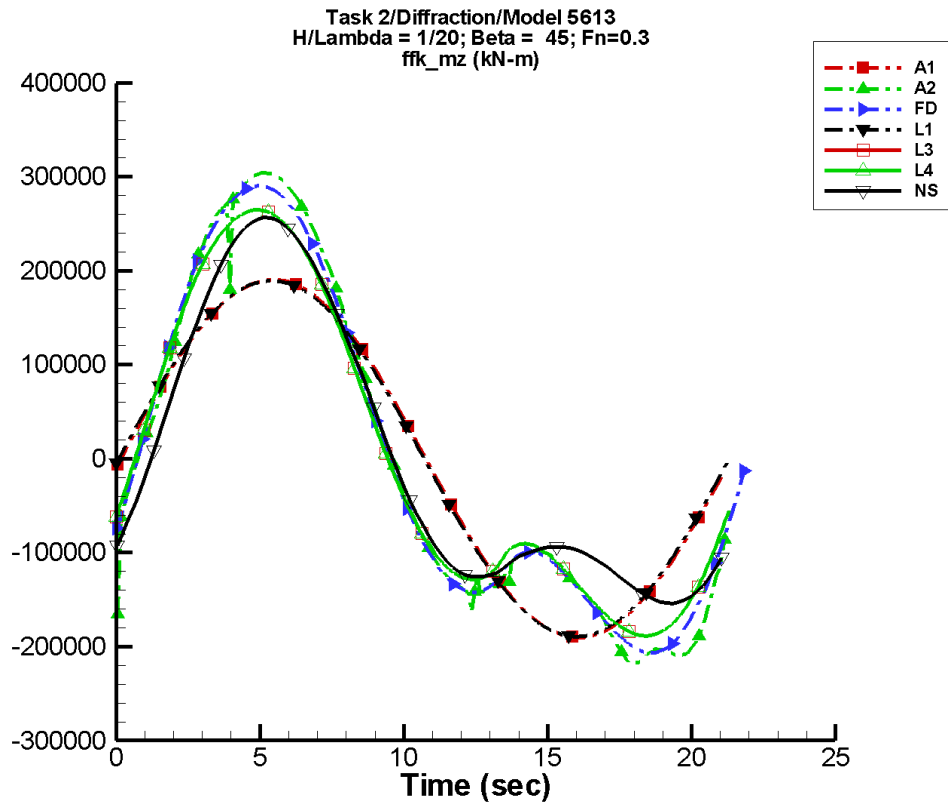
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 14.3            | 6.33E+04        | -1                | 21.5            | 164               |
| A2   | 46.1            | 6.48E+04        | -3                | 1.01E+04        | -61               |
| FD   | 45.2            | 6.43E+04        | 3                 | 1.02E+04        | -48               |
| L1   | 9.34            | 6.31E+04        | -1                | 14.0            | 162               |
| L3   | -12.0           | 6.36E+04        | -1                | 9.10E+03        | -50               |
| L4   | -12.0           | 6.36E+04        | -1                | 9.10E+03        | -50               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -38.3           | 6.35E+04        | -3                | 8.25E+03        | -67               |

Table G-1490. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.33E+04         | 6.33E+04          | -6.31E+04         | 6.31E+04          |
| A2   | -5.97E+04         | 7.16E+04          | -5.94E+04         | 7.18E+04          |
| FD   | -5.86E+04         | 7.27E+04          | -5.85E+04         | 7.24E+04          |
| L1   | -6.31E+04         | 6.31E+04          | -6.31E+04         | 6.32E+04          |
| L3   | -5.92E+04         | 7.07E+04          | -5.91E+04         | 7.06E+04          |
| L4   | -5.92E+04         | 7.07E+04          | -5.91E+04         | 7.06E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.72E+04         | 7.07E+04          | -5.67E+04         | 7.11E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-746. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

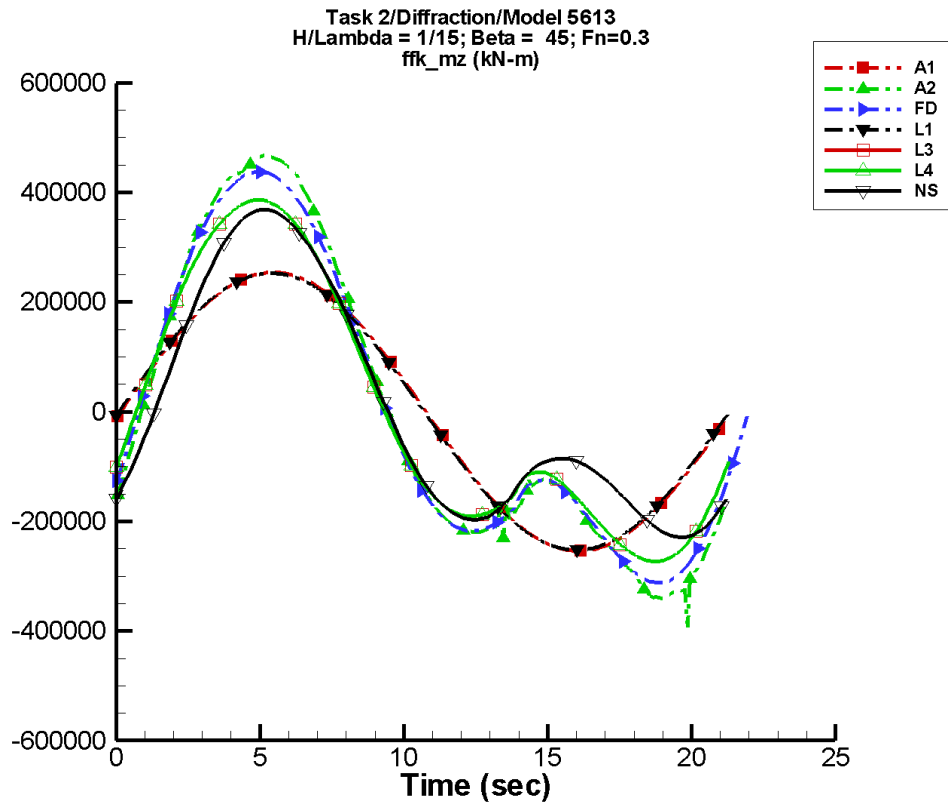
Table G-1491. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 43.1            | 1.90E+05        | -1                | 64.6            | 164               |
| A2   | -13.8           | 2.29E+05        | -1                | 9.16E+04        | -65               |
| FD   | 354.            | 2.22E+05        | 5                 | 8.47E+04        | -56               |
| L1   | 28.0            | 1.89E+05        | -1                | 42.0            | 162               |
| L3   | -75.1           | 2.03E+05        | 1                 | 7.55E+04        | -62               |
| L4   | -75.1           | 2.03E+05        | 1                 | 7.55E+04        | -62               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -379.           | 1.83E+05        | -3                | 8.07E+04        | -84               |

Table G-1492. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.90E+05         | 1.90E+05          | -1.90E+05         | 1.90E+05          |
| A2   | -2.18E+05         | 5.61E+05          | -2.15E+05         | 3.06E+05          |
| FD   | -2.07E+05         | 2.91E+05          | -2.06E+05         | 2.90E+05          |
| L1   | -1.89E+05         | 1.89E+05          | -1.89E+05         | 1.90E+05          |
| L3   | -1.88E+05         | 2.65E+05          | -1.88E+05         | 2.64E+05          |
| L4   | -1.88E+05         | 2.65E+05          | -1.88E+05         | 2.64E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.54E+05         | 2.57E+05          | -1.51E+05         | 2.58E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-747. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

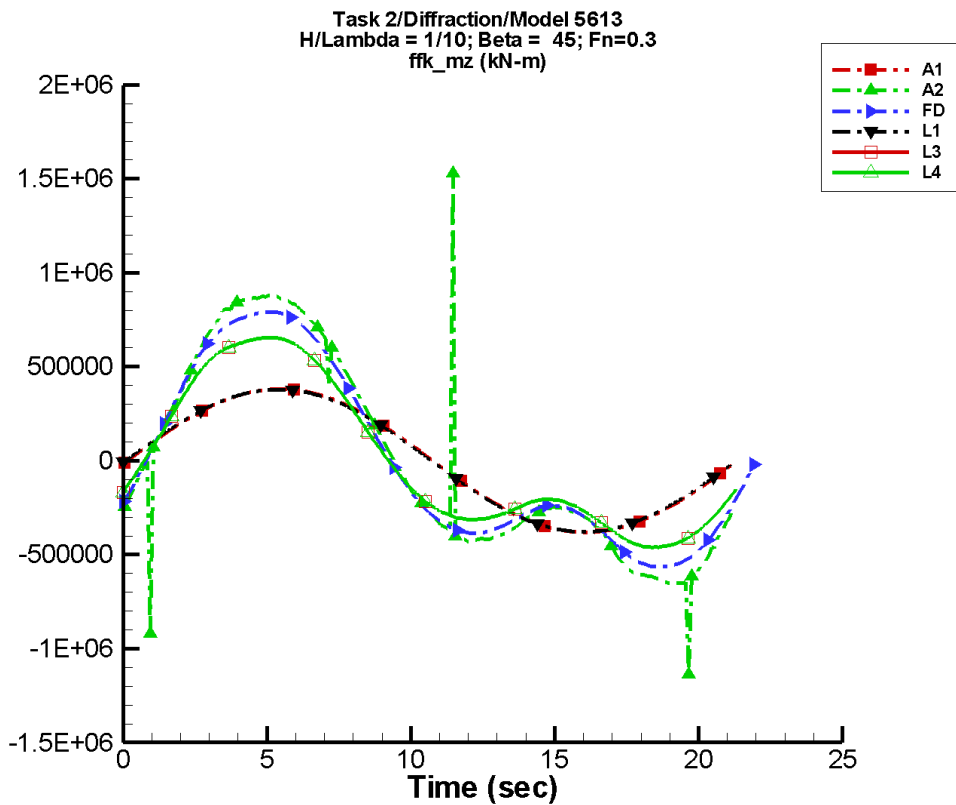
Table G-1493. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 57.5            | 2.54E+05        | -1                | 86.2            | 164               |
| A2   | 652.            | 3.40E+05        | -1                | 1.55E+05        | -66               |
| FD   | 740.            | 3.24E+05        | 5                 | 1.41E+05        | -57               |
| L1   | 37.4            | 2.52E+05        | -1                | 55.9            | 162               |
| L3   | 93.8            | 2.86E+05        | 2                 | 1.22E+05        | -64               |
| L4   | 93.8            | 2.86E+05        | 2                 | 1.22E+05        | -64               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -665.           | 2.46E+05        | -3                | 1.39E+05        | -85               |

Table G-1494. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.54E+05         | 2.54E+05          | -2.54E+05         | 2.54E+05          |
| A2   | -3.92E+05         | 4.67E+05          | -3.37E+05         | 4.67E+05          |
| FD   | -3.12E+05         | 4.38E+05          | -3.11E+05         | 4.36E+05          |
| L1   | -2.52E+05         | 2.52E+05          | -2.52E+05         | 2.53E+05          |
| L3   | -2.73E+05         | 3.86E+05          | -2.73E+05         | 3.86E+05          |
| L4   | -2.73E+05         | 3.86E+05          | -2.73E+05         | 3.86E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.29E+05         | 3.68E+05          | -2.26E+05         | 3.70E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-748. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

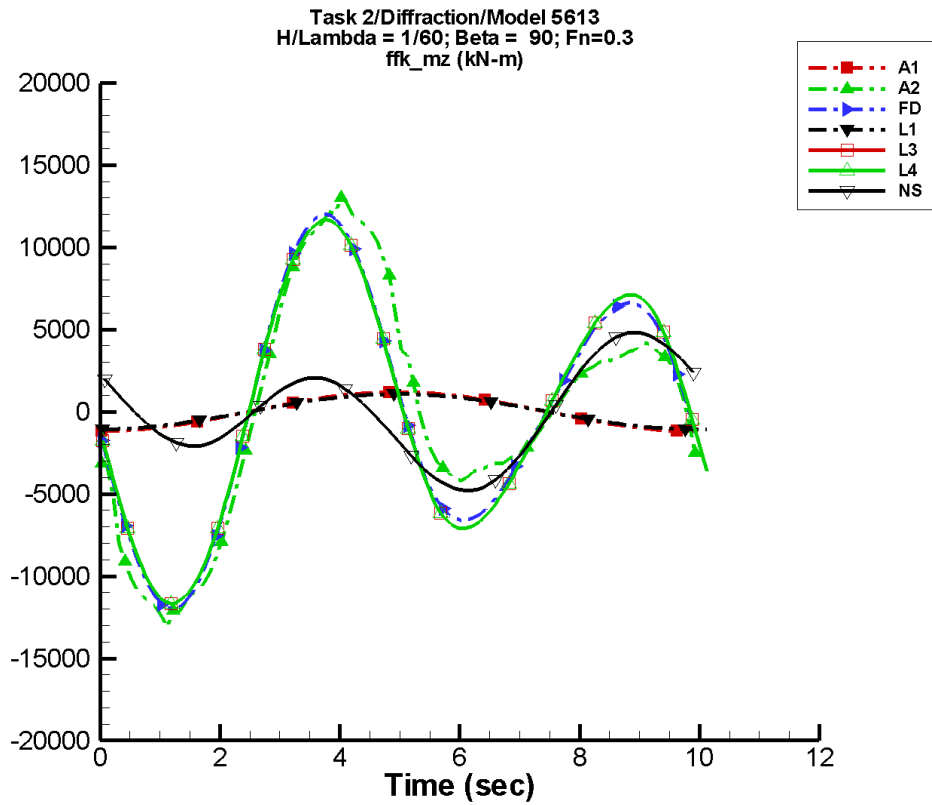
Table G-1495. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 86.2            | 3.81E+05        | -1                | 129.            | 164               |
| A2   | 4.16E+03        | 6.47E+05        | -2                | 2.93E+05        | -62               |
| FD   | 1.18E+03        | 5.87E+05        | 6                 | 2.61E+05        | -56               |
| L1   | 56.0            | 3.79E+05        | -1                | 83.9            | 162               |
| L3   | -521.           | 4.86E+05        | 2                 | 2.12E+05        | -63               |
| L4   | -521.           | 4.86E+05        | 2                 | 2.12E+05        | -63               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1496. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.81E+05         | 3.81E+05          | -3.80E+05         | 3.80E+05          |
| A2   | -1.14E+06         | 1.53E+06          | -7.00E+05         | 8.82E+05          |
| FD   | -5.66E+05         | 7.92E+05          | -5.63E+05         | 7.89E+05          |
| L1   | -3.79E+05         | 3.79E+05          | -3.78E+05         | 3.79E+05          |
| L3   | -4.61E+05         | 6.55E+05          | -4.60E+05         | 6.54E+05          |
| L4   | -4.61E+05         | 6.55E+05          | -4.60E+05         | 6.54E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-749. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1497. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

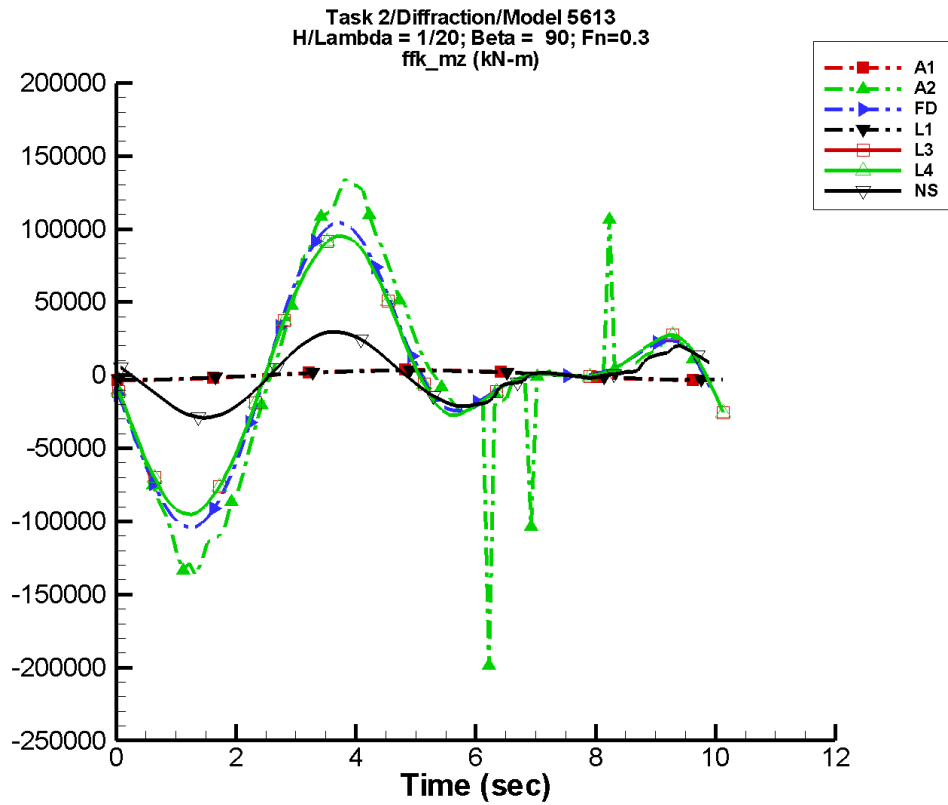
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 0.951           | 1.18E+03        | -94               | 1.33            | -156              |
| A2   | -30.8           | 4.92E+03        | -99               | 8.60E+03        | 164               |
| FD   | 44.3            | 2.59E+03        | -101              | 9.41E+03        | 166               |
| L1   | 0.263           | 1.07E+03        | -94               | 0.429           | 151               |
| L3   | -5.22           | 2.26E+03        | -95               | 9.51E+03        | 172               |
| L4   | -5.22           | 2.26E+03        | -95               | 9.51E+03        | 172               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -29.3           | 2.01E+03        | 88                | 3.33E+03        | 174               |

Table G-1498. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.18E+03         | 1.18E+03          | -1.18E+03         | 1.17E+03          |
| A2   | -1.31E+04         | 1.30E+04          | -1.21E+04         | 1.21E+04          |
| FD   | -1.20E+04         | 1.20E+04          | -1.15E+04         | 1.15E+04          |
| L1   | -1.07E+03         | 1.07E+03          | -1.08E+03         | 1.07E+03          |
| L3   | -1.17E+04         | 1.17E+04          | -1.15E+04         | 1.15E+04          |
| L4   | -1.17E+04         | 1.17E+04          | -1.15E+04         | 1.15E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.80E+03         | 4.82E+03          | -4.65E+03         | 4.65E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-750. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

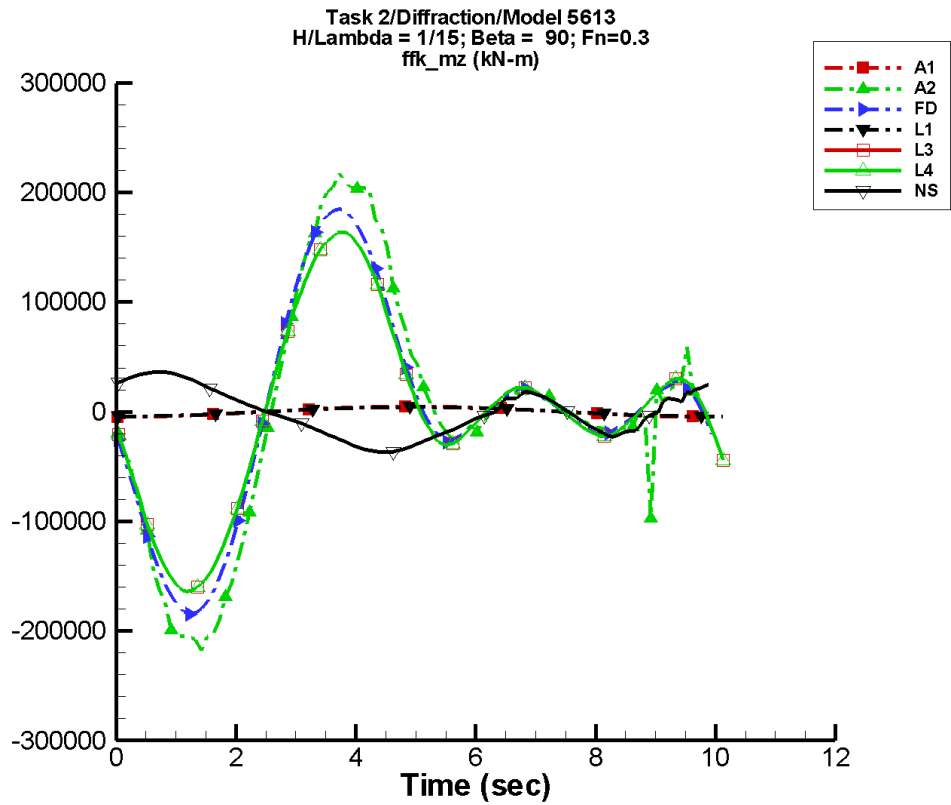
Table G-1499. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.86            | 3.56E+03        | -94               | 3.99            | -156              |
| A2   | -2.18E+03       | 4.28E+04        | -97               | 7.91E+04        | 162               |
| FD   | 949.            | 3.67E+04        | -102              | 6.22E+04        | 167               |
| L1   | 0.801           | 3.21E+03        | -94               | 1.29            | 152               |
| L3   | 12.8            | 3.24E+04        | -96               | 5.89E+04        | 171               |
| L4   | 12.8            | 3.24E+04        | -96               | 5.89E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -969.           | 2.46E+03        | -96               | 2.07E+04        | 171               |

Table G-1500. Minimum and maximum of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.56E+03         | 3.56E+03          | -3.56E+03         | 3.52E+03          |
| A2   | -1.99E+05         | 1.34E+05          | -1.23E+05         | 1.22E+05          |
| FD   | -1.04E+05         | 1.04E+05          | -1.00E+05         | 9.98E+04          |
| L1   | -3.21E+03         | 3.21E+03          | -3.23E+03         | 3.20E+03          |
| L3   | -9.54E+04         | 9.54E+04          | -9.39E+04         | 9.39E+04          |
| L4   | -9.54E+04         | 9.54E+04          | -9.39E+04         | 9.39E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.92E+04         | 2.96E+04          | -2.77E+04         | 2.82E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-751. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

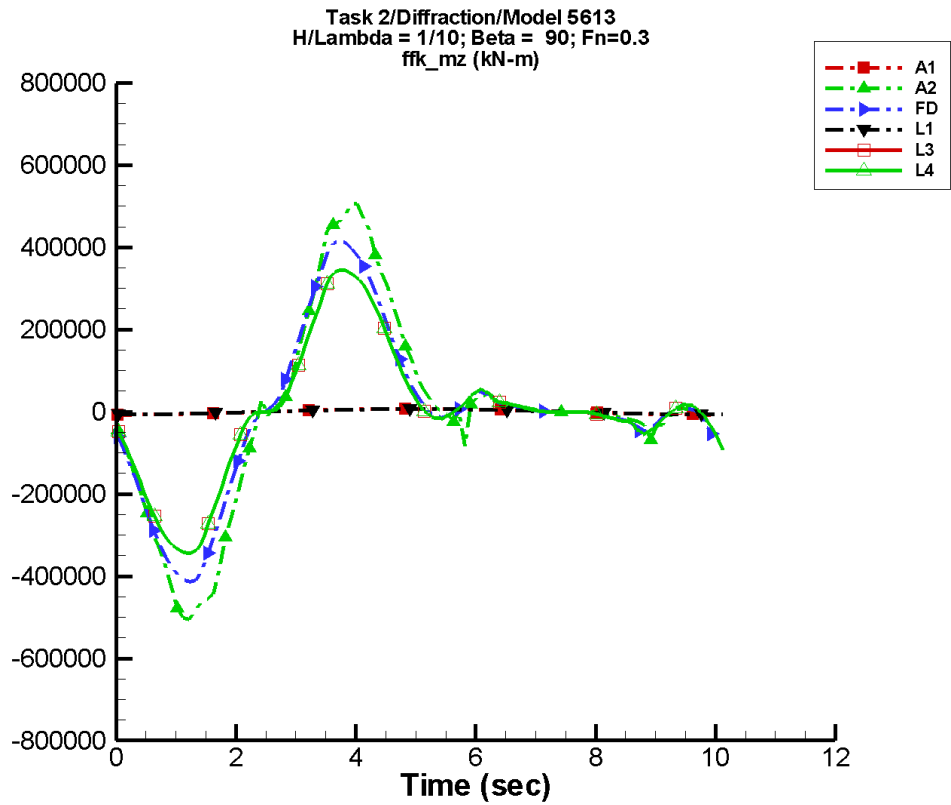
Table G–1501. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.82            | 4.76E+03        | -94               | 5.33            | -156              |
| A2   | -1.23E+03       | 9.20E+04        | -100              | 1.12E+05        | 161               |
| FD   | 2.01E+03        | 7.54E+04        | -102              | 9.78E+04        | 168               |
| L1   | 1.05            | 4.29E+03        | -94               | 1.72            | 152               |
| L3   | 61.5            | 6.68E+04        | -96               | 8.80E+04        | 170               |
| L4   | 61.5            | 6.68E+04        | -96               | 8.80E+04        | 170               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.29E+03       | 2.23E+04        | 87                | 1.71E+04        | -2                |

Table G–1502. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.76E+03         | 4.75E+03          | -4.76E+03         | 4.71E+03          |
| A2   | -2.18E+05         | 2.17E+05          | -2.06E+05         | 2.06E+05          |
| FD   | -1.85E+05         | 1.85E+05          | -1.77E+05         | 1.77E+05          |
| L1   | -4.29E+03         | 4.29E+03          | -4.30E+03         | 4.27E+03          |
| L3   | -1.64E+05         | 1.64E+05          | -1.61E+05         | 1.61E+05          |
| L4   | -1.64E+05         | 1.64E+05          | -1.61E+05         | 1.61E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.70E+04         | 3.65E+04          | -3.62E+04         | 3.56E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-752. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

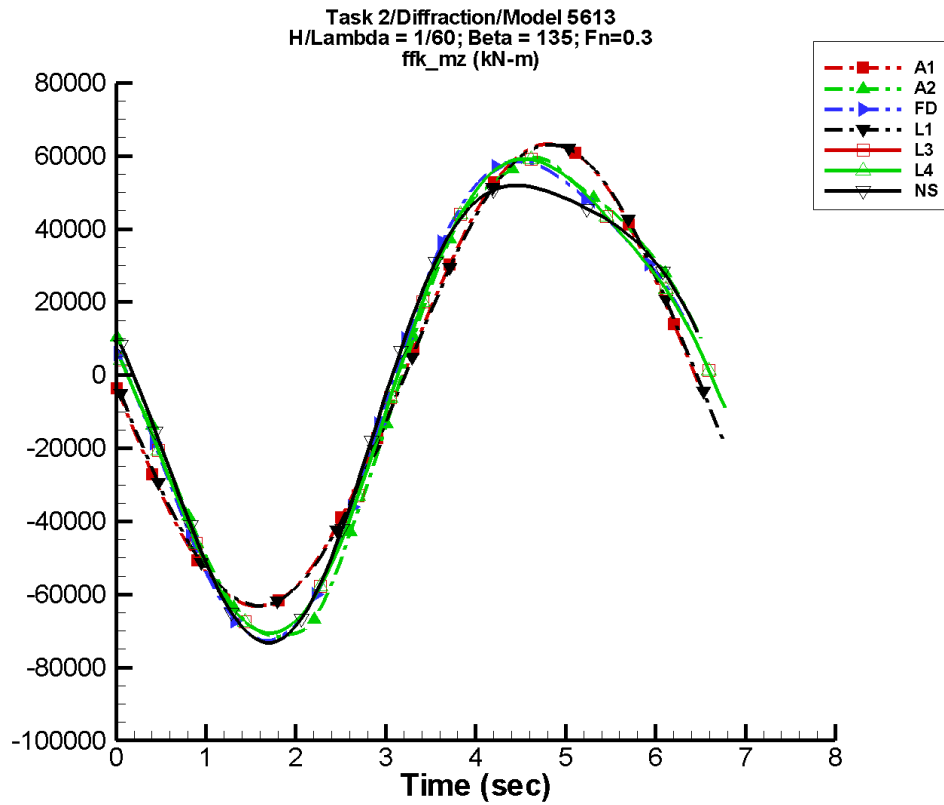
Table G–1503. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.73            | 7.13E+03        | -94               | 7.99            | -156              |
| A2   | -1.16E+03       | 2.08E+05        | -100              | 2.30E+05        | 162               |
| FD   | 3.10E+03        | 1.76E+05        | -101              | 1.86E+05        | 167               |
| L1   | 1.60            | 6.43E+03        | -94               | 2.58            | 152               |
| L3   | -1.42E+03       | 1.47E+05        | -96               | 1.48E+05        | 171               |
| L4   | -1.42E+03       | 1.47E+05        | -96               | 1.48E+05        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1504. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.13E+03         | 7.13E+03          | -7.13E+03         | 7.06E+03          |
| A2   | -5.05E+05         | 5.06E+05          | -4.67E+05         | 4.68E+05          |
| FD   | -4.14E+05         | 4.14E+05          | -3.87E+05         | 3.87E+05          |
| L1   | -6.43E+03         | 6.43E+03          | -6.45E+03         | 6.41E+03          |
| L3   | -3.45E+05         | 3.45E+05          | -3.38E+05         | 3.38E+05          |
| L4   | -3.45E+05         | 3.45E+05          | -3.38E+05         | 3.38E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-753. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1505. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

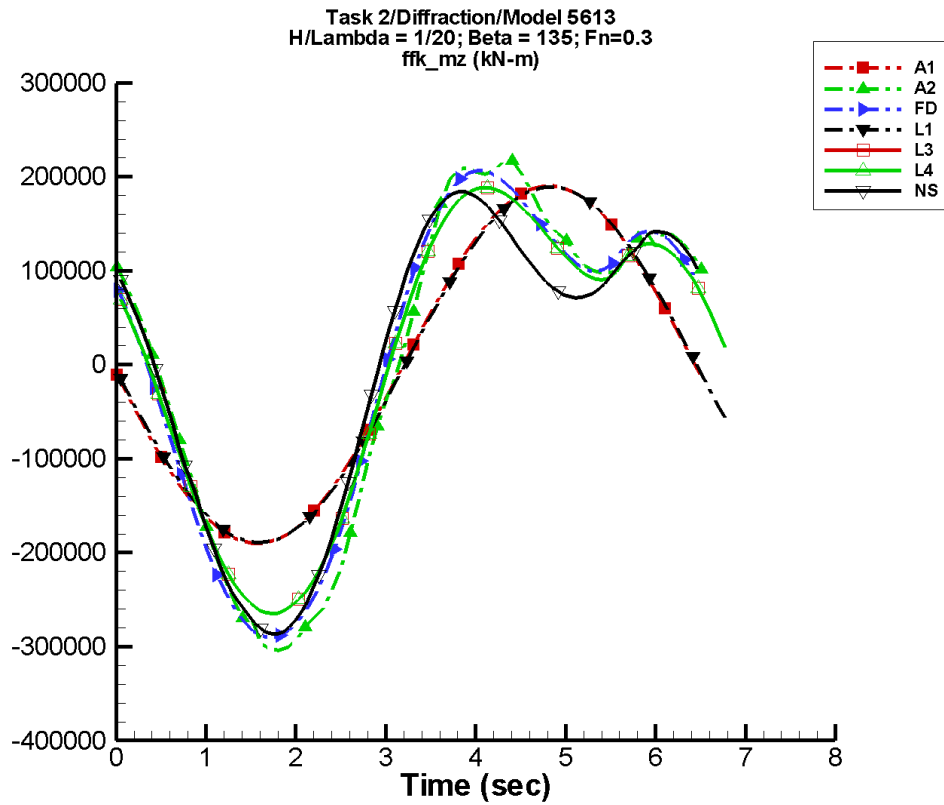
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 27.5            | 6.33E+04        | 180               | 41.7            | 159               |
| A2   | 34.9            | 6.47E+04        | 175               | 9.85E+03        | 44                |
| FD   | -45.0           | 6.45E+04        | -176              | 1.05E+04        | 61                |
| L1   | 7.57            | 6.31E+04        | 179               | 12.0            | 127               |
| L3   | 35.7            | 6.37E+04        | 179               | 9.15E+03        | 46                |
| L4   | 35.7            | 6.37E+04        | 179               | 9.15E+03        | 46                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -37.3           | 6.16E+04        | -179              | 1.24E+04        | 70                |

Table G–1506. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.32E+04         | 6.33E+04          | -6.35E+04         | 6.18E+04          |
| A2   | -7.16E+04         | 5.96E+04          | -7.09E+04         | 5.73E+04          |
| FD   | -7.26E+04         | 5.86E+04          | -7.03E+04         | 5.73E+04          |
| L1   | -6.31E+04         | 6.31E+04          | -6.25E+04         | 6.26E+04          |
| L3   | -7.07E+04         | 5.92E+04          | -6.99E+04         | 5.87E+04          |
| L4   | -7.07E+04         | 5.92E+04          | -6.99E+04         | 5.87E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.32E+04         | 5.19E+04          | -7.21E+04         | 5.16E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-754. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

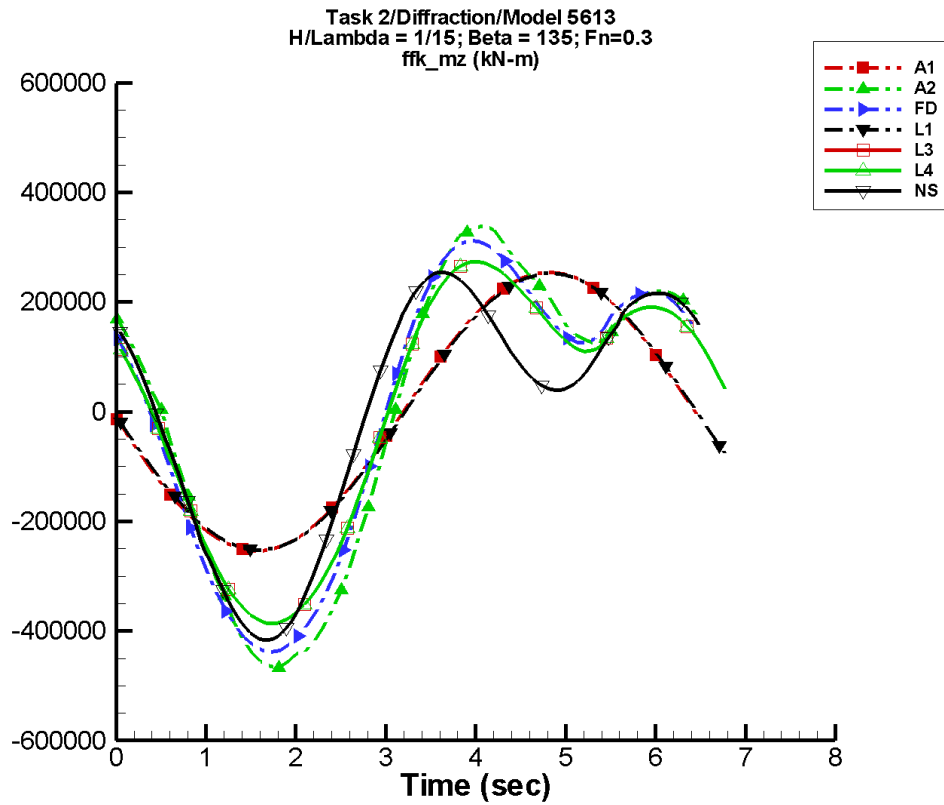
Table G–1507. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 82.6            | 1.90E+05        | 180               | 126.            | 159               |
| A2   | -325.           | 2.30E+05        | 173               | 9.23E+04        | 50                |
| FD   | -929.           | 2.24E+05        | -178              | 8.67E+04        | 71                |
| L1   | 22.7            | 1.89E+05        | 179               | 36.0            | 127               |
| L3   | -12.2           | 2.04E+05        | 177               | 7.53E+04        | 59                |
| L4   | -12.2           | 2.04E+05        | 177               | 7.53E+04        | 59                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -947.           | 1.94E+05        | -179              | 1.04E+05        | 74                |

Table G–1508. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.90E+05         | 1.90E+05          | -1.91E+05         | 1.86E+05          |
| A2   | -3.04E+05         | 2.17E+05          | -2.99E+05         | 2.09E+05          |
| FD   | -2.91E+05         | 2.07E+05          | -2.81E+05         | 1.97E+05          |
| L1   | -1.89E+05         | 1.89E+05          | -1.88E+05         | 1.88E+05          |
| L3   | -2.65E+05         | 1.88E+05          | -2.62E+05         | 1.86E+05          |
| L4   | -2.65E+05         | 1.88E+05          | -2.62E+05         | 1.86E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.86E+05         | 1.84E+05          | -2.81E+05         | 1.79E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-755. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

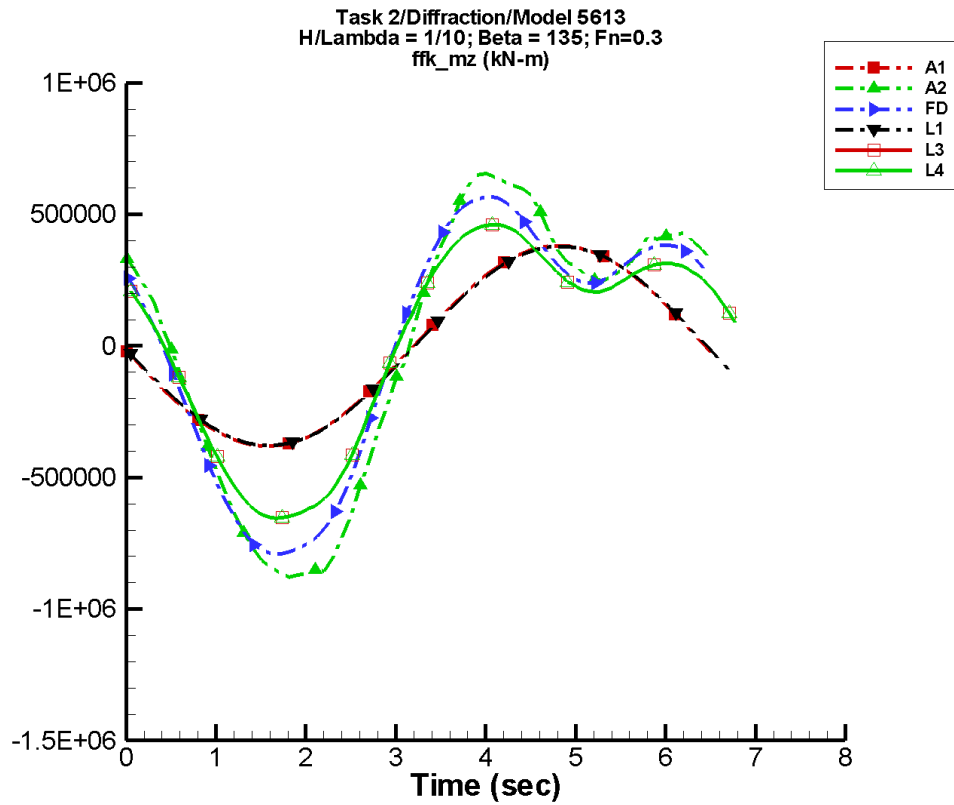
Table G–1509. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 110.            | 2.54E+05        | 180               | 168.            | 159               |
| A2   | -1.21E+03       | 3.41E+05        | 173               | 1.58E+05        | 51                |
| FD   | -1.62E+03       | 3.27E+05        | -178              | 1.44E+05        | 72                |
| L1   | 30.3            | 2.52E+05        | 179               | 48.1            | 127               |
| L3   | 4.62            | 2.86E+05        | 177               | 1.22E+05        | 62                |
| L4   | 4.62            | 2.86E+05        | 177               | 1.22E+05        | 62                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -789.           | 2.43E+05        | -177              | 1.79E+05        | 87                |

Table G–1510. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.54E+05         | 2.54E+05          | -2.55E+05         | 2.48E+05          |
| A2   | -4.68E+05         | 3.39E+05          | -4.58E+05         | 3.17E+05          |
| FD   | -4.38E+05         | 3.12E+05          | -4.22E+05         | 2.96E+05          |
| L1   | -2.52E+05         | 2.52E+05          | -2.50E+05         | 2.50E+05          |
| L3   | -3.86E+05         | 2.73E+05          | -3.81E+05         | 2.69E+05          |
| L4   | -3.86E+05         | 2.73E+05          | -3.81E+05         | 2.69E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.17E+05         | 2.54E+05          | -4.11E+05         | 2.49E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-756. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

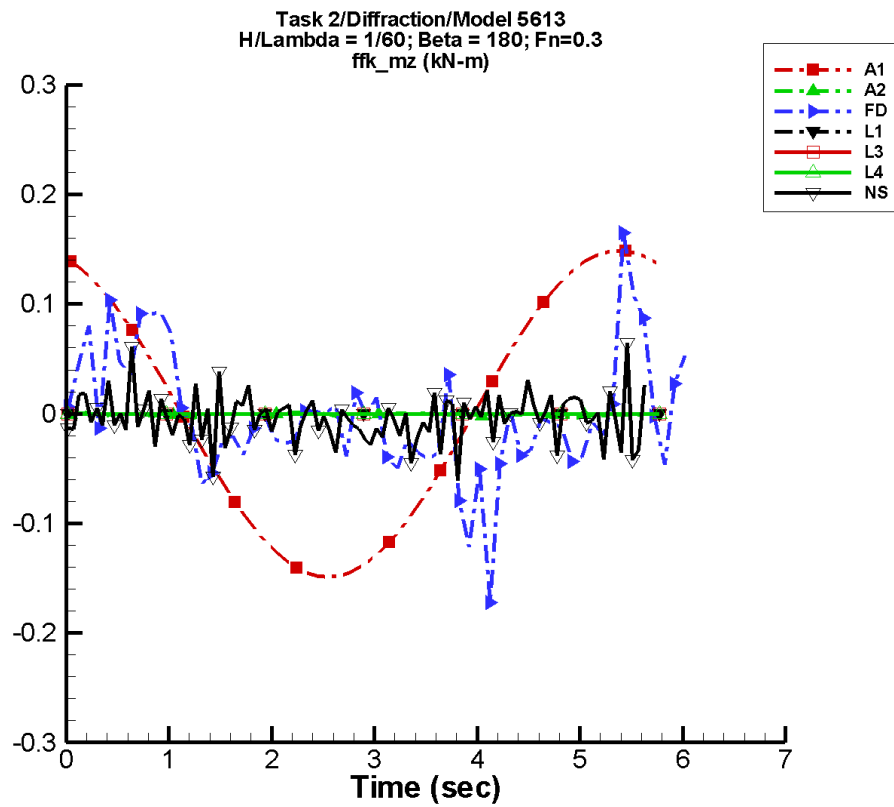
Table G–1511. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 165.            | 3.81E+05        | 180               | 251.            | 159               |
| A2   | -2.47E+03       | 6.55E+05        | 172               | 2.95E+05        | 49                |
| FD   | -2.43E+03       | 5.93E+05        | -179              | 2.68E+05        | 71                |
| L1   | 45.4            | 3.79E+05        | 179               | 72.0            | 127               |
| L3   | 26.7            | 4.88E+05        | 176               | 2.12E+05        | 61                |
| L4   | 26.7            | 4.88E+05        | 176               | 2.12E+05        | 61                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1512. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.81E+05         | 3.81E+05          | -3.82E+05         | 3.72E+05          |
| A2   | -8.79E+05         | 6.55E+05          | -8.58E+05         | 6.20E+05          |
| FD   | -7.91E+05         | 5.66E+05          | -7.70E+05         | 5.39E+05          |
| L1   | -3.79E+05         | 3.79E+05          | -3.75E+05         | 3.75E+05          |
| L3   | -6.54E+05         | 4.60E+05          | -6.48E+05         | 4.53E+05          |
| L4   | -6.54E+05         | 4.60E+05          | -6.48E+05         | 4.53E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-757. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1513. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

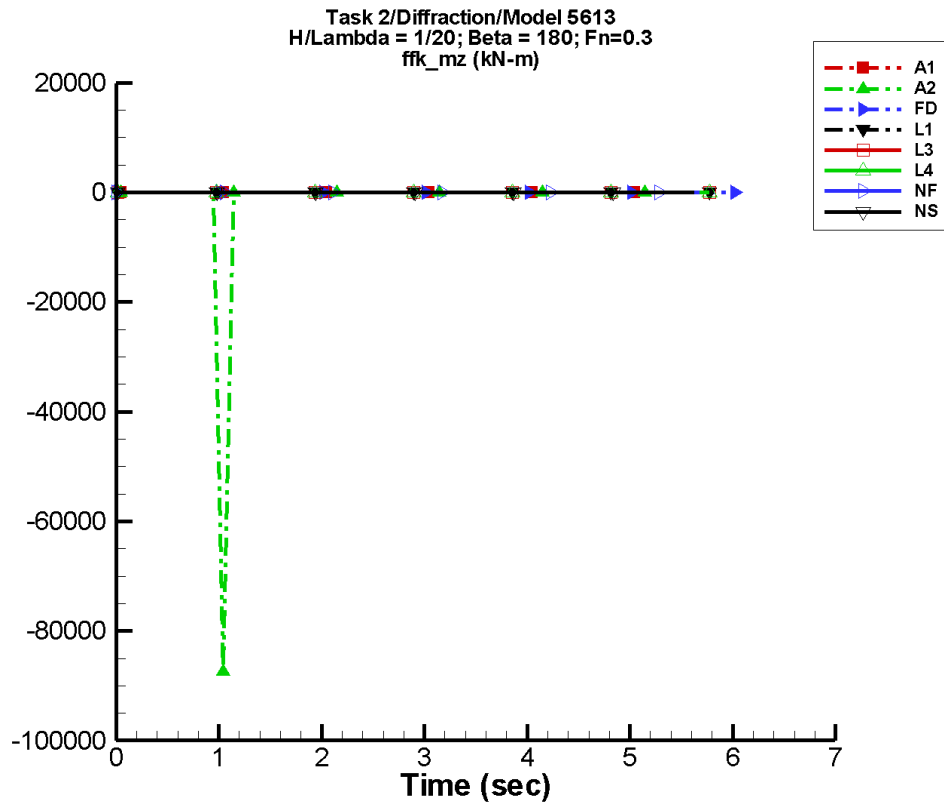
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -5.59E-05       | 0.149           | 101               | 9.15E-05        | -16               |
| A2   | -7.53E-04       | 5.36E-04        | -72               | 5.86E-04        | 57                |
| FD   | -6.03E-03       | 3.98E-02        | 13                | 2.86E-02        | 2                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.49E-03       | 7.44E-03        | 87                | 1.88E-03        | -115              |

Table G-1514. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.149            | 0.149             | -0.144            | 0.144             |
| A2   | -4.79E-03         | 1.06E-03          | -2.01E-03         | 1.40E-04          |
| FD   | -0.172            | 0.165             | -6.06E-02         | 6.42E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.11E-02         | 6.45E-02          | -1.48E-02         | 8.32E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-758. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

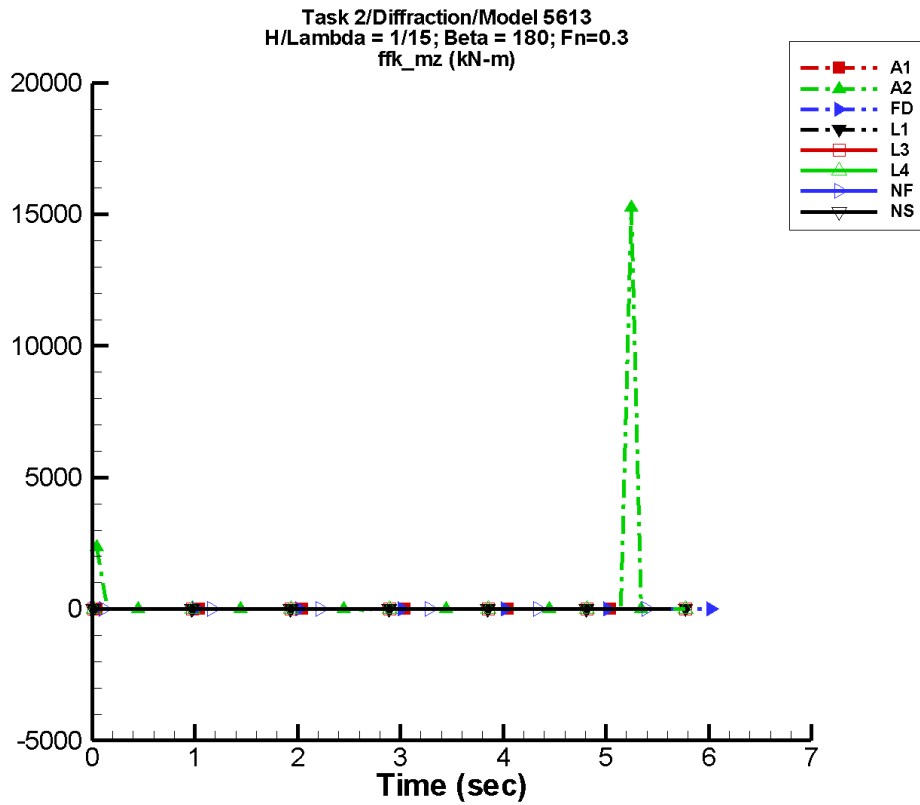
Table G–1515. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.68E-04       | 0.448           | 101               | 2.75E-04        | -16               |
| A2   | -682.           | 1.53E+03        | -166              | 1.95E+03        | 120               |
| FD   | -2.48E-03       | 0.111           | 38                | 9.54E-02        | 43                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.86E-03       | 6.27E-03        | -68               | 9.24E-03        | 10                |

Table G–1516. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.448            | 0.447             | -0.434            | 0.434             |
| A2   | -8.74E+04         | 1.30E-02          | -1.17E+04         | 1.00E+03          |
| FD   | -0.411            | 0.470             | -0.126            | 0.253             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.164            | 0.143             | -3.74E-02         | 1.29E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-759. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

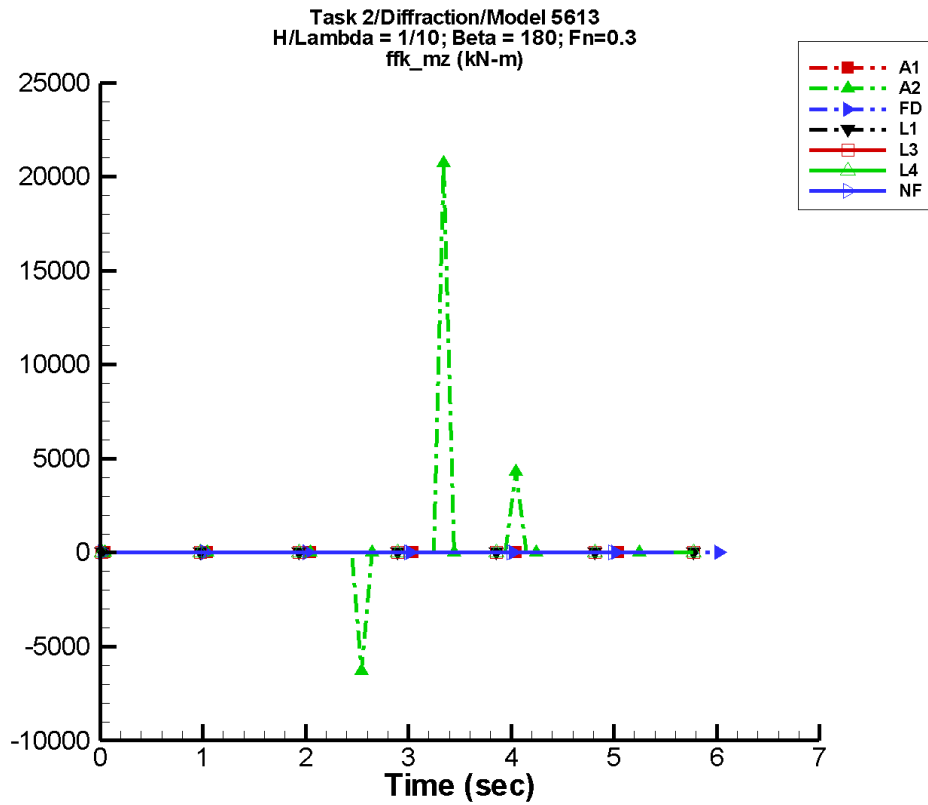
Table G–1517. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.24E-04       | 0.598           | 101               | 3.67E-04        | -16               |
| A2   | 277.            | 509.            | 107               | 521.            | 136               |
| FD   | 6.39E-04        | 0.199           | 30                | 0.124           | 41                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 5.66E-03        | 1.35E-02        | -83               | 4.46E-03        | 152               |

Table G–1518. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.598            | 0.597             | -0.579            | 0.579             |
| A2   | -52.8             | 1.53E+04          | -174.             | 2.04E+03          |
| FD   | -0.716            | 0.817             | -0.257            | 0.312             |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.446            | 0.246             | -4.01E-02         | 7.03E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-760. Time history of  $M_z^{fk}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

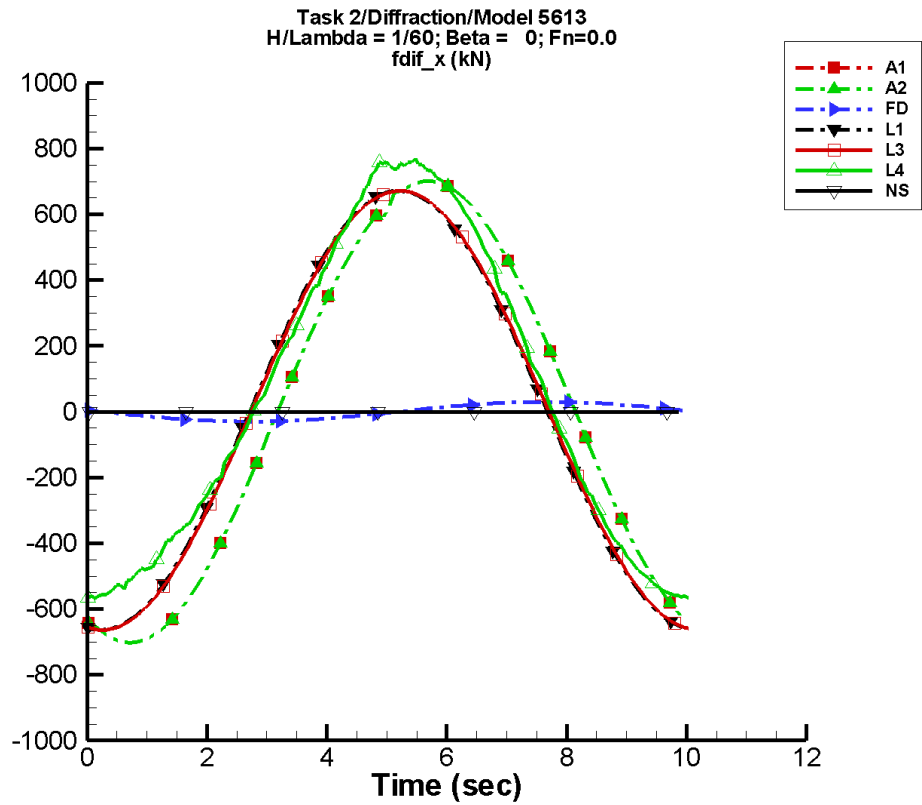
Table G–1519. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.37E-04       | 0.896           | 101               | 5.51E-04        | -16               |
| A2   | 324.            | 785.            | -149              | 784.            | -19               |
| FD   | 0.139           | 0.435           | 59                | 0.534           | 86                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1520. Minimum and maximum of  $M_z^{\text{fk}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.897            | 0.896             | -0.869            | 0.869             |
| A2   | -6.30E+03         | 2.07E+04          | -1.03E+03         | 2.82E+03          |
| FD   | -2.15             | 2.94              | -0.906            | 1.49              |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-761. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1521. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

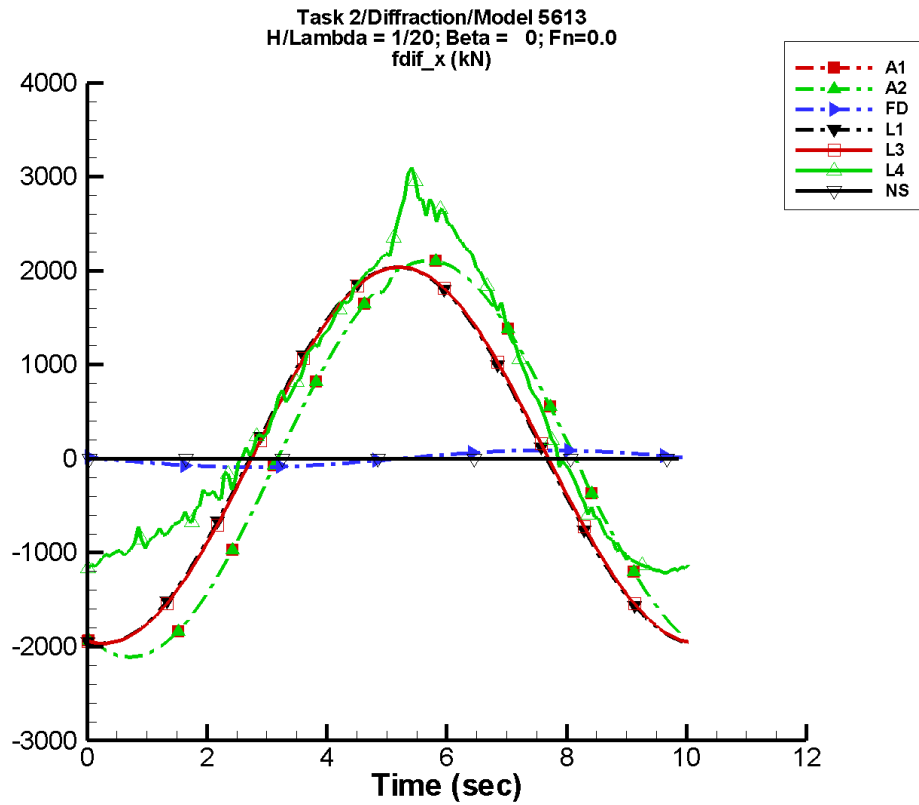
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.547        | 698.          | -120              | 0.313         | -159              |
| A2   | -0.547        | 698.          | -120              | 0.313         | -159              |
| FD   | -1.03E-02     | 29.8          | 164               | 1.34E-02      | -168              |
| L1   | 2.15          | 667.          | -102              | 1.89          | 77                |
| L3   | 2.14          | 667.          | -103              | 1.88          | 77                |
| L4   | 52.7          | 649.          | -105              | 62.3          | 25                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1522. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -702.           | 701.            | -694.           | 694.            |
| A2   | -702.           | 701.            | -694.           | 694.            |
| FD   | -29.8           | 29.8            | -29.5           | 29.9            |
| L1   | -664.           | 672.            | -661.           | 669.            |
| L3   | -663.           | 671.            | -661.           | 669.            |
| L4   | -568.           | 771.            | -565.           | 753.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-762. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

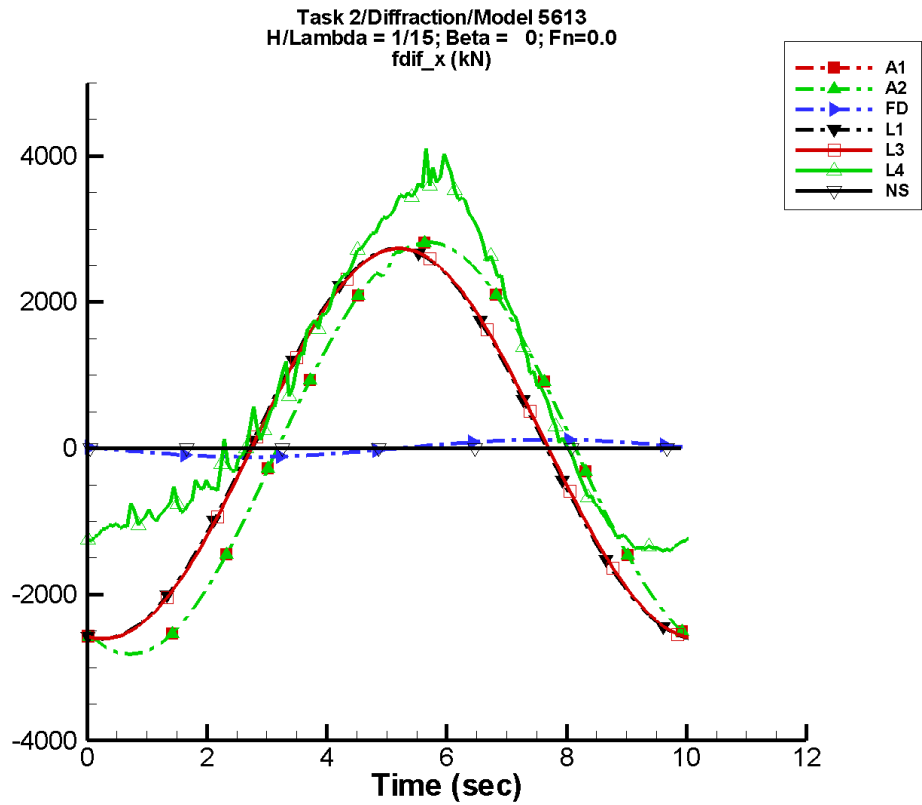
Table G-1523. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.65         | 2.10E+03      | -120              | 0.942         | -159              |
| A2   | -1.65         | 2.10E+03      | -120              | 0.942         | -159              |
| FD   | -3.09E-02     | 89.5          | 164               | 4.01E-02      | -168              |
| L1   | 16.1          | 2.00E+03      | -102              | 20.4          | 80                |
| L3   | 16.1          | 2.00E+03      | -103              | 20.4          | 80                |
| L4   | 456.          | 1.83E+03      | -108              | 392.          | 15                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1524. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.11E+03       | 2.11E+03        | -2.09E+03       | 2.09E+03        |
| A2   | -2.11E+03       | 2.11E+03        | -2.09E+03       | 2.09E+03        |
| FD   | -89.5           | 89.5            | -88.6           | 89.6            |
| L1   | -1.97E+03       | 2.04E+03        | -1.96E+03       | 2.03E+03        |
| L3   | -1.97E+03       | 2.04E+03        | -1.96E+03       | 2.03E+03        |
| L4   | -1.21E+03       | 3.11E+03        | -1.19E+03       | 2.86E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-763. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

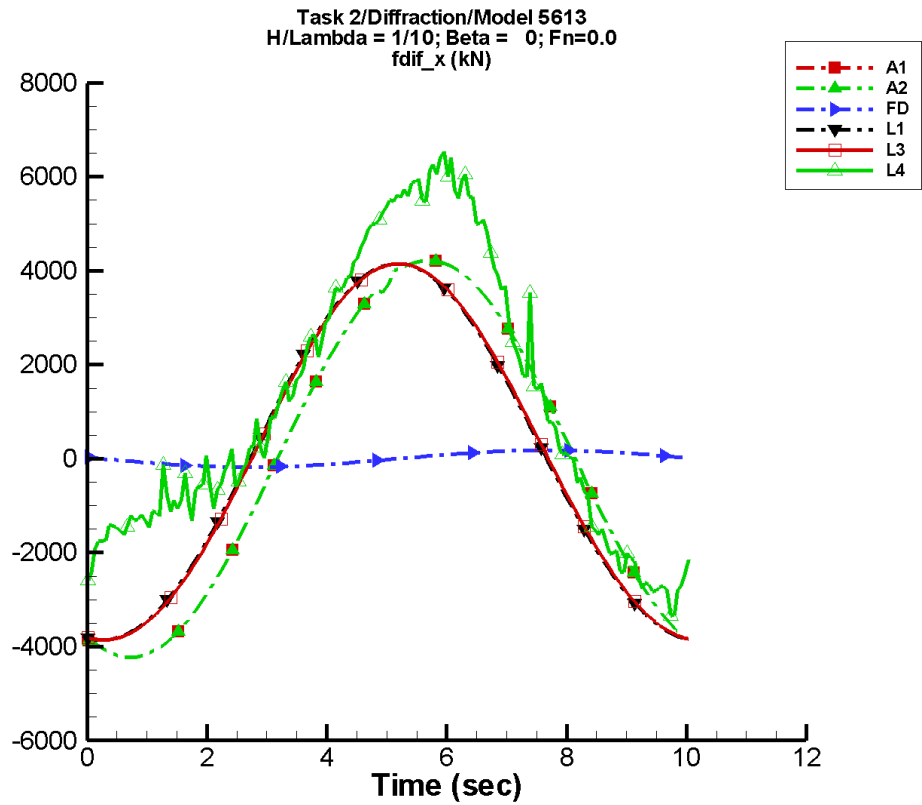
Table G-1525. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.20         | 2.80E+03      | -120              | 1.26          | -159              |
| A2   | -2.20         | 2.80E+03      | -120              | 1.26          | -159              |
| FD   | -4.13E-02     | 119.          | 164               | 5.35E-02      | -168              |
| L1   | 27.9          | 2.67E+03      | -102              | 37.1          | 80                |
| L3   | 27.9          | 2.67E+03      | -103              | 37.1          | 80                |
| L4   | 750.          | 2.40E+03      | -109              | 588.          | 17                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1526. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.82E+03       | 2.81E+03        | -2.78E+03       | 2.79E+03        |
| A2   | -2.82E+03       | 2.81E+03        | -2.78E+03       | 2.79E+03        |
| FD   | -119.           | 119.            | -118.           | 119.            |
| L1   | -2.61E+03       | 2.73E+03        | -2.60E+03       | 2.72E+03        |
| L3   | -2.61E+03       | 2.73E+03        | -2.60E+03       | 2.72E+03        |
| L4   | -1.41E+03       | 4.14E+03        | -1.38E+03       | 3.82E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-764. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

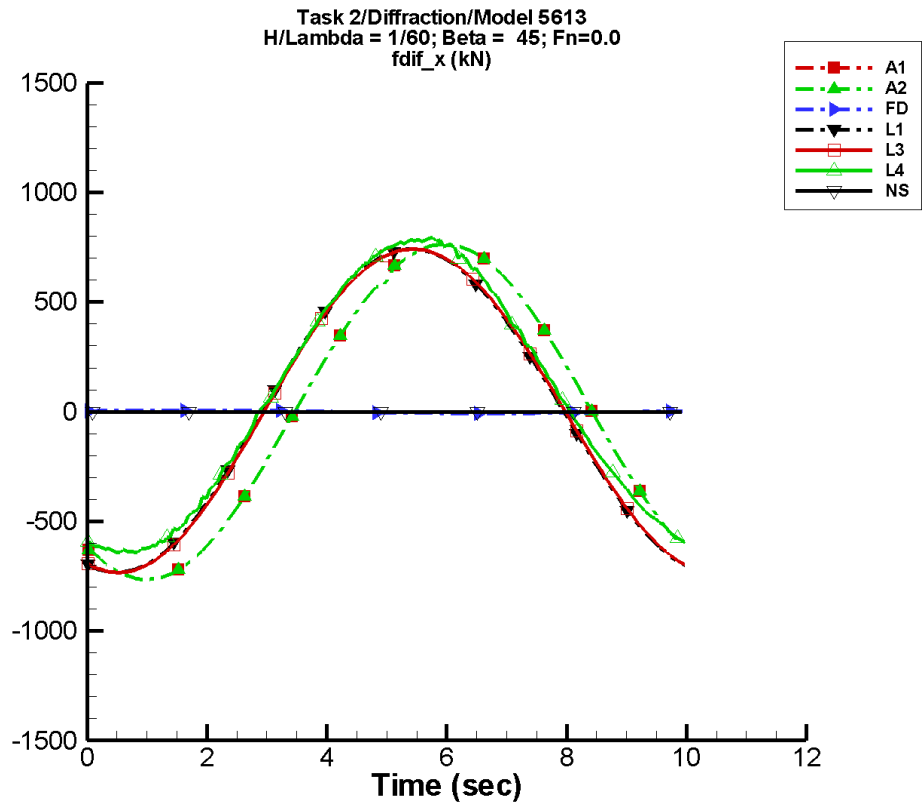
Table G-1527. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.30         | 4.20E+03      | -120              | 1.89          | -159              |
| A2   | -3.30         | 4.20E+03      | -120              | 1.89          | -159              |
| FD   | -6.19E-02     | 179.          | 164               | 8.03E-02      | -168              |
| L1   | 61.3          | 4.00E+03      | -102              | 85.2          | 81                |
| L3   | 61.2          | 4.00E+03      | -103              | 85.1          | 81                |
| L4   | 1.23E+03      | 3.92E+03      | -108              | 1.12E+03      | 10                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1528. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.23E+03       | 4.22E+03        | -4.18E+03       | 4.18E+03        |
| A2   | -4.23E+03       | 4.22E+03        | -4.18E+03       | 4.18E+03        |
| FD   | -179.           | 179.            | -177.           | 179.            |
| L1   | -3.86E+03       | 4.15E+03        | -3.85E+03       | 4.13E+03        |
| L3   | -3.86E+03       | 4.15E+03        | -3.85E+03       | 4.13E+03        |
| L4   | -3.34E+03       | 6.54E+03        | -2.92E+03       | 6.16E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-765. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1529. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

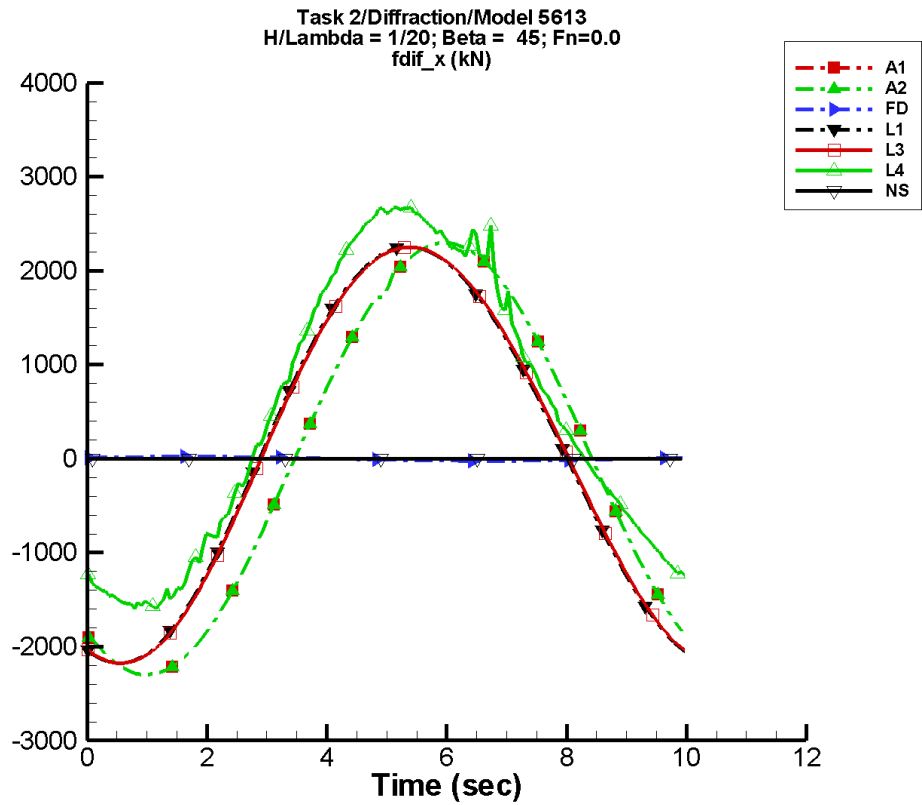
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.246        | 760.          | -130              | 0.459         | 170               |
| A2   | -0.246        | 760.          | -130              | 0.459         | 170               |
| FD   | 6.54E-04      | 7.24          | 21                | 3.02E-03      | 51                |
| L1   | 8.90          | 737.          | -111              | 7.37          | 175               |
| L3   | 8.90          | 737.          | -112              | 7.38          | 175               |
| L4   | 58.7          | 711.          | -113              | 16.3          | 67                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1530. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -765.           | 764.            | -757.           | 756.            |
| A2   | -765.           | 764.            | -757.           | 756.            |
| FD   | -7.24           | 7.24            | -7.18           | 7.17            |
| L1   | -733.           | 742.            | -730.           | 739.            |
| L3   | -733.           | 741.            | -730.           | 739.            |
| L4   | -643.           | 795.            | -636.           | 783.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-766. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

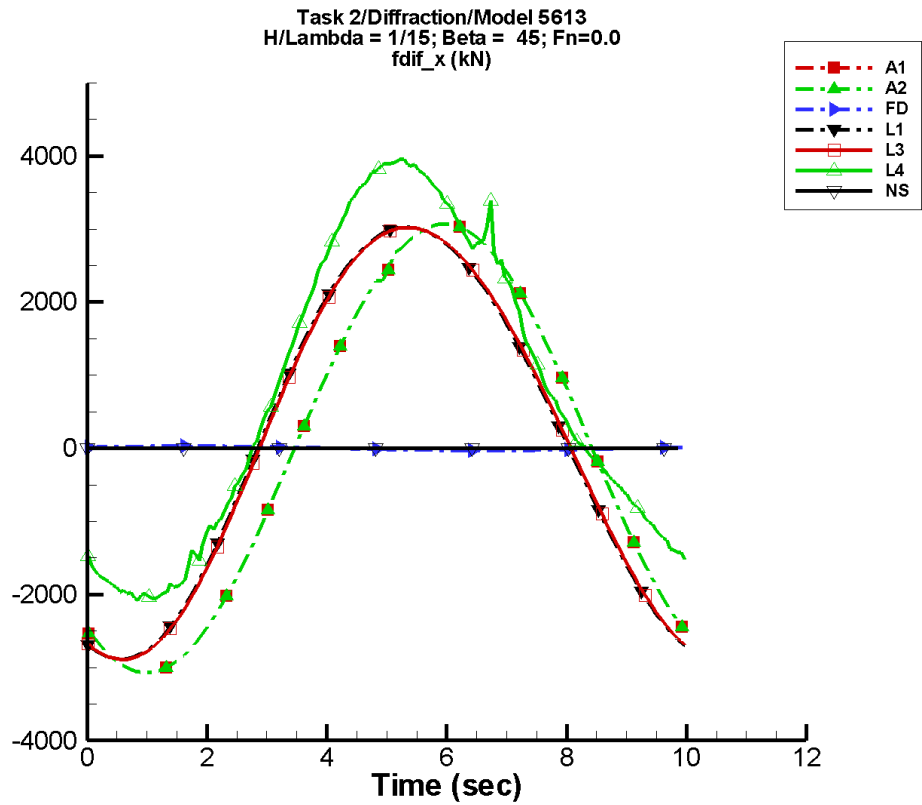
Table G-1531. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.739        | 2.29E+03      | -130              | 1.38          | 170               |
| A2   | -0.739        | 2.29E+03      | -130              | 1.38          | 170               |
| FD   | 1.96E-03      | 21.7          | 21                | 9.07E-03      | 51                |
| L1   | 79.3          | 2.21E+03      | -111              | 68.1          | 174               |
| L3   | 79.3          | 2.21E+03      | -112              | 68.1          | 174               |
| L4   | 495.          | 2.09E+03      | -114              | 180.          | 104               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1532. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.30E+03       | 2.30E+03        | -2.28E+03       | 2.27E+03        |
| A2   | -2.30E+03       | 2.30E+03        | -2.28E+03       | 2.27E+03        |
| FD   | -21.7           | 21.7            | -21.5           | 21.5            |
| L1   | -2.18E+03       | 2.25E+03        | -2.17E+03       | 2.25E+03        |
| L3   | -2.18E+03       | 2.25E+03        | -2.17E+03       | 2.24E+03        |
| L4   | -1.61E+03       | 2.69E+03        | -1.56E+03       | 2.66E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-767. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

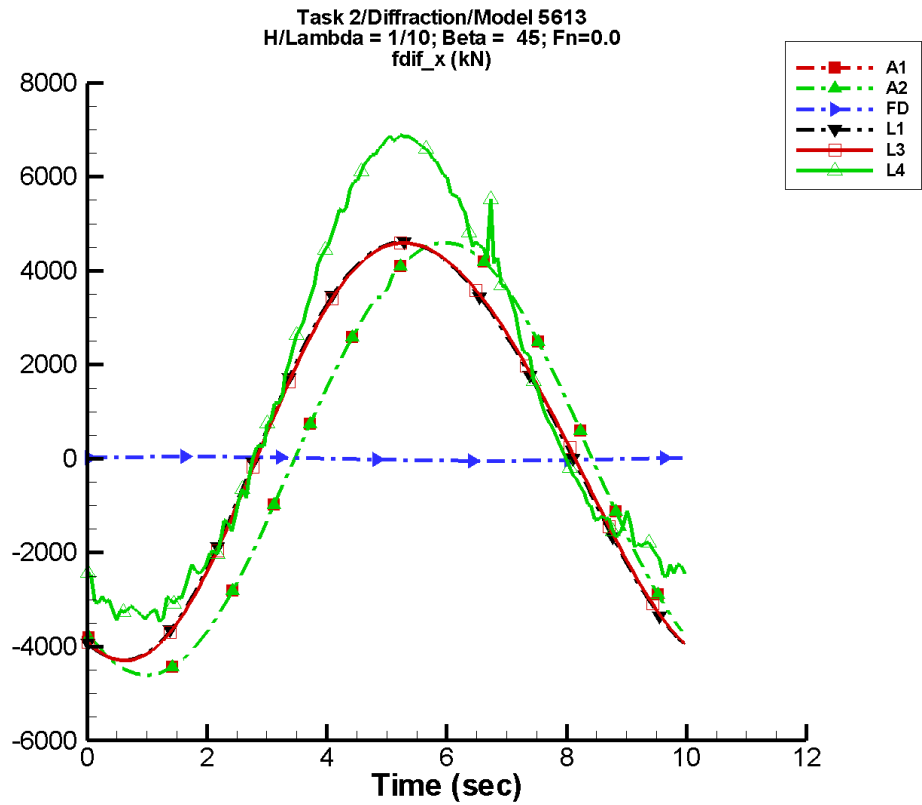
Table G-1533. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.987        | 3.05E+03      | -130              | 1.84          | 170               |
| A2   | -0.987        | 3.05E+03      | -130              | 1.84          | 170               |
| FD   | 2.61E-03      | 29.0          | 21                | 1.21E-02      | 51                |
| L1   | 141.          | 2.95E+03      | -111              | 121.          | 174               |
| L3   | 141.          | 2.95E+03      | -112              | 122.          | 174               |
| L4   | 765.          | 2.88E+03      | -114              | 376.          | 98                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1534. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.07E+03       | 3.07E+03        | -3.04E+03       | 3.04E+03        |
| A2   | -3.07E+03       | 3.07E+03        | -3.04E+03       | 3.04E+03        |
| FD   | -29.0           | 29.0            | -28.7           | 28.7            |
| L1   | -2.89E+03       | 3.02E+03        | -2.88E+03       | 3.01E+03        |
| L3   | -2.89E+03       | 3.02E+03        | -2.88E+03       | 3.01E+03        |
| L4   | -2.11E+03       | 3.97E+03        | -2.04E+03       | 3.92E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-768. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

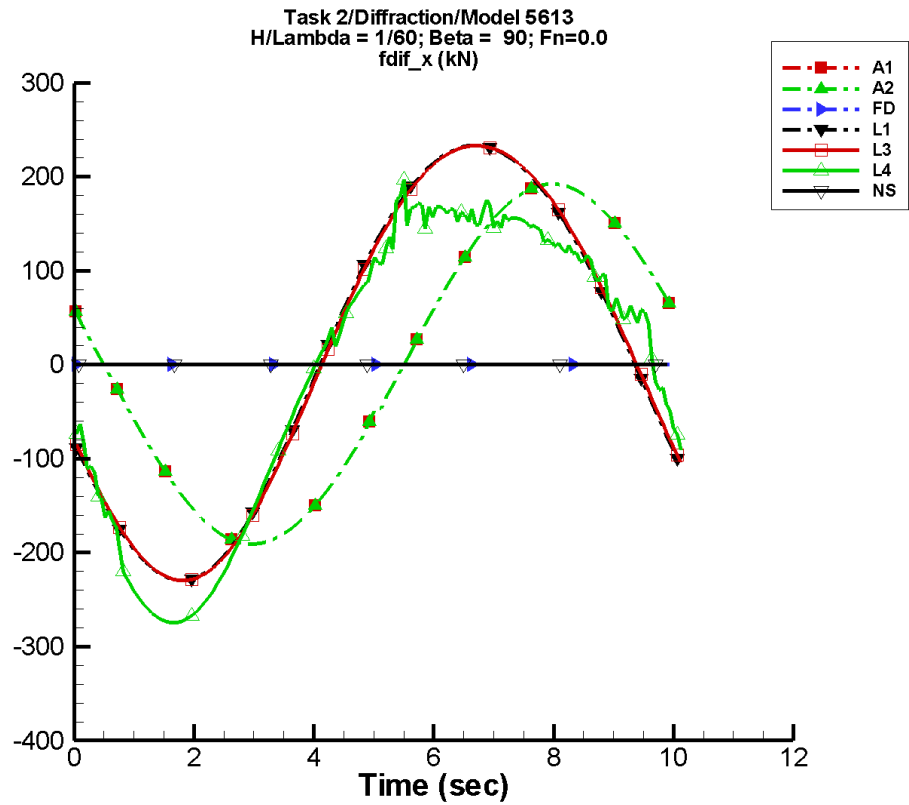
Table G-1535. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.48         | 4.58E+03      | -130              | 2.76          | 170               |
| A2   | -1.48         | 4.58E+03      | -130              | 2.76          | 170               |
| FD   | 3.92E-03      | 43.5          | 21                | 1.81E-02      | 51                |
| L1   | 316.          | 4.42E+03      | -111              | 274.          | 174               |
| L3   | 316.          | 4.42E+03      | -112              | 274.          | 174               |
| L4   | 1.17E+03      | 4.94E+03      | -111              | 815.          | 78                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1536. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.61E+03       | 4.60E+03        | -4.56E+03       | 4.55E+03        |
| A2   | -4.61E+03       | 4.60E+03        | -4.56E+03       | 4.55E+03        |
| FD   | -43.5           | 43.5            | -43.1           | 43.0            |
| L1   | -4.29E+03       | 4.60E+03        | -4.27E+03       | 4.59E+03        |
| L3   | -4.29E+03       | 4.59E+03        | -4.28E+03       | 4.58E+03        |
| L4   | -3.46E+03       | 6.94E+03        | -3.29E+03       | 6.83E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-769. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1537. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

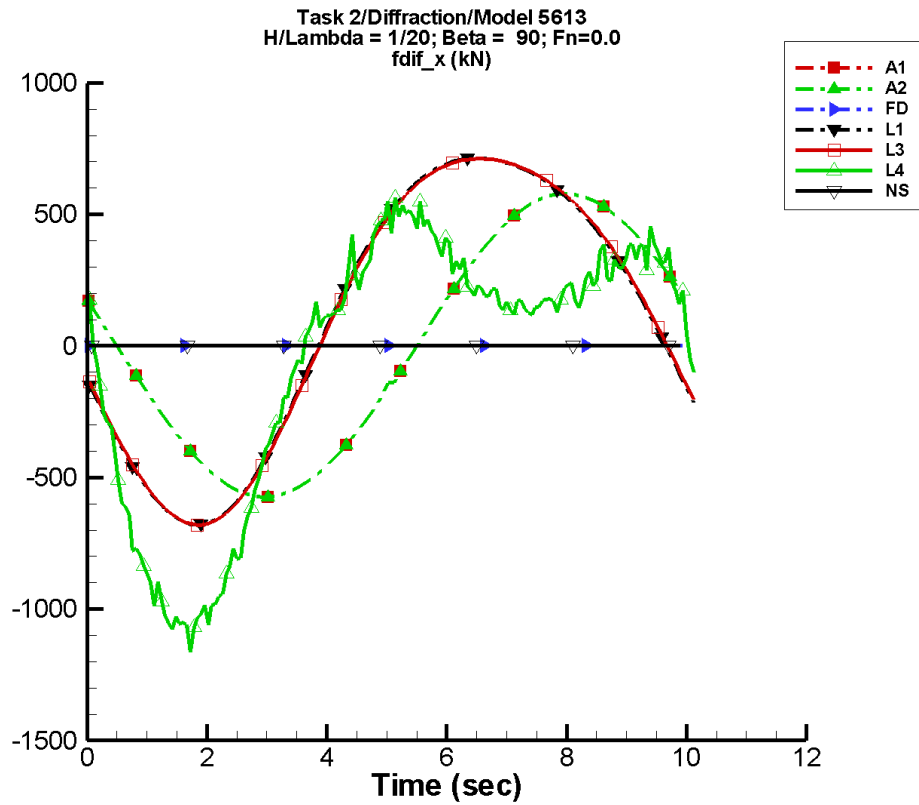
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.992         | 190.          | 157               | 0.664         | 130               |
| A2   | 0.992         | 190.          | 157               | 0.664         | 130               |
| FD   | -1.15E-09     | 3.54E-06      | 167               | 1.57E-09      | -164              |
| L1   | 11.6          | 231.          | -158              | 10.3          | 118               |
| L3   | 11.6          | 231.          | -159              | 10.3          | 118               |
| L4   | -6.61         | 214.          | -159              | 50.7          | 133               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1538. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -191.           | 192.            | -189.           | 190.            |
| A2   | -191.           | 192.            | -189.           | 190.            |
| FD   | -3.54E-06       | 3.54E-06        | -3.50E-06       | 3.55E-06        |
| L1   | -230.           | 233.            | -229.           | 232.            |
| L3   | -230.           | 233.            | -229.           | 232.            |
| L4   | -275.           | 197.            | -273.           | 168.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-770. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

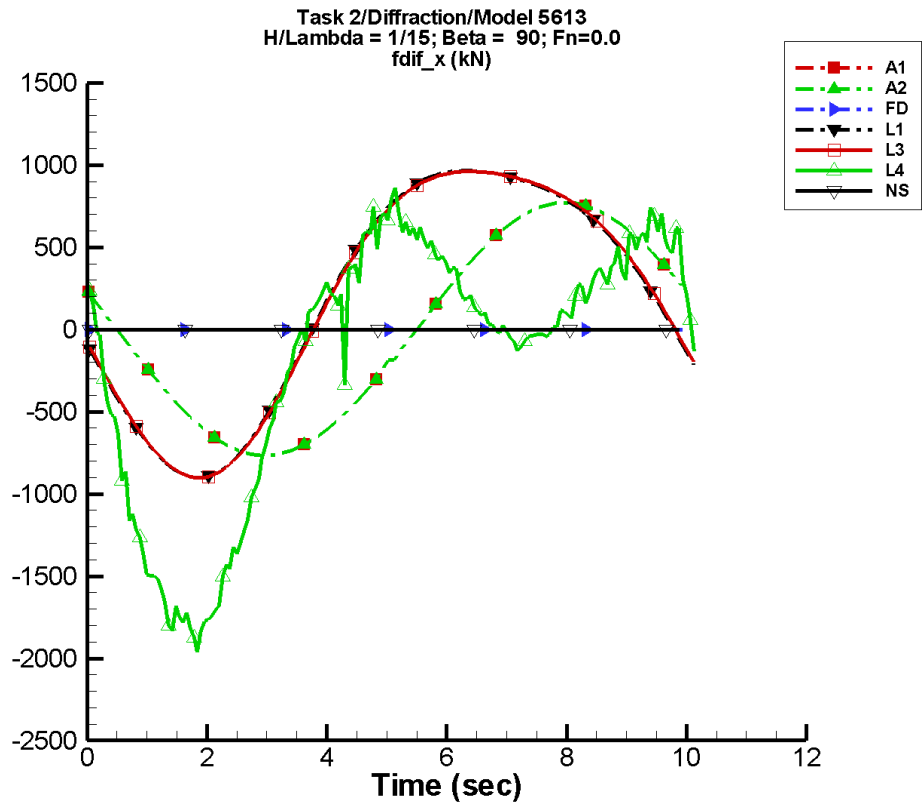
Table G-1539. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.98          | 572.          | 157               | 2.00          | 130               |
| A2   | 2.98          | 572.          | 157               | 2.00          | 130               |
| FD   | -3.44E-09     | 1.06E-05      | 167               | 4.72E-09      | -164              |
| L1   | 103.          | 694.          | -158              | 91.8          | 118               |
| L3   | 103.          | 694.          | -159              | 91.8          | 118               |
| L4   | -57.5         | 587.          | -155              | 397.          | 127               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1540. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -574.           | 578.            | -568.           | 572.            |
| A2   | -574.           | 578.            | -568.           | 572.            |
| FD   | -1.06E-05       | 1.06E-05        | -1.05E-05       | 1.06E-05        |
| L1   | -680.           | 714.            | -676.           | 712.            |
| L3   | -680.           | 712.            | -677.           | 710.            |
| L4   | -1.19E+03       | 562.            | -1.07E+03       | 513.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-771. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

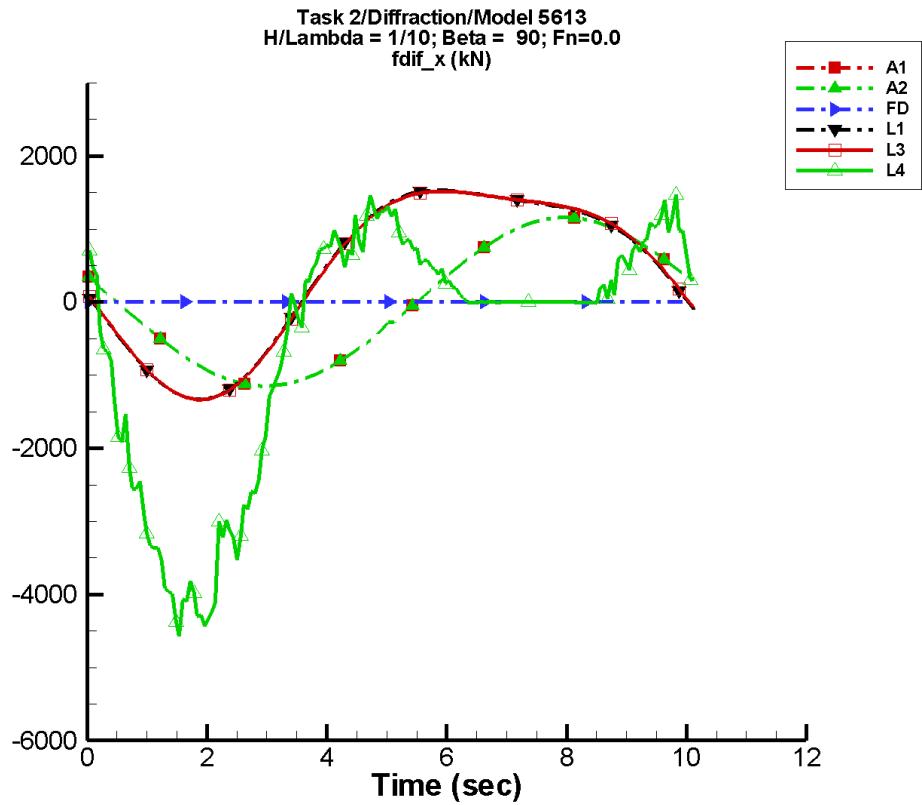
Table G–1541. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.98          | 763.          | 157               | 2.67          | 130               |
| A2   | 3.98          | 763.          | 157               | 2.67          | 130               |
| FD   | -4.59E-09     | 1.42E-05      | 167               | 6.29E-09      | -164              |
| L1   | 184.          | 926.          | -158              | 163.          | 118               |
| L3   | 184.          | 926.          | -159              | 163.          | 118               |
| L4   | -187.         | 829.          | -156              | 733.          | 125               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1542. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -767.           | 772.            | -759.           | 764.            |
| A2   | -767.           | 772.            | -759.           | 764.            |
| FD   | -1.42E-05       | 1.42E-05        | -1.40E-05       | 1.42E-05        |
| L1   | -900.           | 966.            | -895.           | 964.            |
| L3   | -901.           | 961.            | -896.           | 960.            |
| L4   | -1.96E+03       | 863.            | -1.82E+03       | 702.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-772. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

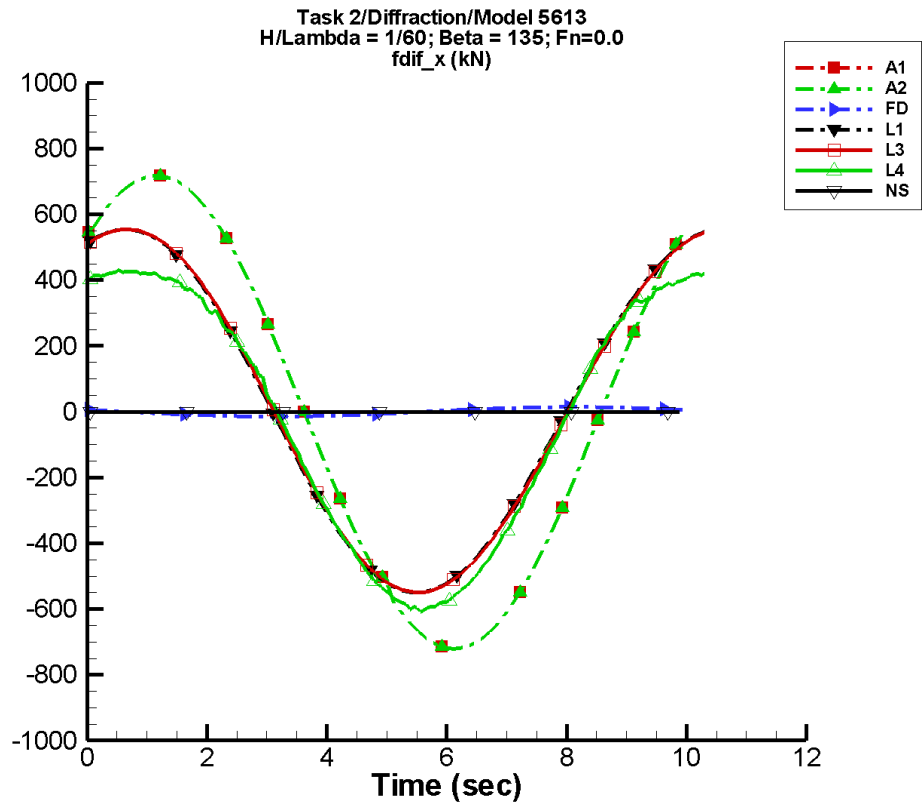
Table G-1543. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 5.98          | 1.14E+03      | 157               | 4.00          | 130               |
| A2   | 5.98          | 1.14E+03      | 157               | 4.00          | 130               |
| FD   | -6.88E-09     | 2.12E-05      | 167               | 9.44E-09      | -164              |
| L1   | 413.          | 1.39E+03      | -158              | 366.          | 118               |
| L3   | 413.          | 1.39E+03      | -159              | 366.          | 118               |
| L4   | -564.         | 1.70E+03      | -155              | 1.66E+03      | 125               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1544. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.15E+03       | 1.16E+03        | -1.14E+03       | 1.15E+03        |
| A2   | -1.15E+03       | 1.16E+03        | -1.14E+03       | 1.15E+03        |
| FD   | -2.12E-05       | 2.12E-05        | -2.10E-05       | 2.13E-05        |
| L1   | -1.33E+03       | 1.53E+03        | -1.32E+03       | 1.53E+03        |
| L3   | -1.33E+03       | 1.52E+03        | -1.32E+03       | 1.51E+03        |
| L4   | -4.61E+03       | 1.47E+03        | -4.23E+03       | 1.24E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-773. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1545. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

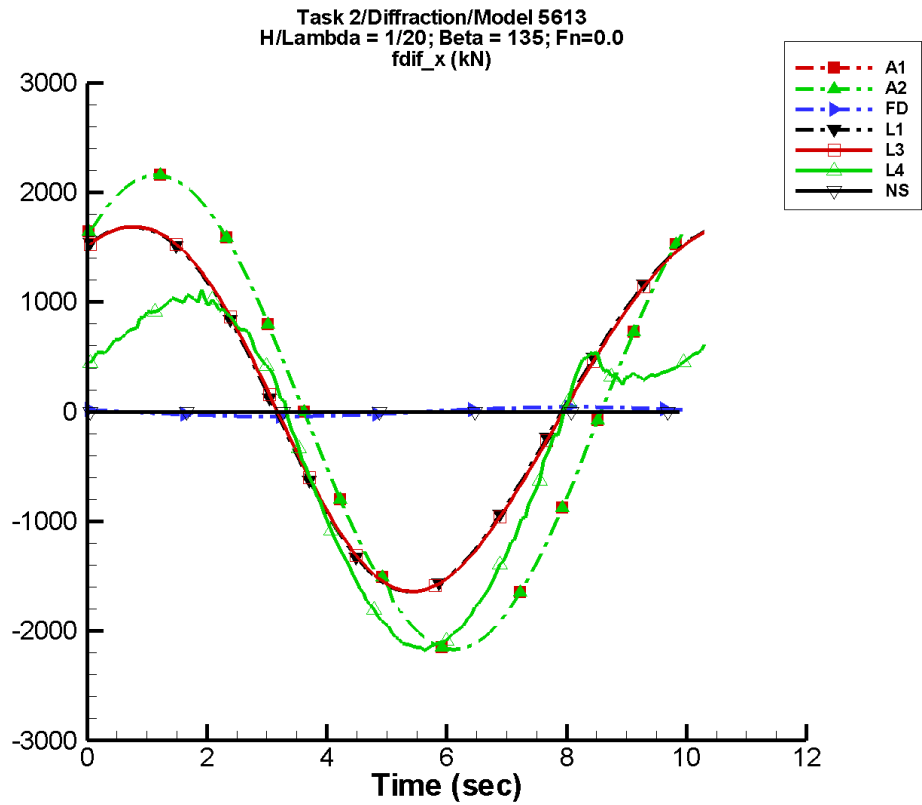
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.799         | 719.          | 44                | 0.254         | 68                |
| A2   | 0.799         | 719.          | 44                | 0.254         | 68                |
| FD   | -6.02E-03     | 14.5          | 148               | 6.70E-03      | 177               |
| L1   | 6.53          | 552.          | 65                | 10.3          | -75               |
| L3   | 6.54          | 551.          | 64                | 10.3          | -75               |
| L4   | -31.4         | 523.          | 63                | 53.6          | -147              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1546. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -721.           | 727.            | -714.           | 720.            |
| A2   | -721.           | 727.            | -714.           | 720.            |
| FD   | -14.5           | 14.5            | -14.4           | 14.4            |
| L1   | -550.           | 554.            | -548.           | 552.            |
| L3   | -549.           | 554.            | -547.           | 553.            |
| L4   | -615.           | 431.            | -597.           | 425.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-774. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

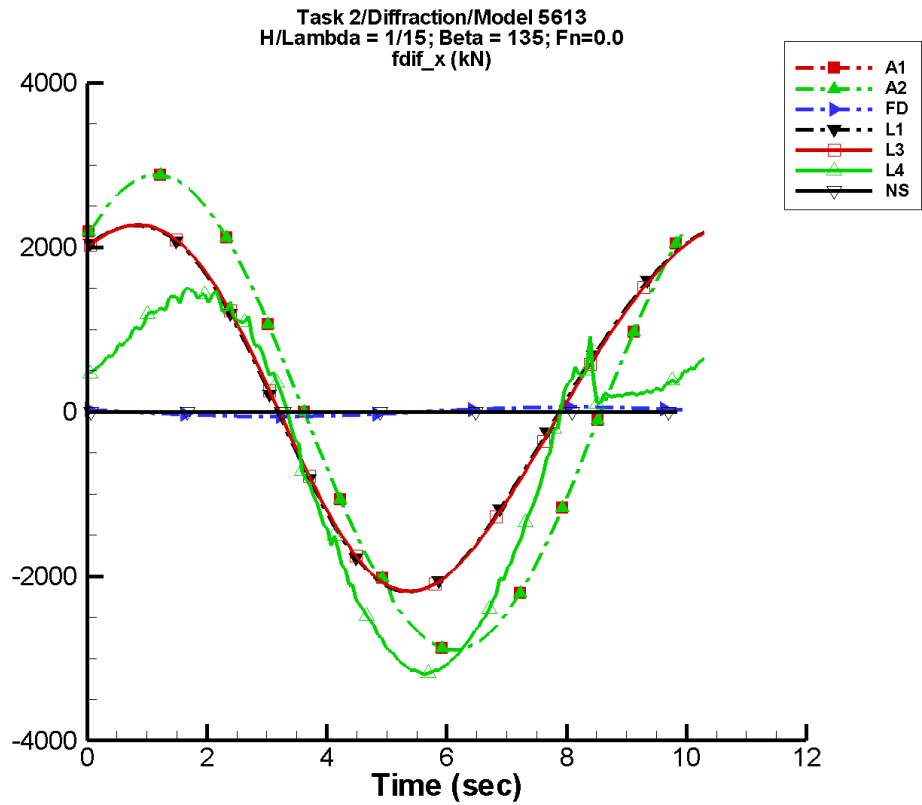
Table G-1547. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.40          | 2.16E+03      | 44                | 0.765         | 68                |
| A2   | 2.40          | 2.16E+03      | 44                | 0.765         | 68                |
| FD   | -1.81E-02     | 43.5          | 148               | 2.01E-02      | 177               |
| L1   | 61.9          | 1.65E+03      | 65                | 94.8          | -77               |
| L3   | 61.9          | 1.65E+03      | 64                | 94.8          | -77               |
| L4   | -319.         | 1.48E+03      | 57                | 469.          | -126              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1548. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.17E+03       | 2.19E+03        | -2.15E+03       | 2.17E+03        |
| A2   | -2.17E+03       | 2.19E+03        | -2.15E+03       | 2.17E+03        |
| FD   | -43.5           | 43.5            | -43.1           | 43.1            |
| L1   | -1.64E+03       | 1.68E+03        | -1.64E+03       | 1.68E+03        |
| L3   | -1.64E+03       | 1.69E+03        | -1.63E+03       | 1.68E+03        |
| L4   | -2.18E+03       | 1.11E+03        | -2.15E+03       | 1.04E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-775. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

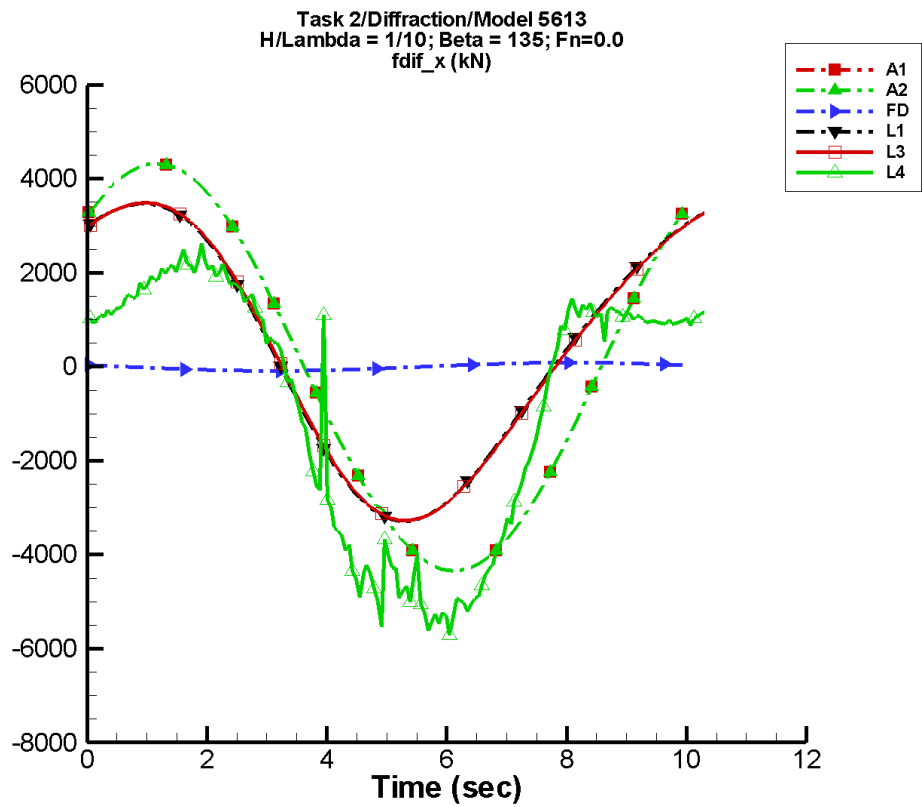
Table G-1549. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.21          | 2.89E+03      | 44                | 1.02          | 68                |
| A2   | 3.21          | 2.89E+03      | 44                | 1.02          | 68                |
| FD   | -2.41E-02     | 58.0          | 148               | 2.68E-02      | 177               |
| L1   | 111.          | 2.21E+03      | 65                | 169.          | -77               |
| L3   | 111.          | 2.21E+03      | 64                | 169.          | -77               |
| L4   | -543.         | 2.08E+03      | 55                | 731.          | -123              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1550. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.90E+03       | 2.92E+03        | -2.87E+03       | 2.89E+03        |
| A2   | -2.90E+03       | 2.92E+03        | -2.87E+03       | 2.89E+03        |
| FD   | -58.0           | 58.0            | -57.4           | 57.4            |
| L1   | -2.19E+03       | 2.27E+03        | -2.18E+03       | 2.26E+03        |
| L3   | -2.18E+03       | 2.27E+03        | -2.17E+03       | 2.26E+03        |
| L4   | -3.21E+03       | 1.53E+03        | -3.16E+03       | 1.44E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-776. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

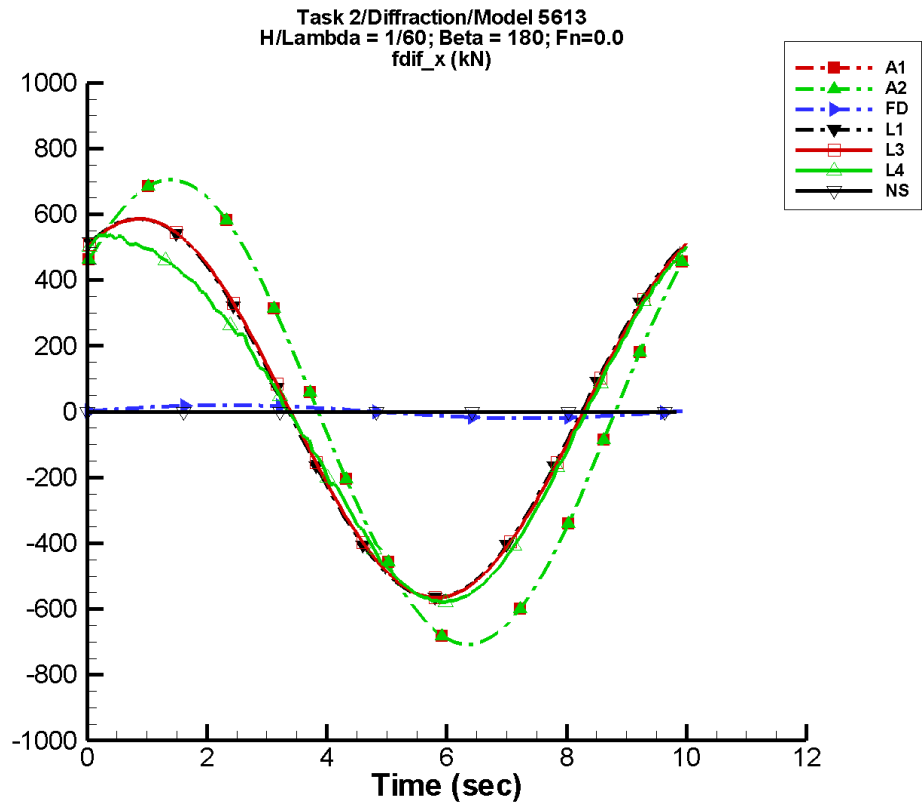
Table G-1551. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 4.81          | 4.33E+03      | 44                | 1.53          | 68                |
| A2   | 4.81          | 4.33E+03      | 44                | 1.53          | 68                |
| FD   | -3.61E-02     | 87.0          | 148               | 4.02E-02      | 177               |
| L1   | 251.          | 3.31E+03      | 65                | 381.          | -77               |
| L3   | 251.          | 3.31E+03      | 64                | 381.          | -77               |
| L4   | -853.         | 3.57E+03      | 60                | 1.26E+03      | -133              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1552. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.34E+03       | 4.38E+03        | -4.30E+03       | 4.34E+03        |
| A2   | -4.34E+03       | 4.38E+03        | -4.30E+03       | 4.34E+03        |
| FD   | -87.0           | 87.0            | -86.1           | 86.1            |
| L1   | -3.29E+03       | 3.47E+03        | -3.27E+03       | 3.46E+03        |
| L3   | -3.28E+03       | 3.48E+03        | -3.26E+03       | 3.47E+03        |
| L4   | -5.71E+03       | 2.62E+03        | -5.39E+03       | 2.25E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-777. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1553. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

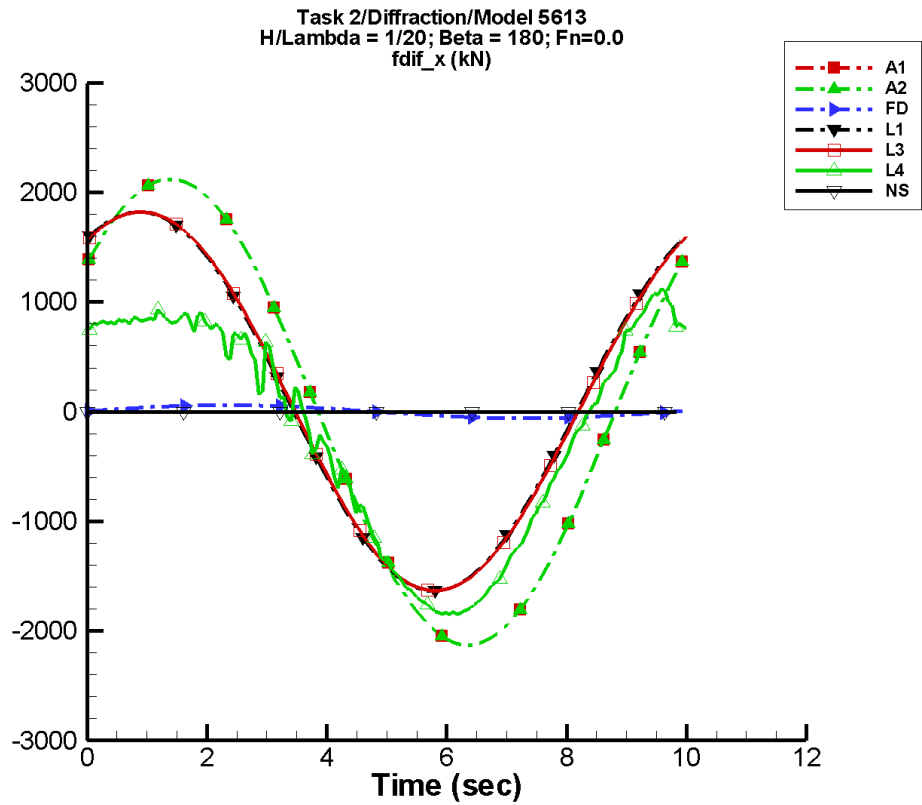
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.346         | 706.          | 36                | 0.291         | 14                |
| A2   | 0.346         | 706.          | 36                | 0.291         | 14                |
| FD   | 5.27E-03      | 20.0          | -3                | 8.68E-03      | 26                |
| L1   | 12.5          | 576.          | 55                | 2.66          | -127              |
| L3   | 12.6          | 576.          | 54                | 2.66          | -127              |
| L4   | -12.8         | 543.          | 55                | 41.2          | 136               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1554. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -708.           | 712.            | -700.           | 704.            |
| A2   | -708.           | 712.            | -700.           | 704.            |
| FD   | -20.0           | 20.0            | -19.8           | 19.8            |
| L1   | -566.           | 586.            | -564.           | 584.            |
| L3   | -565.           | 586.            | -563.           | 584.            |
| L4   | -580.           | 538.            | -575.           | 532.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-778. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

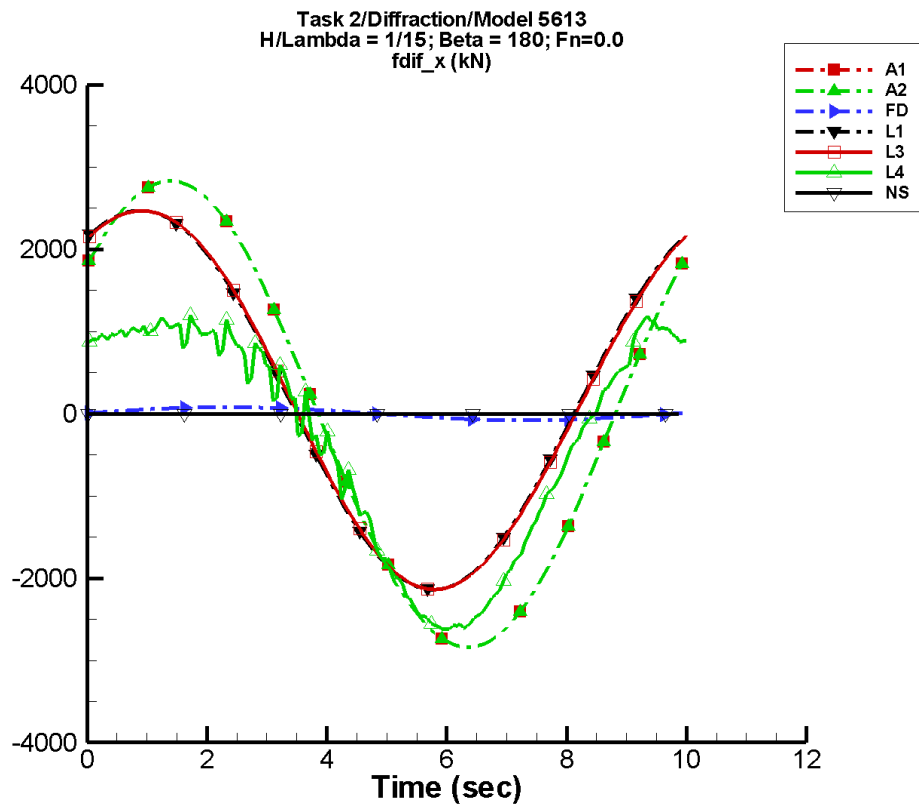
Table G-1555. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.04          | 2.12E+03      | 36                | 0.876         | 14                |
| A2   | 1.04          | 2.12E+03      | 36                | 0.876         | 14                |
| FD   | 1.58E-02      | 59.9          | -3                | 2.60E-02      | 26                |
| L1   | 114.          | 1.73E+03      | 55                | 26.6          | -124              |
| L3   | 114.          | 1.73E+03      | 54                | 26.6          | -123              |
| L4   | -194.         | 1.36E+03      | 50                | 303.          | 175               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1556. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.13E+03       | 2.14E+03        | -2.11E+03       | 2.12E+03        |
| A2   | -2.13E+03       | 2.14E+03        | -2.11E+03       | 2.12E+03        |
| FD   | -59.9           | 59.9            | -59.3           | 59.3            |
| L1   | -1.64E+03       | 1.82E+03        | -1.63E+03       | 1.81E+03        |
| L3   | -1.63E+03       | 1.82E+03        | -1.63E+03       | 1.82E+03        |
| L4   | -1.85E+03       | 1.12E+03        | -1.84E+03       | 1.03E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-779. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

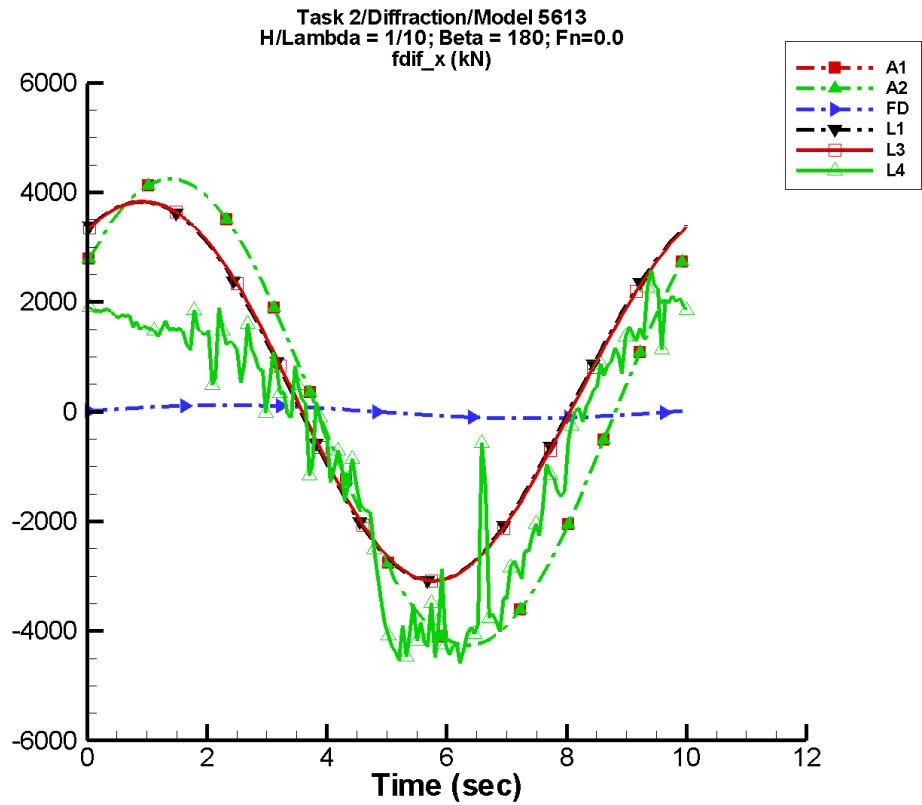
Table G-1557. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.39          | 2.84E+03      | 36                | 1.17          | 14                |
| A2   | 1.39          | 2.84E+03      | 36                | 1.17          | 14                |
| FD   | 2.11E-02      | 79.9          | -3                | 3.47E-02      | 26                |
| L1   | 204.          | 2.30E+03      | 55                | 47.9          | -123              |
| L3   | 204.          | 2.30E+03      | 54                | 47.9          | -123              |
| L4   | -328.         | 1.80E+03      | 48                | 460.          | 179               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1558. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.84E+03       | 2.86E+03        | -2.81E+03       | 2.83E+03        |
| A2   | -2.84E+03       | 2.86E+03        | -2.81E+03       | 2.83E+03        |
| FD   | -79.9           | 79.9            | -79.1           | 79.1            |
| L1   | -2.14E+03       | 2.47E+03        | -2.13E+03       | 2.46E+03        |
| L3   | -2.14E+03       | 2.47E+03        | -2.13E+03       | 2.46E+03        |
| L4   | -2.62E+03       | 1.20E+03        | -2.60E+03       | 1.09E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-780. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

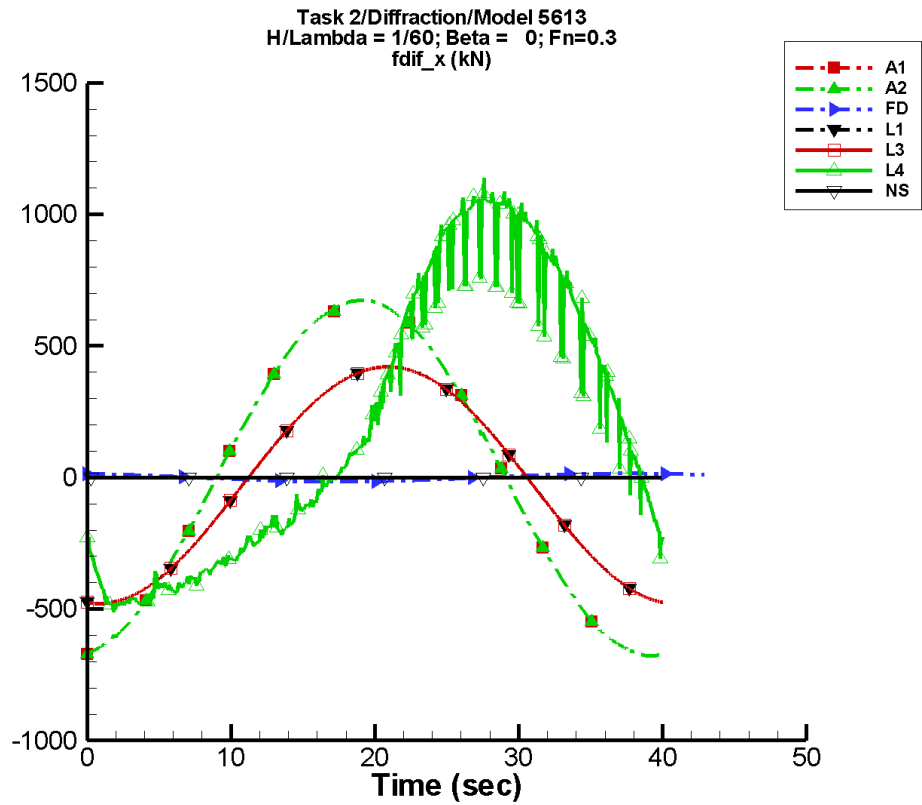
Table G-1559. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.09          | 4.25E+03      | 36                | 1.75          | 14                |
| A2   | 2.09          | 4.25E+03      | 36                | 1.75          | 14                |
| FD   | 3.16E-02      | 120.          | -3                | 5.21E-02      | 26                |
| L1   | 459.          | 3.46E+03      | 55                | 109.          | -123              |
| L3   | 459.          | 3.46E+03      | 54                | 109.          | -123              |
| L4   | -505.         | 2.91E+03      | 52                | 825.          | 175               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1560. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.26E+03       | 4.29E+03        | -4.22E+03       | 4.24E+03        |
| A2   | -4.26E+03       | 4.29E+03        | -4.22E+03       | 4.24E+03        |
| FD   | -120.           | 120.            | -119.           | 119.            |
| L1   | -3.09E+03       | 3.83E+03        | -3.07E+03       | 3.82E+03        |
| L3   | -3.08E+03       | 3.83E+03        | -3.07E+03       | 3.82E+03        |
| L4   | -4.80E+03       | 2.59E+03        | -4.21E+03       | 2.02E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-781. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1561. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

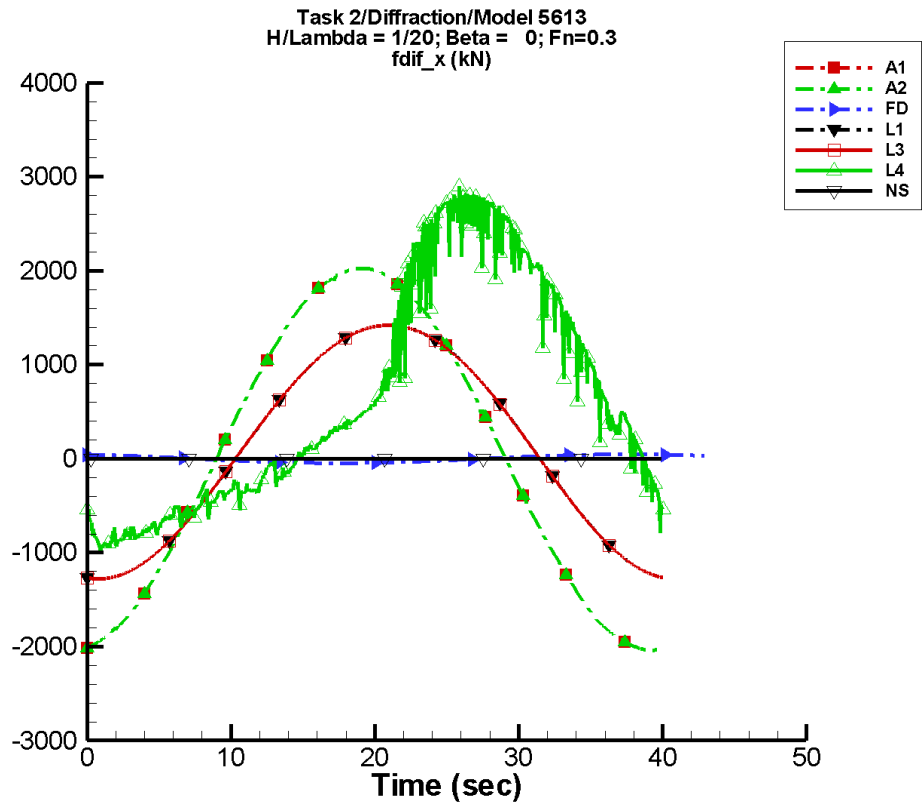
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.239         | 674.          | -82               | 2.48          | -121              |
| A2   | 0.239         | 674.          | -82               | 2.48          | -121              |
| FD   | -2.48E-04     | 15.5          | 110               | 9.34E-04      | -119              |
| L1   | -26.0         | 450.          | -100              | 3.15          | -90               |
| L3   | -26.0         | 450.          | -100              | 3.20          | -89               |
| L4   | 186.          | 720.          | -160              | 174.          | -86               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1562. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -677.           | 674.            | -677.           | 673.            |
| A2   | -677.           | 674.            | -677.           | 673.            |
| FD   | -15.5           | 15.5            | -15.5           | 15.5            |
| L1   | -479.           | 421.            | -479.           | 421.            |
| L3   | -479.           | 421.            | -479.           | 421.            |
| L4   | -512.           | 1.14E+03        | -489.           | 1.07E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-782. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

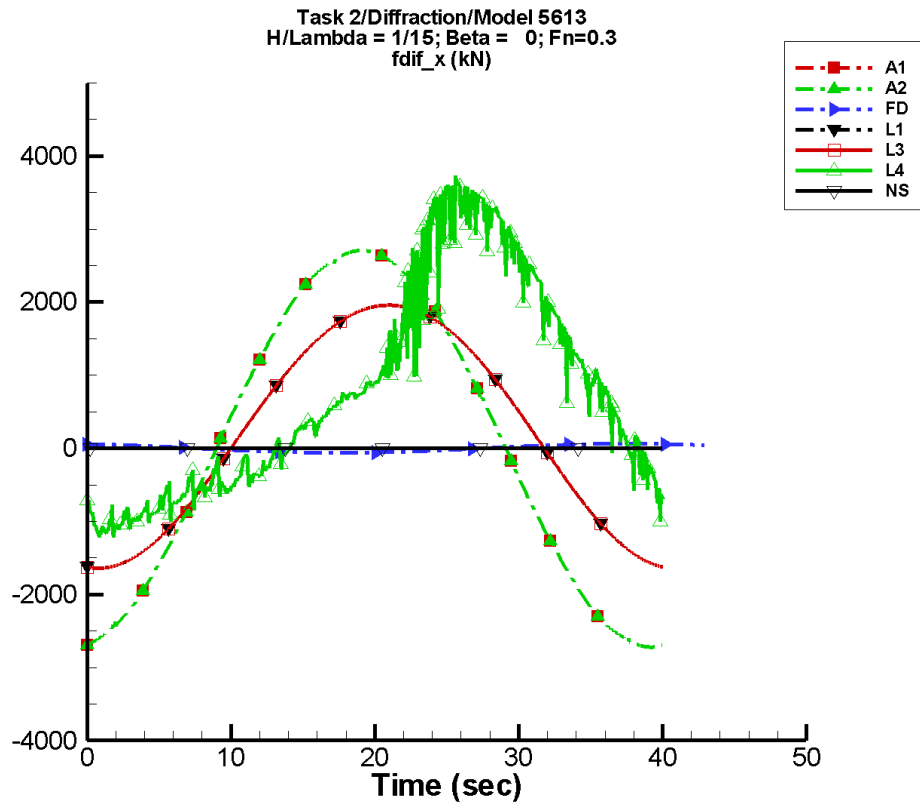
Table G–1563. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.719         | 2.03E+03      | -82               | 7.46          | -121              |
| A2   | 0.719         | 2.03E+03      | -82               | 7.46          | -121              |
| FD   | -7.41E-04     | 46.6          | 110               | 2.81E-03      | -119              |
| L1   | 97.0          | 1.35E+03      | -100              | 26.8          | -94               |
| L3   | 97.0          | 1.35E+03      | -100              | 26.9          | -93               |
| L4   | 610.          | 1.60E+03      | -154              | 496.          | -68               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1564. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.04E+03       | 2.03E+03        | -2.04E+03       | 2.02E+03        |
| A2   | -2.04E+03       | 2.03E+03        | -2.04E+03       | 2.02E+03        |
| FD   | -46.6           | 46.6            | -46.5           | 46.5            |
| L1   | -1.28E+03       | 1.42E+03        | -1.28E+03       | 1.42E+03        |
| L3   | -1.28E+03       | 1.42E+03        | -1.28E+03       | 1.42E+03        |
| L4   | -991.           | 2.90E+03        | -930.           | 2.72E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-783. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

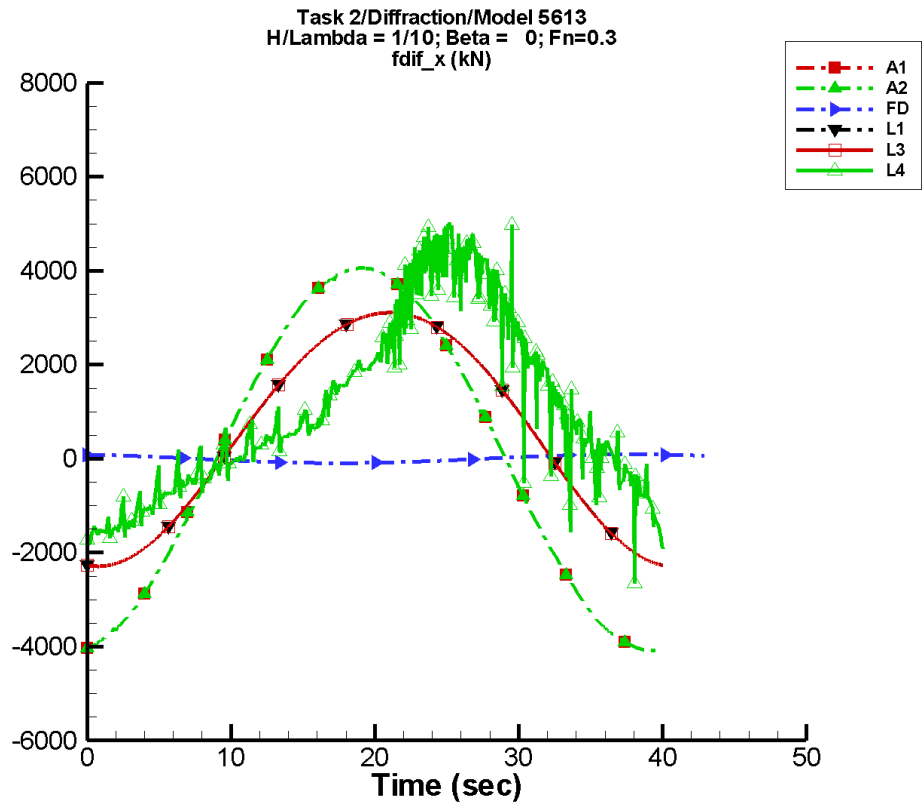
Table G–1565. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.960         | 2.71E+03      | -82               | 9.95          | -121              |
| A2   | 0.960         | 2.71E+03      | -82               | 9.95          | -121              |
| FD   | -9.91E-04     | 62.1          | 110               | 3.74E-03      | -119              |
| L1   | 204.          | 1.80E+03      | -100              | 47.3          | -94               |
| L3   | 204.          | 1.80E+03      | -100              | 47.5          | -94               |
| L4   | 746.          | 1.91E+03      | -150              | 599.          | -65               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1566. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.72E+03       | 2.70E+03        | -2.72E+03       | 2.70E+03        |
| A2   | -2.72E+03       | 2.70E+03        | -2.72E+03       | 2.70E+03        |
| FD   | -62.1           | 62.1            | -62.1           | 62.1            |
| L1   | -1.64E+03       | 1.96E+03        | -1.64E+03       | 1.96E+03        |
| L3   | -1.64E+03       | 1.96E+03        | -1.64E+03       | 1.96E+03        |
| L4   | -1.22E+03       | 3.72E+03        | -1.15E+03       | 3.50E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-784. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

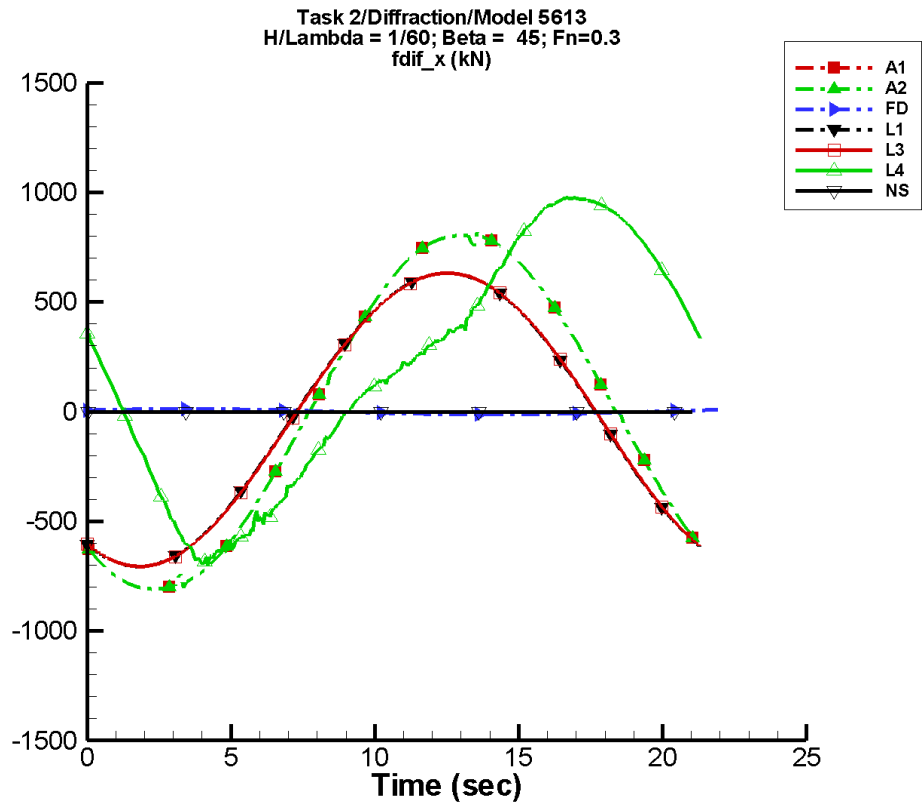
Table G-1567. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.44          | 4.06E+03      | -82               | 14.9          | -121              |
| A2   | 1.44          | 4.06E+03      | -82               | 14.9          | -121              |
| FD   | -1.48E-03     | 93.1          | 110               | 5.62E-03      | -119              |
| L1   | 511.          | 2.70E+03      | -100              | 106.          | -94               |
| L3   | 511.          | 2.70E+03      | -100              | 106.          | -94               |
| L4   | 1.02E+03      | 2.47E+03      | -130              | 800.          | -40               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1568. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.08E+03       | 4.06E+03        | -4.08E+03       | 4.05E+03        |
| A2   | -4.08E+03       | 4.06E+03        | -4.08E+03       | 4.05E+03        |
| FD   | -93.2           | 93.1            | -93.1           | 93.1            |
| L1   | -2.29E+03       | 3.11E+03        | -2.29E+03       | 3.11E+03        |
| L3   | -2.29E+03       | 3.11E+03        | -2.29E+03       | 3.11E+03        |
| L4   | -2.64E+03       | 5.17E+03        | -1.81E+03       | 4.80E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-785. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1569. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

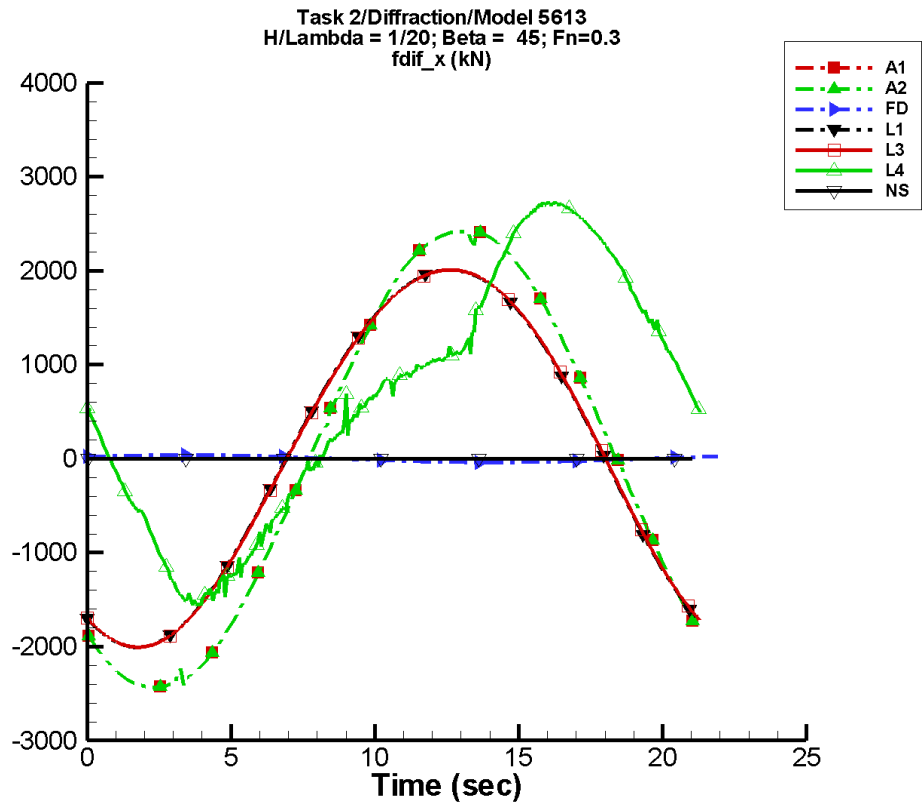
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.20          | 808.          | -130              | 1.92          | -169              |
| A2   | 3.20          | 808.          | -130              | 1.92          | -169              |
| FD   | 3.72E-03      | 12.8          | 37                | 6.06E-03      | 149               |
| L1   | -29.4         | 669.          | -121              | 8.45          | -125              |
| L3   | -29.4         | 669.          | -121              | 8.47          | -125              |
| L4   | 199.          | 730.          | 174               | 178.          | 159               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1570. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -822.           | 823.            | -808.           | 799.            |
| A2   | -822.           | 823.            | -808.           | 799.            |
| FD   | -12.8           | 12.8            | -12.8           | 12.8            |
| L1   | -706.           | 632.            | -705.           | 631.            |
| L3   | -706.           | 632.            | -705.           | 631.            |
| L4   | -707.           | 975.            | -680.           | 974.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-786. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

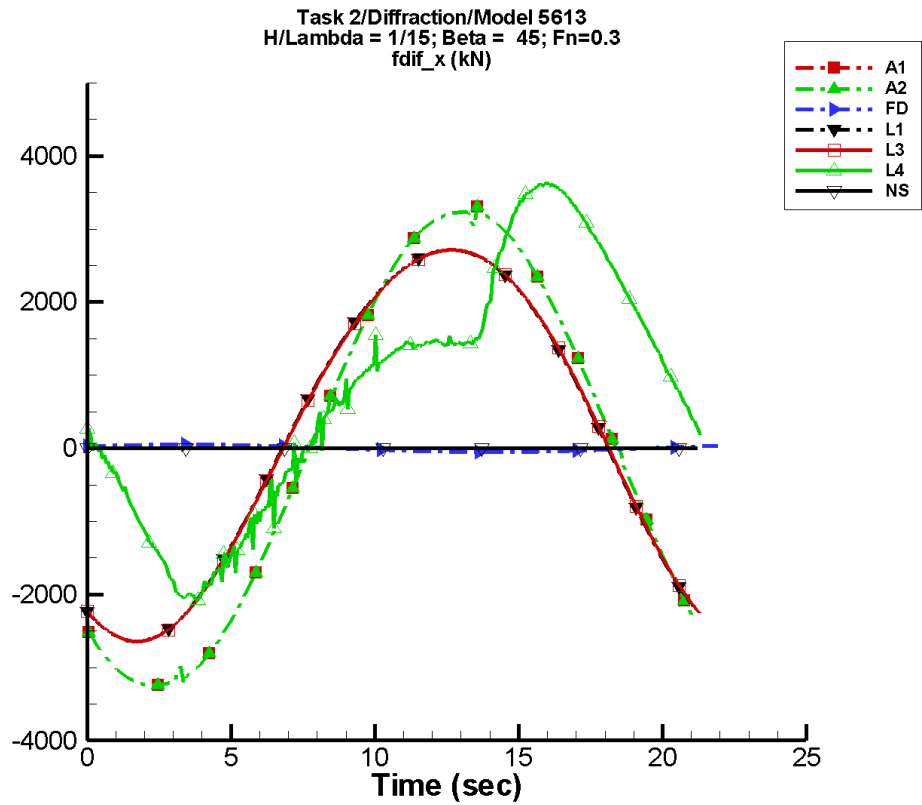
Table G-1571. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 9.64          | 2.43E+03      | -130              | 5.77          | -169              |
| A2   | 9.64          | 2.43E+03      | -130              | 5.77          | -169              |
| FD   | 1.12E-02      | 38.4          | 37                | 1.82E-02      | 149               |
| L1   | 69.6          | 2.01E+03      | -121              | 76.7          | -125              |
| L3   | 69.6          | 2.01E+03      | -121              | 76.8          | -125              |
| L4   | 645.          | 1.79E+03      | -175              | 418.          | -178              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1572. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.47E+03       | 2.48E+03        | -2.43E+03       | 2.40E+03        |
| A2   | -2.47E+03       | 2.48E+03        | -2.43E+03       | 2.40E+03        |
| FD   | -38.4           | 38.4            | -38.3           | 38.3            |
| L1   | -2.01E+03       | 2.01E+03        | -2.00E+03       | 2.01E+03        |
| L3   | -2.01E+03       | 2.01E+03        | -2.00E+03       | 2.01E+03        |
| L4   | -1.56E+03       | 2.74E+03        | -1.52E+03       | 2.71E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-787. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

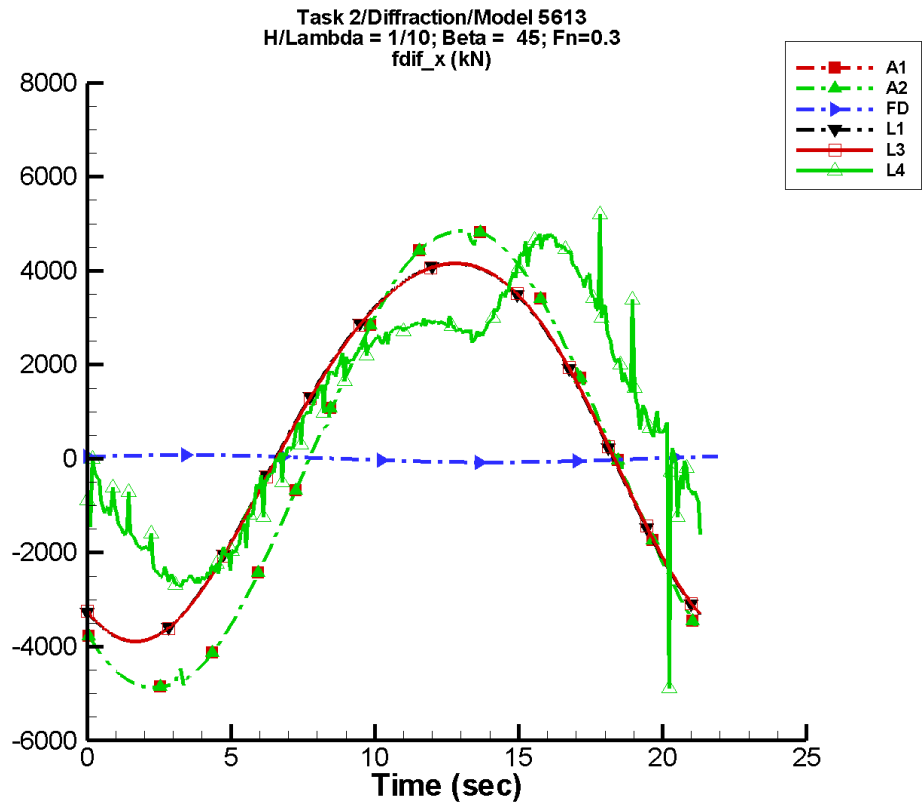
Table G-1573. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 12.9          | 3.24E+03      | -130              | 7.71          | -169              |
| A2   | 12.9          | 3.24E+03      | -130              | 7.71          | -169              |
| FD   | 1.49E-02      | 51.2          | 37                | 2.42E-02      | 149               |
| L1   | 156.          | 2.67E+03      | -121              | 136.          | -125              |
| L3   | 156.          | 2.67E+03      | -121              | 137.          | -126              |
| L4   | 799.          | 2.23E+03      | -168              | 587.          | -171              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1574. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.30E+03       | 3.30E+03        | -3.24E+03       | 3.21E+03        |
| A2   | -3.30E+03       | 3.30E+03        | -3.24E+03       | 3.21E+03        |
| FD   | -51.2           | 51.2            | -51.1           | 51.1            |
| L1   | -2.64E+03       | 2.71E+03        | -2.64E+03       | 2.71E+03        |
| L3   | -2.64E+03       | 2.71E+03        | -2.64E+03       | 2.71E+03        |
| L4   | -2.11E+03       | 3.65E+03        | -2.03E+03       | 3.61E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-788. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

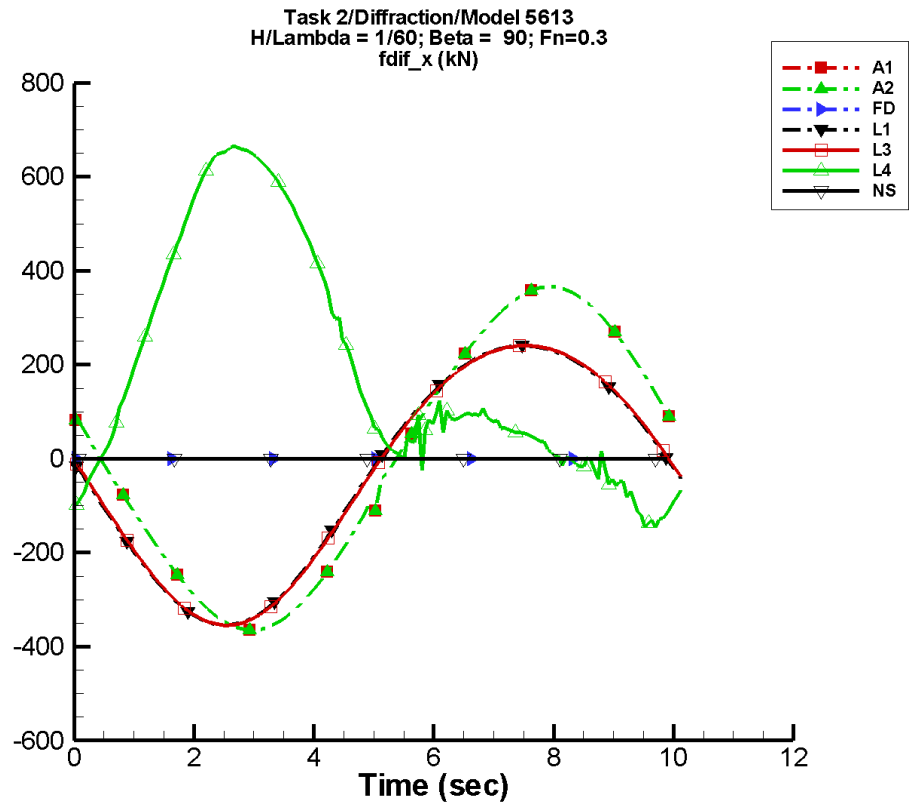
Table G-1575. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 19.3          | 4.86E+03      | -130              | 11.6          | -169              |
| A2   | 19.3          | 4.86E+03      | -130              | 11.6          | -169              |
| FD   | 2.24E-02      | 76.7          | 37                | 3.63E-02      | 149               |
| L1   | 404.          | 4.01E+03      | -121              | 307.          | -126              |
| L3   | 404.          | 4.01E+03      | -121              | 308.          | -126              |
| L4   | 1.11E+03      | 3.05E+03      | -149              | 682.          | -170              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1576. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.95E+03       | 4.96E+03        | -4.86E+03       | 4.82E+03        |
| A2   | -4.95E+03       | 4.96E+03        | -4.86E+03       | 4.82E+03        |
| FD   | -76.7           | 76.7            | -76.6           | 76.6            |
| L1   | -3.89E+03       | 4.15E+03        | -3.89E+03       | 4.15E+03        |
| L3   | -3.89E+03       | 4.16E+03        | -3.89E+03       | 4.15E+03        |
| L4   | -4.89E+03       | 5.20E+03        | -2.64E+03       | 4.71E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-789. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1577. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

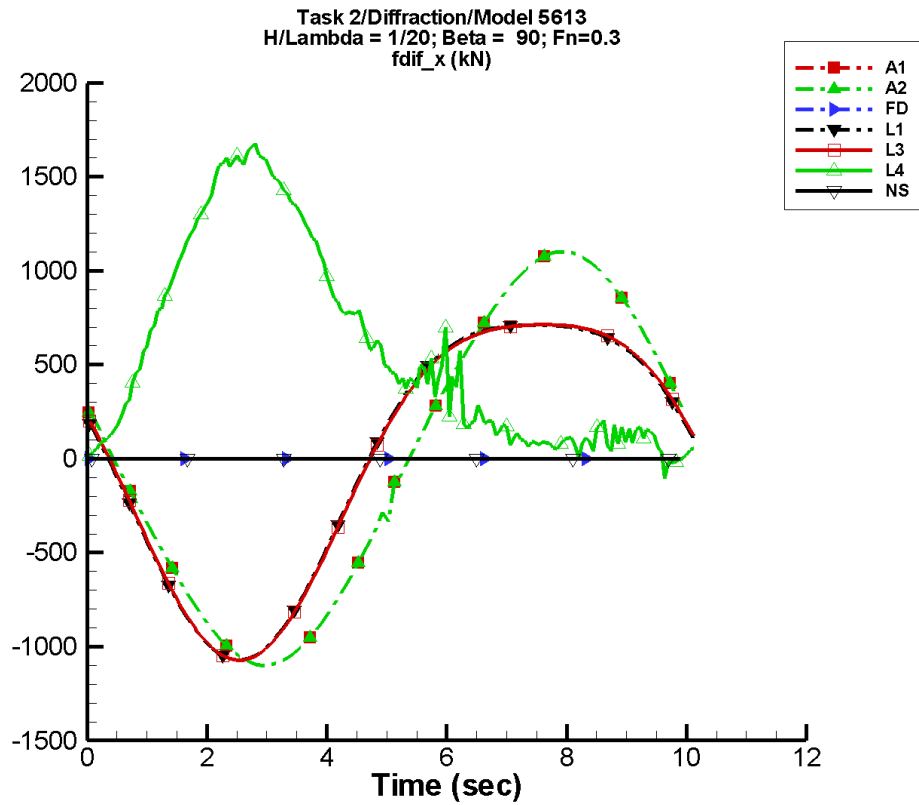
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 9.63E-02      | 358.          | 160               | 1.01          | -76               |
| A2   | 9.63E-02      | 358.          | 160               | 1.01          | -76               |
| FD   | -1.35E-09     | 3.63E-06      | 158               | 1.65E-09      | -173              |
| L1   | -36.6         | 297.          | 174               | 20.4          | 79                |
| L3   | -36.6         | 298.          | 173               | 20.4          | 79                |
| L4   | 193.          | 301.          | -25               | 179.          | -109              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1578. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -365.           | 366.            | -361.           | 362.            |
| A2   | -365.           | 366.            | -361.           | 362.            |
| FD   | -3.63E-06       | 3.63E-06        | -3.60E-06       | 3.60E-06        |
| L1   | -354.           | 240.            | -353.           | 240.            |
| L3   | -355.           | 241.            | -353.           | 240.            |
| L4   | -146.           | 666.            | -131.           | 659.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-790. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

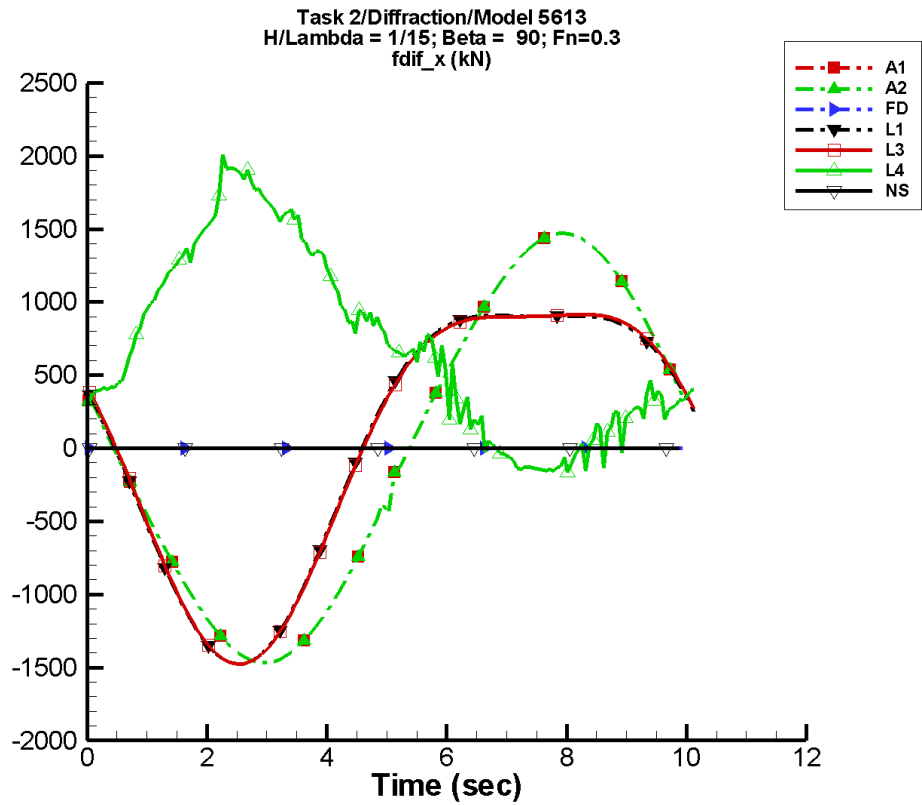
Table G-1579. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.290         | 1.08E+03      | 160               | 3.04          | -76               |
| A2   | 0.290         | 1.08E+03      | 160               | 3.04          | -76               |
| FD   | -4.05E-09     | 1.09E-05      | 158               | 4.94E-09      | -173              |
| L1   | 3.31          | 892.          | 174               | 183.          | 79                |
| L3   | 3.33          | 893.          | 173               | 183.          | 79                |
| L4   | 583.          | 698.          | -24               | 302.          | -109              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1580. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.10E+03       | 1.10E+03        | -1.09E+03       | 1.09E+03        |
| A2   | -1.10E+03       | 1.10E+03        | -1.09E+03       | 1.09E+03        |
| FD   | -1.09E-05       | 1.09E-05        | -1.08E-05       | 1.08E-05        |
| L1   | -1.07E+03       | 712.            | -1.07E+03       | 712.            |
| L3   | -1.07E+03       | 713.            | -1.07E+03       | 712.            |
| L4   | -103.           | 1.68E+03        | -7.09           | 1.62E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-791. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

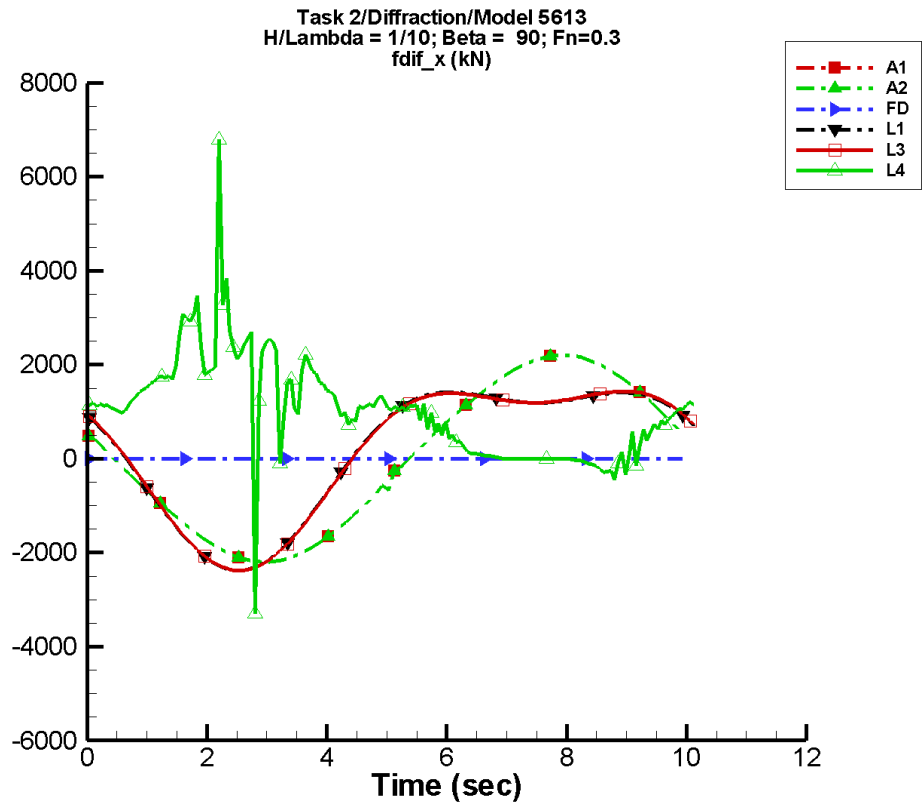
Table G–1581. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.387         | 1.44E+03      | 160               | 4.07          | -76               |
| A2   | 0.387         | 1.44E+03      | 160               | 4.07          | -76               |
| FD   | -5.40E-09     | 1.45E-05      | 158               | 6.59E-09      | -173              |
| L1   | 38.1          | 1.19E+03      | 174               | 326.          | 79                |
| L3   | 38.1          | 1.19E+03      | 173               | 326.          | 79                |
| L4   | 706.          | 871.          | -19               | 162.          | -110              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1582. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.47E+03       | 1.47E+03        | -1.45E+03       | 1.45E+03        |
| A2   | -1.47E+03       | 1.47E+03        | -1.45E+03       | 1.45E+03        |
| FD   | -1.45E-05       | 1.45E-05        | -1.44E-05       | 1.44E-05        |
| L1   | -1.48E+03       | 909.            | -1.47E+03       | 908.            |
| L3   | -1.48E+03       | 915.            | -1.47E+03       | 914.            |
| L4   | -165.           | 2.01E+03        | -145.           | 1.89E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-792. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

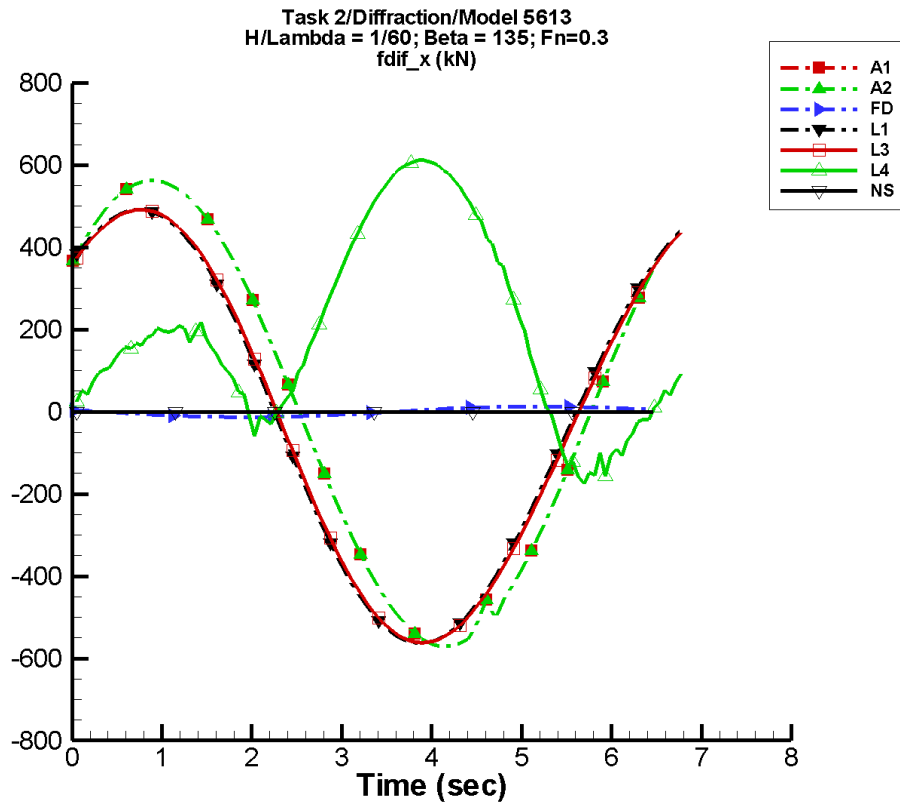
Table G–1583. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.580         | 2.15E+03      | 160               | 6.10          | -76               |
| A2   | 0.580         | 2.15E+03      | 160               | 6.10          | -76               |
| FD   | -8.10E-09     | 2.18E-05      | 158               | 9.88E-09      | -173              |
| L1   | 137.          | 1.78E+03      | 174               | 732.          | 79                |
| L3   | 137.          | 1.78E+03      | 173               | 732.          | 79                |
| L4   | 1.00E+03      | 1.16E+03      | -6                | 330.          | -37               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1584. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.20E+03       | 2.21E+03        | -2.17E+03       | 2.18E+03        |
| A2   | -2.20E+03       | 2.21E+03        | -2.17E+03       | 2.18E+03        |
| FD   | -2.18E-05       | 2.18E-05        | -2.16E-05       | 2.16E-05        |
| L1   | -2.38E+03       | 1.42E+03        | -2.36E+03       | 1.41E+03        |
| L3   | -2.38E+03       | 1.43E+03        | -2.36E+03       | 1.43E+03        |
| L4   | -4.36E+03       | 6.79E+03        | -231.           | 3.27E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-793. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1585. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

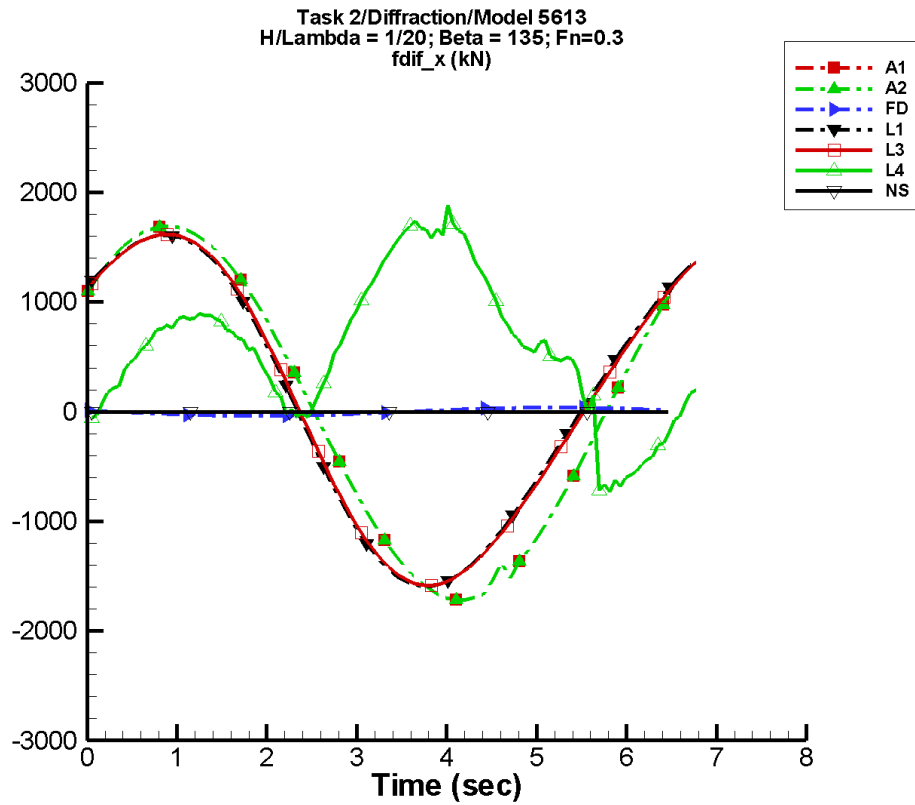
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.664        | 565.          | 37                | 2.14          | -88               |
| A2   | -0.664        | 565.          | 37                | 2.14          | -88               |
| FD   | -1.70E-04     | 13.0          | 163               | 4.27E-04      | -40               |
| L1   | -32.6         | 526.          | 49                | 15.6          | -95               |
| L3   | -32.6         | 526.          | 48                | 15.7          | -95               |
| L4   | 195.          | 235.          | -114              | 224.          | -2                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1586. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -571.           | 567.            | -553.           | 553.            |
| A2   | -571.           | 567.            | -553.           | 553.            |
| FD   | -13.0           | 13.0            | -12.7           | 12.7            |
| L1   | -563.           | 490.            | -558.           | 486.            |
| L3   | -562.           | 491.            | -558.           | 487.            |
| L4   | -174.           | 612.            | -142.           | 605.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-794. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

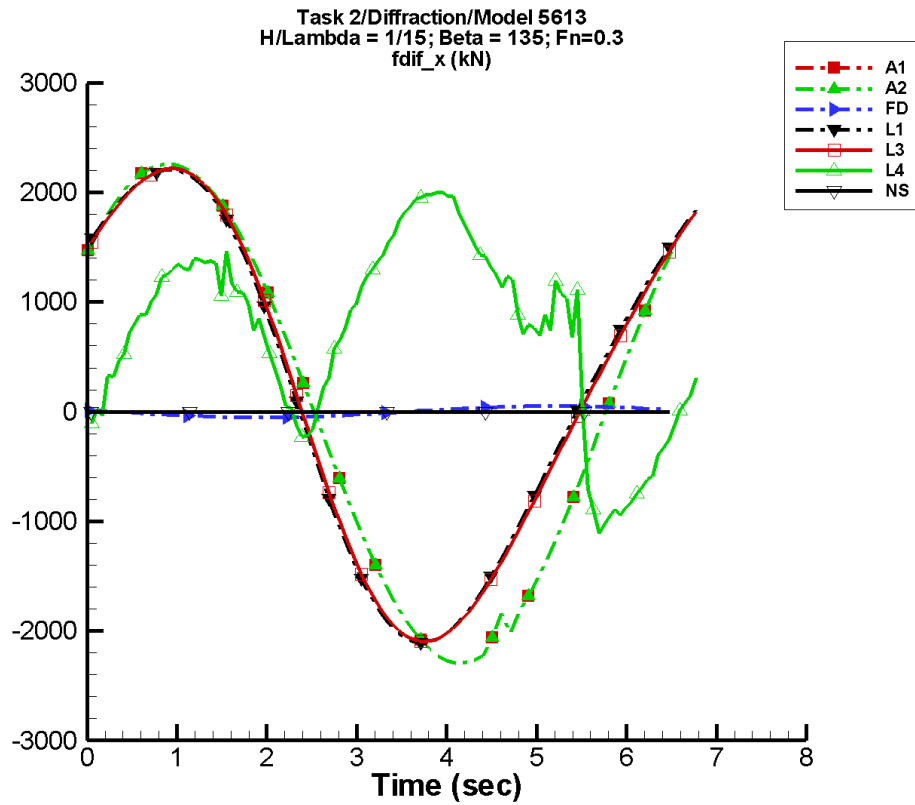
Table G–1587. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.00         | 1.70E+03      | 37                | 6.45          | -88               |
| A2   | -2.00         | 1.70E+03      | 37                | 6.45          | -88               |
| FD   | -5.10E-04     | 39.0          | 163               | 1.28E-03      | -40               |
| L1   | 39.9          | 1.58E+03      | 49                | 140.          | -95               |
| L3   | 39.9          | 1.58E+03      | 48                | 140.          | -95               |
| L4   | 588.          | 590.          | -103              | 662.          | -16               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1588. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.72E+03       | 1.71E+03        | -1.66E+03       | 1.66E+03        |
| A2   | -1.72E+03       | 1.71E+03        | -1.66E+03       | 1.66E+03        |
| FD   | -38.9           | 38.9            | -38.0           | 38.0            |
| L1   | -1.59E+03       | 1.61E+03        | -1.58E+03       | 1.59E+03        |
| L3   | -1.58E+03       | 1.62E+03        | -1.57E+03       | 1.60E+03        |
| L4   | -733.           | 1.89E+03        | -610.           | 1.69E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-795. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

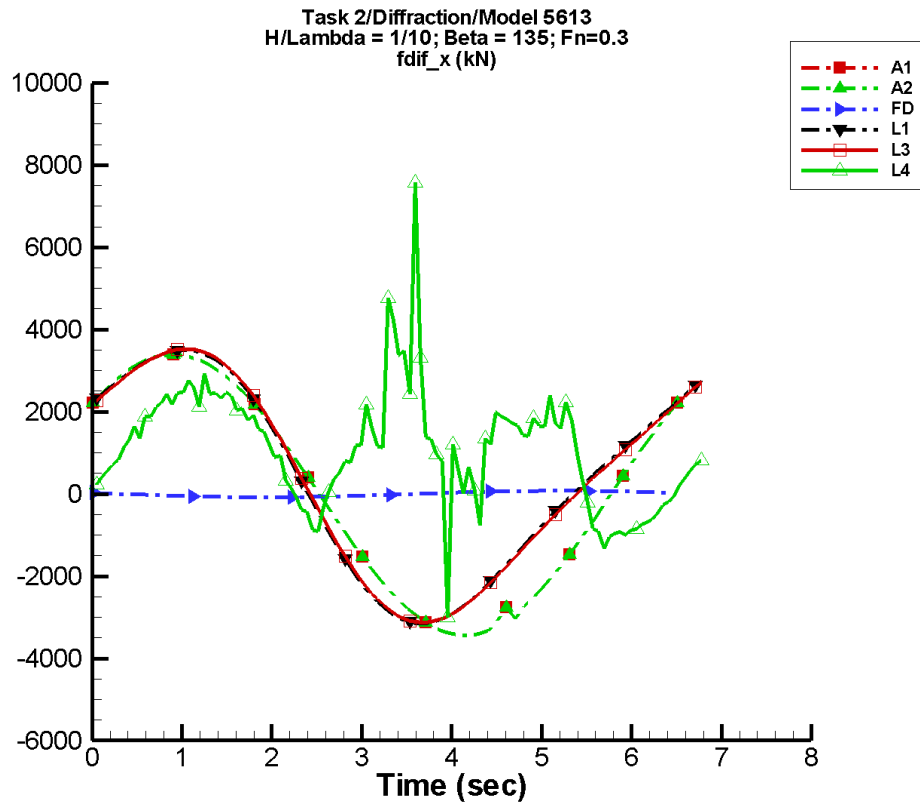
Table G–1589. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.67         | 2.27E+03      | 37                | 8.61          | -88               |
| A2   | -2.67         | 2.27E+03      | 37                | 8.61          | -88               |
| FD   | -6.79E-04     | 51.9          | 163               | 1.71E-03      | -40               |
| L1   | 103.          | 2.10E+03      | 49                | 250.          | -95               |
| L3   | 103.          | 2.10E+03      | 48                | 250.          | -95               |
| L4   | 739.          | 611.          | -95               | 921.          | -24               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G–1590. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.29E+03       | 2.28E+03        | -2.22E+03       | 2.22E+03        |
| A2   | -2.29E+03       | 2.28E+03        | -2.22E+03       | 2.22E+03        |
| FD   | -51.9           | 51.9            | -50.7           | 50.7            |
| L1   | -2.11E+03       | 2.21E+03        | -2.08E+03       | 2.19E+03        |
| L3   | -2.10E+03       | 2.22E+03        | -2.07E+03       | 2.20E+03        |
| L4   | -1.11E+03       | 2.00E+03        | -949.           | 1.98E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-796. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

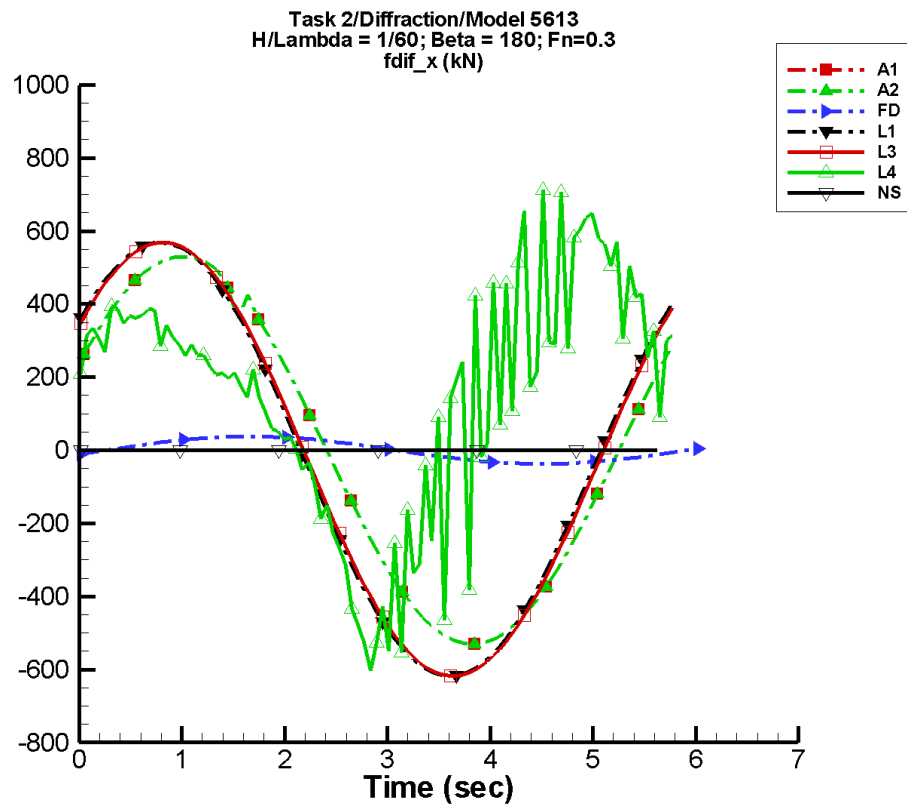
Table G-1591. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -4.00         | 3.40E+03      | 37                | 12.9          | -88               |
| A2   | -4.00         | 3.40E+03      | 37                | 12.9          | -88               |
| FD   | -1.02E-03     | 77.9          | 163               | 2.56E-03      | -40               |
| L1   | 285.          | 3.16E+03      | 49                | 561.          | -95               |
| L3   | 285.          | 3.16E+03      | 48                | 561.          | -95               |
| L4   | 1.10E+03      | 530.          | -51               | 1.14E+03      | -26               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1592. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.44E+03       | 3.42E+03        | -3.33E+03       | 3.33E+03        |
| A2   | -3.44E+03       | 3.42E+03        | -3.33E+03       | 3.33E+03        |
| FD   | -77.9           | 77.8            | -76.1           | 76.0            |
| L1   | -3.15E+03       | 3.50E+03        | -3.11E+03       | 3.46E+03        |
| L3   | -3.13E+03       | 3.53E+03        | -3.09E+03       | 3.49E+03        |
| L4   | -3.00E+03       | 7.57E+03        | -1.02E+03       | 3.57E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-797. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1593. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

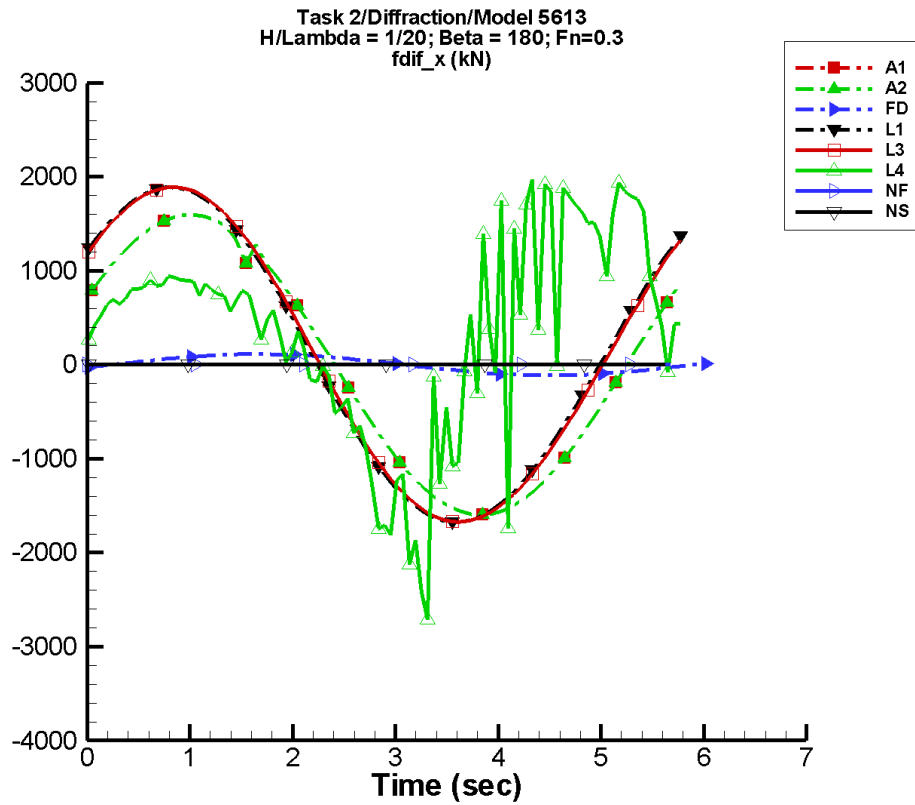
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.34         | 529.          | 19                | 0.344         | -61               |
| A2   | -3.34         | 529.          | 19                | 0.344         | -61               |
| FD   | 3.23E-03      | 37.7          | -52               | 6.51E-02      | -99               |
| L1   | -26.6         | 594.          | 26                | 2.80          | -87               |
| L3   | -26.5         | 594.          | 25                | 2.82          | -87               |
| L4   | 153.          | 377.          | 85                | 181.          | -139              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1594. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -531.           | 543.            | -515.           | 512.            |
| A2   | -531.           | 543.            | -515.           | 512.            |
| FD   | -37.7           | 37.6            | -36.5           | 36.4            |
| L1   | -618.           | 568.            | -612.           | 562.            |
| L3   | -618.           | 569.            | -612.           | 562.            |
| L4   | -608.           | 712.            | -488.           | 568.            |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-798. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

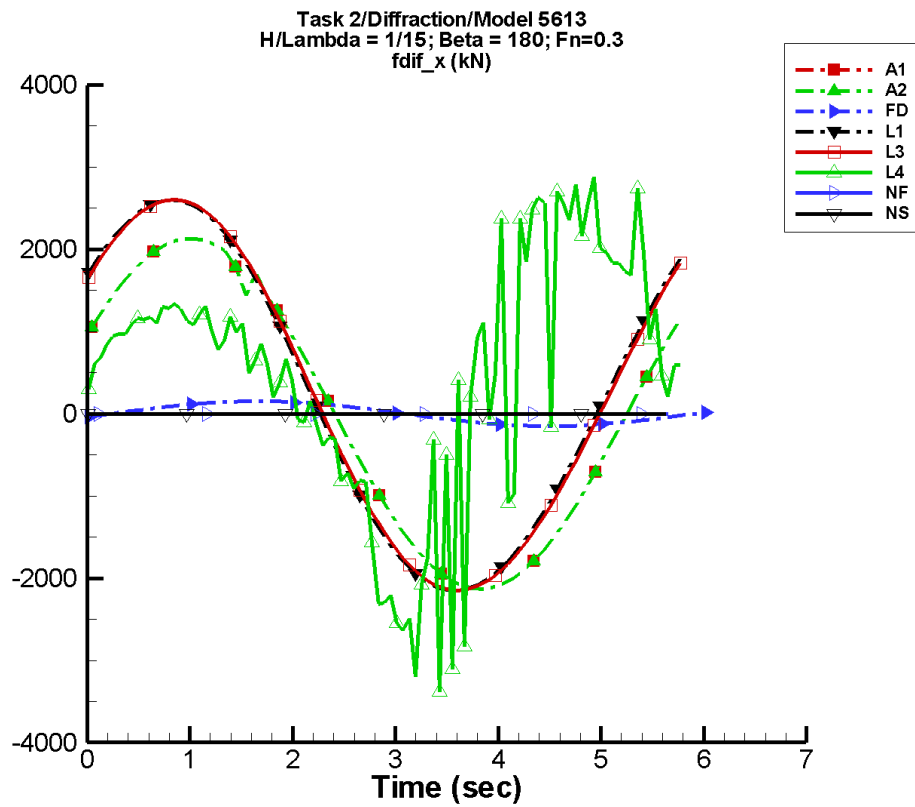
Table G-1595. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -10.0         | 1.59E+03      | 19                | 1.04          | -61               |
| A2   | -10.0         | 1.59E+03      | 19                | 1.04          | -61               |
| FD   | 9.71E-03      | 113.          | -52               | 0.195         | -99               |
| L1   | 95.6          | 1.78E+03      | 26                | 28.9          | -102              |
| L3   | 95.7          | 1.78E+03      | 25                | 29.0          | -101              |
| L4   | 363.          | 1.07E+03      | 80                | 737.          | -151              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1596. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.60E+03       | 1.63E+03        | -1.55E+03       | 1.54E+03        |
| A2   | -1.60E+03       | 1.63E+03        | -1.55E+03       | 1.54E+03        |
| FD   | -113.           | 113.            | -109.           | 109.            |
| L1   | -1.67E+03       | 1.89E+03        | -1.65E+03       | 1.87E+03        |
| L3   | -1.67E+03       | 1.89E+03        | -1.65E+03       | 1.87E+03        |
| L4   | -2.71E+03       | 2.03E+03        | -1.76E+03       | 1.61E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-799. Time history of  $F_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

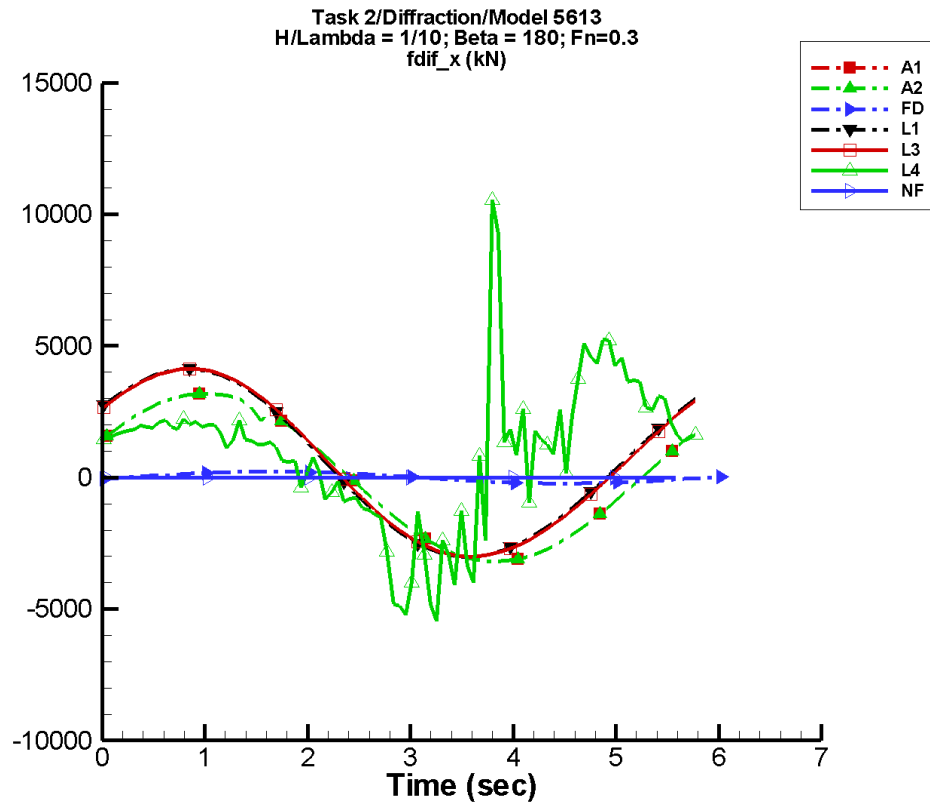
Table G-1597. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -13.4         | 2.12E+03      | 19                | 1.38          | -61               |
| A2   | -13.4         | 2.12E+03      | 19                | 1.38          | -61               |
| FD   | 1.29E-02      | 151.          | -52               | 0.260         | -99               |
| L1   | 203.          | 2.37E+03      | 26                | 52.5          | -103              |
| L3   | 203.          | 2.38E+03      | 25                | 52.5          | -103              |
| L4   | 498.          | 1.54E+03      | 80                | 1.06E+03      | -156              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1598. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.13E+03       | 2.18E+03        | -2.07E+03       | 2.05E+03        |
| A2   | -2.13E+03       | 2.18E+03        | -2.07E+03       | 2.05E+03        |
| FD   | -151.           | 151.            | -146.           | 146.            |
| L1   | -2.15E+03       | 2.60E+03        | -2.13E+03       | 2.57E+03        |
| L3   | -2.15E+03       | 2.60E+03        | -2.12E+03       | 2.57E+03        |
| L4   | -3.38E+03       | 2.88E+03        | -2.38E+03       | 2.48E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-800. Time history of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

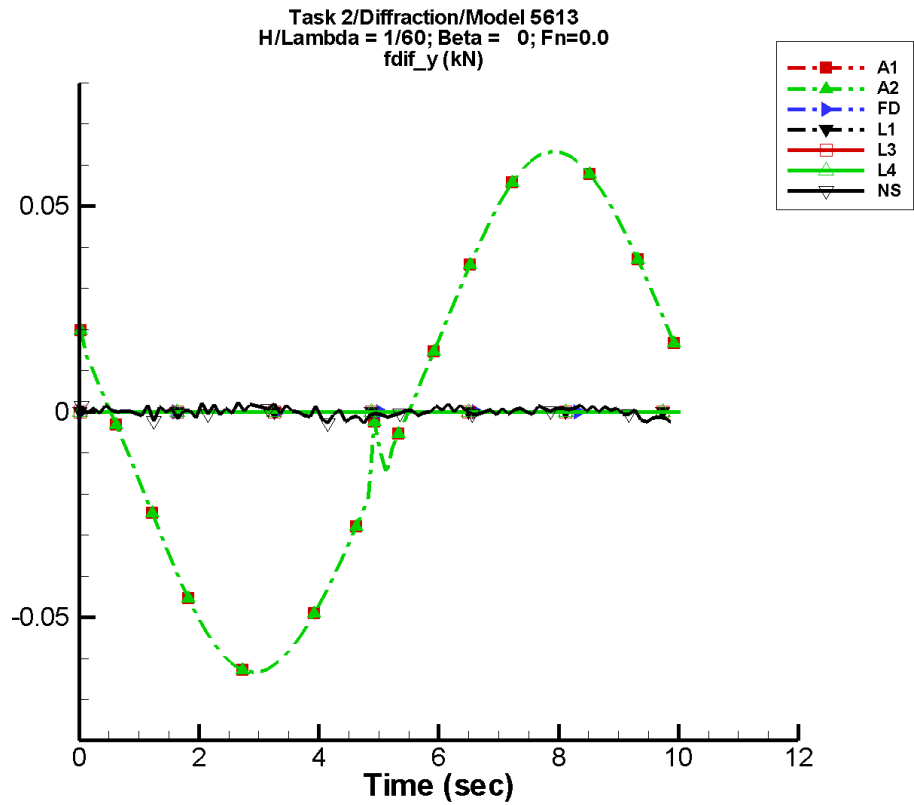
Table G-1599. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -20.1         | 3.19E+03      | 19                | 2.07          | -61               |
| A2   | -20.1         | 3.19E+03      | 19                | 2.07          | -61               |
| FD   | 1.94E-02      | 226.          | -52               | 0.390         | -99               |
| L1   | 509.          | 3.56E+03      | 26                | 120.          | -105              |
| L3   | 510.          | 3.56E+03      | 25                | 121.          | -104              |
| L4   | 941.          | 2.62E+03      | 85                | 1.53E+03      | -149              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1600. Minimum and maximum of  $F_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.20E+03       | 3.27E+03        | -3.10E+03       | 3.08E+03        |
| A2   | -3.20E+03       | 3.27E+03        | -3.10E+03       | 3.08E+03        |
| FD   | -226.           | 226.            | -219.           | 219.            |
| L1   | -3.01E+03       | 4.12E+03        | -2.97E+03       | 4.08E+03        |
| L3   | -3.01E+03       | 4.13E+03        | -2.97E+03       | 4.09E+03        |
| L4   | -5.60E+03       | 1.05E+04        | -3.95E+03       | 4.69E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-801. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1601. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

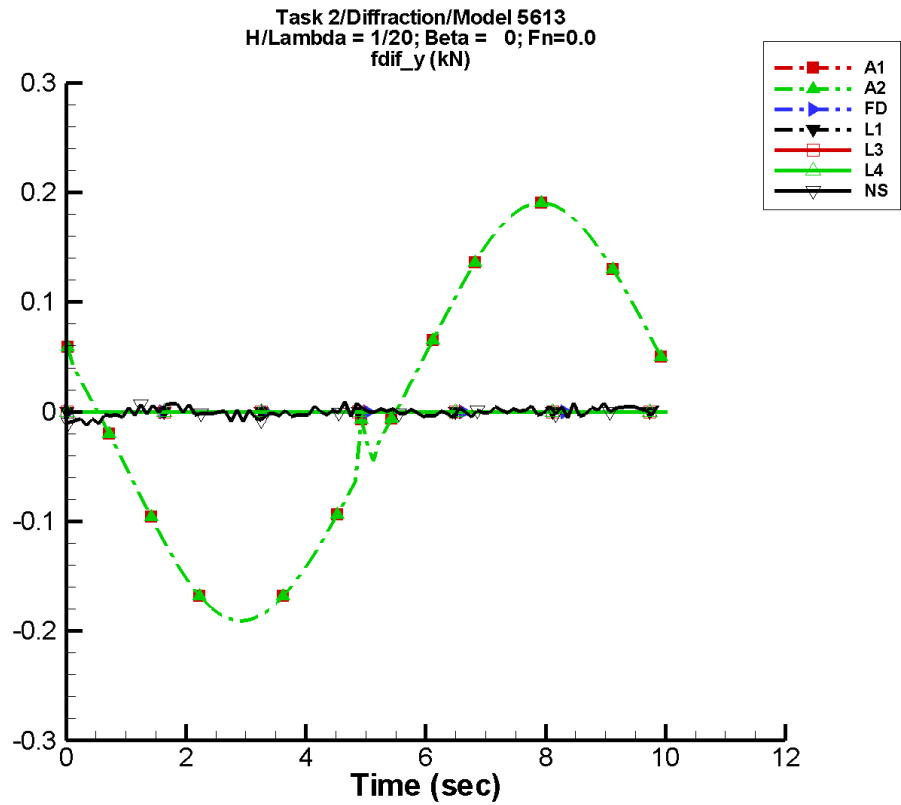
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.54E-04      | 6.05E-02      | 158               | 3.04E-04      | 29                |
| A2   | 2.54E-04      | 6.05E-02      | 158               | 3.04E-04      | 29                |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.28E-05     | 2.11E-04      | 102               | 6.71E-04      | -69               |

Table G-1602. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.34E-02       | 6.33E-02        | -6.27E-02       | 6.25E-02        |
| A2   | -6.34E-02       | 6.33E-02        | -6.27E-02       | 6.25E-02        |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.15E-03       | 2.91E-03        | -2.01E-03       | 1.61E-03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-802. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

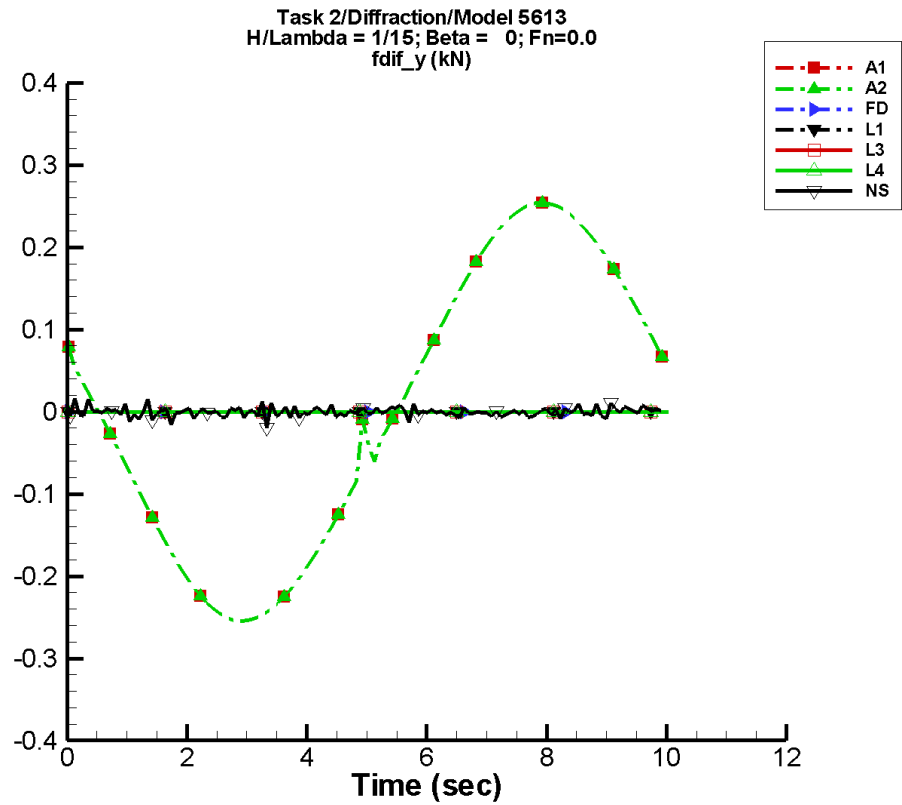
Table G-1603. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 7.63E-04      | 0.182         | 158               | 9.14E-04      | 29                |
| A2   | 7.63E-04      | 0.182         | 158               | 9.14E-04      | 29                |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.50E-04     | 5.57E-04      | -131              | 1.52E-03      | -109              |

Table G-1604. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.191          | 0.190           | -0.189          | 0.188           |
| A2   | -0.191          | 0.190           | -0.189          | 0.188           |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.45E-02       | 9.44E-03        | -9.53E-03       | 4.29E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-803. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

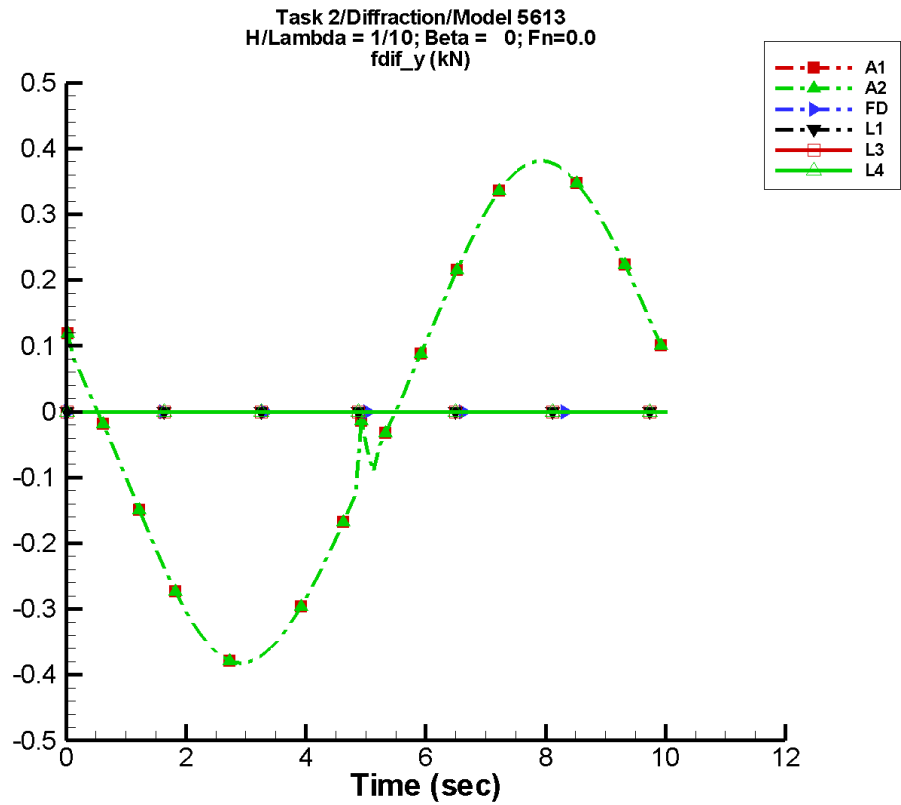
Table G-1605. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.02E-03      | 0.243         | 158               | 1.22E-03      | 29                |
| A2   | 1.02E-03      | 0.243         | 158               | 1.22E-03      | 29                |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.84E-04     | 5.15E-04      | 87                | 1.53E-03      | 111               |

Table G-1606. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.255          | 0.254           | -0.252          | 0.251           |
| A2   | -0.255          | 0.254           | -0.252          | 0.251           |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.00E-02       | 1.92E-02        | -3.28E-03       | 2.65E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-804. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

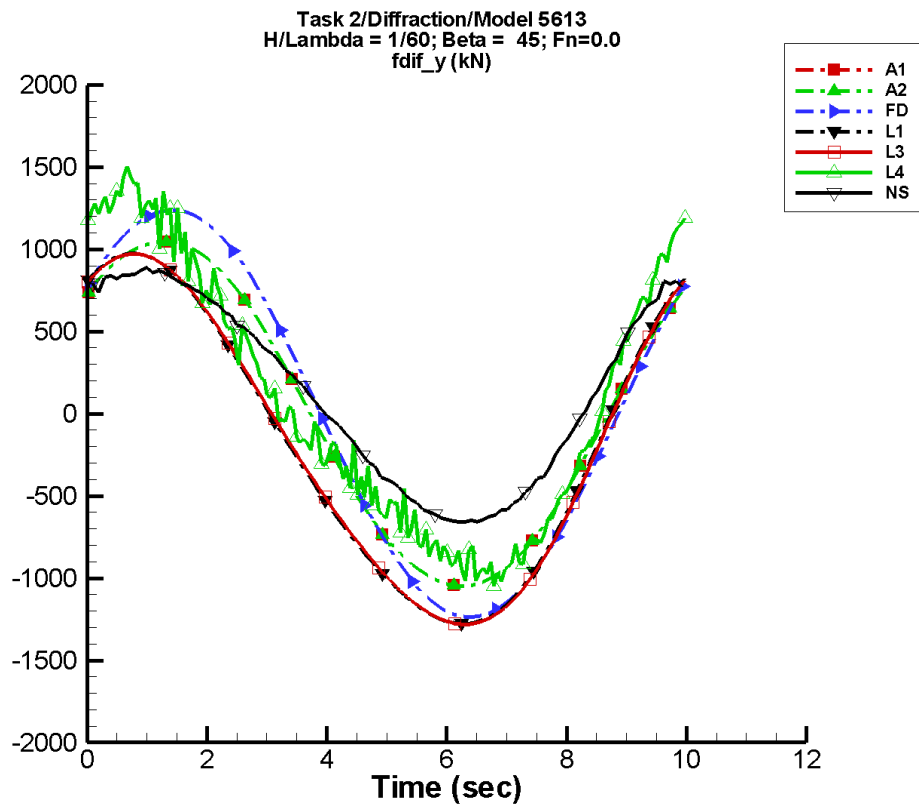
Table G-1607. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.53E-03      | 0.364         | 158               | 1.83E-03      | 29                |
| A2   | 1.53E-03      | 0.364         | 158               | 1.83E-03      | 29                |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1608. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.382          | 0.381           | -0.378          | 0.376           |
| A2   | -0.382          | 0.381           | -0.378          | 0.376           |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-805. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1609. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

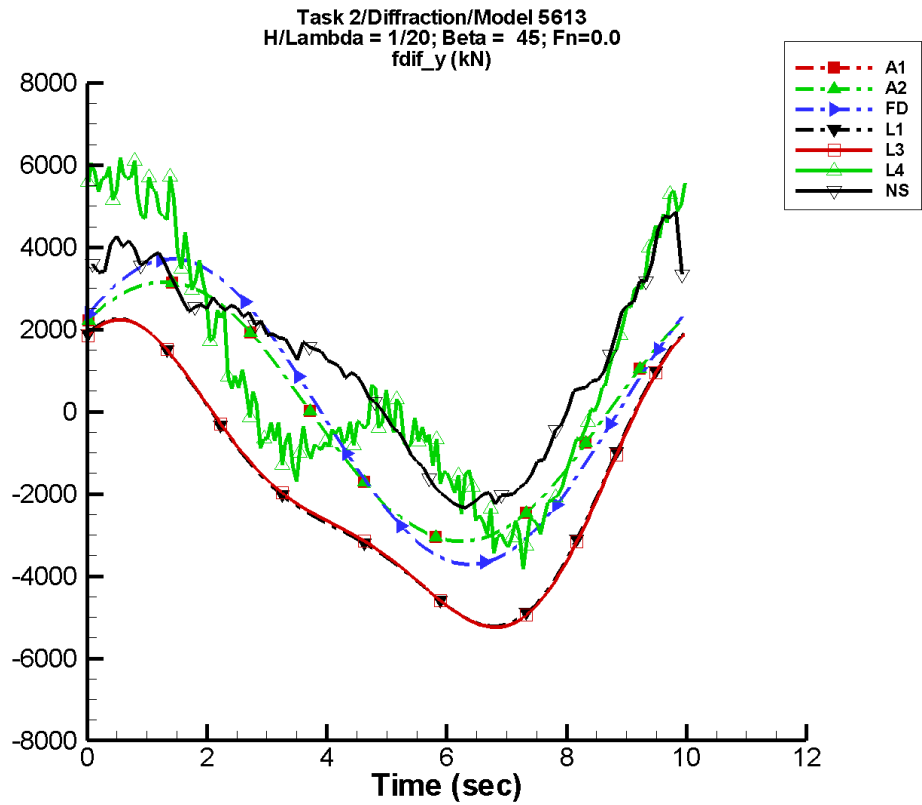
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.89         | 1.05E+03      | 40                | 1.22          | -89               |
| A2   | -1.89         | 1.05E+03      | 40                | 1.22          | -89               |
| FD   | 1.15E-02      | 1.24E+03      | 31                | 0.514         | 63                |
| L1   | -200.         | 1.11E+03      | 50                | 111.          | 72                |
| L3   | -200.         | 1.11E+03      | 49                | 111.          | 72                |
| L4   | 78.9          | 1.06E+03      | 49                | 252.          | 63                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 138.          | 761.          | 50                | 83.1          | 127               |

Table G-1610. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.05E+03       | 1.05E+03        | -1.04E+03       | 1.04E+03        |
| A2   | -1.05E+03       | 1.05E+03        | -1.04E+03       | 1.04E+03        |
| FD   | -1.24E+03       | 1.24E+03        | -1.23E+03       | 1.23E+03        |
| L1   | -1.28E+03       | 975.            | -1.27E+03       | 970.            |
| L3   | -1.28E+03       | 972.            | -1.28E+03       | 967.            |
| L4   | -1.05E+03       | 1.50E+03        | -966.           | 1.38E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -657.           | 888.            | -649.           | 859.            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-806. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

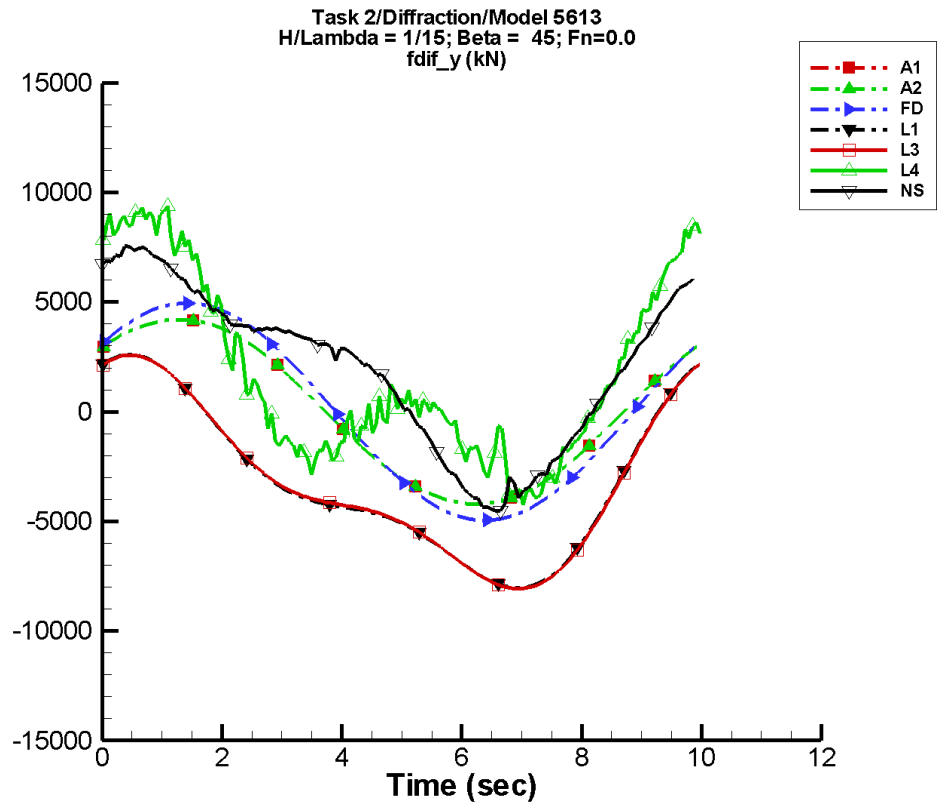
Table G-1611. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -5.67         | 3.17E+03      | 40                | 3.66          | -89               |
| A2   | -5.67         | 3.17E+03      | 40                | 3.66          | -89               |
| FD   | 3.41E-02      | 3.72E+03      | 31                | 1.54          | 63                |
| L1   | -1.80E+03     | 3.32E+03      | 50                | 1.00E+03      | 72                |
| L3   | -1.80E+03     | 3.32E+03      | 49                | 1.00E+03      | 72                |
| L4   | 819.          | 3.40E+03      | 54                | 1.97E+03      | 58                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.16E+03      | 2.77E+03      | 47                | 911.          | 124               |

Table G-1612. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.15E+03       | 3.15E+03        | -3.12E+03       | 3.12E+03        |
| A2   | -3.15E+03       | 3.15E+03        | -3.12E+03       | 3.12E+03        |
| FD   | -3.71E+03       | 3.71E+03        | -3.68E+03       | 3.68E+03        |
| L1   | -5.22E+03       | 2.26E+03        | -5.24E+03       | 2.24E+03        |
| L3   | -5.25E+03       | 2.24E+03        | -5.27E+03       | 2.22E+03        |
| L4   | -3.83E+03       | 6.33E+03        | -3.13E+03       | 5.84E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.33E+03       | 4.86E+03        | -2.18E+03       | 4.07E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-807. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

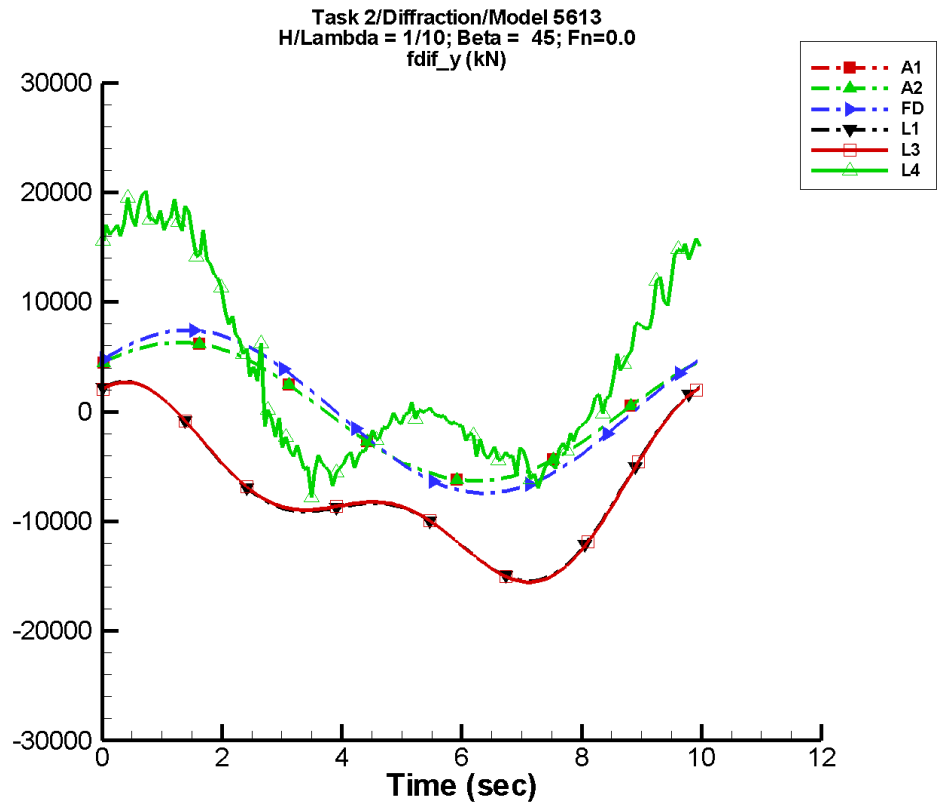
Table G-1613. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -7.57         | 4.23E+03      | 40                | 4.89          | -89               |
| A2   | -7.57         | 4.23E+03      | 40                | 4.89          | -89               |
| FD   | 4.56E-02      | 4.95E+03      | 31                | 2.06          | 63                |
| L1   | -3.21E+03     | 4.43E+03      | 50                | 1.78E+03      | 72                |
| L3   | -3.21E+03     | 4.43E+03      | 49                | 1.78E+03      | 72                |
| L4   | 1.73E+03      | 4.82E+03      | 61                | 3.01E+03      | 52                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.00E+03      | 4.76E+03      | 41                | 1.64E+03      | 111               |

Table G-1614. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.21E+03       | 4.20E+03        | -4.17E+03       | 4.16E+03        |
| A2   | -4.21E+03       | 4.20E+03        | -4.17E+03       | 4.16E+03        |
| FD   | -4.95E+03       | 4.95E+03        | -4.90E+03       | 4.90E+03        |
| L1   | -8.03E+03       | 2.61E+03        | -8.01E+03       | 2.57E+03        |
| L3   | -8.08E+03       | 2.58E+03        | -8.05E+03       | 2.54E+03        |
| L4   | -4.24E+03       | 9.75E+03        | -3.77E+03       | 8.92E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -4.54E+03       | 7.57E+03        | -4.20E+03       | 7.36E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-808. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

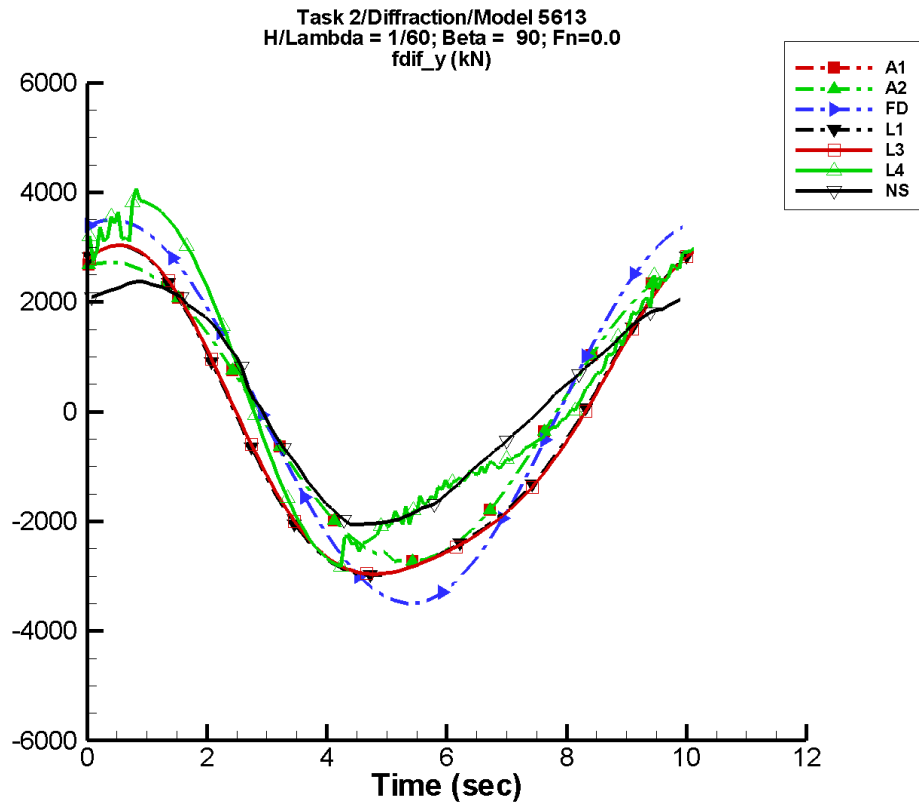
Table G-1615. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -11.4         | 6.35E+03      | 40                | 7.33          | -89               |
| A2   | -11.4         | 6.35E+03      | 40                | 7.33          | -89               |
| FD   | 6.84E-02      | 7.43E+03      | 31                | 3.08          | 63                |
| L1   | -7.22E+03     | 6.64E+03      | 50                | 4.00E+03      | 72                |
| L3   | -7.22E+03     | 6.64E+03      | 49                | 4.00E+03      | 72                |
| L4   | 3.57E+03      | 1.02E+04      | 62                | 5.74E+03      | 34                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1616. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.31E+03       | 6.31E+03        | -6.25E+03       | 6.25E+03        |
| A2   | -6.31E+03       | 6.31E+03        | -6.25E+03       | 6.25E+03        |
| FD   | -7.43E+03       | 7.43E+03        | -7.35E+03       | 7.35E+03        |
| L1   | -1.55E+04       | 2.75E+03        | -1.54E+04       | 2.67E+03        |
| L3   | -1.56E+04       | 2.70E+03        | -1.55E+04       | 2.62E+03        |
| L4   | -7.80E+03       | 2.02E+04        | -5.45E+03       | 1.87E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-809. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1617. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

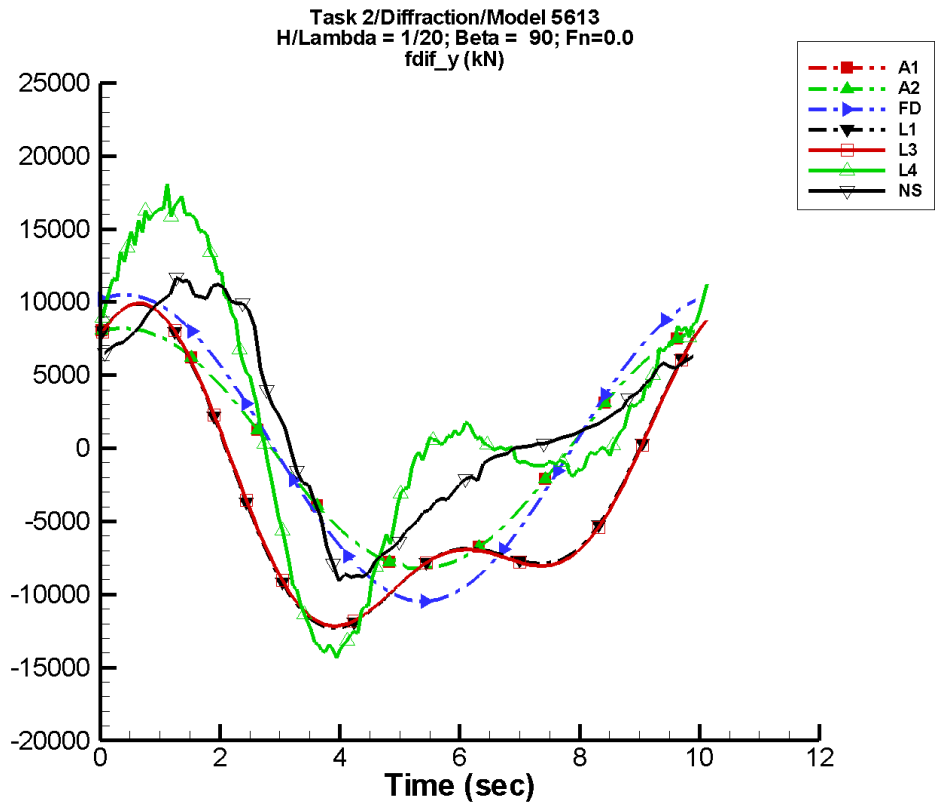
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.43         | 2.75E+03      | 72                | 3.37          | -44               |
| A2   | -2.43         | 2.75E+03      | 72                | 3.37          | -44               |
| FD   | -0.926        | 3.50E+03      | 67                | 1.52          | 102               |
| L1   | -382.         | 2.93E+03      | 74                | 528.          | 25                |
| L3   | -382.         | 2.93E+03      | 73                | 528.          | 25                |
| L4   | 252.          | 2.76E+03      | 72                | 930.          | -4                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 209.          | 2.15E+03      | 78                | 367.          | -38               |

Table G-1618. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.73E+03       | 2.76E+03        | -2.70E+03       | 2.71E+03        |
| A2   | -2.73E+03       | 2.76E+03        | -2.70E+03       | 2.71E+03        |
| FD   | -3.50E+03       | 3.50E+03        | -3.46E+03       | 3.46E+03        |
| L1   | -2.98E+03       | 3.03E+03        | -2.97E+03       | 3.01E+03        |
| L3   | -2.96E+03       | 3.04E+03        | -2.95E+03       | 3.02E+03        |
| L4   | -2.82E+03       | 4.07E+03        | -2.65E+03       | 3.77E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.06E+03       | 2.38E+03        | -2.04E+03       | 2.33E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-810. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

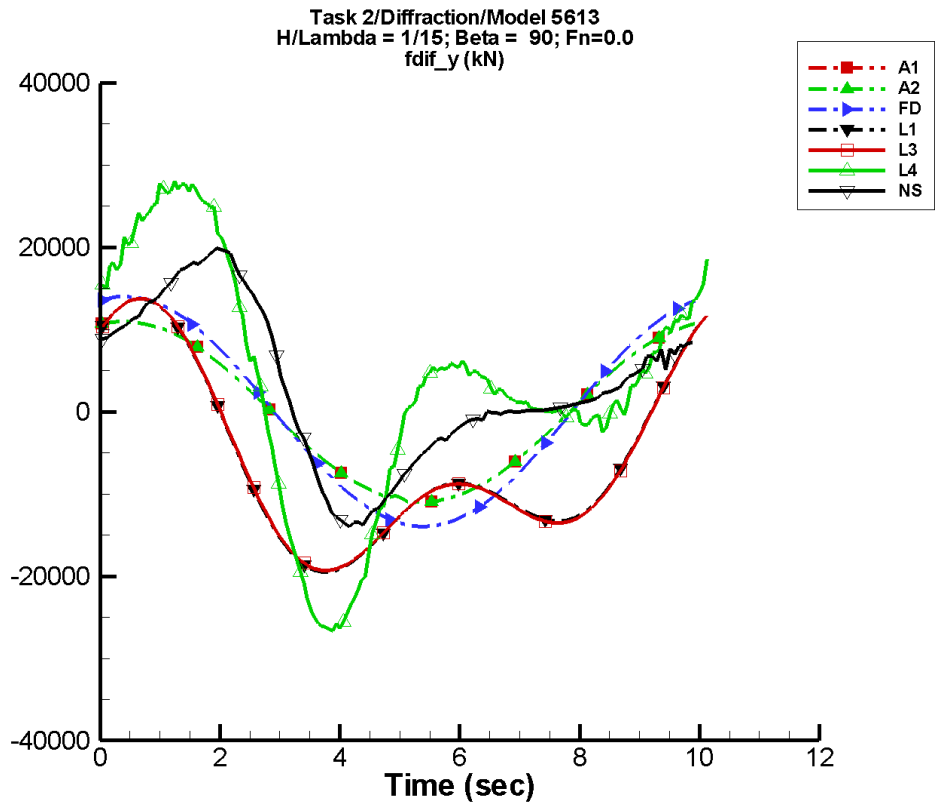
Table G-1619. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -7.32         | 8.27E+03      | 72                | 10.1          | -44               |
| A2   | -7.32         | 8.27E+03      | 72                | 10.1          | -44               |
| FD   | -2.78         | 1.05E+04      | 67                | 4.56          | 103               |
| L1   | -3.43E+03     | 8.80E+03      | 74                | 4.74E+03      | 25                |
| L3   | -3.43E+03     | 8.80E+03      | 73                | 4.74E+03      | 25                |
| L4   | 1.80E+03      | 8.98E+03      | 75                | 7.55E+03      | -7                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.74E+03      | 7.34E+03      | 69                | 3.76E+03      | -41               |

Table G-1620. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.21E+03       | 8.29E+03        | -8.12E+03       | 8.14E+03        |
| A2   | -8.21E+03       | 8.29E+03        | -8.12E+03       | 8.14E+03        |
| FD   | -1.05E+04       | 1.05E+04        | -1.04E+04       | 1.04E+04        |
| L1   | -1.23E+04       | 9.87E+03        | -1.22E+04       | 9.78E+03        |
| L3   | -1.22E+04       | 9.91E+03        | -1.21E+04       | 9.81E+03        |
| L4   | -1.43E+04       | 1.81E+04        | -1.37E+04       | 1.67E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -9.10E+03       | 1.16E+04        | -8.49E+03       | 1.09E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-811. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

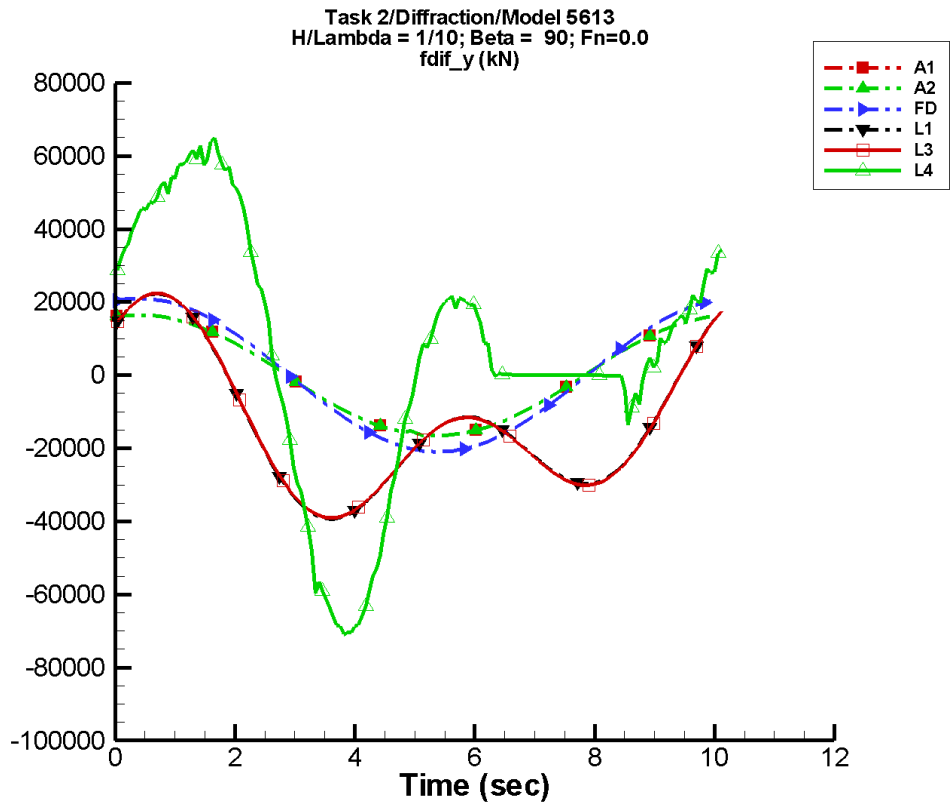
Table G-1621. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -9.77         | 1.10E+04      | 72                | 13.5          | -44               |
| A2   | -9.77         | 1.10E+04      | 72                | 13.5          | -44               |
| FD   | -3.70         | 1.40E+04      | 67                | 6.08          | 103               |
| L1   | -6.10E+03     | 1.17E+04      | 74                | 8.43E+03      | 25                |
| L3   | -6.10E+03     | 1.17E+04      | 73                | 8.43E+03      | 25                |
| L4   | 3.29E+03      | 1.34E+04      | 79                | 1.44E+04      | -10               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.95E+03      | 1.05E+04      | 64                | 6.79E+03      | -42               |

Table G-1622. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.10E+04       | 1.11E+04        | -1.08E+04       | 1.09E+04        |
| A2   | -1.10E+04       | 1.11E+04        | -1.08E+04       | 1.09E+04        |
| FD   | -1.40E+04       | 1.40E+04        | -1.38E+04       | 1.38E+04        |
| L1   | -1.95E+04       | 1.37E+04        | -1.94E+04       | 1.36E+04        |
| L3   | -1.93E+04       | 1.38E+04        | -1.92E+04       | 1.36E+04        |
| L4   | -2.67E+04       | 2.88E+04        | -2.61E+04       | 2.74E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.40E+04       | 1.99E+04        | -1.34E+04       | 1.91E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-812. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

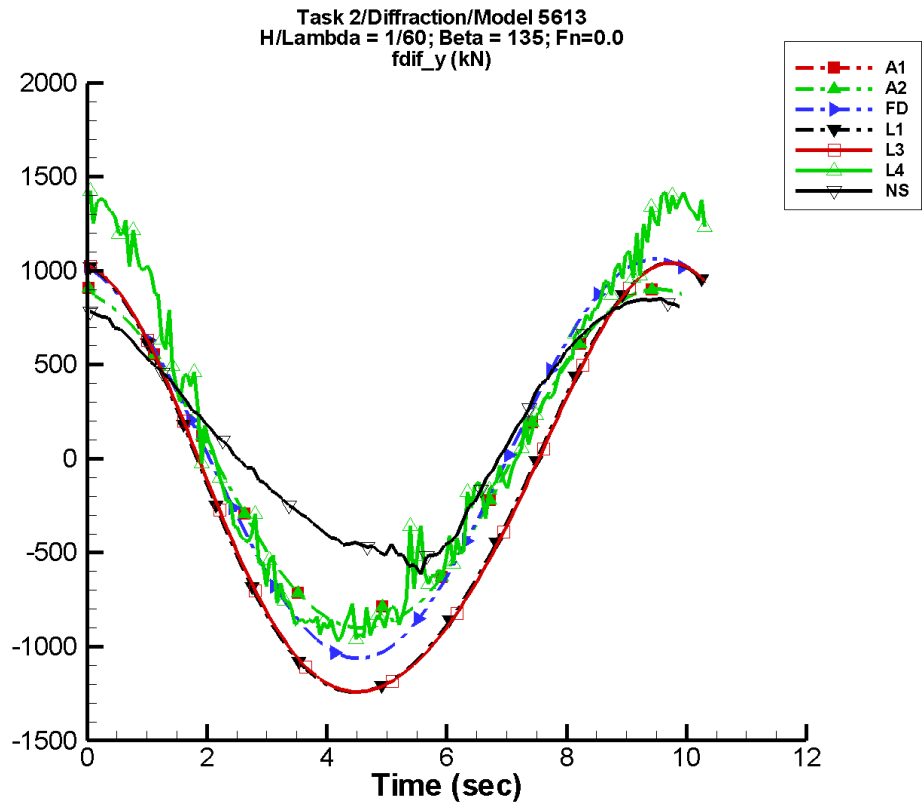
Table G-1623. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -14.7         | 1.66E+04      | 72                | 20.3          | -44               |
| A2   | -14.7         | 1.66E+04      | 72                | 20.3          | -44               |
| FD   | -5.56         | 2.10E+04      | 67                | 9.12          | 103               |
| L1   | -1.37E+04     | 1.76E+04      | 74                | 1.90E+04      | 25                |
| L3   | -1.37E+04     | 1.76E+04      | 73                | 1.90E+04      | 25                |
| L4   | 5.56E+03      | 2.86E+04      | 80                | 3.52E+04      | -11               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1624. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.64E+04       | 1.66E+04        | -1.63E+04       | 1.63E+04        |
| A2   | -1.64E+04       | 1.66E+04        | -1.63E+04       | 1.63E+04        |
| FD   | -2.10E+04       | 2.10E+04        | -2.08E+04       | 2.08E+04        |
| L1   | -3.94E+04       | 2.23E+04        | -3.91E+04       | 2.20E+04        |
| L3   | -3.91E+04       | 2.23E+04        | -3.88E+04       | 2.20E+04        |
| L4   | -7.10E+04       | 6.52E+04        | -6.89E+04       | 6.13E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-813. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1625. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

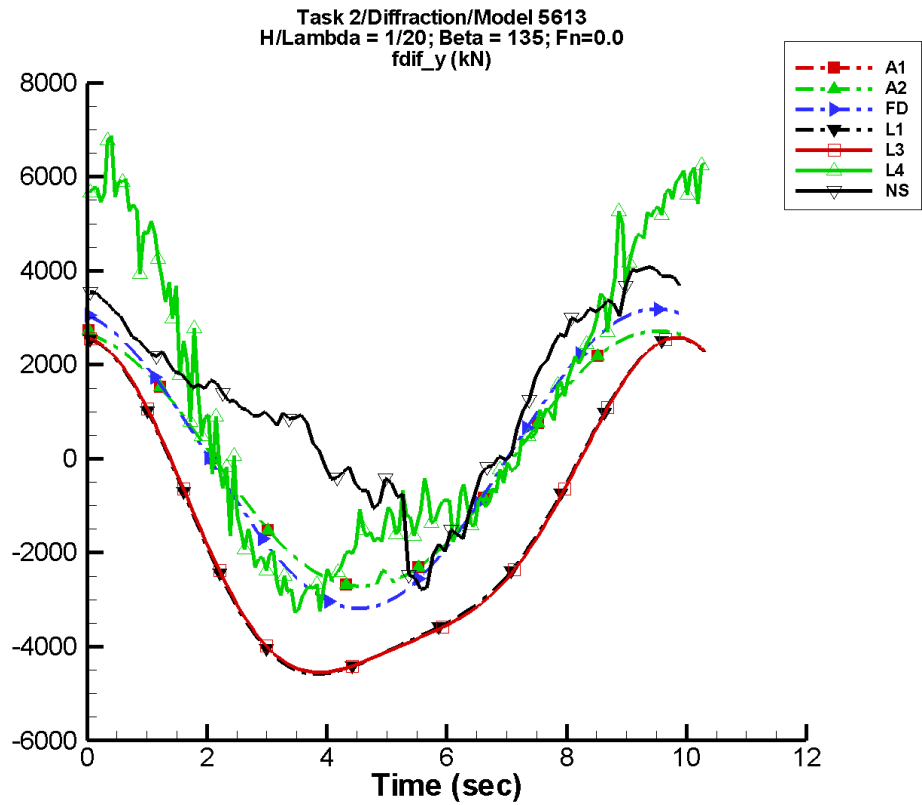
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.543         | 912.          | 99                | 1.98          | 22                |
| A2   | 0.543         | 912.          | 99                | 1.98          | 22                |
| FD   | -0.450        | 1.06E+03      | 98                | 0.493         | 133               |
| L1   | -179.         | 1.14E+03      | 98                | 92.5          | 74                |
| L3   | -179.         | 1.14E+03      | 97                | 92.5          | 73                |
| L4   | 105.          | 1.08E+03      | 98                | 179.          | 57                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 145.          | 685.          | 100               | 86.8          | -173              |

Table G-1626. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -901.           | 906.            | -884.           | 889.            |
| A2   | -901.           | 906.            | -884.           | 889.            |
| FD   | -1.06E+03       | 1.06E+03        | -1.05E+03       | 1.05E+03        |
| L1   | -1.24E+03       | 1.04E+03        | -1.24E+03       | 1.03E+03        |
| L3   | -1.24E+03       | 1.04E+03        | -1.24E+03       | 1.04E+03        |
| L4   | -972.           | 1.43E+03        | -898.           | 1.39E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -617.           | 851.            | -539.           | 840.            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-814. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

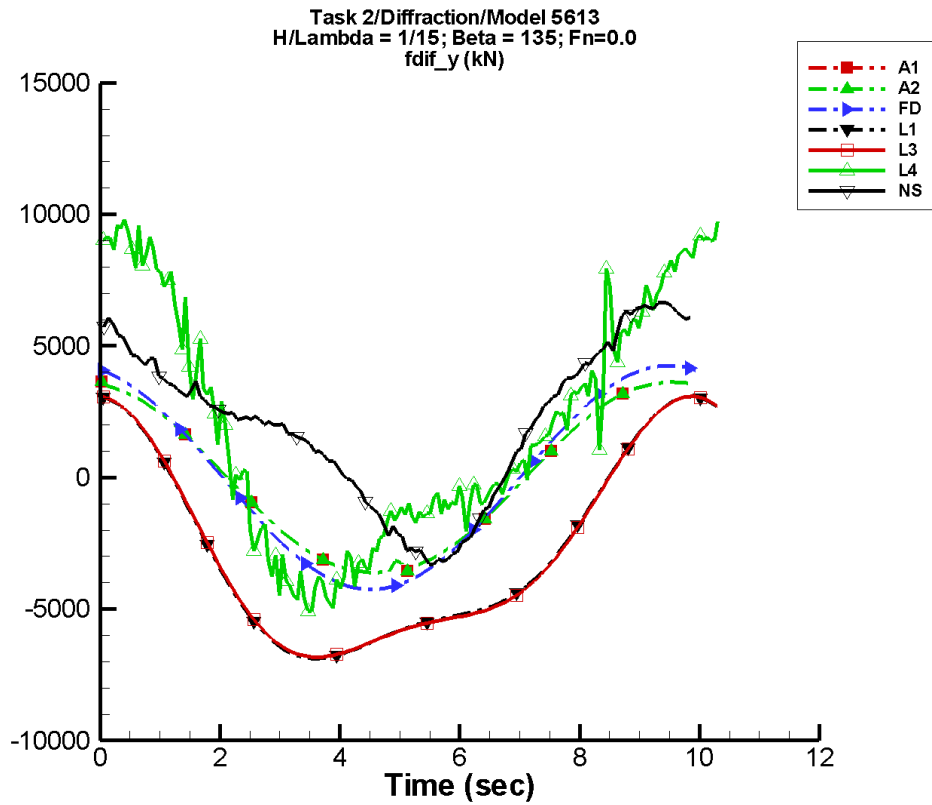
Table G-1627. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.63          | 2.74E+03      | 99                | 5.97          | 22                |
| A2   | 1.63          | 2.74E+03      | 99                | 5.97          | 22                |
| FD   | -1.35         | 3.19E+03      | 98                | 1.48          | 133               |
| L1   | -1.61E+03     | 3.41E+03      | 98                | 828.          | 73                |
| L3   | -1.61E+03     | 3.40E+03      | 97                | 828.          | 73                |
| L4   | 919.          | 3.86E+03      | 96                | 1.42E+03      | 61                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.21E+03      | 2.42E+03      | 89                | 853.          | -176              |

Table G-1628. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.71E+03       | 2.73E+03        | -2.66E+03       | 2.67E+03        |
| A2   | -2.71E+03       | 2.73E+03        | -2.66E+03       | 2.67E+03        |
| FD   | -3.19E+03       | 3.19E+03        | -3.15E+03       | 3.15E+03        |
| L1   | -4.59E+03       | 2.57E+03        | -4.57E+03       | 2.54E+03        |
| L3   | -4.55E+03       | 2.58E+03        | -4.54E+03       | 2.55E+03        |
| L4   | -3.46E+03       | 6.87E+03        | -2.93E+03       | 6.03E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.79E+03       | 4.08E+03        | -2.14E+03       | 3.93E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-815. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

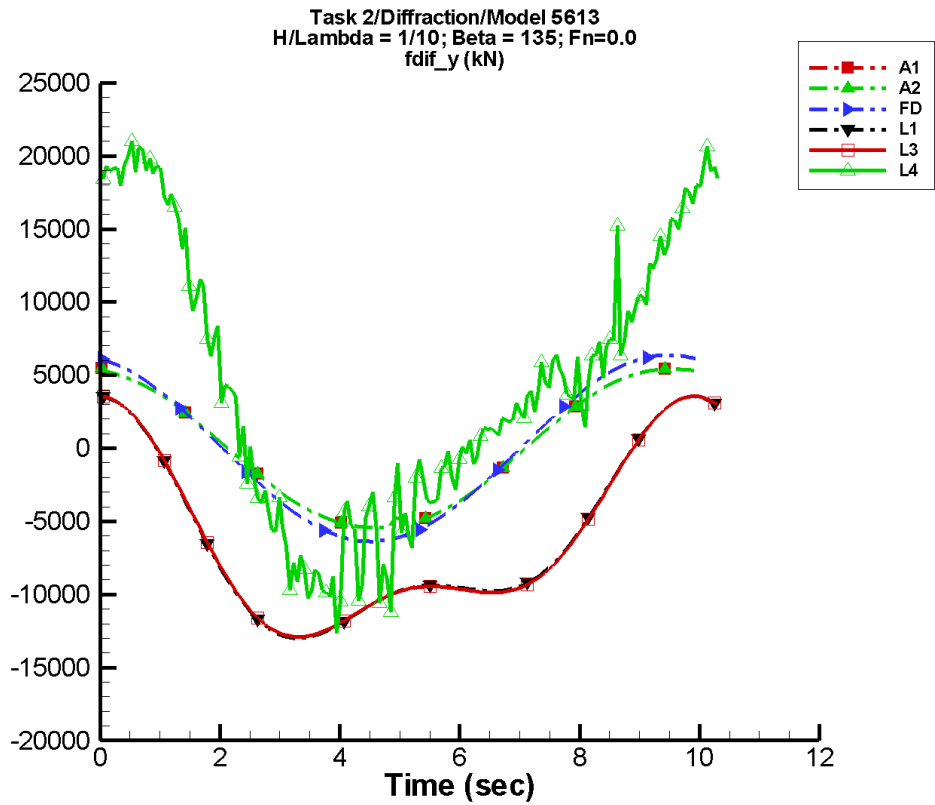
Table G-1629. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.18          | 3.66E+03      | 99                | 7.97          | 22                |
| A2   | 2.18          | 3.66E+03      | 99                | 7.97          | 22                |
| FD   | -1.80         | 4.25E+03      | 98                | 1.97          | 133               |
| L1   | -2.86E+03     | 4.54E+03      | 98                | 1.47E+03      | 73                |
| L3   | -2.86E+03     | 4.54E+03      | 97                | 1.47E+03      | 73                |
| L4   | 1.82E+03      | 5.81E+03      | 97                | 2.12E+03      | 46                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.08E+03      | 3.93E+03      | 90                | 1.33E+03      | -169              |

Table G-1630. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.62E+03       | 3.64E+03        | -3.55E+03       | 3.57E+03        |
| A2   | -3.62E+03       | 3.64E+03        | -3.55E+03       | 3.57E+03        |
| FD   | -4.25E+03       | 4.25E+03        | -4.21E+03       | 4.20E+03        |
| L1   | -6.89E+03       | 3.07E+03        | -6.87E+03       | 3.03E+03        |
| L3   | -6.83E+03       | 3.08E+03        | -6.81E+03       | 3.04E+03        |
| L4   | -5.62E+03       | 9.80E+03        | -4.48E+03       | 9.20E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -3.30E+03       | 6.65E+03        | -3.09E+03       | 6.53E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-816. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

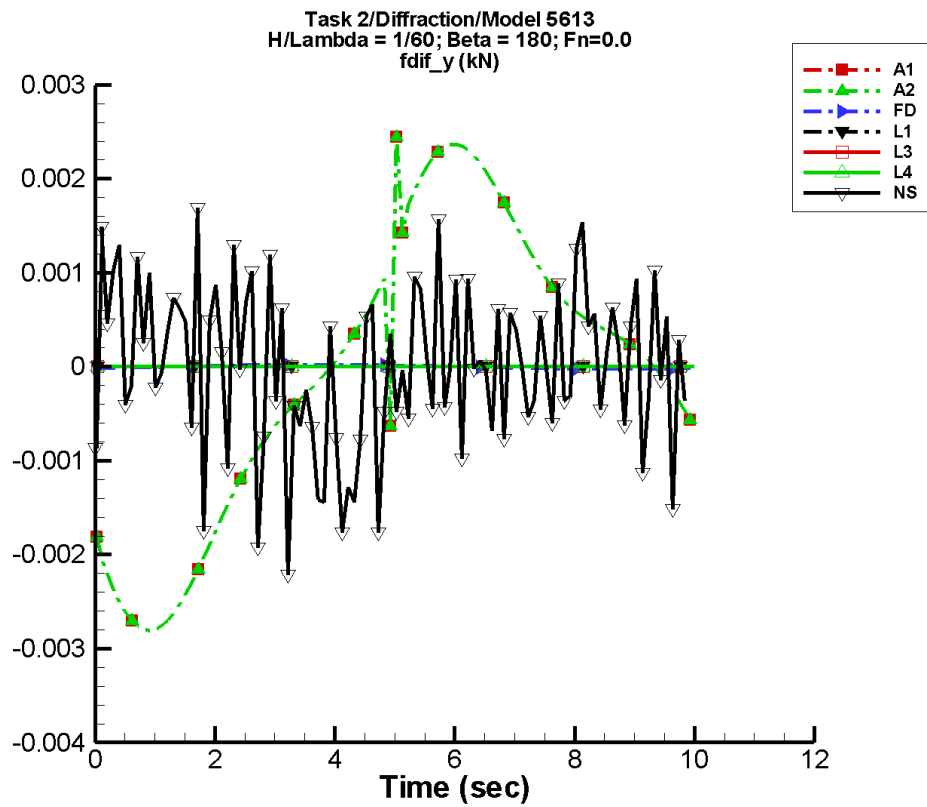
Table G-1631. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 3.27          | 5.49E+03      | 99                | 12.0          | 22                |
| A2   | 3.27          | 5.49E+03      | 99                | 12.0          | 22                |
| FD   | -2.70         | 6.37E+03      | 98                | 2.96          | 133               |
| L1   | -6.42E+03     | 6.81E+03      | 98                | 3.31E+03      | 73                |
| L3   | -6.42E+03     | 6.80E+03      | 97                | 3.31E+03      | 73                |
| L4   | 3.83E+03      | 1.17E+04      | 93                | 4.93E+03      | 22                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1632. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.42E+03       | 5.46E+03        | -5.33E+03       | 5.36E+03        |
| A2   | -5.42E+03       | 5.46E+03        | -5.33E+03       | 5.36E+03        |
| FD   | -6.37E+03       | 6.37E+03        | -6.31E+03       | 6.31E+03        |
| L1   | -1.30E+04       | 3.54E+03        | -1.30E+04       | 3.47E+03        |
| L3   | -1.29E+04       | 3.56E+03        | -1.29E+04       | 3.49E+03        |
| L4   | -1.26E+04       | 2.10E+04        | -9.78E+03       | 1.98E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-817. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1633. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

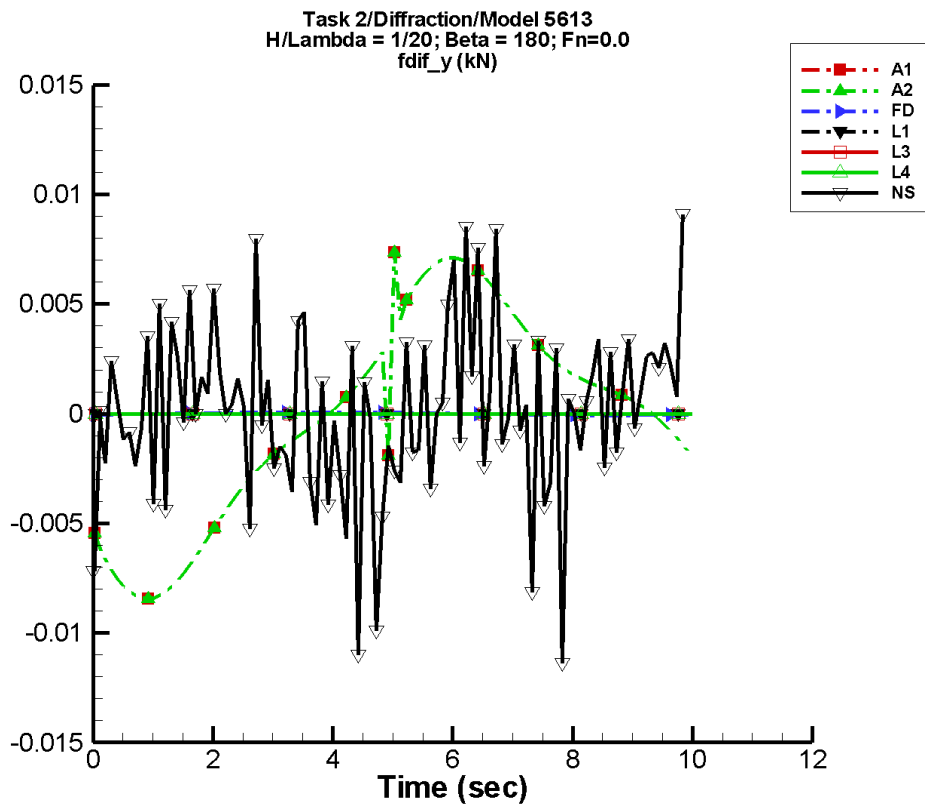
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.97E-05      | 1.95E-03      | -142              | 8.86E-05      | 157               |
| A2   | 2.97E-05      | 1.95E-03      | -142              | 8.86E-05      | 157               |
| FD   | 1.00E-08      | 2.18E-05      | -52               | 1.03E-08      | -21               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.70E-05     | 3.02E-04      | 124               | 2.89E-04      | -17               |

Table G-1634. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.81E-03       | 2.44E-03        | -2.75E-03       | 2.31E-03        |
| A2   | -2.81E-03       | 2.44E-03        | -2.75E-03       | 2.31E-03        |
| FD   | -2.18E-05       | 2.18E-05        | -2.16E-05       | 2.16E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -2.22E-03       | 1.69E-03        | -9.06E-04       | 5.09E-04        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-818. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

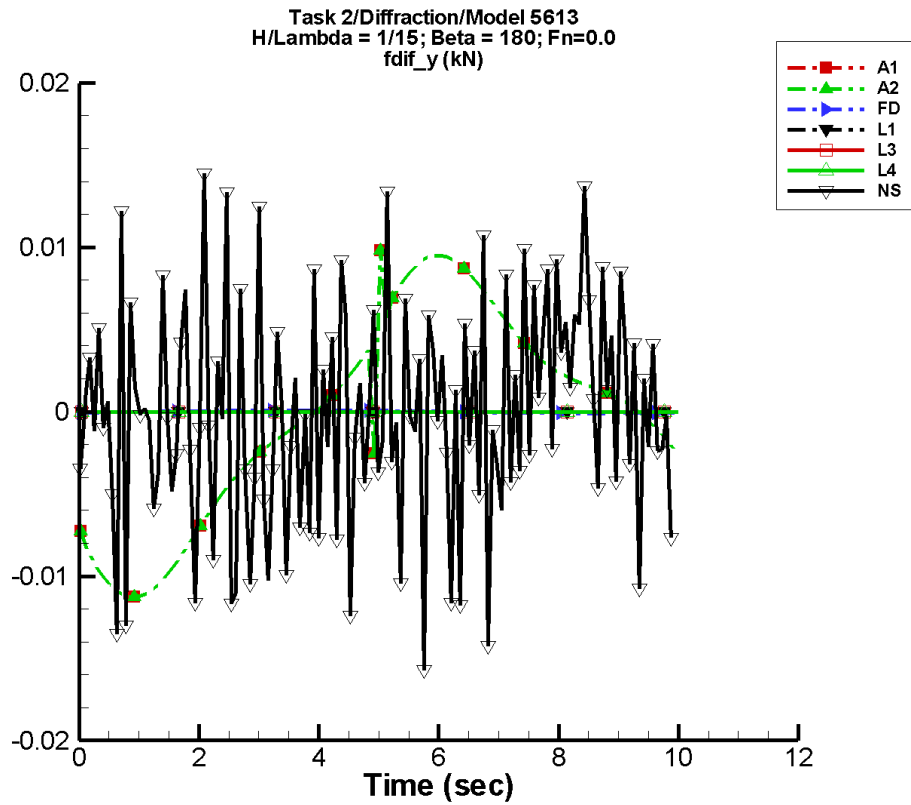
Table G-1635. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 8.95E-05      | 5.87E-03      | -142              | 2.66E-04      | 157               |
| A2   | 8.95E-05      | 5.87E-03      | -142              | 2.66E-04      | 157               |
| FD   | 3.01E-08      | 6.54E-05      | -52               | 3.09E-08      | -21               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.05E-05      | 7.06E-04      | 111               | 1.09E-03      | -34               |

Table G-1636. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.45E-03       | 7.35E-03        | -8.27E-03       | 6.95E-03        |
| A2   | -8.45E-03       | 7.35E-03        | -8.27E-03       | 6.95E-03        |
| FD   | -6.54E-05       | 6.54E-05        | -6.47E-05       | 6.47E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.14E-02       | 9.10E-03        | -4.23E-03       | 4.60E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-819. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

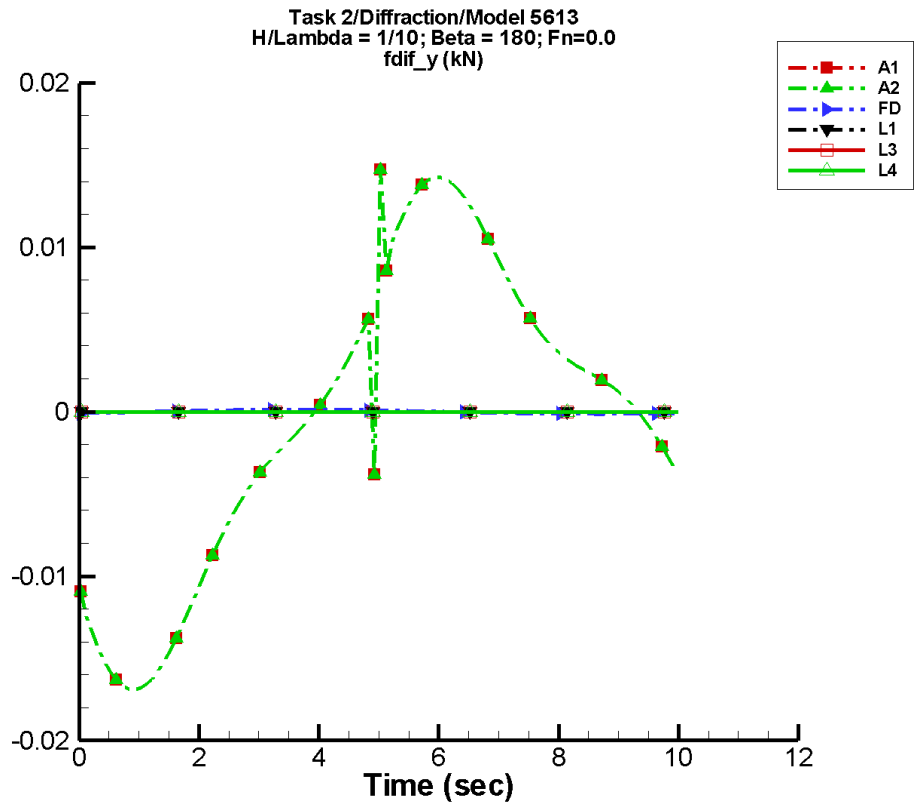
Table G-1637. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.19E-04      | 7.83E-03      | -142              | 3.56E-04      | 157               |
| A2   | 1.19E-04      | 7.83E-03      | -142              | 3.56E-04      | 157               |
| FD   | 4.01E-08      | 8.72E-05      | -52               | 4.12E-08      | -21               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -2.07E-04     | 1.71E-03      | 157               | 1.27E-03      | -150              |

Table G-1638. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.13E-02       | 9.81E-03        | -1.10E-02       | 9.28E-03        |
| A2   | -1.13E-02       | 9.81E-03        | -1.10E-02       | 9.28E-03        |
| FD   | -8.72E-05       | 8.72E-05        | -8.63E-05       | 8.63E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -7.47E-02       | 7.31E-02        | -3.10E-03       | 5.28E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-820. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

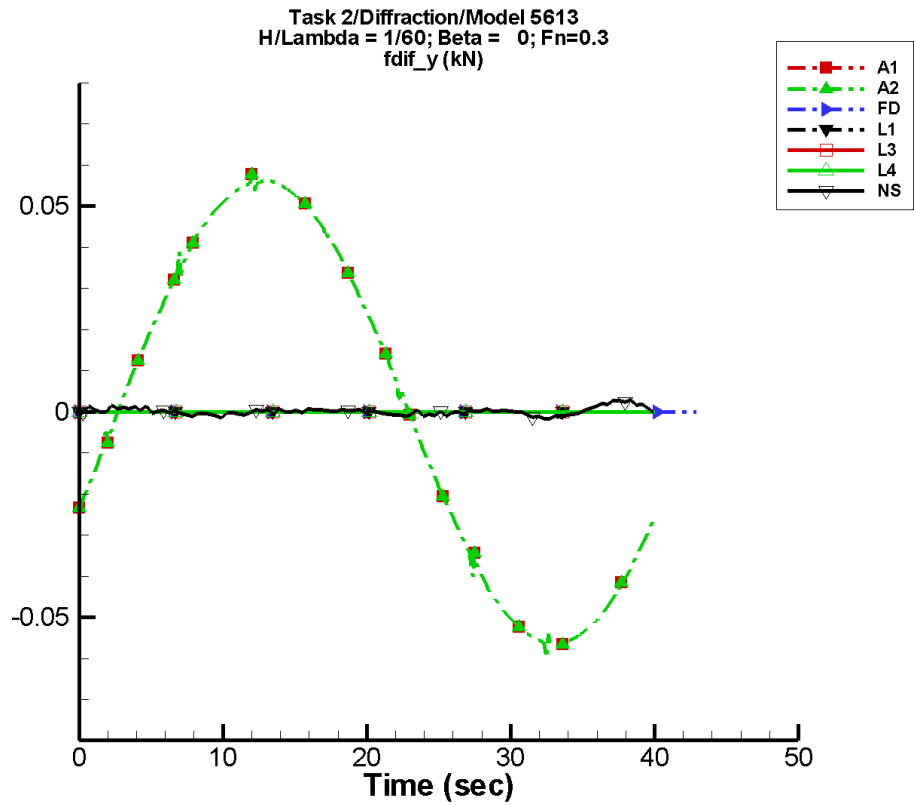
Table G-1639. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.79E-04      | 1.17E-02      | -142              | 5.34E-04      | 157               |
| A2   | 1.79E-04      | 1.17E-02      | -142              | 5.34E-04      | 157               |
| FD   | 6.02E-08      | 1.31E-04      | -52               | 6.18E-08      | -21               |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1640. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.69E-02       | 1.47E-02        | -1.66E-02       | 1.39E-02        |
| A2   | -1.69E-02       | 1.47E-02        | -1.66E-02       | 1.39E-02        |
| FD   | -1.31E-04       | 1.31E-04        | -1.29E-04       | 1.29E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-821. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1641. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

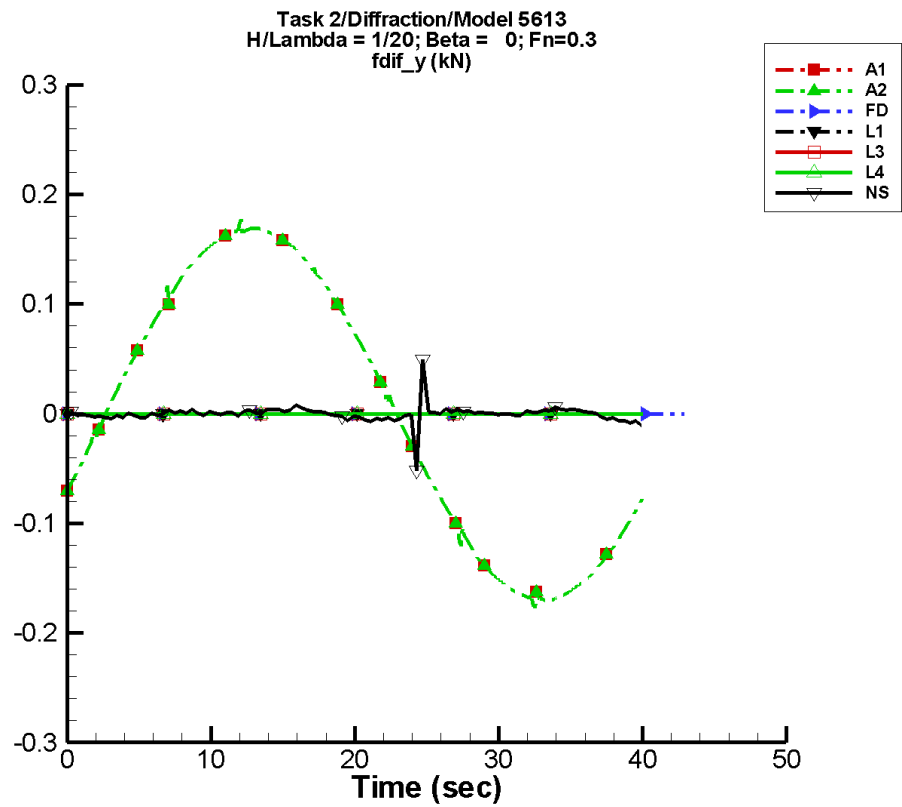
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.34E-05     | 5.64E-02      | -26               | 5.91E-04      | -35               |
| A2   | -6.34E-05     | 5.64E-02      | -26               | 5.91E-04      | -35               |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 7.79E-06      | 2.67E-04      | 6                 | 4.63E-04      | -153              |

Table G-1642. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.99E-02       | 5.91E-02        | -5.65E-02       | 5.61E-02        |
| A2   | -5.99E-02       | 5.91E-02        | -5.65E-02       | 5.61E-02        |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -4.29E-03       | 4.45E-03        | -3.56E-03       | 2.71E-03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-822. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

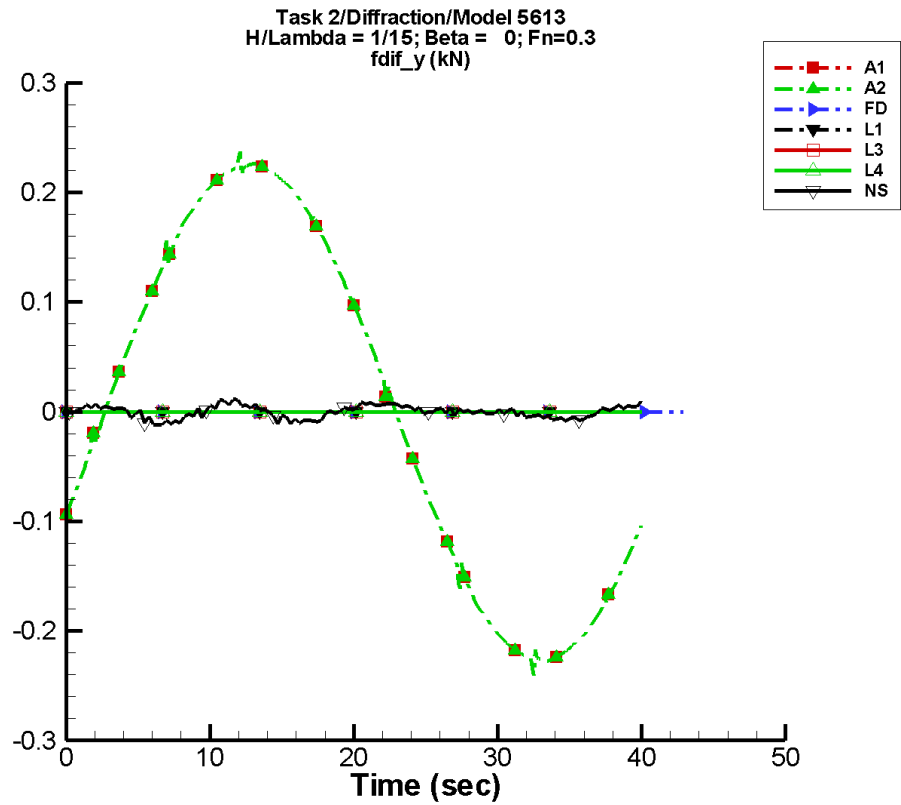
Table G-1643. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.91E-04     | 0.170         | -26               | 1.78E-03      | -35               |
| A2   | -1.91E-04     | 0.170         | -26               | 1.78E-03      | -35               |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.09E-04     | 2.87E-04      | -89               | 2.39E-03      | -122              |

Table G-1644. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.180          | 0.178           | -0.170          | 0.169           |
| A2   | -0.180          | 0.178           | -0.170          | 0.169           |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -5.17E-02       | 4.95E-02        | -6.78E-03       | 3.92E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-823. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

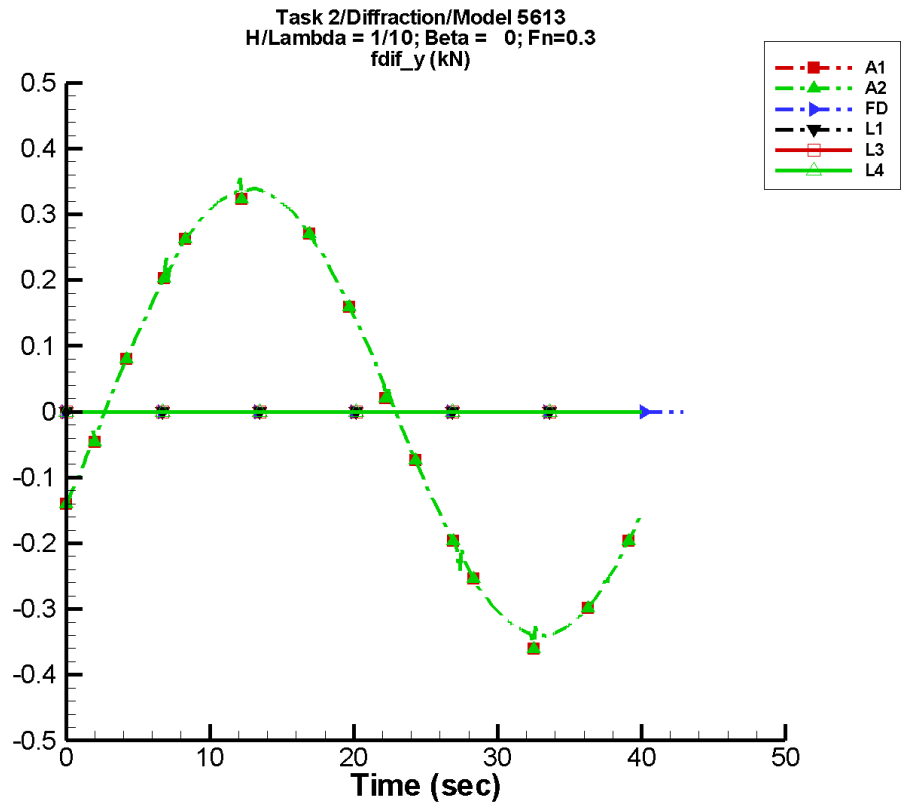
Table G-1645. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.55E-04     | 0.227         | -26               | 2.37E-03      | -35               |
| A2   | -2.55E-04     | 0.227         | -26               | 2.37E-03      | -35               |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 2.17E-06      | 1.04E-03      | -76               | 1.78E-03      | 27                |

Table G-1646. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.241          | 0.237           | -0.227          | 0.225           |
| A2   | -0.241          | 0.237           | -0.227          | 0.225           |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.22E-02       | 1.37E-02        | -9.61E-03       | 7.86E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-824. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

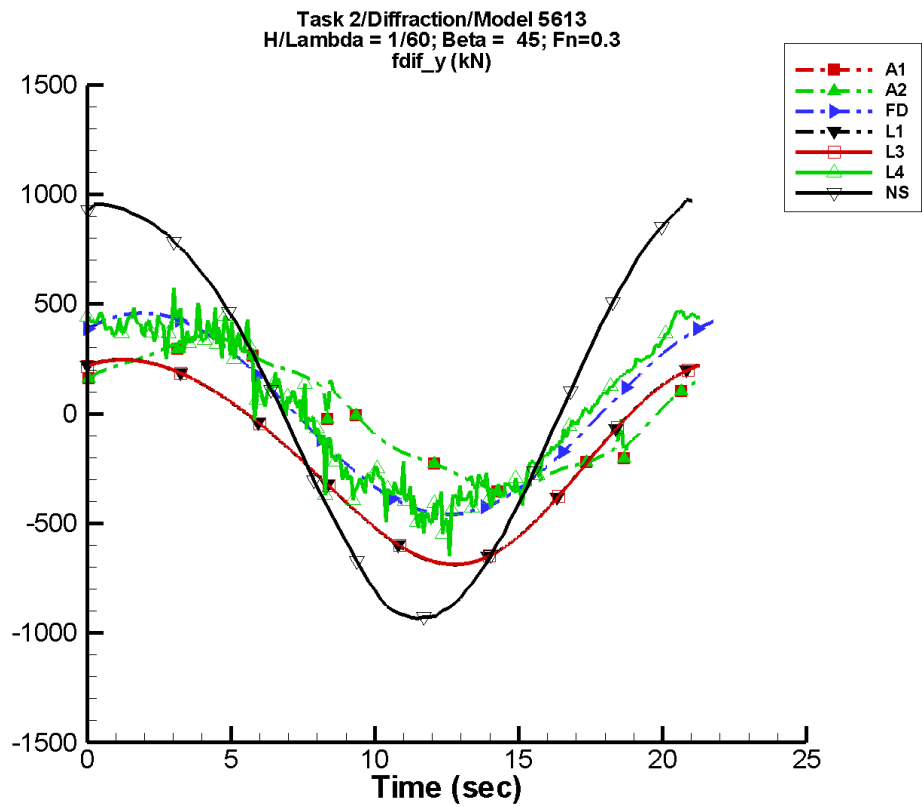
Table G-1647. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.82E-04     | 0.340         | -26               | 3.56E-03      | -35               |
| A2   | -3.82E-04     | 0.340         | -26               | 3.56E-03      | -35               |
| FD   | —             | —             | —                 | —             | —                 |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1648. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.361          | 0.356           | -0.341          | 0.338           |
| A2   | -0.361          | 0.356           | -0.341          | 0.338           |
| FD   | —               | —               | —               | —               |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-825. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1649. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

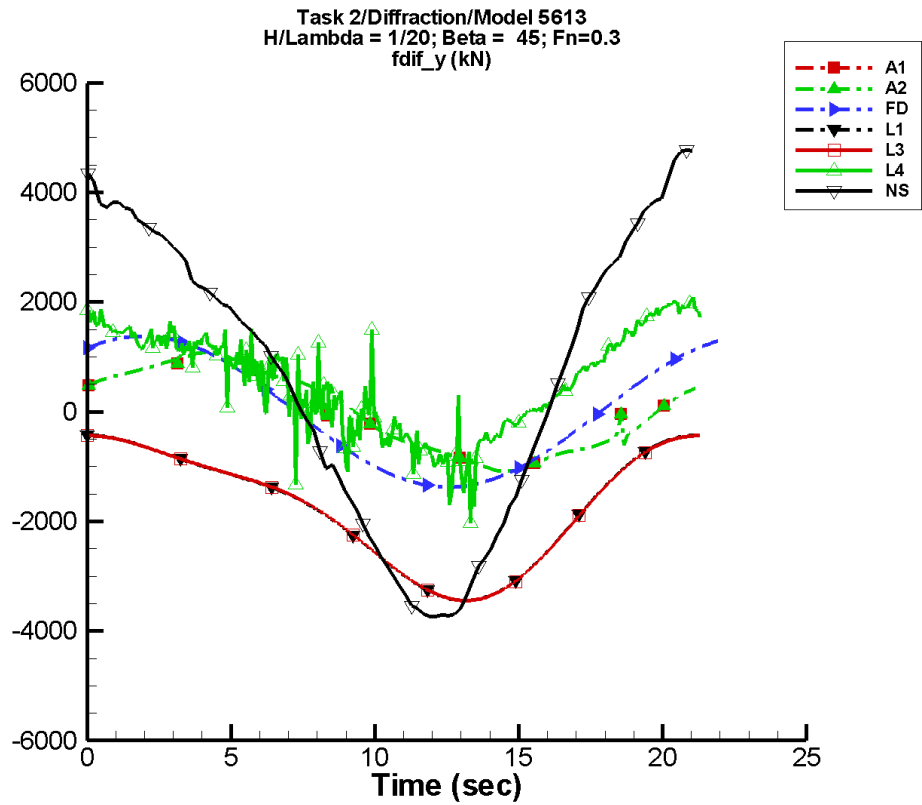
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.470         | 333.          | 25                | 0.601         | -99               |
| A2   | 0.470         | 333.          | 25                | 0.601         | -99               |
| FD   | 0.113         | 459.          | 62                | 0.184         | 148               |
| L1   | -196.         | 463.          | 60                | 40.4          | 160               |
| L3   | -196.         | 463.          | 60                | 40.4          | 160               |
| L4   | 25.5          | 445.          | 61                | 35.3          | -144              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 72.9          | 939.          | 74                | 73.0          | -147              |

Table G-1650. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -361.           | 361.            | -358.           | 358.            |
| A2   | -361.           | 361.            | -358.           | 358.            |
| FD   | -459.           | 459.            | -458.           | 458.            |
| L1   | -688.           | 248.            | -687.           | 247.            |
| L3   | -687.           | 246.            | -687.           | 246.            |
| L4   | -649.           | 573.            | -482.           | 456.            |
| NF   | —               | —               | —               | —               |
| NS   | -933.           | 977.            | -923.           | 951.            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-826. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

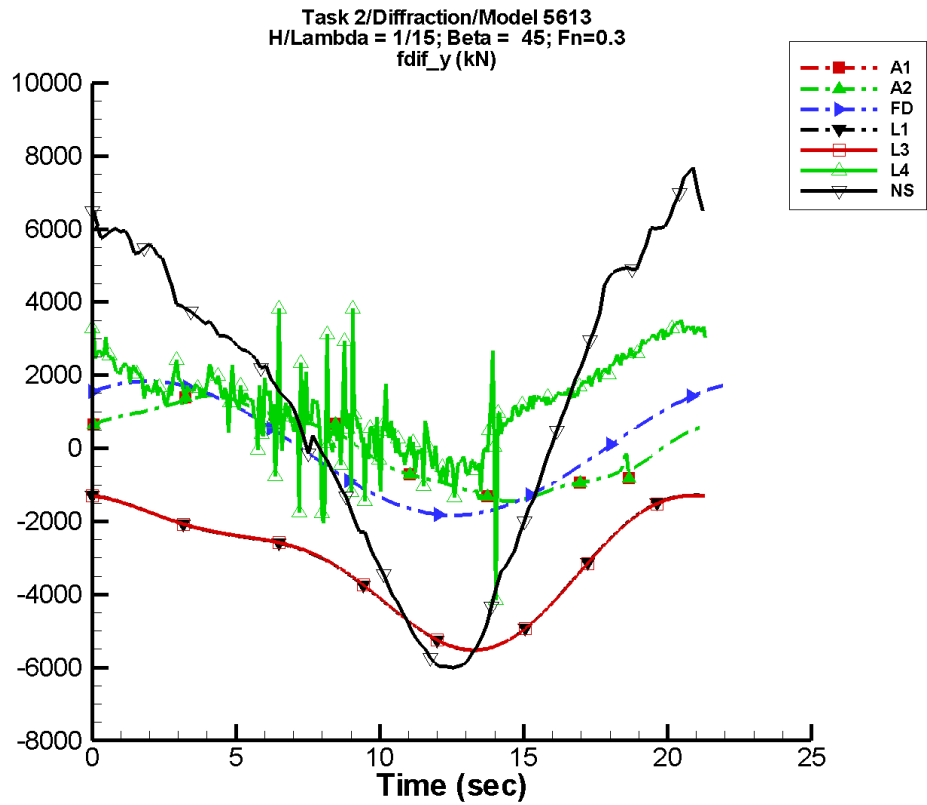
Table G-1651. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.41          | 1.00E+03      | 25                | 1.81          | -99               |
| A2   | 1.41          | 1.00E+03      | 25                | 1.81          | -99               |
| FD   | 0.340         | 1.38E+03      | 62                | 0.552         | 148               |
| L1   | -1.76E+03     | 1.39E+03      | 60                | 363.          | 160               |
| L3   | -1.76E+03     | 1.39E+03      | 60                | 363.          | 160               |
| L4   | 554.          | 1.18E+03      | 73                | 279.          | 172               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 653.          | 3.68E+03      | 76                | 747.          | -174              |

Table G-1652. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.09E+03       | 1.08E+03        | -1.08E+03       | 1.08E+03        |
| A2   | -1.09E+03       | 1.08E+03        | -1.08E+03       | 1.08E+03        |
| FD   | -1.38E+03       | 1.38E+03        | -1.37E+03       | 1.37E+03        |
| L1   | -3.45E+03       | -429.           | -3.44E+03       | -427.           |
| L3   | -3.45E+03       | -436.           | -3.44E+03       | -435.           |
| L4   | -2.03E+03       | 2.09E+03        | -1.22E+03       | 1.96E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -3.74E+03       | 4.77E+03        | -3.68E+03       | 4.43E+03        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-827. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

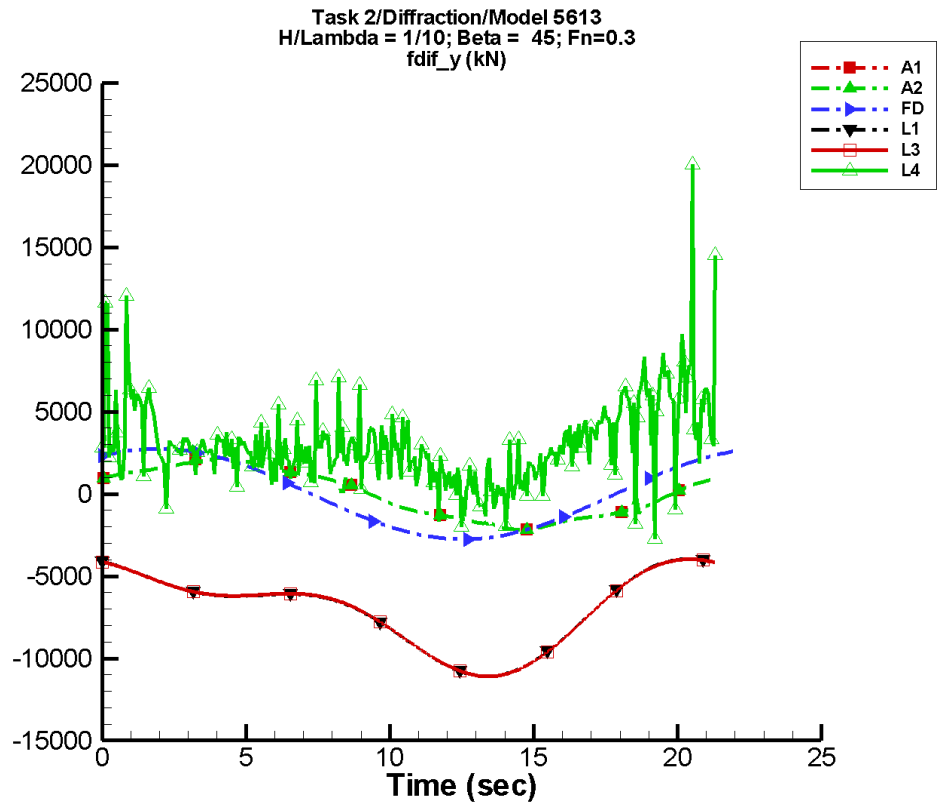
Table G-1653. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.89          | 1.34E+03      | 25                | 2.41          | -99               |
| A2   | 1.89          | 1.34E+03      | 25                | 2.41          | -99               |
| FD   | 0.453         | 1.84E+03      | 62                | 0.736         | 148               |
| L1   | -3.13E+03     | 1.85E+03      | 60                | 645.          | 160               |
| L3   | -3.13E+03     | 1.85E+03      | 60                | 645.          | 160               |
| L4   | 1.29E+03      | 1.38E+03      | 91                | 443.          | 177               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.10E+03      | 5.58E+03      | 75                | 1.46E+03      | -177              |

Table G-1654. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.45E+03       | 1.45E+03        | -1.44E+03       | 1.44E+03        |
| A2   | -1.45E+03       | 1.45E+03        | -1.44E+03       | 1.44E+03        |
| FD   | -1.84E+03       | 1.84E+03        | -1.83E+03       | 1.83E+03        |
| L1   | -5.52E+03       | -1.28E+03       | -5.52E+03       | -1.28E+03       |
| L3   | -5.53E+03       | -1.29E+03       | -5.52E+03       | -1.30E+03       |
| L4   | -4.15E+03       | 3.82E+03        | -603.           | 3.36E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.01E+03       | 7.68E+03        | -5.94E+03       | 6.97E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-828. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

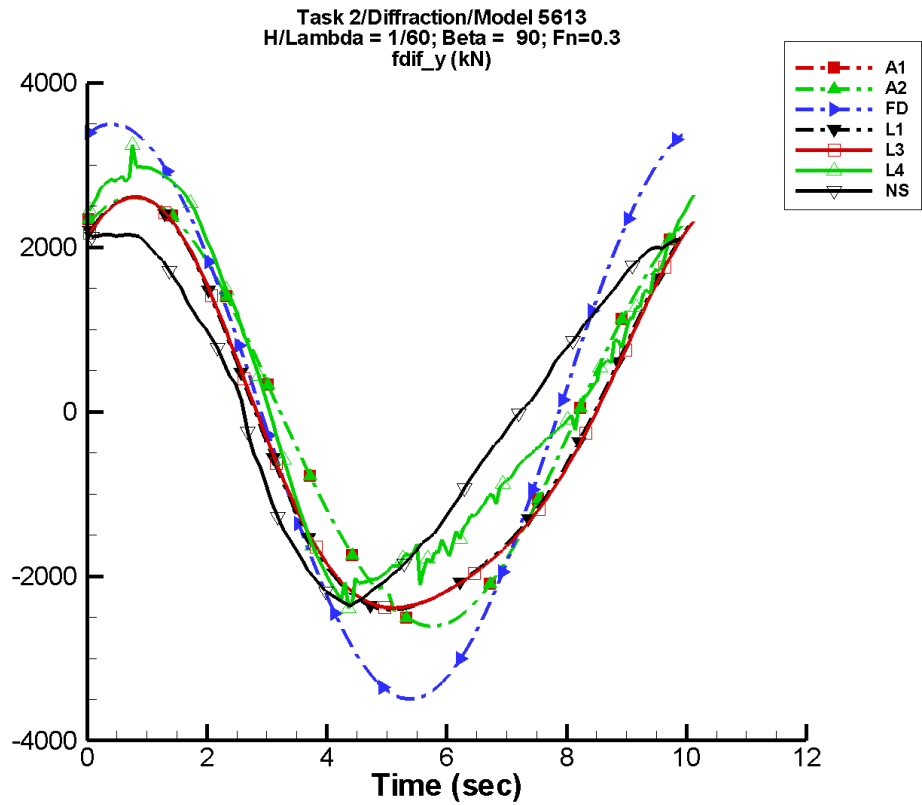
Table G-1655. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.83          | 2.00E+03      | 25                | 3.62          | -99               |
| A2   | 2.83          | 2.00E+03      | 25                | 3.62          | -99               |
| FD   | 0.679         | 2.75E+03      | 62                | 1.10          | 149               |
| L1   | -7.05E+03     | 2.78E+03      | 60                | 1.45E+03      | 160               |
| L3   | -7.05E+03     | 2.77E+03      | 60                | 1.45E+03      | 160               |
| L4   | 3.02E+03      | 1.79E+03      | 87                | 1.41E+03      | 150               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1656. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.18E+03       | 2.17E+03        | -2.16E+03       | 2.15E+03        |
| A2   | -2.18E+03       | 2.17E+03        | -2.16E+03       | 2.15E+03        |
| FD   | -2.75E+03       | 2.75E+03        | -2.75E+03       | 2.75E+03        |
| L1   | -1.11E+04       | -3.95E+03       | -1.11E+04       | -3.96E+03       |
| L3   | -1.11E+04       | -3.97E+03       | -1.11E+04       | -3.98E+03       |
| L4   | -3.37E+03       | 2.00E+04        | -71.2           | 8.18E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

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Data identically zero, insufficient, or not available from NFA.

Figure G-829. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–1657. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

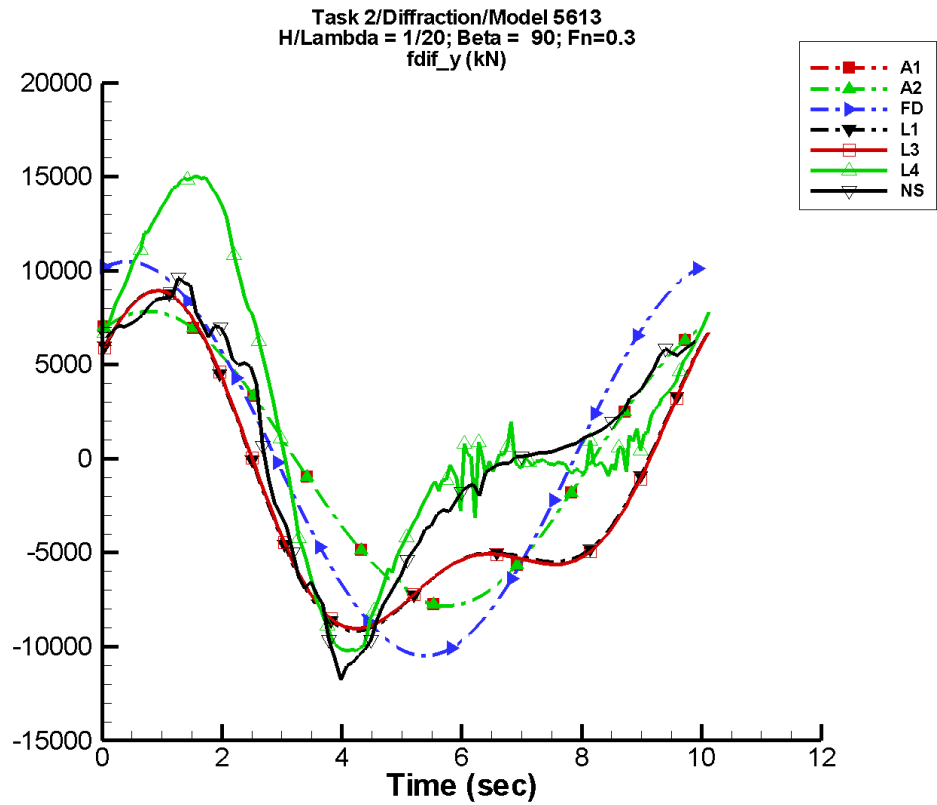
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -0.555        | 2.59E+03      | 58                | 6.10          | -1                |
| A2   | -0.555        | 2.59E+03      | 58                | 6.10          | -1                |
| FD   | -0.927        | 3.50E+03      | 67                | 1.52          | 103               |
| L1   | -213.         | 2.46E+03      | 64                | 409.          | 4                 |
| L3   | -213.         | 2.45E+03      | 63                | 409.          | 4                 |
| L4   | 202.          | 2.40E+03      | 65                | 601.          | -19               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 84.1          | 2.16E+03      | 92                | 356.          | -18               |

Table G–1658. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.61E+03       | 2.61E+03        | -2.58E+03       | 2.58E+03        |
| A2   | -2.61E+03       | 2.61E+03        | -2.58E+03       | 2.58E+03        |
| FD   | -3.50E+03       | 3.50E+03        | -3.46E+03       | 3.46E+03        |
| L1   | -2.41E+03       | 2.61E+03        | -2.40E+03       | 2.60E+03        |
| L3   | -2.39E+03       | 2.61E+03        | -2.38E+03       | 2.60E+03        |
| L4   | -2.39E+03       | 3.25E+03        | -2.20E+03       | 2.97E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.36E+03       | 2.15E+03        | -2.28E+03       | 2.15E+03        |



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Data identically zero, insufficient, or not available from NFA.

Figure G-830. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

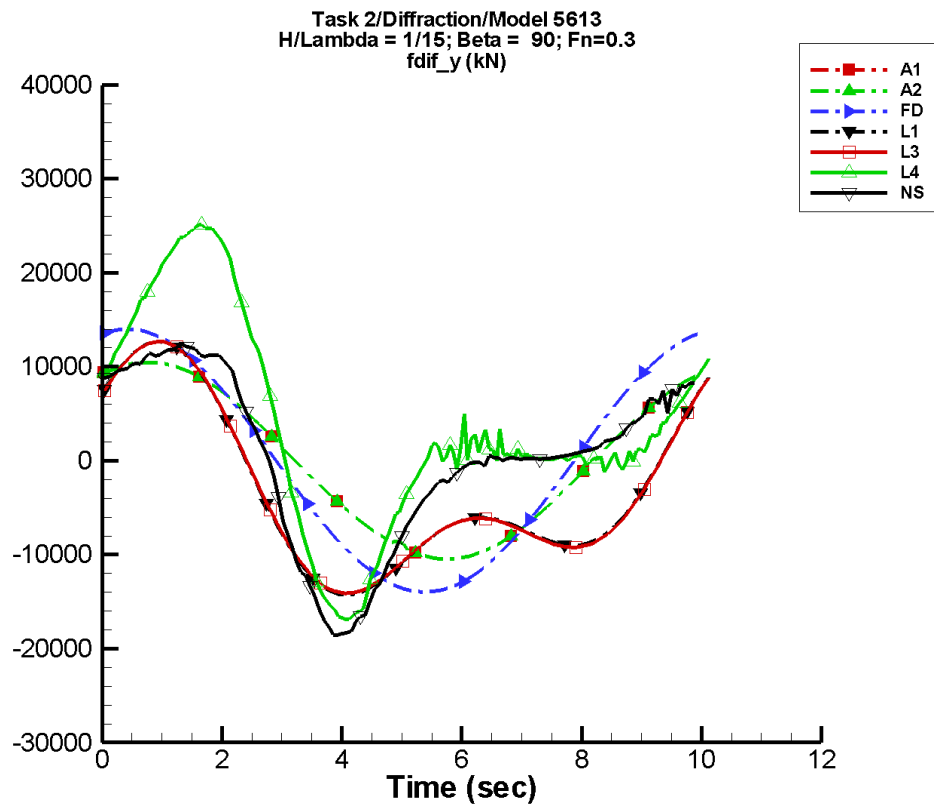
Table G-1659. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -1.67         | 7.78E+03      | 58                | 18.4          | -1                |
| A2   | -1.67         | 7.78E+03      | 58                | 18.4          | -1                |
| FD   | -2.78         | 1.05E+04      | 67                | 4.56          | 103               |
| L1   | -1.92E+03     | 7.38E+03      | 64                | 3.68E+03      | 4                 |
| L3   | -1.92E+03     | 7.36E+03      | 63                | 3.68E+03      | 4                 |
| L4   | 1.91E+03      | 7.70E+03      | 61                | 5.97E+03      | -27               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 484.          | 6.97E+03      | 87                | 3.59E+03      | -19               |

Table G-1660. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.85E+03       | 7.85E+03        | -7.76E+03       | 7.76E+03        |
| A2   | -7.85E+03       | 7.85E+03        | -7.76E+03       | 7.76E+03        |
| FD   | -1.05E+04       | 1.05E+04        | -1.04E+04       | 1.04E+04        |
| L1   | -9.18E+03       | 8.93E+03        | -9.13E+03       | 8.85E+03        |
| L3   | -9.05E+03       | 8.94E+03        | -9.00E+03       | 8.86E+03        |
| L4   | -1.03E+04       | 1.50E+04        | -1.01E+04       | 1.49E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.18E+04       | 9.65E+03        | -1.03E+04       | 8.69E+03        |

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Data identically zero, insufficient, or not available from NFA.

Figure G-831. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

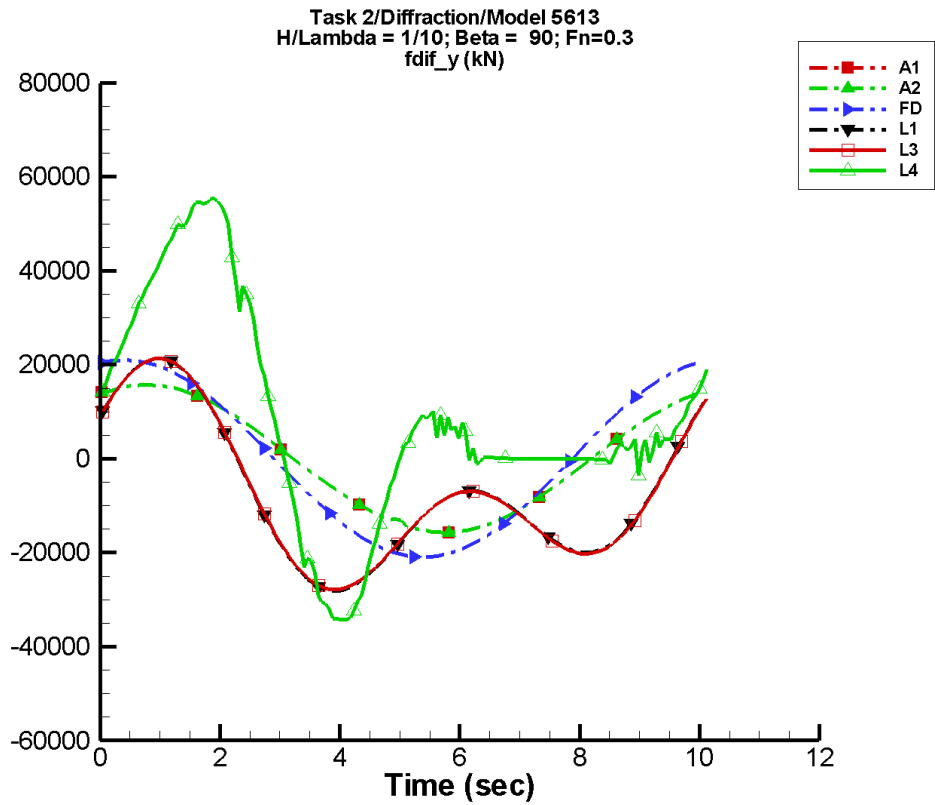
Table G-1661. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -2.23         | 1.04E+04      | 58                | 24.5          | -1                |
| A2   | -2.23         | 1.04E+04      | 58                | 24.5          | -1                |
| FD   | -3.71         | 1.40E+04      | 67                | 6.08          | 103               |
| L1   | -3.40E+03     | 9.83E+03      | 64                | 6.53E+03      | 4                 |
| L3   | -3.40E+03     | 9.81E+03      | 63                | 6.53E+03      | 4                 |
| L4   | 3.63E+03      | 1.10E+04      | 59                | 1.05E+04      | -29               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 273.          | 9.77E+03      | 91                | 6.39E+03      | -17               |

Table G-1662. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.05E+04       | 1.05E+04        | -1.04E+04       | 1.04E+04        |
| A2   | -1.05E+04       | 1.05E+04        | -1.04E+04       | 1.04E+04        |
| FD   | -1.40E+04       | 1.40E+04        | -1.38E+04       | 1.38E+04        |
| L1   | -1.43E+04       | 1.27E+04        | -1.42E+04       | 1.25E+04        |
| L3   | -1.41E+04       | 1.27E+04        | -1.40E+04       | 1.25E+04        |
| L4   | -1.69E+04       | 2.52E+04        | -1.65E+04       | 2.48E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.86E+04       | 1.24E+04        | -1.79E+04       | 1.19E+04        |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-832. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

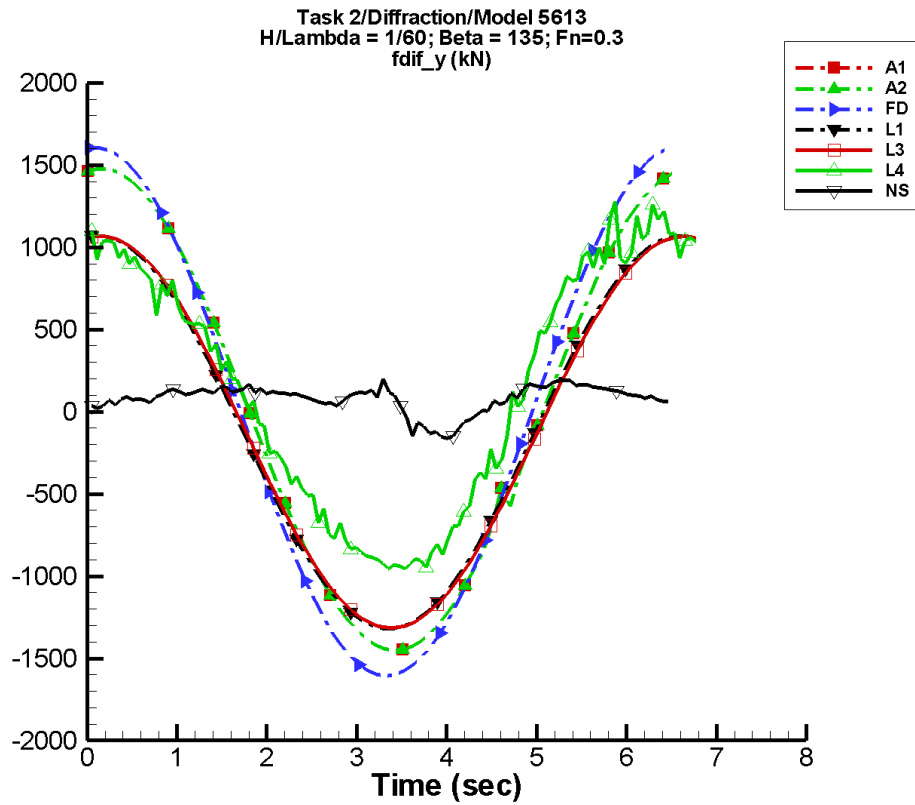
Table G-1663. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -3.34         | 1.56E+04      | 58                | 36.8          | -1                |
| A2   | -3.34         | 1.56E+04      | 58                | 36.8          | -1                |
| FD   | -5.56         | 2.10E+04      | 67                | 9.13          | 103               |
| L1   | -7.66E+03     | 1.47E+04      | 64                | 1.47E+04      | 4                 |
| L3   | -7.66E+03     | 1.47E+04      | 63                | 1.47E+04      | 4                 |
| L4   | 8.16E+03      | 2.06E+04      | 52                | 2.23E+04      | -28               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1664. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.57E+04       | 1.57E+04        | -1.55E+04       | 1.55E+04        |
| A2   | -1.57E+04       | 1.57E+04        | -1.55E+04       | 1.55E+04        |
| FD   | -2.10E+04       | 2.10E+04        | -2.08E+04       | 2.08E+04        |
| L1   | -2.81E+04       | 2.13E+04        | -2.79E+04       | 2.10E+04        |
| L3   | -2.79E+04       | 2.13E+04        | -2.77E+04       | 2.10E+04        |
| L4   | -3.42E+04       | 5.57E+04        | -3.36E+04       | 5.47E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-833. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G-1665. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

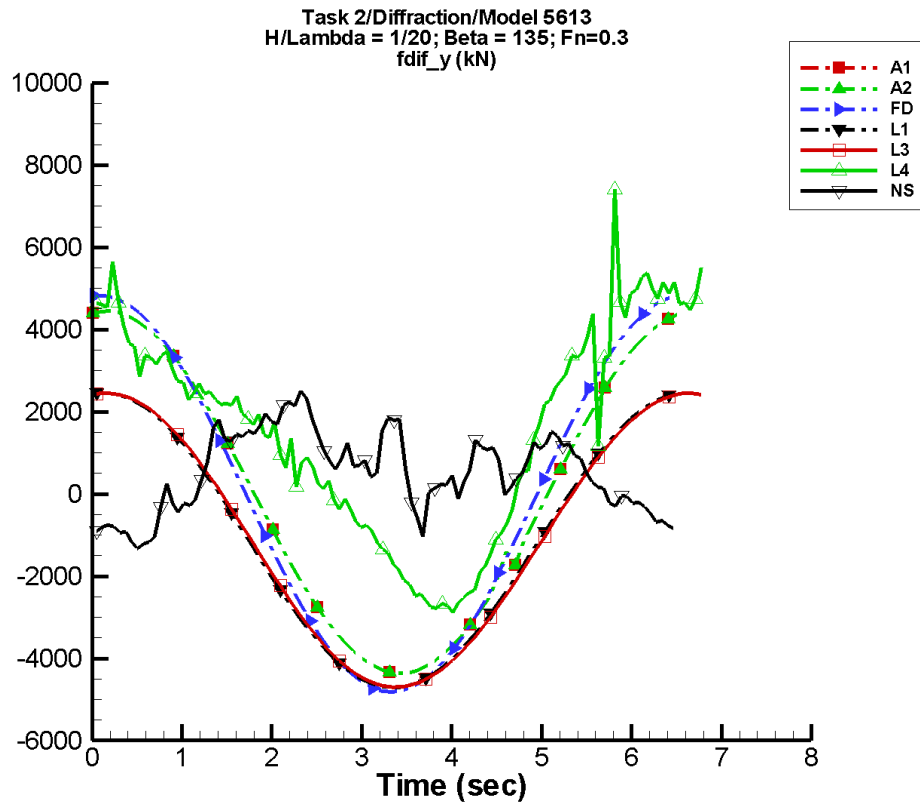
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 0.347         | 1.46E+03      | 77                | 13.1          | 34                |
| A2   | 0.347         | 1.46E+03      | 77                | 13.1          | 34                |
| FD   | 5.97E-02      | 1.61E+03      | 86                | 7.96E-02      | -140              |
| L1   | -124.         | 1.19E+03      | 81                | 2.47          | -42               |
| L3   | -124.         | 1.19E+03      | 79                | 2.49          | -42               |
| L4   | 131.          | 1.03E+03      | 87                | 125.          | -157              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 80.1          | 51.7          | 56                | 70.3          | -146              |

Table G-1666. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.45E+03       | 1.48E+03        | -1.42E+03       | 1.48E+03        |
| A2   | -1.45E+03       | 1.48E+03        | -1.42E+03       | 1.48E+03        |
| FD   | -1.61E+03       | 1.61E+03        | -1.57E+03       | 1.61E+03        |
| L1   | -1.32E+03       | 1.07E+03        | -1.31E+03       | 1.08E+03        |
| L3   | -1.32E+03       | 1.07E+03        | -1.31E+03       | 1.08E+03        |
| L4   | -957.           | 1.28E+03        | -931.           | 1.12E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -162.           | 200.            | -127.           | 174.            |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-834. Time history of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

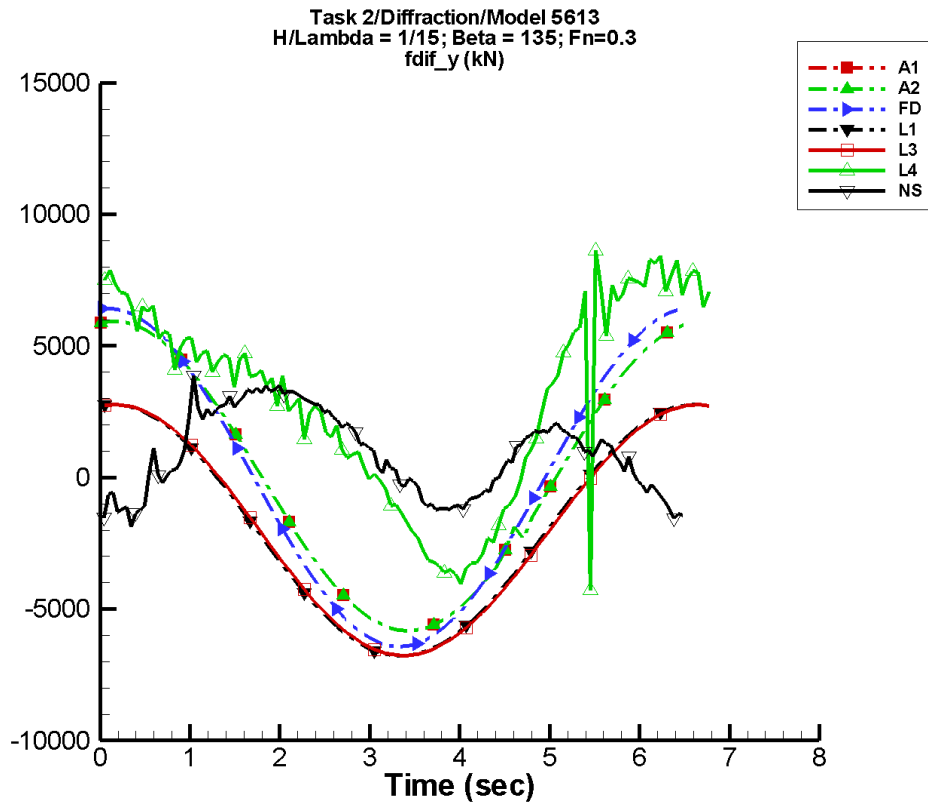
Table G-1667. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.04          | 4.38E+03      | 77                | 39.5          | 34                |
| A2   | 1.04          | 4.38E+03      | 77                | 39.5          | 34                |
| FD   | 0.179         | 4.82E+03      | 86                | 0.239         | -140              |
| L1   | -1.12E+03     | 3.58E+03      | 81                | 21.7          | -42               |
| L3   | -1.12E+03     | 3.57E+03      | 79                | 21.7          | -42               |
| L4   | 1.43E+03      | 3.31E+03      | 76                | 1.07E+03      | 167               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 510.          | 821.          | -76               | 924.          | -130              |

Table G-1668. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.36E+03       | 4.44E+03        | -4.26E+03       | 4.46E+03        |
| A2   | -4.36E+03       | 4.44E+03        | -4.26E+03       | 4.46E+03        |
| FD   | -4.82E+03       | 4.82E+03        | -4.71E+03       | 4.82E+03        |
| L1   | -4.71E+03       | 2.46E+03        | -4.68E+03       | 2.49E+03        |
| L3   | -4.70E+03       | 2.45E+03        | -4.67E+03       | 2.48E+03        |
| L4   | -2.90E+03       | 7.42E+03        | -2.71E+03       | 5.07E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.46E+03       | 2.51E+03        | -1.13E+03       | 2.05E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-835. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

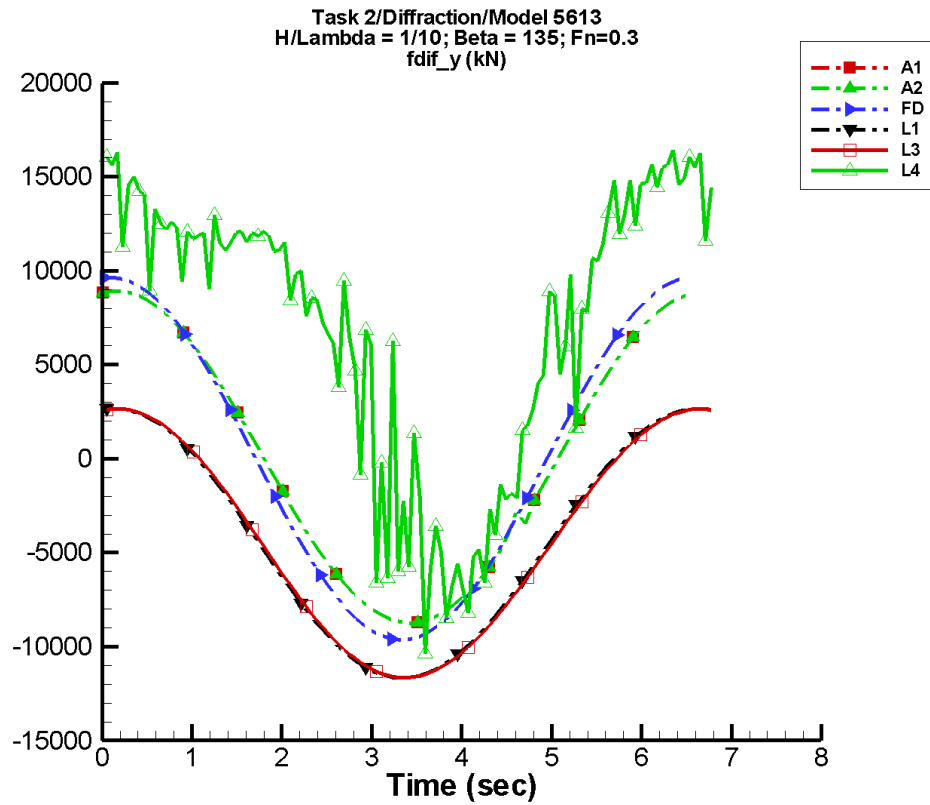
Table G-1669. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.39          | 5.85E+03      | 77                | 52.8          | 34                |
| A2   | 1.39          | 5.85E+03      | 77                | 52.8          | 34                |
| FD   | 0.239         | 6.43E+03      | 86                | 0.319         | -140              |
| L1   | -1.99E+03     | 4.77E+03      | 81                | 38.4          | -42               |
| L3   | -1.99E+03     | 4.76E+03      | 79                | 38.4          | -42               |
| L4   | 2.85E+03      | 4.69E+03      | 71                | 1.71E+03      | 167               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 889.          | 1.17E+03      | -21               | 1.79E+03      | -121              |

Table G-1670. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -5.83E+03       | 5.93E+03        | -5.69E+03       | 5.95E+03        |
| A2   | -5.83E+03       | 5.93E+03        | -5.69E+03       | 5.95E+03        |
| FD   | -6.43E+03       | 6.42E+03        | -6.27E+03       | 6.42E+03        |
| L1   | -6.78E+03       | 2.77E+03        | -6.74E+03       | 2.81E+03        |
| L3   | -6.76E+03       | 2.76E+03        | -6.72E+03       | 2.80E+03        |
| L4   | -4.29E+03       | 8.63E+03        | -3.55E+03       | 7.79E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.05E+03       | 3.86E+03        | -1.39E+03       | 3.34E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-836. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

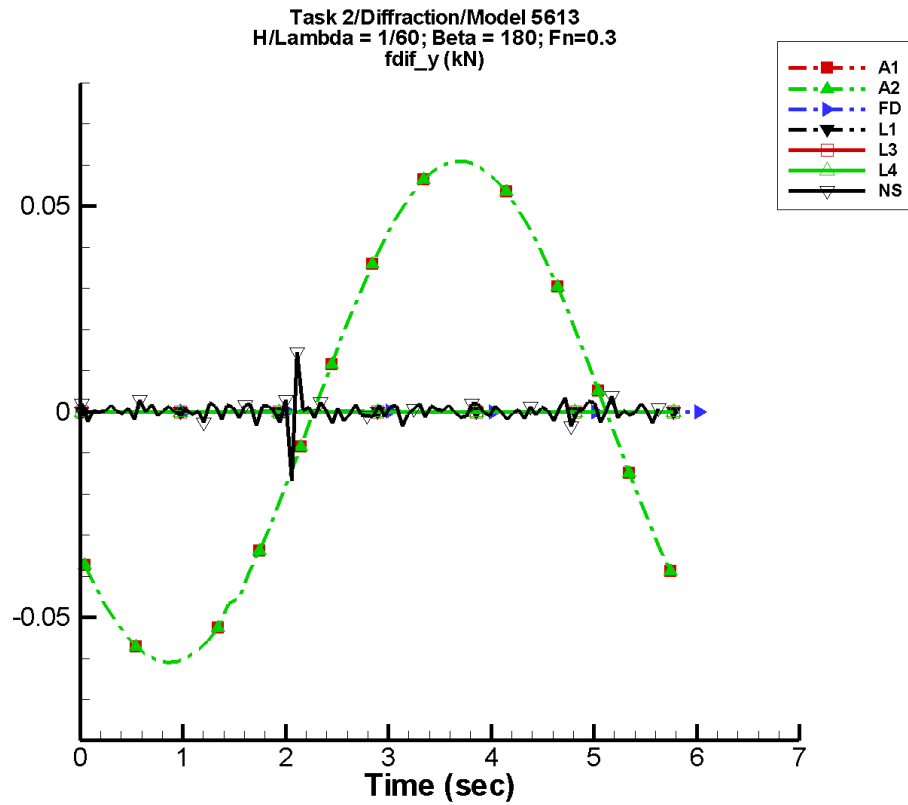
Table G-1671. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 2.09          | 8.78E+03      | 77                | 79.2          | 34                |
| A2   | 2.09          | 8.78E+03      | 77                | 79.2          | 34                |
| FD   | 0.359         | 9.64E+03      | 86                | 0.478         | -140              |
| L1   | -4.47E+03     | 7.16E+03      | 81                | 86.1          | -42               |
| L3   | -4.47E+03     | 7.15E+03      | 79                | 86.1          | -41               |
| L4   | 6.79E+03      | 9.31E+03      | 59                | 3.63E+03      | 178               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1672. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.74E+03       | 8.90E+03        | -8.54E+03       | 8.93E+03        |
| A2   | -8.74E+03       | 8.90E+03        | -8.54E+03       | 8.93E+03        |
| FD   | -9.64E+03       | 9.63E+03        | -9.41E+03       | 9.63E+03        |
| L1   | -1.17E+04       | 2.66E+03        | -1.16E+04       | 2.72E+03        |
| L3   | -1.16E+04       | 2.65E+03        | -1.16E+04       | 2.70E+03        |
| L4   | -1.04E+04       | 1.64E+04        | -6.48E+03       | 1.56E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-837. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1673. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

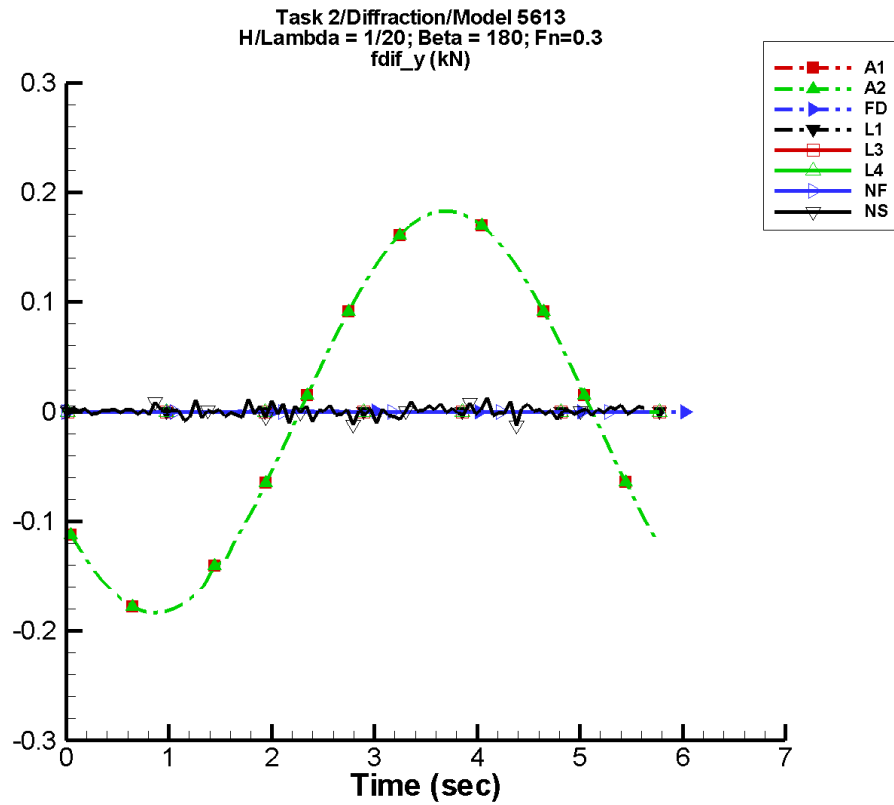
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.96E-04      | 6.09E-02      | -152              | 3.07E-04      | 119               |
| A2   | 1.96E-04      | 6.09E-02      | -152              | 3.07E-04      | 119               |
| FD   | 5.04E-08      | 5.16E-05      | -95               | 7.50E-08      | -132              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 4.81E-05      | 2.75E-05      | 126               | 1.87E-04      | -93               |

Table G-1674. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.12E-02       | 6.08E-02        | -5.90E-02       | 5.89E-02        |
| A2   | -6.12E-02       | 6.08E-02        | -5.90E-02       | 5.89E-02        |
| FD   | -5.15E-05       | 5.16E-05        | -5.00E-05       | 5.00E-05        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.67E-02       | 1.45E-02        | -8.33E-04       | 2.05E-03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-838. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

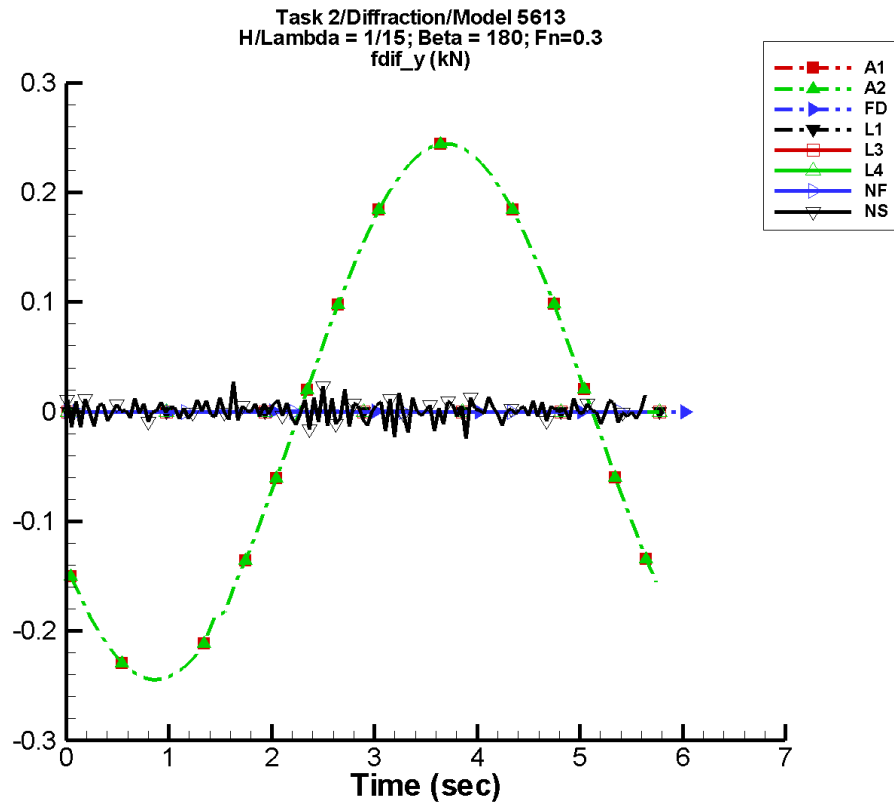
Table G-1675. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 5.91E-04      | 0.183         | -152              | 9.23E-04      | 119               |
| A2   | 5.91E-04      | 0.183         | -152              | 9.23E-04      | 119               |
| FD   | 1.51E-07      | 1.55E-04      | -95               | 2.25E-07      | -132              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 1.67E-04      | 8.43E-04      | 154               | 2.08E-04      | -112              |

Table G-1676. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.184          | 0.183           | -0.177          | 0.177           |
| A2   | -0.184          | 0.183           | -0.177          | 0.177           |
| FD   | -1.55E-04       | 1.55E-04        | -1.50E-04       | 1.50E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -1.23E-02       | 1.25E-02        | -3.06E-03       | 2.63E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-839. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

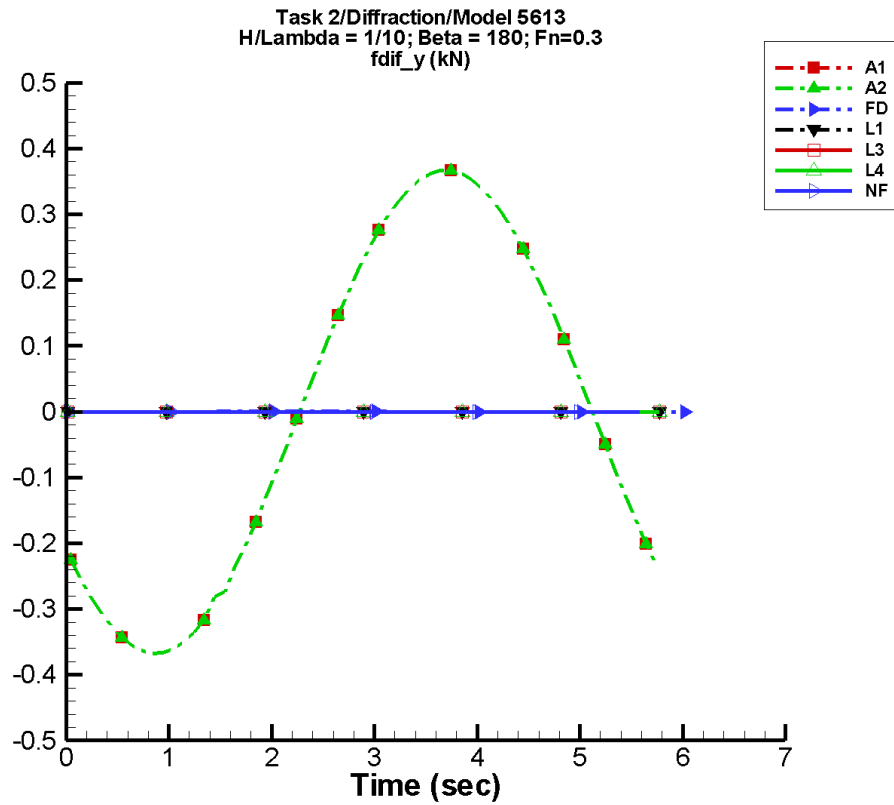
Table G-1677. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 7.89E-04      | 0.245         | -152              | 1.23E-03      | 119               |
| A2   | 7.89E-04      | 0.245         | -152              | 1.23E-03      | 119               |
| FD   | 2.02E-07      | 2.06E-04      | -95               | 3.00E-07      | -132              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | 4.46E-04      | 6.96E-04      | 14                | 1.39E-03      | -136              |

Table G-1678. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.246          | 0.244           | -0.237          | 0.237           |
| A2   | -0.246          | 0.244           | -0.237          | 0.237           |
| FD   | -2.06E-04       | 2.06E-04        | -2.00E-04       | 2.00E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | -3.63E-02       | 3.16E-02        | -1.86E-03       | 4.77E-03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-840. Time history of  $F_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

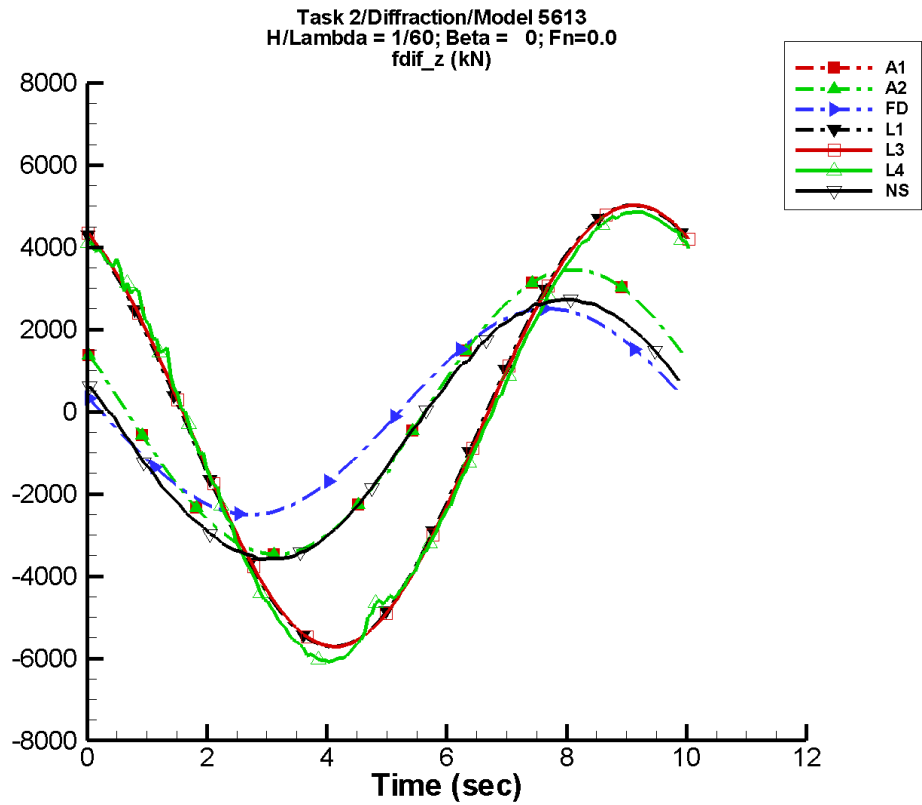
Table G-1679. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 1.18E-03      | 0.367         | -152              | 1.85E-03      | 119               |
| A2   | 1.18E-03      | 0.367         | -152              | 1.85E-03      | 119               |
| FD   | 3.02E-07      | 3.10E-04      | -95               | 4.50E-07      | -132              |
| L1   | —             | —             | —                 | —             | —                 |
| L3   | —             | —             | —                 | —             | —                 |
| L4   | —             | —             | —                 | —             | —                 |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1680. Minimum and maximum of  $F_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -0.369          | 0.366           | -0.355          | 0.355           |
| A2   | -0.369          | 0.366           | -0.355          | 0.355           |
| FD   | -3.09E-04       | 3.10E-04        | -3.00E-04       | 3.00E-04        |
| L1   | —               | —               | —               | —               |
| L3   | —               | —               | —               | —               |
| L4   | —               | —               | —               | —               |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-841. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1681. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

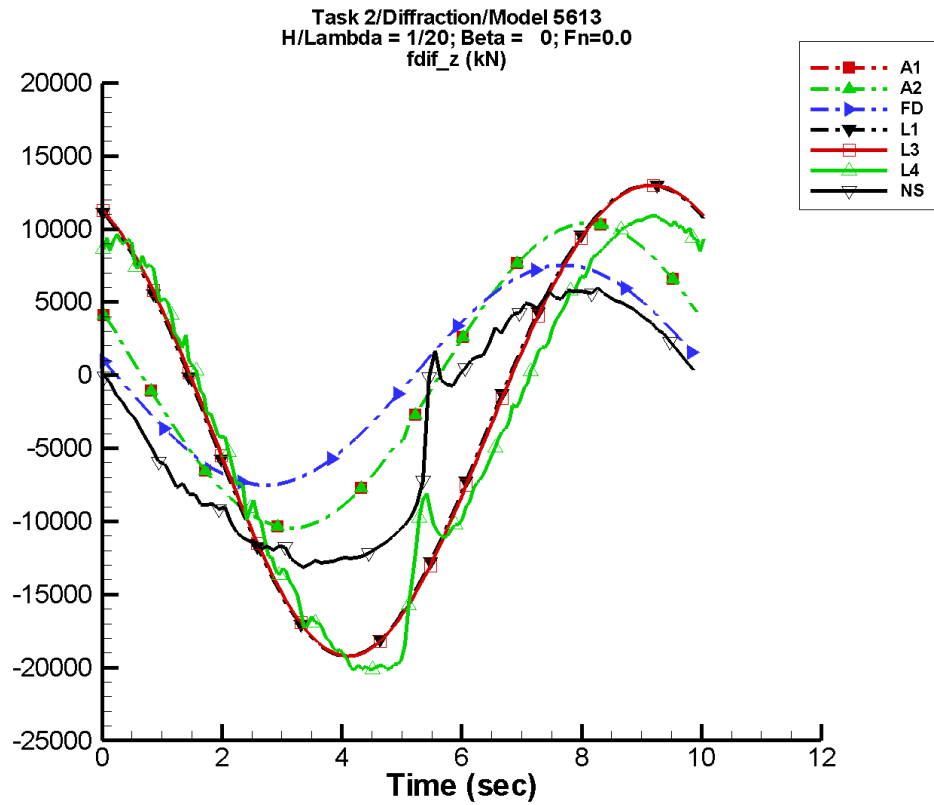
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -11.6         | 3.48E+03      | 152               | 3.71          | 115               |
| A2   | -11.6         | 3.48E+03      | 152               | 3.71          | 115               |
| FD   | -0.866        | 2.51E+03      | 164               | 1.12          | -168              |
| L1   | -289.         | 5.37E+03      | 117               | 62.4          | -16               |
| L3   | -289.         | 5.37E+03      | 116               | 62.5          | -16               |
| L4   | -383.         | 5.37E+03      | 115               | 248.          | 18                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -400.         | 3.18E+03      | 161               | 35.6          | 27                |

Table G-1682. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.47E+03       | 3.45E+03        | -3.44E+03       | 3.42E+03        |
| A2   | -3.47E+03       | 3.45E+03        | -3.44E+03       | 3.42E+03        |
| FD   | -2.51E+03       | 2.51E+03        | -2.48E+03       | 2.51E+03        |
| L1   | -5.72E+03       | 5.02E+03        | -5.70E+03       | 5.00E+03        |
| L3   | -5.71E+03       | 5.02E+03        | -5.69E+03       | 5.00E+03        |
| L4   | -6.08E+03       | 4.86E+03        | -6.03E+03       | 4.84E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -3.58E+03       | 2.73E+03        | -3.55E+03       | 2.69E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-842. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

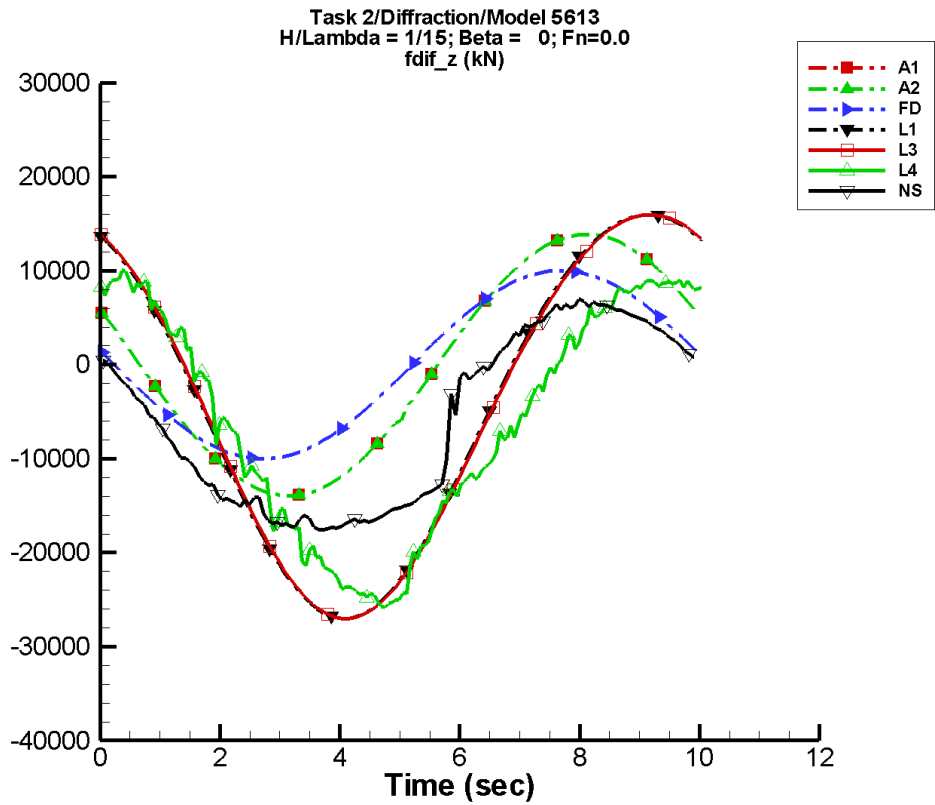
Table G-1683. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -34.9         | 1.05E+04      | 152               | 11.2          | 115               |
| A2   | -34.9         | 1.05E+04      | 152               | 11.2          | 115               |
| FD   | -2.60         | 7.52E+03      | 164               | 3.37          | -168              |
| L1   | -2.57E+03     | 1.61E+04      | 117               | 585.          | -17               |
| L3   | -2.57E+03     | 1.61E+04      | 116               | 585.          | -17               |
| L4   | -3.26E+03     | 1.48E+04      | 110               | 1.21E+03      | -9                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.60E+03     | 9.66E+03      | 156               | 1.01E+03      | -55               |

Table G-1684. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.05E+04       | 1.04E+04        | -1.03E+04       | 1.03E+04        |
| A2   | -1.05E+04       | 1.04E+04        | -1.03E+04       | 1.03E+04        |
| FD   | -7.52E+03       | 7.52E+03        | -7.44E+03       | 7.52E+03        |
| L1   | -1.92E+04       | 1.30E+04        | -1.92E+04       | 1.29E+04        |
| L3   | -1.92E+04       | 1.30E+04        | -1.92E+04       | 1.29E+04        |
| L4   | -2.02E+04       | 1.09E+04        | -2.01E+04       | 1.07E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.31E+04       | 5.99E+03        | -1.28E+04       | 5.68E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-843. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

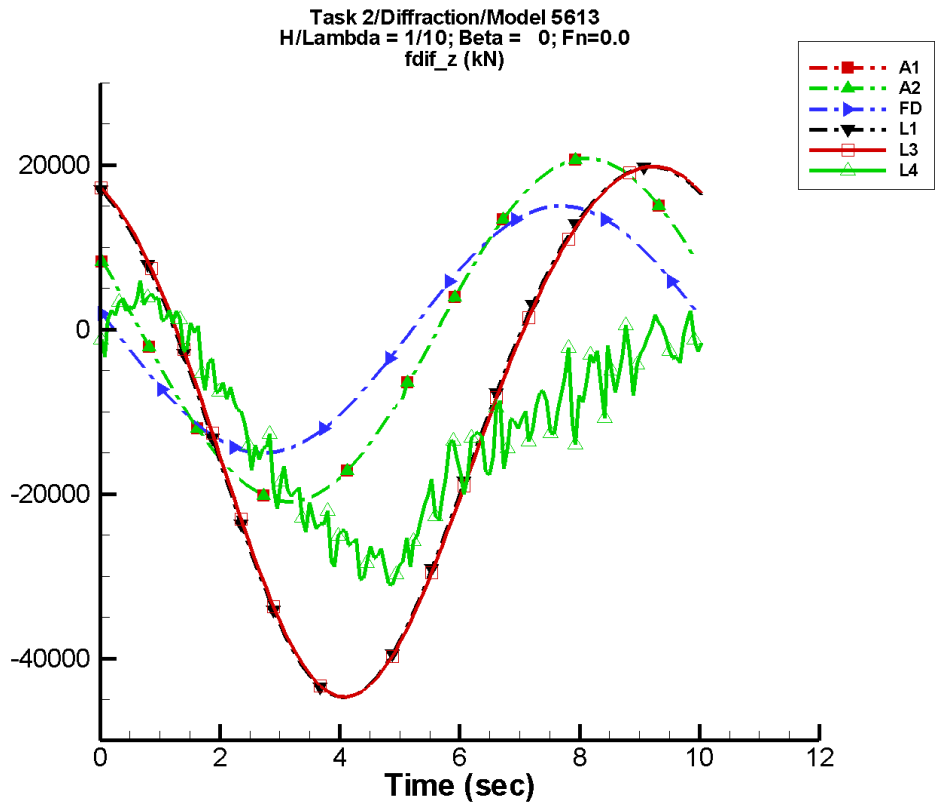
Table G-1685. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -46.6         | 1.40E+04      | 152               | 14.9          | 115               |
| A2   | -46.6         | 1.40E+04      | 152               | 14.9          | 115               |
| FD   | -3.47         | 1.00E+04      | 164               | 4.50          | -168              |
| L1   | -4.57E+03     | 2.15E+04      | 117               | 1.05E+03      | -17               |
| L3   | -4.57E+03     | 2.15E+04      | 116               | 1.05E+03      | -17               |
| L4   | -6.12E+03     | 1.67E+04      | 102               | 1.62E+03      | -23               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.99E+03     | 1.26E+04      | 145               | 1.13E+03      | -100              |

Table G-1686. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.40E+04       | 1.39E+04        | -1.38E+04       | 1.37E+04        |
| A2   | -1.40E+04       | 1.39E+04        | -1.38E+04       | 1.37E+04        |
| FD   | -1.00E+04       | 1.00E+04        | -9.92E+03       | 1.00E+04        |
| L1   | -2.70E+04       | 1.59E+04        | -2.69E+04       | 1.59E+04        |
| L3   | -2.70E+04       | 1.60E+04        | -2.69E+04       | 1.59E+04        |
| L4   | -2.58E+04       | 1.01E+04        | -2.53E+04       | 9.03E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.76E+04       | 6.98E+03        | -1.72E+04       | 6.48E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-844. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

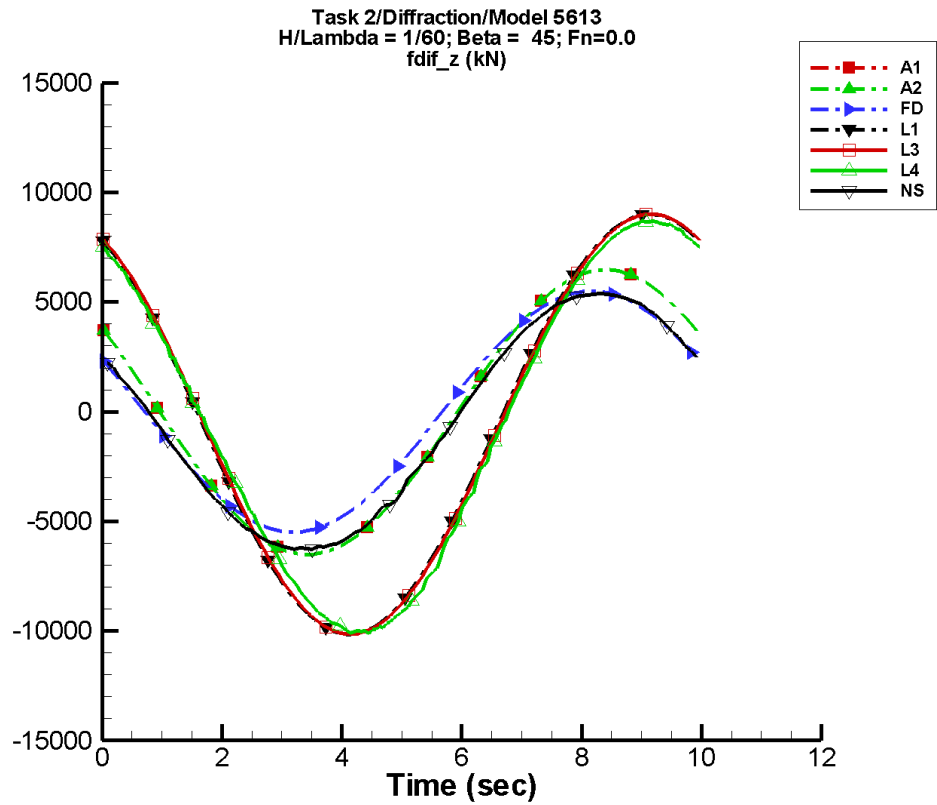
Table G-1687. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -69.8         | 2.10E+04      | 152               | 22.4          | 115               |
| A2   | -69.8         | 2.10E+04      | 152               | 22.4          | 115               |
| FD   | -5.20         | 1.50E+04      | 164               | 6.74          | -168              |
| L1   | -1.03E+04     | 3.22E+04      | 117               | 2.36E+03      | -17               |
| L3   | -1.03E+04     | 3.22E+04      | 116               | 2.36E+03      | -17               |
| L4   | -1.14E+04     | 1.36E+04      | 92                | 3.78E+03      | -22               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1688. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.09E+04       | 2.08E+04        | -2.07E+04       | 2.06E+04        |
| A2   | -2.09E+04       | 2.08E+04        | -2.07E+04       | 2.06E+04        |
| FD   | -1.50E+04       | 1.50E+04        | -1.49E+04       | 1.50E+04        |
| L1   | -4.47E+04       | 1.98E+04        | -4.46E+04       | 1.97E+04        |
| L3   | -4.47E+04       | 1.98E+04        | -4.45E+04       | 1.97E+04        |
| L4   | -3.14E+04       | 5.98E+03        | -2.91E+04       | 3.81E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-845. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1689. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

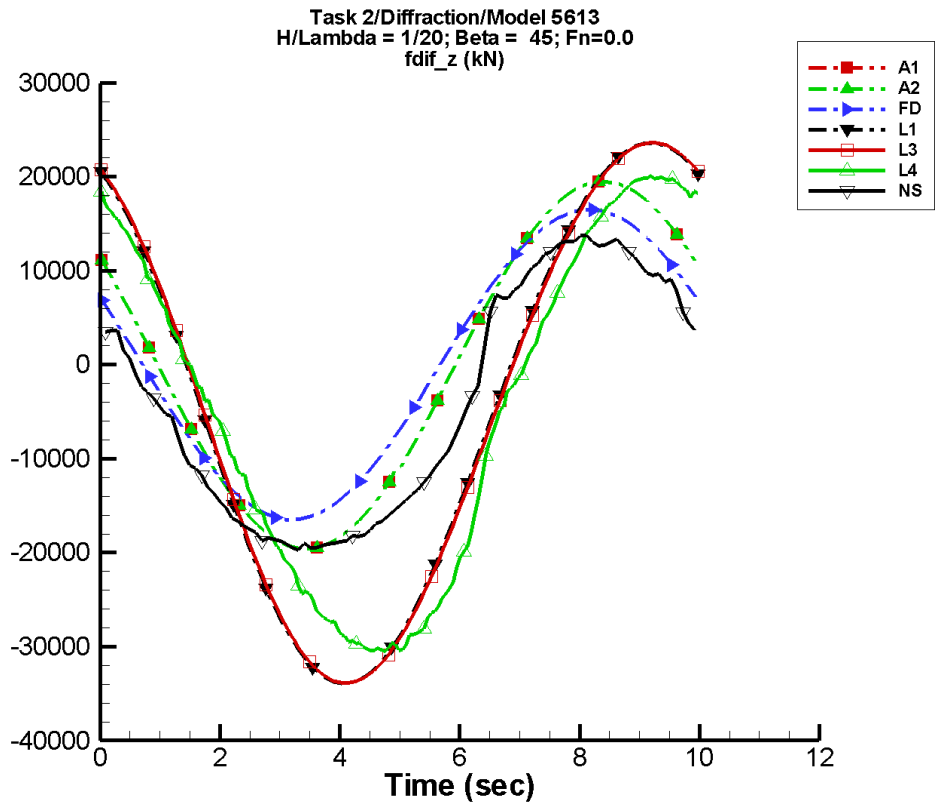
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -16.1         | 6.50E+03      | 141               | 9.60          | 77                |
| A2   | -16.1         | 6.50E+03      | 141               | 9.60          | 77                |
| FD   | -2.31         | 5.49E+03      | 146               | 2.55          | 176               |
| L1   | -518.         | 9.58E+03      | 116               | 89.4          | 14                |
| L3   | -518.         | 9.57E+03      | 115               | 89.4          | 14                |
| L4   | -607.         | 9.32E+03      | 113               | 260.          | -115              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -488.         | 5.88E+03      | 148               | 62.7          | -90               |

Table G-1690. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.51E+03       | 6.48E+03        | -6.45E+03       | 6.41E+03        |
| A2   | -6.51E+03       | 6.48E+03        | -6.45E+03       | 6.41E+03        |
| FD   | -5.50E+03       | 5.49E+03        | -5.44E+03       | 5.44E+03        |
| L1   | -1.02E+04       | 9.00E+03        | -1.01E+04       | 8.97E+03        |
| L3   | -1.01E+04       | 9.00E+03        | -1.01E+04       | 8.97E+03        |
| L4   | -1.01E+04       | 8.68E+03        | -1.00E+04       | 8.64E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -6.28E+03       | 5.39E+03        | -6.21E+03       | 5.32E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-846. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

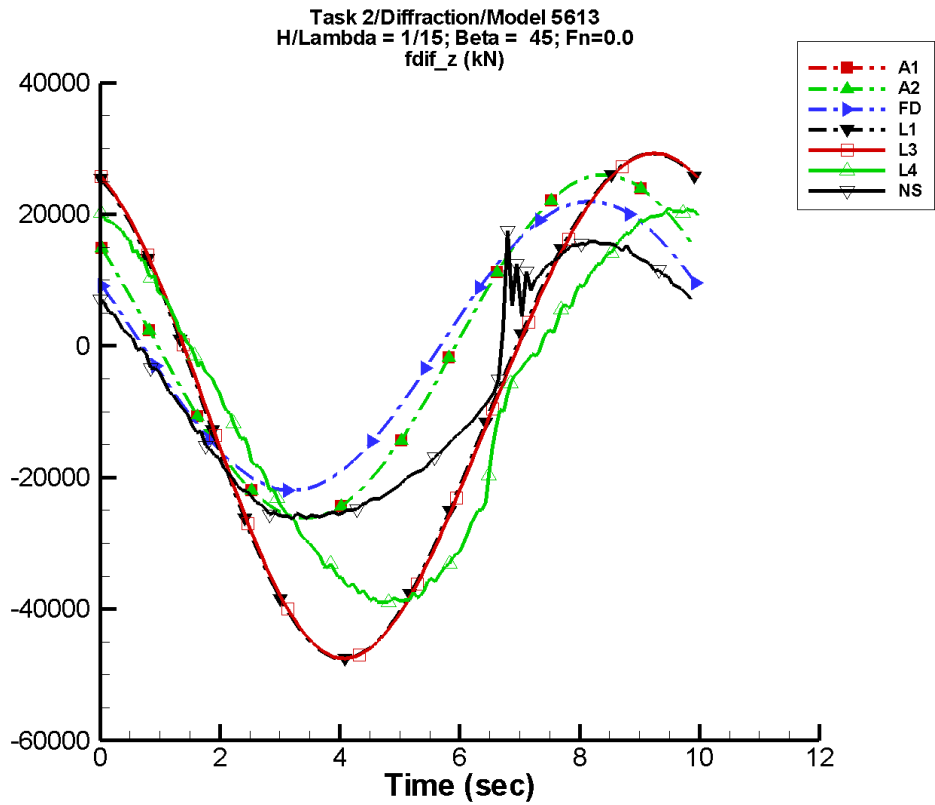
Table G-1691. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -48.3         | 1.96E+04      | 141               | 28.9          | 77                |
| A2   | -48.3         | 1.96E+04      | 141               | 28.9          | 77                |
| FD   | -6.94         | 1.65E+04      | 146               | 7.64          | 176               |
| L1   | -4.63E+03     | 2.87E+04      | 116               | 854.          | 13                |
| L3   | -4.63E+03     | 2.87E+04      | 115               | 855.          | 13                |
| L4   | -5.06E+03     | 2.53E+04      | 108               | 1.74E+03      | -139              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.12E+03     | 1.71E+04      | 145               | 1.37E+03      | -120              |

Table G-1692. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.96E+04       | 1.95E+04        | -1.94E+04       | 1.93E+04        |
| A2   | -1.96E+04       | 1.95E+04        | -1.94E+04       | 1.93E+04        |
| FD   | -1.65E+04       | 1.65E+04        | -1.63E+04       | 1.63E+04        |
| L1   | -3.39E+04       | 2.36E+04        | -3.38E+04       | 2.35E+04        |
| L3   | -3.39E+04       | 2.36E+04        | -3.38E+04       | 2.35E+04        |
| L4   | -3.05E+04       | 2.01E+04        | -3.02E+04       | 1.99E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.97E+04       | 1.38E+04        | -1.93E+04       | 1.33E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-847. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

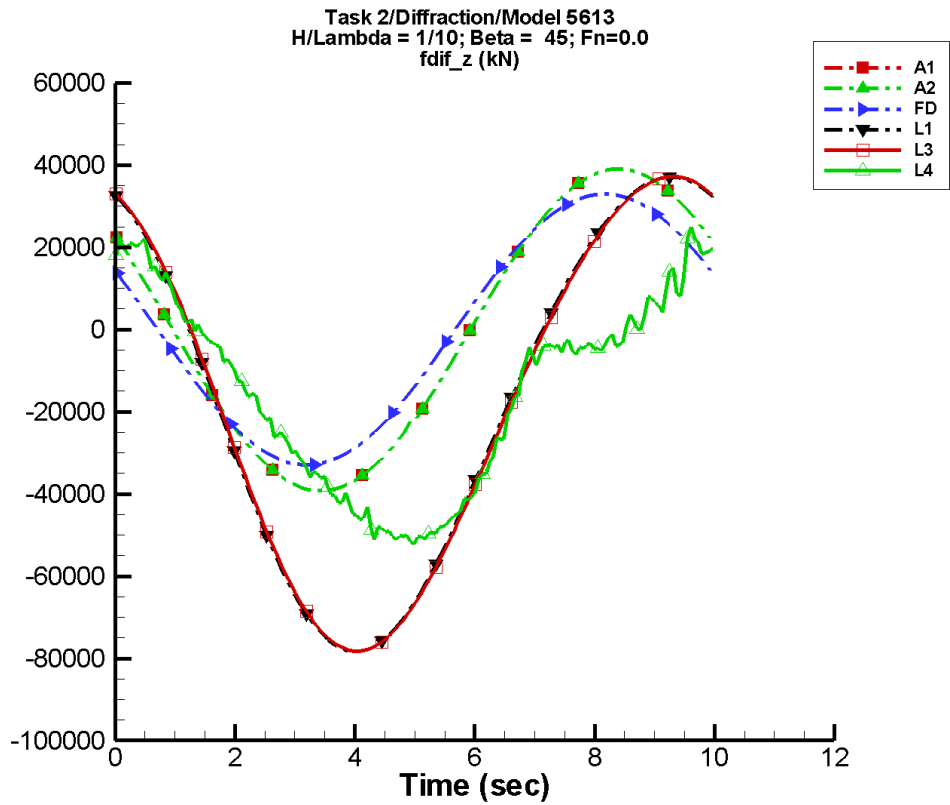
Table G-1693. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -64.5         | 2.61E+04      | 141               | 38.5          | 77                |
| A2   | -64.5         | 2.61E+04      | 141               | 38.5          | 77                |
| FD   | -9.25         | 2.20E+04      | 146               | 10.2          | 176               |
| L1   | -8.22E+03     | 3.83E+04      | 116               | 1.53E+03      | 13                |
| L3   | -8.22E+03     | 3.83E+04      | 115               | 1.53E+03      | 13                |
| L4   | -8.71E+03     | 2.98E+04      | 101               | 1.86E+03      | -141              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -6.69E+03     | 2.15E+04      | 137               | 1.75E+03      | -144              |

Table G-1694. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.62E+04       | 2.60E+04        | -2.59E+04       | 2.57E+04        |
| A2   | -2.62E+04       | 2.60E+04        | -2.59E+04       | 2.57E+04        |
| FD   | -2.20E+04       | 2.20E+04        | -2.18E+04       | 2.18E+04        |
| L1   | -4.76E+04       | 2.92E+04        | -4.74E+04       | 2.91E+04        |
| L3   | -4.75E+04       | 2.93E+04        | -4.73E+04       | 2.91E+04        |
| L4   | -3.90E+04       | 2.10E+04        | -3.88E+04       | 2.05E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.63E+04       | 1.75E+04        | -2.59E+04       | 1.56E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-848. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

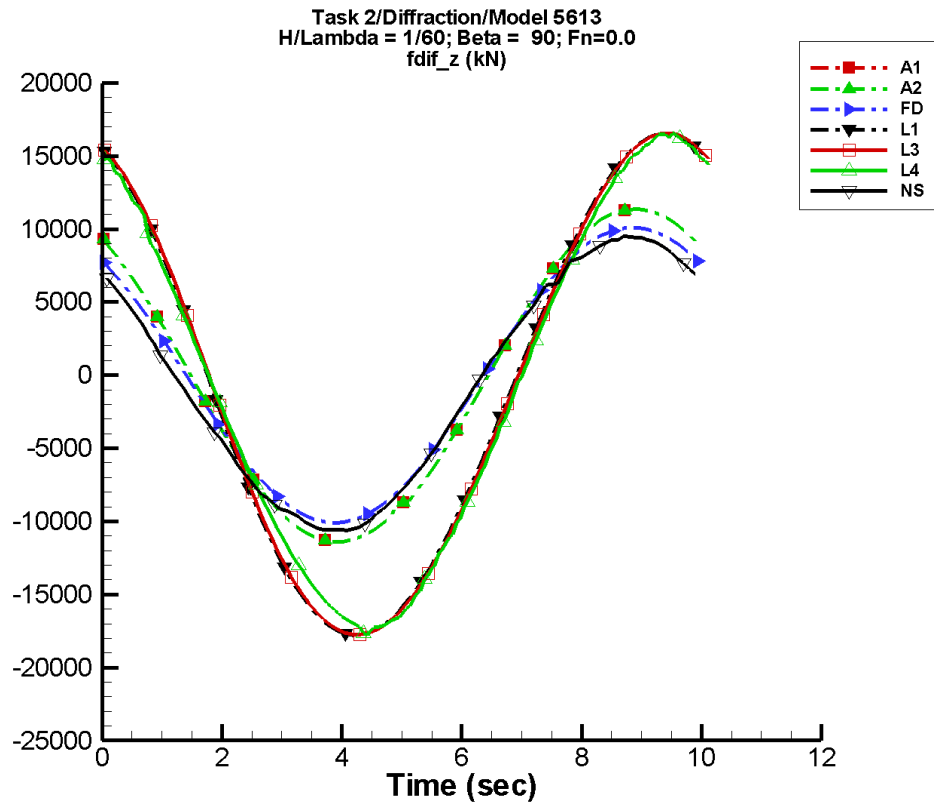
Table G-1695. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -96.8         | 3.92E+04      | 141               | 57.8          | 77                |
| A2   | -96.8         | 3.92E+04      | 141               | 57.8          | 77                |
| FD   | -13.9         | 3.30E+04      | 146               | 15.3          | 176               |
| L1   | -1.85E+04     | 5.75E+04      | 116               | 3.47E+03      | 13                |
| L3   | -1.85E+04     | 5.74E+04      | 115               | 3.47E+03      | 13                |
| L4   | -1.52E+04     | 3.27E+04      | 96                | 2.51E+03      | -45               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1696. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.92E+04       | 3.90E+04        | -3.88E+04       | 3.86E+04        |
| A2   | -3.92E+04       | 3.90E+04        | -3.88E+04       | 3.86E+04        |
| FD   | -3.30E+04       | 3.30E+04        | -3.26E+04       | 3.26E+04        |
| L1   | -7.83E+04       | 3.71E+04        | -7.81E+04       | 3.69E+04        |
| L3   | -7.82E+04       | 3.72E+04        | -7.80E+04       | 3.70E+04        |
| L4   | -5.21E+04       | 2.50E+04        | -5.09E+04       | 2.05E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-849. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1697. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

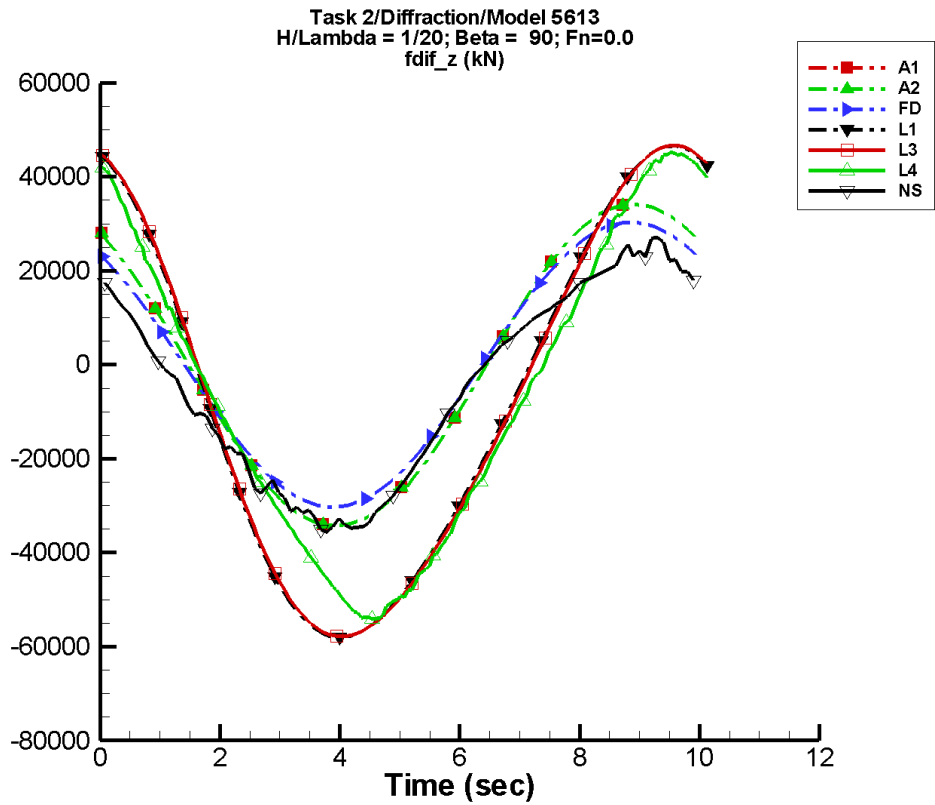
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -15.7         | 1.14E+04      | 122               | 25.3          | 50                |
| A2   | -15.7         | 1.14E+04      | 122               | 25.3          | 50                |
| FD   | -4.66         | 1.01E+04      | 121               | 4.77          | 153               |
| L1   | -850.         | 1.71E+04      | 109               | 597.          | 60                |
| L3   | -850.         | 1.71E+04      | 108               | 597.          | 60                |
| L4   | -896.         | 1.64E+04      | 106               | 452.          | 127               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -588.         | 9.96E+03      | 132               | 48.4          | -77               |

Table G-1698. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.14E+04       | 1.14E+04        | -1.13E+04       | 1.12E+04        |
| A2   | -1.14E+04       | 1.14E+04        | -1.13E+04       | 1.12E+04        |
| FD   | -1.01E+04       | 1.01E+04        | -9.99E+03       | 9.99E+03        |
| L1   | -1.78E+04       | 1.65E+04        | -1.77E+04       | 1.65E+04        |
| L3   | -1.78E+04       | 1.65E+04        | -1.77E+04       | 1.65E+04        |
| L4   | -1.78E+04       | 1.66E+04        | -1.74E+04       | 1.64E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.06E+04       | 9.50E+03        | -1.05E+04       | 9.33E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-850. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

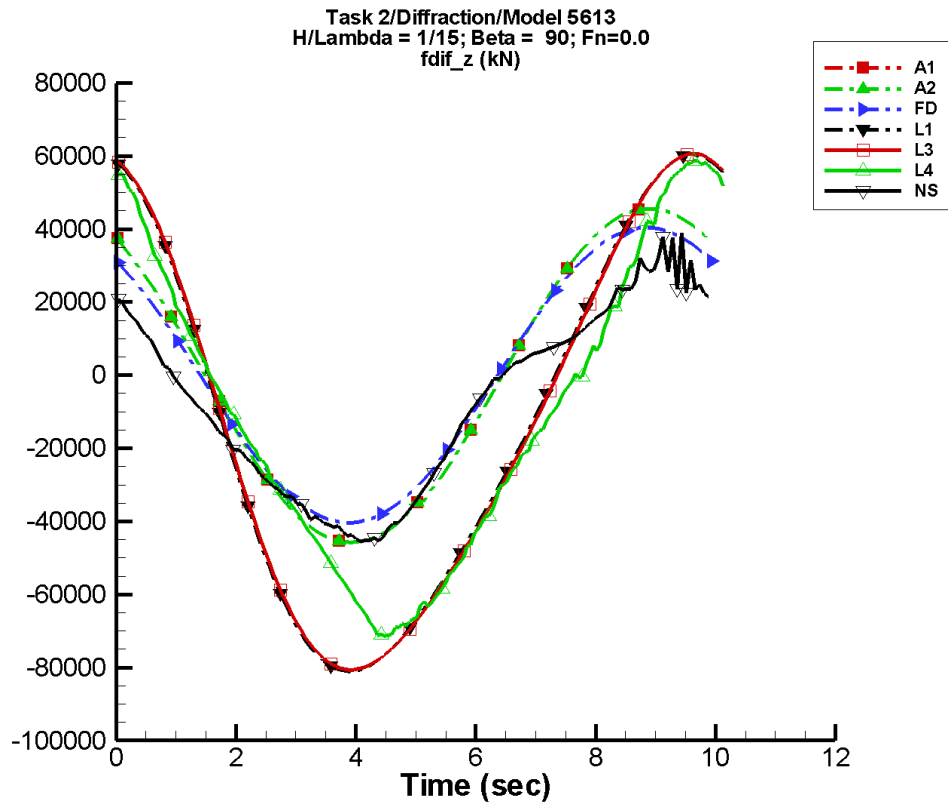
Table G-1699. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -47.4         | 3.43E+04      | 122               | 76.0          | 50                |
| A2   | -47.4         | 3.43E+04      | 122               | 76.0          | 50                |
| FD   | -14.0         | 3.03E+04      | 121               | 14.3          | 153               |
| L1   | -7.64E+03     | 5.13E+04      | 109               | 5.37E+03      | 60                |
| L3   | -7.64E+03     | 5.13E+04      | 108               | 5.37E+03      | 60                |
| L4   | -7.26E+03     | 4.50E+04      | 102               | 3.15E+03      | 118               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.69E+03     | 2.81E+04      | 131               | 826.          | 31                |

Table G-1700. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.43E+04       | 3.41E+04        | -3.40E+04       | 3.38E+04        |
| A2   | -3.43E+04       | 3.41E+04        | -3.40E+04       | 3.38E+04        |
| FD   | -3.03E+04       | 3.03E+04        | -3.00E+04       | 3.00E+04        |
| L1   | -5.80E+04       | 4.66E+04        | -5.79E+04       | 4.63E+04        |
| L3   | -5.78E+04       | 4.67E+04        | -5.76E+04       | 4.65E+04        |
| L4   | -5.41E+04       | 4.51E+04        | -5.36E+04       | 4.46E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.56E+04       | 2.70E+04        | -3.43E+04       | 2.46E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-851. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

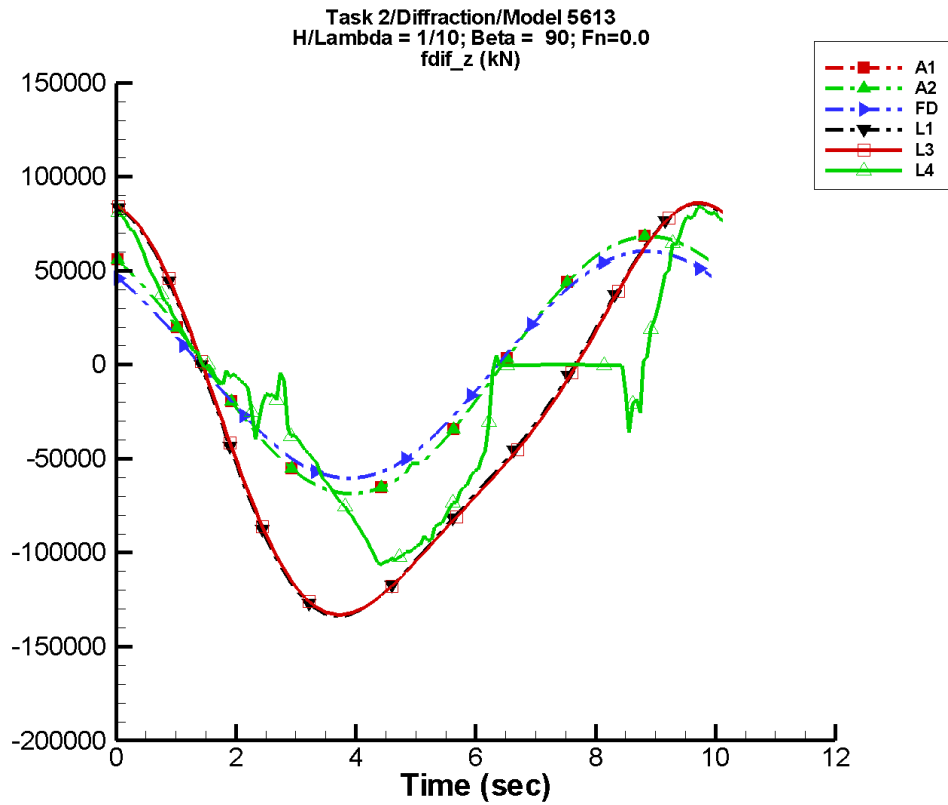
Table G-1701. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -63.2         | 4.58E+04      | 122               | 101.          | 50                |
| A2   | -63.2         | 4.58E+04      | 122               | 101.          | 50                |
| FD   | -18.7         | 4.04E+04      | 121               | 19.1          | 153               |
| L1   | -1.36E+04     | 6.85E+04      | 109               | 9.55E+03      | 60                |
| L3   | -1.36E+04     | 6.84E+04      | 108               | 9.55E+03      | 60                |
| L4   | -1.13E+04     | 5.59E+04      | 98                | 5.12E+03      | 107               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -7.45E+03     | 3.41E+04      | 130               | 1.43E+03      | 50                |

Table G-1702. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.58E+04       | 4.56E+04        | -4.53E+04       | 4.51E+04        |
| A2   | -4.58E+04       | 4.56E+04        | -4.53E+04       | 4.51E+04        |
| FD   | -4.04E+04       | 4.04E+04        | -4.00E+04       | 4.00E+04        |
| L1   | -8.10E+04       | 6.03E+04        | -8.08E+04       | 6.00E+04        |
| L3   | -8.06E+04       | 6.06E+04        | -8.04E+04       | 6.02E+04        |
| L4   | -7.13E+04       | 5.87E+04        | -7.03E+04       | 5.79E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.55E+04       | 3.89E+04        | -4.47E+04       | 3.16E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-852. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

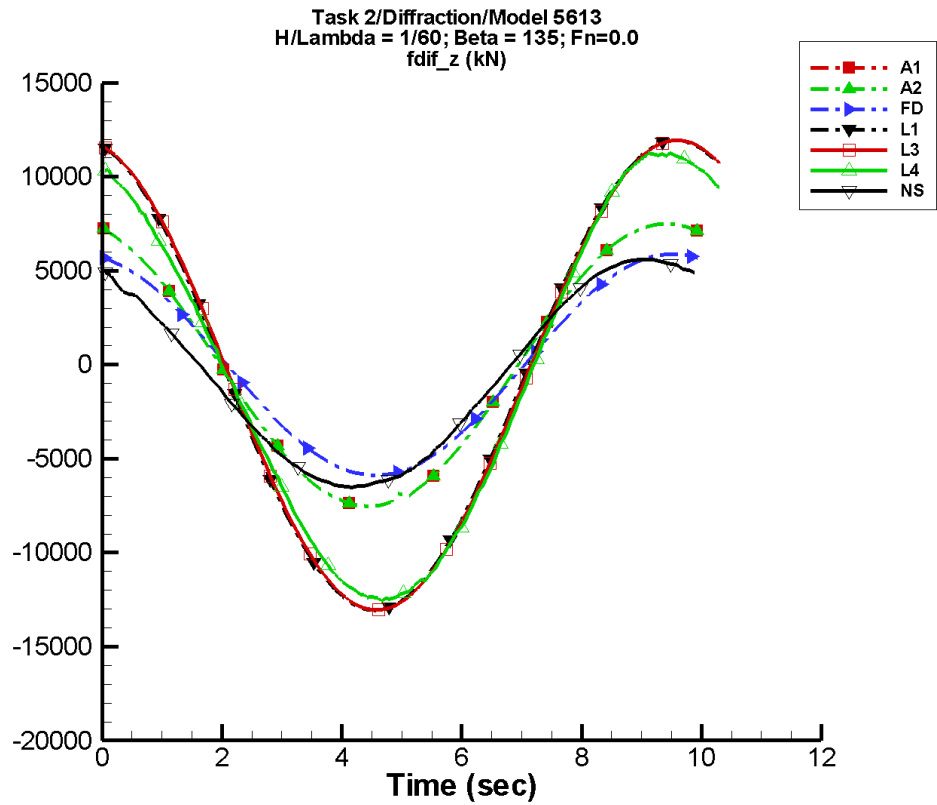
Table G-1703. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -94.8         | 6.87E+04      | 122               | 152.          | 50                |
| A2   | -94.8         | 6.87E+04      | 122               | 152.          | 50                |
| FD   | -28.0         | 6.05E+04      | 121               | 28.6          | 153               |
| L1   | -3.06E+04     | 1.03E+05      | 109               | 2.15E+04      | 60                |
| L3   | -3.06E+04     | 1.03E+05      | 108               | 2.15E+04      | 60                |
| L4   | -1.54E+04     | 6.64E+04      | 97                | 7.87E+03      | -13               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1704. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.87E+04       | 6.84E+04        | -6.80E+04       | 6.77E+04        |
| A2   | -6.87E+04       | 6.84E+04        | -6.80E+04       | 6.77E+04        |
| FD   | -6.05E+04       | 6.05E+04        | -5.99E+04       | 5.99E+04        |
| L1   | -1.34E+05       | 8.57E+04        | -1.33E+05       | 8.51E+04        |
| L3   | -1.33E+05       | 8.61E+04        | -1.33E+05       | 8.55E+04        |
| L4   | -1.06E+05       | 8.42E+04        | -1.04E+05       | 8.15E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-853. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1705. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

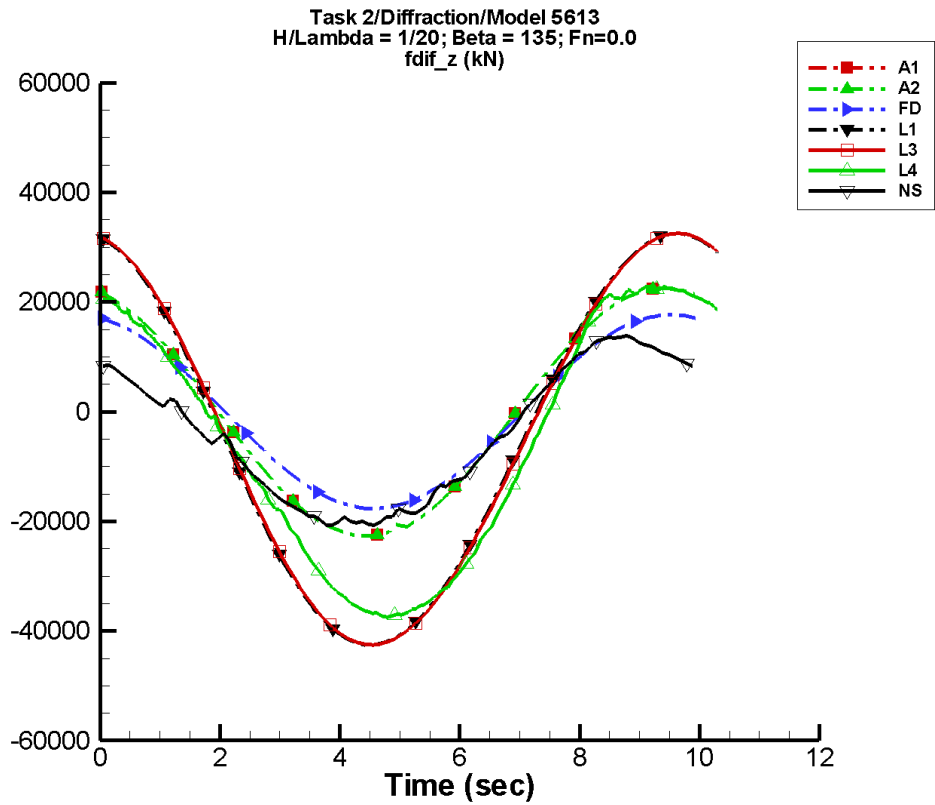
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -11.6         | 7.54E+03      | 104               | 21.0          | 32                |
| A2   | -11.6         | 7.54E+03      | 104               | 21.0          | 32                |
| FD   | -2.46         | 5.89E+03      | 97                | 2.73          | 132               |
| L1   | -576.         | 1.25E+04      | 100               | 94.3          | 28                |
| L3   | -577.         | 1.25E+04      | 99                | 94.6          | 28                |
| L4   | -746.         | 1.18E+04      | 99                | 477.          | -173              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -473.         | 6.06E+03      | 117               | 78.2          | -132              |

Table G-1706. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -7.52E+03       | 7.49E+03        | -7.43E+03       | 7.41E+03        |
| A2   | -7.52E+03       | 7.49E+03        | -7.43E+03       | 7.41E+03        |
| FD   | -5.89E+03       | 5.89E+03        | -5.83E+03       | 5.83E+03        |
| L1   | -1.31E+04       | 1.19E+04        | -1.30E+04       | 1.19E+04        |
| L3   | -1.31E+04       | 1.19E+04        | -1.30E+04       | 1.19E+04        |
| L4   | -1.26E+04       | 1.13E+04        | -1.24E+04       | 1.12E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -6.52E+03       | 5.60E+03        | -6.42E+03       | 5.53E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-854. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

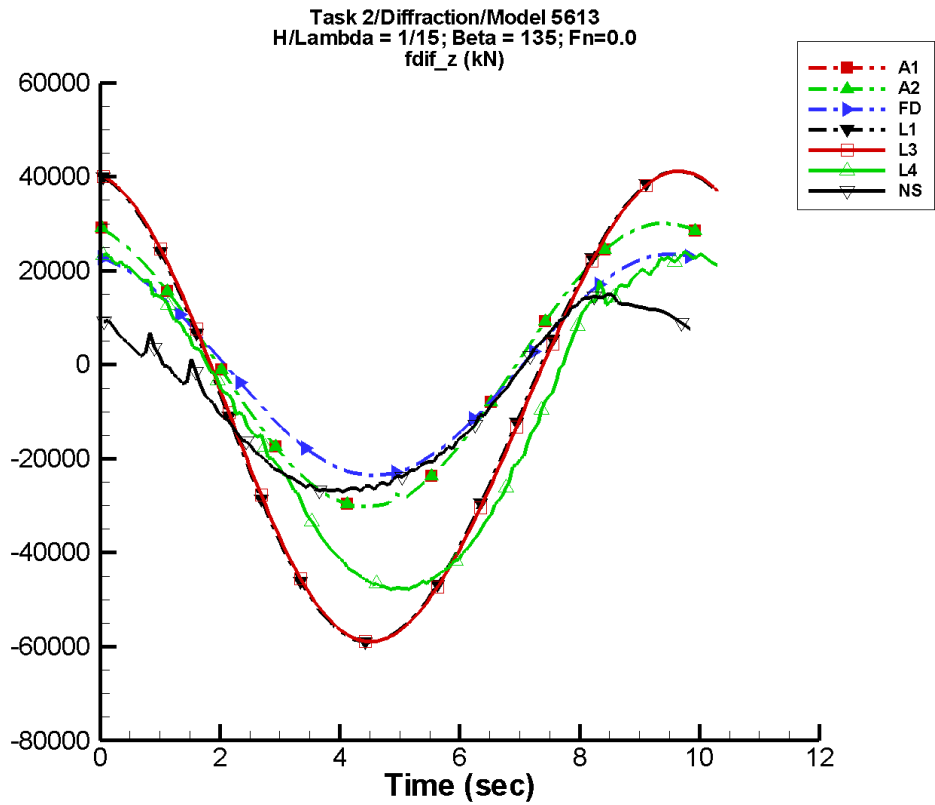
Table G-1707. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -35.0         | 2.27E+04      | 104               | 63.0          | 32                |
| A2   | -35.0         | 2.27E+04      | 104               | 63.0          | 32                |
| FD   | -7.39         | 1.77E+04      | 97                | 8.18          | 132               |
| L1   | -5.11E+03     | 3.75E+04      | 100               | 843.          | 25                |
| L3   | -5.11E+03     | 3.75E+04      | 99                | 844.          | 25                |
| L4   | -6.62E+03     | 3.03E+04      | 96                | 2.76E+03      | -159              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.05E+03     | 1.64E+04      | 118               | 1.51E+03      | -121              |

Table G-1708. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.26E+04       | 2.25E+04        | -2.24E+04       | 2.23E+04        |
| A2   | -2.26E+04       | 2.25E+04        | -2.24E+04       | 2.23E+04        |
| FD   | -1.77E+04       | 1.77E+04        | -1.75E+04       | 1.75E+04        |
| L1   | -4.26E+04       | 3.25E+04        | -4.24E+04       | 3.24E+04        |
| L3   | -4.25E+04       | 3.25E+04        | -4.24E+04       | 3.24E+04        |
| L4   | -3.75E+04       | 2.28E+04        | -3.72E+04       | 2.26E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.07E+04       | 1.39E+04        | -2.02E+04       | 1.33E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-855. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

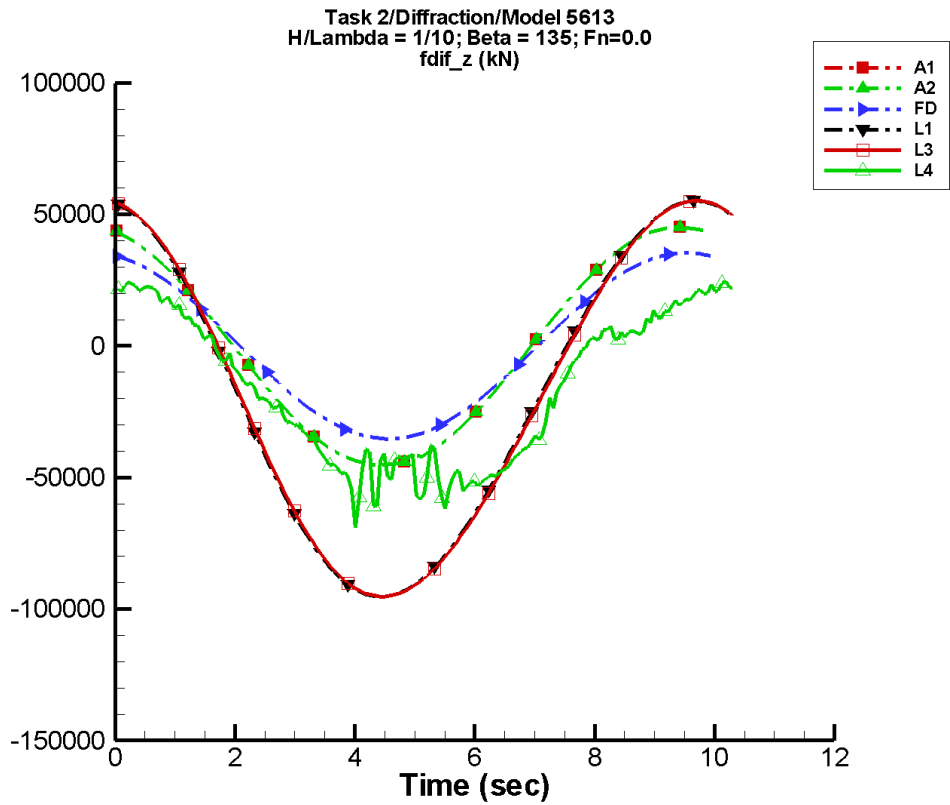
Table G-1709. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -46.8         | 3.03E+04      | 104               | 84.2          | 32                |
| A2   | -46.8         | 3.03E+04      | 104               | 84.2          | 32                |
| FD   | -9.85         | 2.35E+04      | 97                | 10.9          | 132               |
| L1   | -9.06E+03     | 5.00E+04      | 100               | 1.50E+03      | 24                |
| L3   | -9.06E+03     | 5.00E+04      | 99                | 1.50E+03      | 24                |
| L4   | -1.14E+04     | 3.58E+04      | 90                | 2.57E+03      | -157              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -6.62E+03     | 2.04E+04      | 121               | 1.57E+03      | -98               |

Table G-1710. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.02E+04       | 3.01E+04        | -2.98E+04       | 2.97E+04        |
| A2   | -3.02E+04       | 3.01E+04        | -2.98E+04       | 2.97E+04        |
| FD   | -2.35E+04       | 2.35E+04        | -2.33E+04       | 2.33E+04        |
| L1   | -5.90E+04       | 4.11E+04        | -5.88E+04       | 4.09E+04        |
| L3   | -5.90E+04       | 4.12E+04        | -5.88E+04       | 4.10E+04        |
| L4   | -4.79E+04       | 2.39E+04        | -4.76E+04       | 2.32E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.70E+04       | 1.50E+04        | -2.67E+04       | 1.43E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-856. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

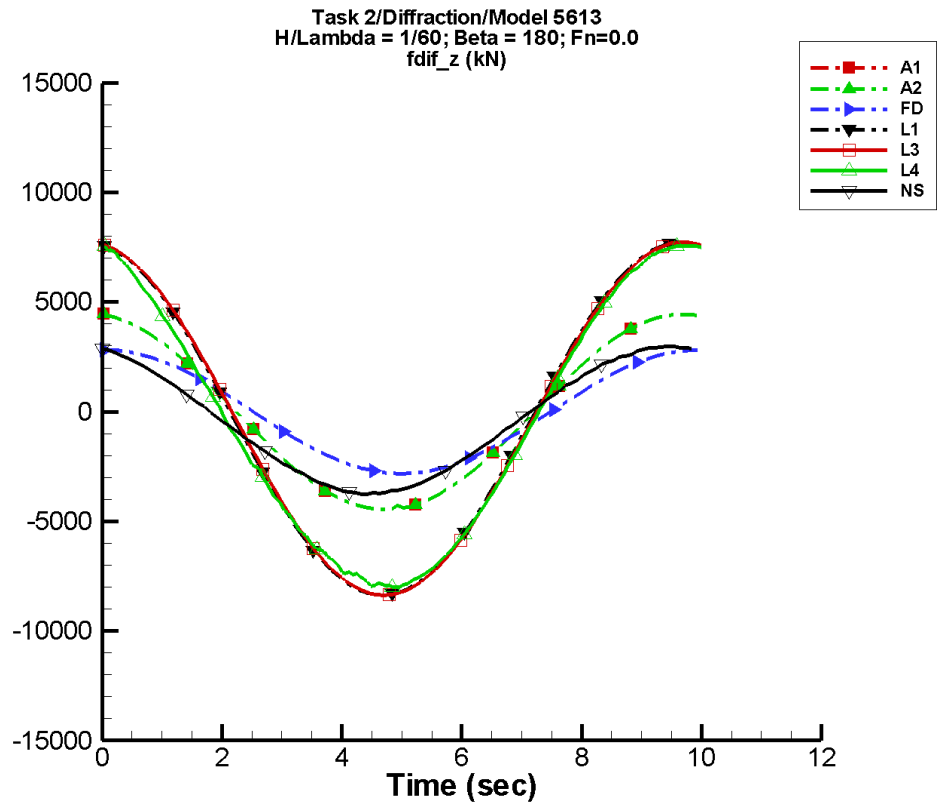
Table G-1711. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -70.1         | 4.54E+04      | 104               | 126.          | 32                |
| A2   | -70.1         | 4.54E+04      | 104               | 126.          | 32                |
| FD   | -14.8         | 3.53E+04      | 97                | 16.4          | 132               |
| L1   | -2.04E+04     | 7.49E+04      | 100               | 3.37E+03      | 24                |
| L3   | -2.04E+04     | 7.49E+04      | 99                | 3.37E+03      | 24                |
| L4   | -1.76E+04     | 3.81E+04      | 86                | 2.06E+03      | 109               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1712. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.53E+04       | 4.51E+04        | -4.48E+04       | 4.46E+04        |
| A2   | -4.53E+04       | 4.51E+04        | -4.48E+04       | 4.46E+04        |
| FD   | -3.53E+04       | 3.53E+04        | -3.50E+04       | 3.50E+04        |
| L1   | -9.54E+04       | 5.51E+04        | -9.51E+04       | 5.49E+04        |
| L3   | -9.53E+04       | 5.53E+04        | -9.50E+04       | 5.50E+04        |
| L4   | -6.89E+04       | 2.46E+04        | -5.24E+04       | 2.25E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-857. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1713. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

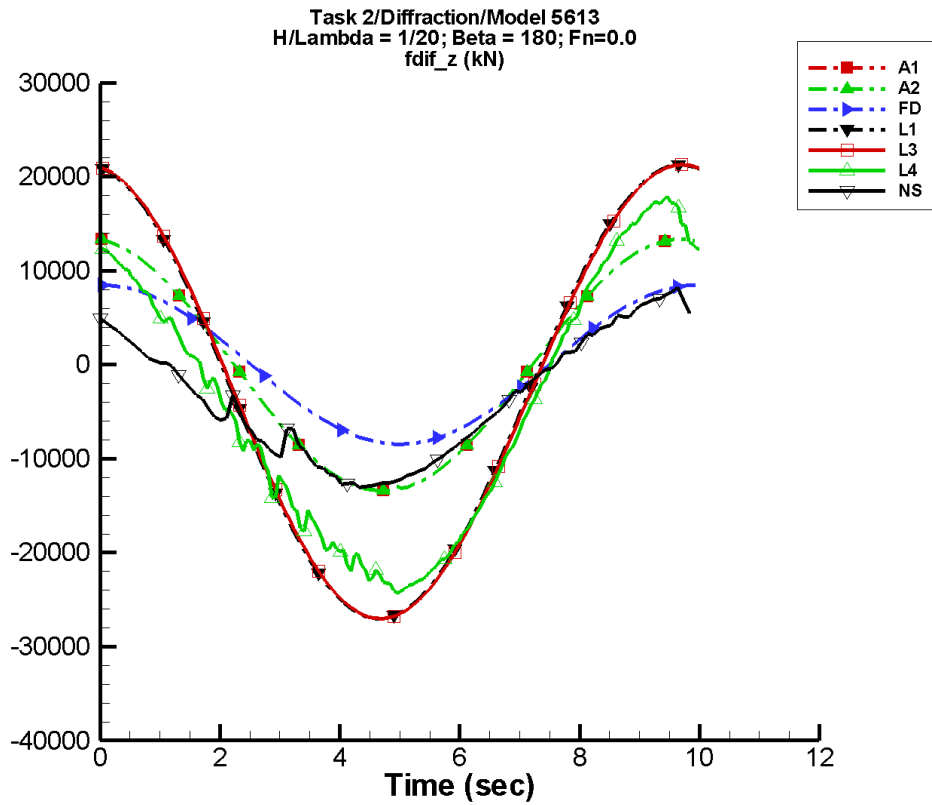
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -11.1         | 4.46E+03      | 94                | 14.2          | 23                |
| A2   | -11.1         | 4.46E+03      | 94                | 14.2          | 23                |
| FD   | -0.985        | 2.82E+03      | 81                | 1.27          | 117               |
| L1   | -320.         | 8.05E+03      | 96                | 27.1          | 12                |
| L3   | -320.         | 8.05E+03      | 95                | 27.2          | 13                |
| L4   | -496.         | 7.68E+03      | 97                | 352.          | 129               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -389.         | 3.32E+03      | 108               | 16.4          | 88                |

Table G-1714. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.46E+03       | 4.45E+03        | -4.40E+03       | 4.40E+03        |
| A2   | -4.46E+03       | 4.45E+03        | -4.40E+03       | 4.40E+03        |
| FD   | -2.82E+03       | 2.82E+03        | -2.79E+03       | 2.82E+03        |
| L1   | -8.37E+03       | 7.73E+03        | -8.34E+03       | 7.70E+03        |
| L3   | -8.36E+03       | 7.73E+03        | -8.34E+03       | 7.70E+03        |
| L4   | -8.02E+03       | 7.57E+03        | -7.95E+03       | 7.54E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -3.76E+03       | 2.99E+03        | -3.70E+03       | 2.93E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-858. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

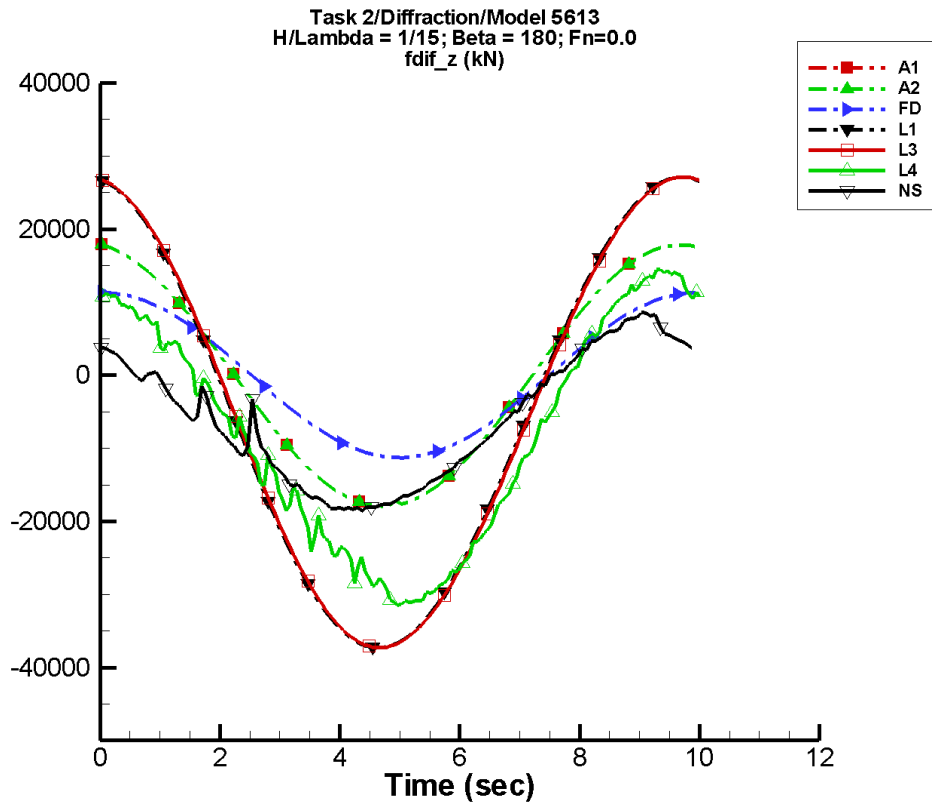
Table G-1715. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -33.3         | 1.34E+04      | 94                | 42.8          | 23                |
| A2   | -33.3         | 1.34E+04      | 94                | 42.8          | 23                |
| FD   | -2.95         | 8.47E+03      | 81                | 3.80          | 117               |
| L1   | -2.84E+03     | 2.41E+04      | 96                | 263.          | 4                 |
| L3   | -2.84E+03     | 2.41E+04      | 95                | 263.          | 4                 |
| L4   | -4.65E+03     | 1.88E+04      | 98                | 2.12E+03      | 175               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -3.61E+03     | 8.99E+03      | 112               | 831.          | 176               |

Table G-1716. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.34E+04       | 1.34E+04        | -1.32E+04       | 1.32E+04        |
| A2   | -1.34E+04       | 1.34E+04        | -1.32E+04       | 1.32E+04        |
| FD   | -8.47E+03       | 8.47E+03        | -8.38E+03       | 8.47E+03        |
| L1   | -2.70E+04       | 2.13E+04        | -2.69E+04       | 2.12E+04        |
| L3   | -2.70E+04       | 2.13E+04        | -2.69E+04       | 2.12E+04        |
| L4   | -2.43E+04       | 1.79E+04        | -2.38E+04       | 1.73E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.31E+04       | 8.26E+03        | -1.28E+04       | 7.02E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-859. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

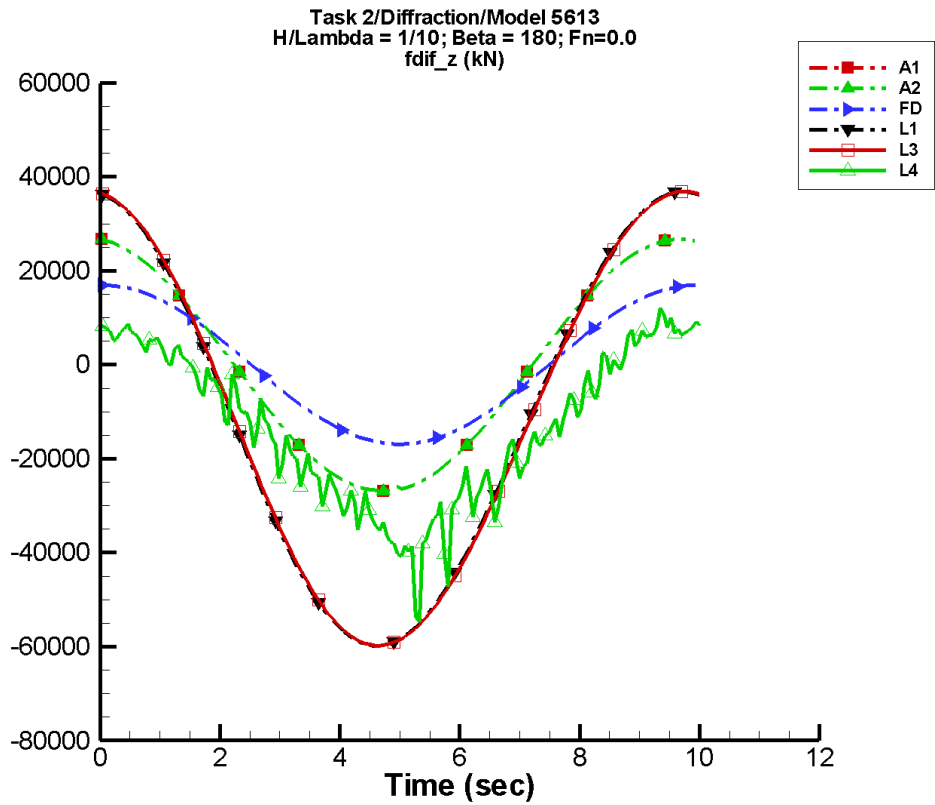
Table G-1717. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -44.4         | 1.79E+04      | 94                | 57.2          | 23                |
| A2   | -44.4         | 1.79E+04      | 94                | 57.2          | 23                |
| FD   | -3.94         | 1.13E+04      | 81                | 5.07          | 117               |
| L1   | -5.03E+03     | 3.22E+04      | 96                | 473.          | 3                 |
| L3   | -5.03E+03     | 3.22E+04      | 95                | 473.          | 3                 |
| L4   | -8.28E+03     | 2.13E+04      | 91                | 2.35E+03      | -173              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -6.00E+03     | 1.19E+04      | 115               | 1.11E+03      | -140              |

Table G-1718. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.79E+04       | 1.79E+04        | -1.77E+04       | 1.77E+04        |
| A2   | -1.79E+04       | 1.79E+04        | -1.77E+04       | 1.77E+04        |
| FD   | -1.13E+04       | 1.13E+04        | -1.12E+04       | 1.13E+04        |
| L1   | -3.73E+04       | 2.71E+04        | -3.72E+04       | 2.70E+04        |
| L3   | -3.73E+04       | 2.71E+04        | -3.72E+04       | 2.70E+04        |
| L4   | -3.15E+04       | 1.45E+04        | -3.11E+04       | 1.41E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.86E+04       | 8.58E+03        | -1.83E+04       | 7.89E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-860. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

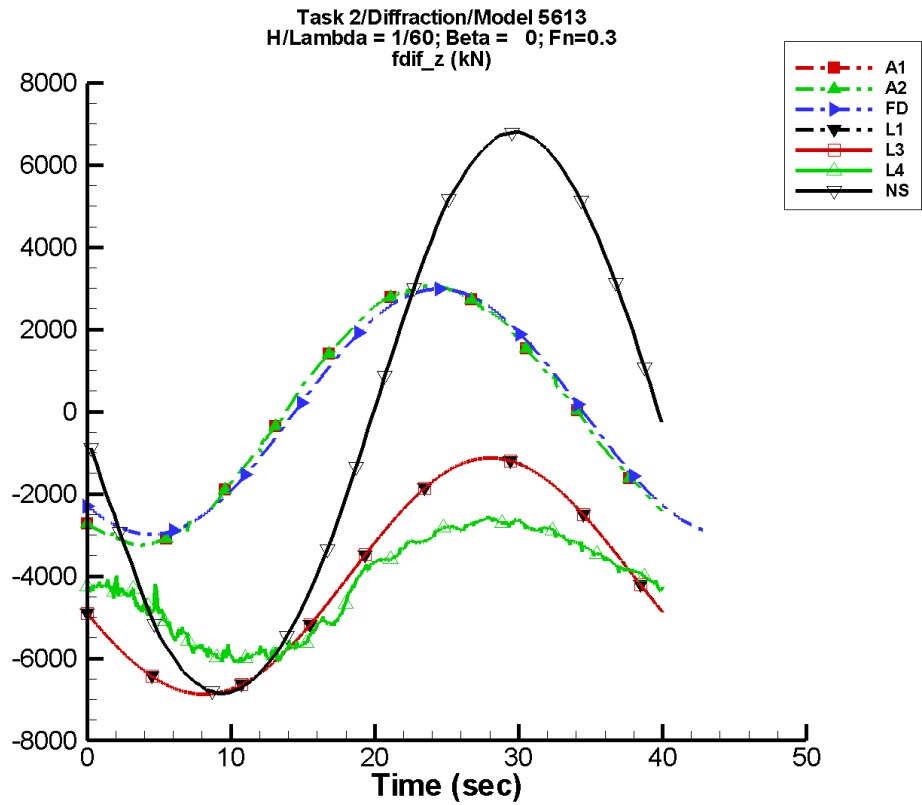
Table G-1719. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -66.7         | 2.69E+04      | 94                | 85.8          | 23                |
| A2   | -66.7         | 2.69E+04      | 94                | 85.8          | 23                |
| FD   | -5.91         | 1.69E+04      | 81                | 7.60          | 117               |
| L1   | -1.13E+04     | 4.83E+04      | 96                | 1.08E+03      | 2                 |
| L3   | -1.13E+04     | 4.83E+04      | 95                | 1.08E+03      | 2                 |
| L4   | -1.33E+04     | 2.20E+04      | 82                | 1.79E+03      | -146              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1720. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.69E+04       | 2.68E+04        | -2.65E+04       | 2.65E+04        |
| A2   | -2.69E+04       | 2.68E+04        | -2.65E+04       | 2.65E+04        |
| FD   | -1.69E+04       | 1.69E+04        | -1.68E+04       | 1.69E+04        |
| L1   | -5.98E+04       | 3.68E+04        | -5.97E+04       | 3.67E+04        |
| L3   | -5.98E+04       | 3.69E+04        | -5.96E+04       | 3.67E+04        |
| L4   | -5.89E+04       | 1.22E+04        | -4.23E+04       | 8.54E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-861. Time history of  $F_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1721. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

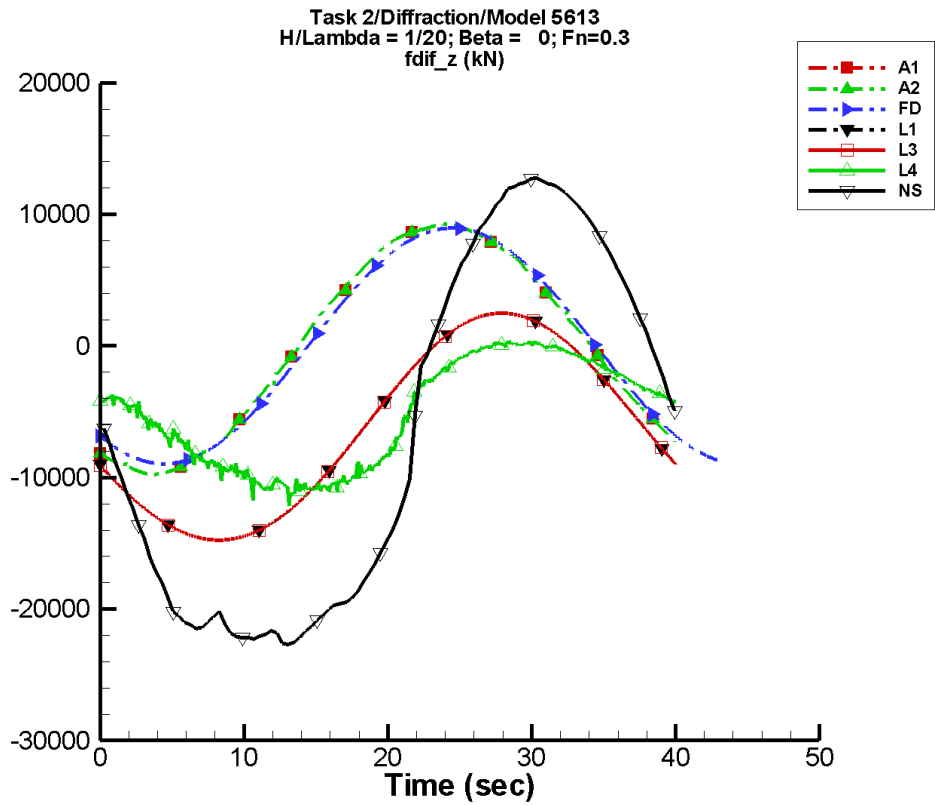
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 9.20          | 3.08E+03      | -125              | 71.2          | 164               |
| A2   | 9.20          | 3.08E+03      | -125              | 71.2          | 164               |
| FD   | -8.80E-02     | 2.99E+03      | -132              | 0.303         | -78               |
| L1   | -4.02E+03     | 2.87E+03      | -164              | 28.5          | -34               |
| L3   | -4.02E+03     | 2.87E+03      | -164              | 28.5          | -34               |
| L4   | -4.18E+03     | 1.57E+03      | -179              | 345.          | 32                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -114.         | 6.93E+03      | -178              | 87.2          | -158              |

Table G-1722. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.25E+03       | 3.07E+03        | -3.24E+03       | 3.07E+03        |
| A2   | -3.25E+03       | 3.07E+03        | -3.24E+03       | 3.07E+03        |
| FD   | -2.99E+03       | 2.99E+03        | -2.99E+03       | 2.99E+03        |
| L1   | -6.87E+03       | -1.13E+03       | -6.87E+03       | -1.13E+03       |
| L3   | -6.87E+03       | -1.12E+03       | -6.87E+03       | -1.13E+03       |
| L4   | -6.10E+03       | -2.57E+03       | -6.07E+03       | -2.59E+03       |
| NF   | —               | —               | —               | —               |
| NS   | -7.19E+03       | 6.81E+03        | -7.21E+03       | 6.72E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-862. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

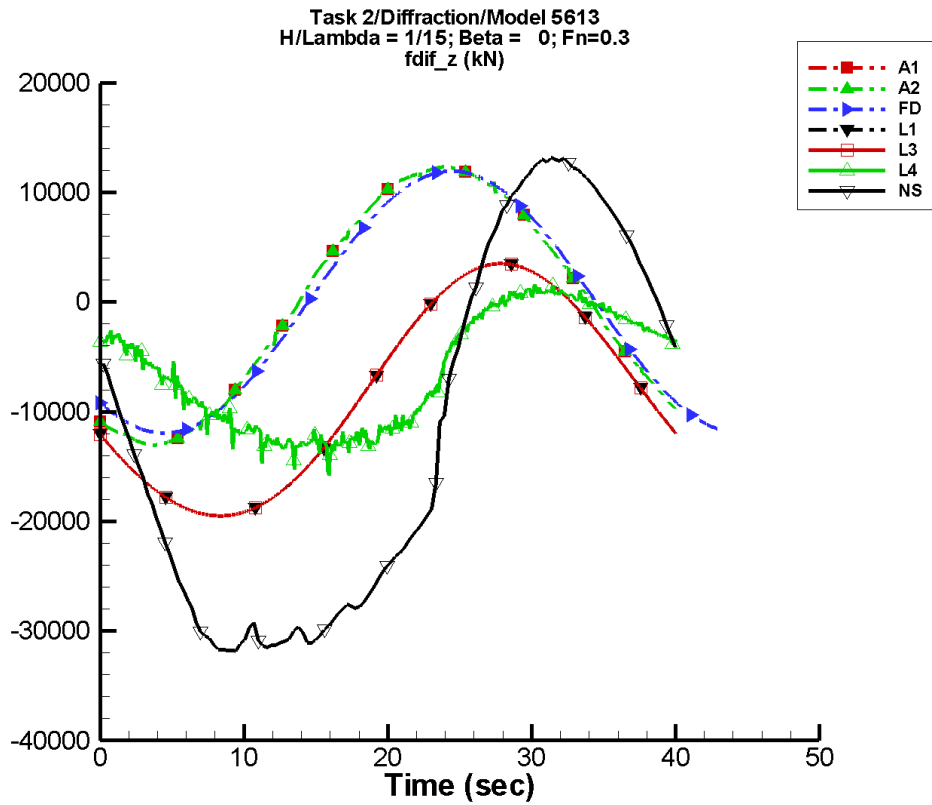
Table G-1723. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 27.7          | 9.27E+03      | -125              | 214.          | 164               |
| A2   | 27.7          | 9.27E+03      | -125              | 214.          | 164               |
| FD   | -0.263        | 8.96E+03      | -132              | 0.908         | -78               |
| L1   | -6.36E+03     | 8.62E+03      | -164              | 258.          | -31               |
| L3   | -6.36E+03     | 8.62E+03      | -164              | 258.          | -31               |
| L4   | -5.19E+03     | 5.44E+03      | 163               | 1.29E+03      | -21               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -6.95E+03     | 1.86E+04      | 171               | 2.29E+03      | -95               |

Table G-1724. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -9.77E+03       | 9.24E+03        | -9.75E+03       | 9.23E+03        |
| A2   | -9.77E+03       | 9.24E+03        | -9.75E+03       | 9.23E+03        |
| FD   | -8.96E+03       | 8.96E+03        | -8.96E+03       | 8.96E+03        |
| L1   | -1.48E+04       | 2.50E+03        | -1.47E+04       | 2.49E+03        |
| L3   | -1.48E+04       | 2.50E+03        | -1.47E+04       | 2.49E+03        |
| L4   | -1.21E+04       | 379.            | -1.13E+04       | 240.            |
| NF   | —               | —               | —               | —               |
| NS   | -2.28E+04       | 1.28E+04        | -2.28E+04       | 1.24E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-863. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

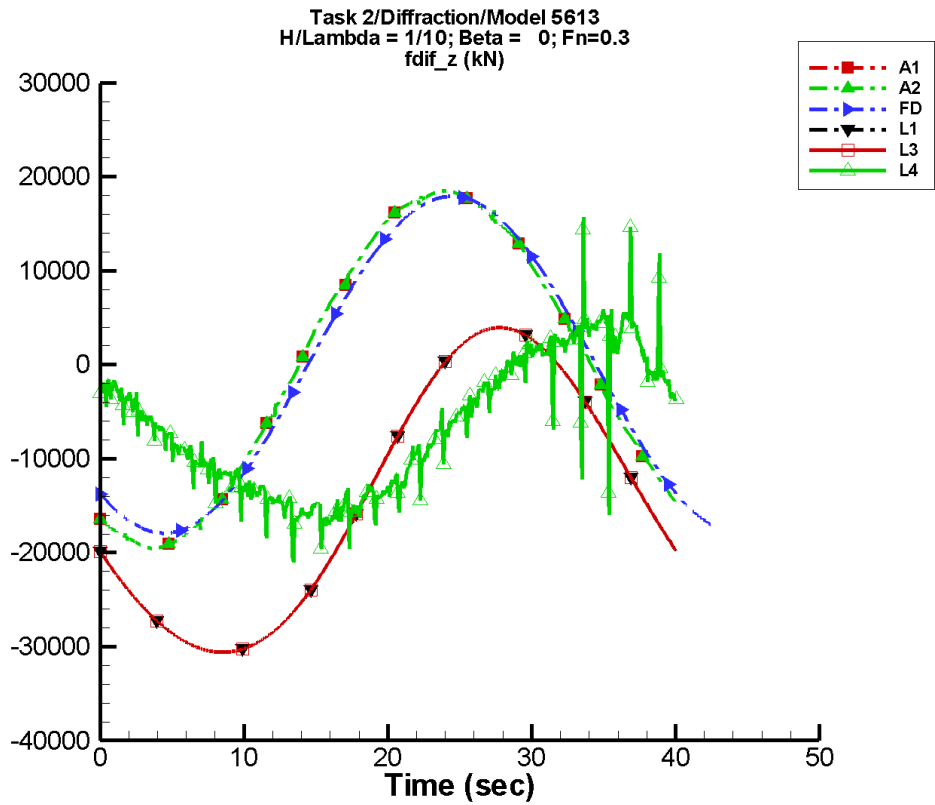
Table G-1725. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 36.9          | 1.24E+04      | -125              | 286.          | 164               |
| A2   | 36.9          | 1.24E+04      | -125              | 286.          | 164               |
| FD   | -0.352        | 1.19E+04      | -132              | 1.21          | -78               |
| L1   | -8.40E+03     | 1.15E+04      | -164              | 459.          | -31               |
| L3   | -8.40E+03     | 1.15E+04      | -164              | 459.          | -31               |
| L4   | -6.24E+03     | 7.21E+03      | 146               | 1.24E+03      | -66               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -1.23E+04     | 2.33E+04      | 157               | 3.11E+03      | -138              |

Table G-1726. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.30E+04       | 1.23E+04        | -1.30E+04       | 1.23E+04        |
| A2   | -1.30E+04       | 1.23E+04        | -1.30E+04       | 1.23E+04        |
| FD   | -1.19E+04       | 1.19E+04        | -1.19E+04       | 1.19E+04        |
| L1   | -1.95E+04       | 3.51E+03        | -1.95E+04       | 3.51E+03        |
| L3   | -1.95E+04       | 3.51E+03        | -1.95E+04       | 3.51E+03        |
| L4   | -1.58E+04       | 1.60E+03        | -1.40E+04       | 1.06E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -3.28E+04       | 1.32E+04        | -3.24E+04       | 1.29E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-864. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

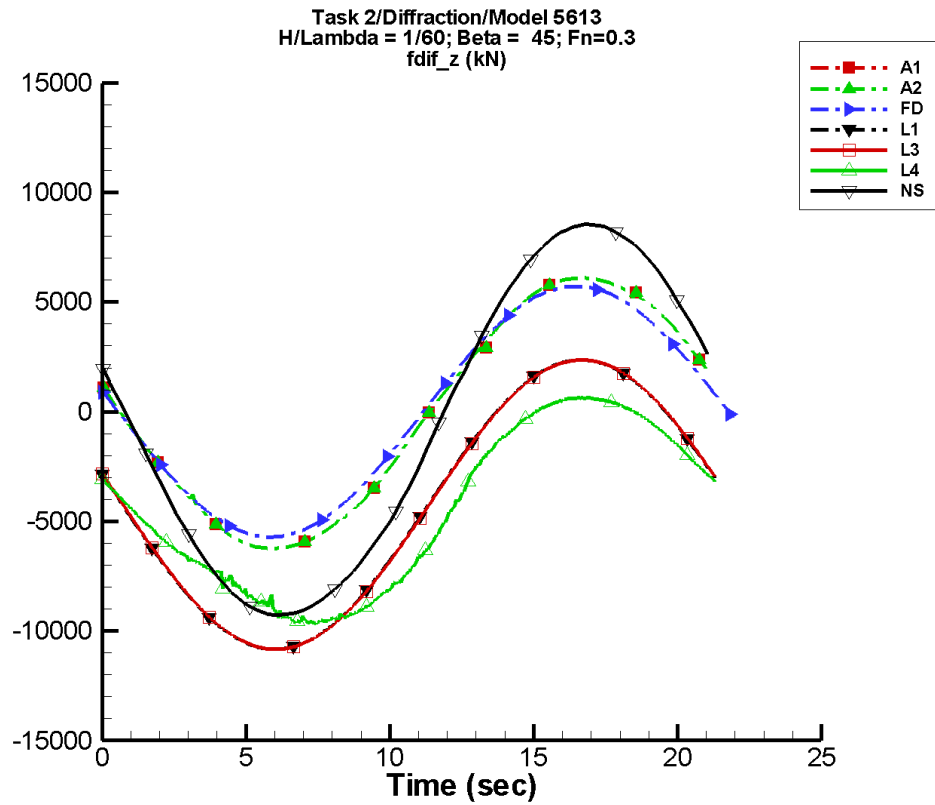
Table G-1727. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 55.4          | 1.86E+04      | -125              | 429.          | 164               |
| A2   | 55.4          | 1.86E+04      | -125              | 429.          | 164               |
| FD   | -0.527        | 1.79E+04      | -132              | 1.82          | -78               |
| L1   | -1.42E+04     | 1.72E+04      | -164              | 1.03E+03      | -31               |
| L3   | -1.42E+04     | 1.72E+04      | -164              | 1.03E+03      | -30               |
| L4   | -6.61E+03     | 9.47E+03      | 140               | 716.          | -108              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1728. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.96E+04       | 1.85E+04        | -1.95E+04       | 1.85E+04        |
| A2   | -1.96E+04       | 1.85E+04        | -1.95E+04       | 1.85E+04        |
| FD   | -1.79E+04       | 1.79E+04        | -1.79E+04       | 1.79E+04        |
| L1   | -3.06E+04       | 3.95E+03        | -3.06E+04       | 3.94E+03        |
| L3   | -3.06E+04       | 3.95E+03        | -3.06E+04       | 3.94E+03        |
| L4   | -2.13E+04       | 1.57E+04        | -1.72E+04       | 7.06E+03        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-865. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1729. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

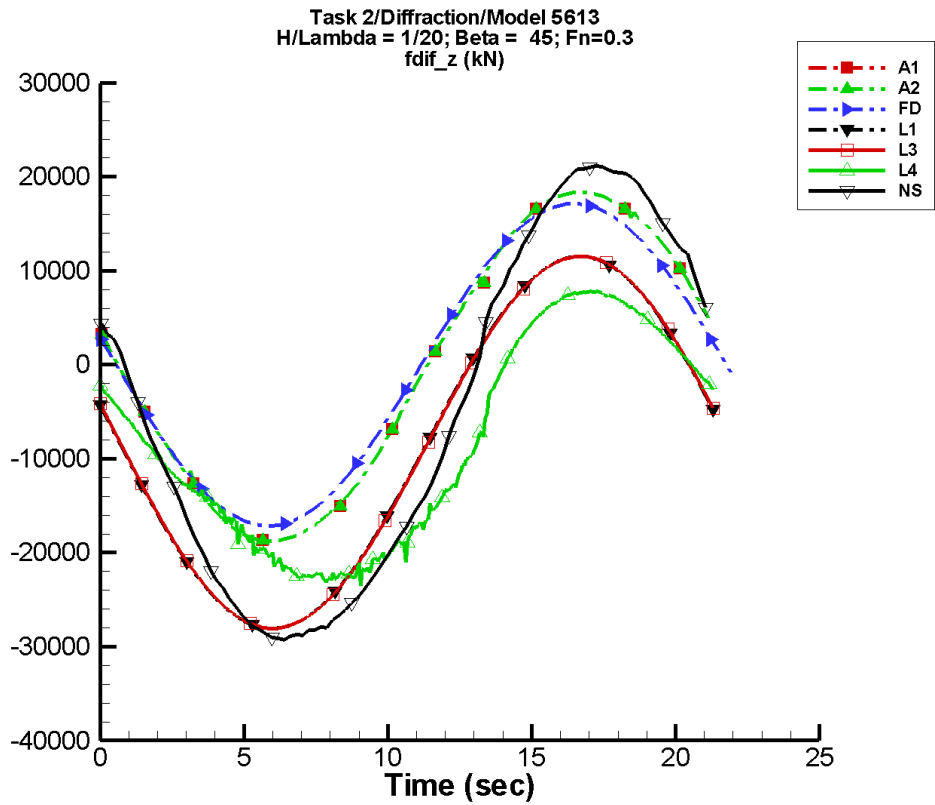
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -6.53         | 6.15E+03      | 167               | 4.57          | 17                |
| A2   | -6.53         | 6.15E+03      | 167               | 4.57          | 17                |
| FD   | -1.40         | 5.71E+03      | 176               | 2.27          | -31               |
| L1   | -4.25E+03     | 6.60E+03      | 168               | 20.4          | -158              |
| L3   | -4.25E+03     | 6.60E+03      | 168               | 20.6          | -158              |
| L4   | -4.58E+03     | 5.04E+03      | 157               | 665.          | -67               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -482.         | 8.95E+03      | 162               | 141.          | -111              |

Table G-1730. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.24E+03       | 6.10E+03        | -6.22E+03       | 6.09E+03        |
| A2   | -6.24E+03       | 6.10E+03        | -6.22E+03       | 6.09E+03        |
| FD   | -5.71E+03       | 5.71E+03        | -5.70E+03       | 5.70E+03        |
| L1   | -1.08E+04       | 2.36E+03        | -1.08E+04       | 2.35E+03        |
| L3   | -1.08E+04       | 2.36E+03        | -1.08E+04       | 2.35E+03        |
| L4   | -9.67E+03       | 650.            | -9.61E+03       | 624.            |
| NF   | —               | —               | —               | —               |
| NS   | -9.28E+03       | 8.54E+03        | -9.20E+03       | 8.44E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-866. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

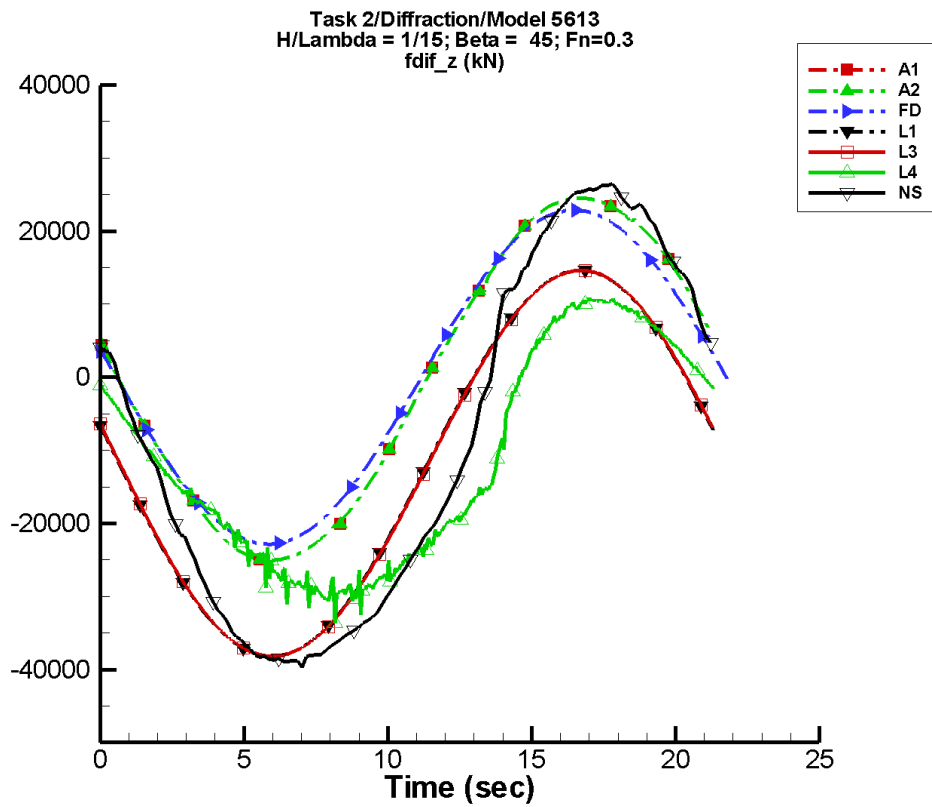
Table G-1731. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -19.6         | 1.85E+04      | 167               | 13.7          | 17                |
| A2   | -19.6         | 1.85E+04      | 167               | 13.7          | 17                |
| FD   | -4.19         | 1.71E+04      | 176               | 6.82          | -31               |
| L1   | -8.41E+03     | 1.98E+04      | 168               | 188.          | -159              |
| L3   | -8.41E+03     | 1.98E+04      | 168               | 189.          | -159              |
| L4   | -8.44E+03     | 1.50E+04      | 147               | 2.35E+03      | -93               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.06E+03     | 2.53E+04      | 154               | 1.13E+03      | -139              |

Table G-1732. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.88E+04       | 1.83E+04        | -1.87E+04       | 1.83E+04        |
| A2   | -1.88E+04       | 1.83E+04        | -1.87E+04       | 1.83E+04        |
| FD   | -1.71E+04       | 1.71E+04        | -1.71E+04       | 1.71E+04        |
| L1   | -2.81E+04       | 1.15E+04        | -2.80E+04       | 1.15E+04        |
| L3   | -2.81E+04       | 1.15E+04        | -2.80E+04       | 1.15E+04        |
| L4   | -2.35E+04       | 7.85E+03        | -2.27E+04       | 7.77E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -2.93E+04       | 2.11E+04        | -2.88E+04       | 2.09E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-867. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

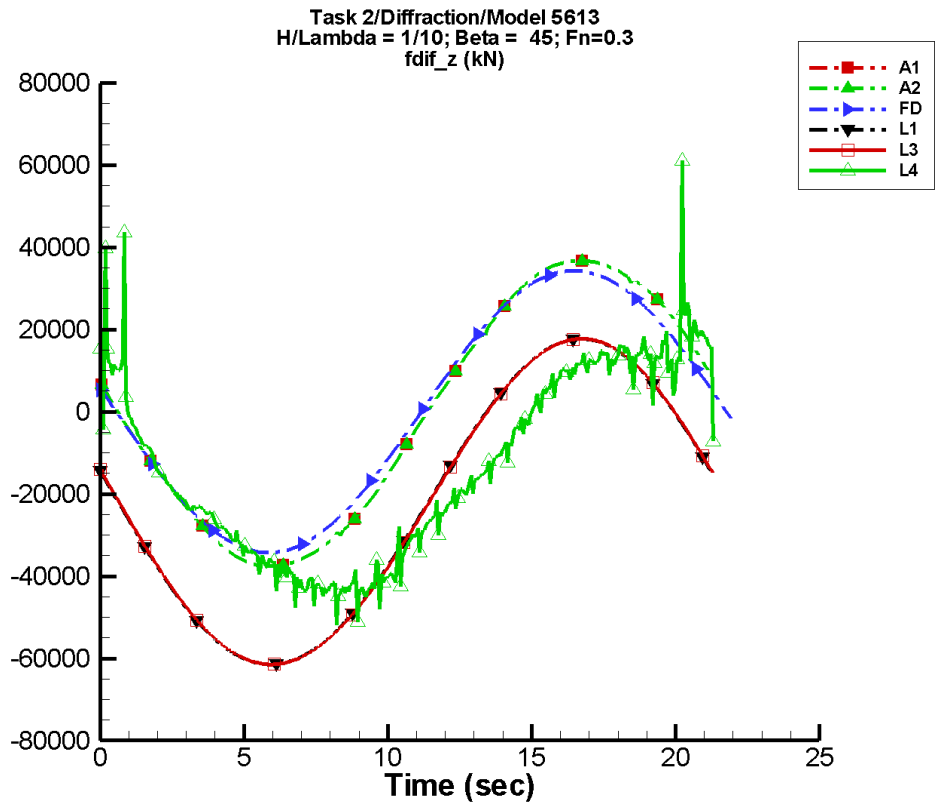
Table G-1733. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -26.2         | 2.47E+04      | 167               | 18.4          | 17                |
| A2   | -26.2         | 2.47E+04      | 167               | 18.4          | 17                |
| FD   | -5.59         | 2.29E+04      | 176               | 9.09          | -31               |
| L1   | -1.20E+04     | 2.64E+04      | 168               | 336.          | -159              |
| L3   | -1.20E+04     | 2.64E+04      | 168               | 337.          | -160              |
| L4   | -1.14E+04     | 1.96E+04      | 140               | 3.25E+03      | -121              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -8.85E+03     | 3.30E+04      | 151               | 2.60E+03      | -140              |

Table G-1734. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.50E+04       | 2.45E+04        | -2.50E+04       | 2.44E+04        |
| A2   | -2.50E+04       | 2.45E+04        | -2.50E+04       | 2.44E+04        |
| FD   | -2.29E+04       | 2.29E+04        | -2.28E+04       | 2.28E+04        |
| L1   | -3.82E+04       | 1.46E+04        | -3.82E+04       | 1.46E+04        |
| L3   | -3.82E+04       | 1.46E+04        | -3.82E+04       | 1.46E+04        |
| L4   | -3.37E+04       | 1.08E+04        | -2.99E+04       | 1.06E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.97E+04       | 2.65E+04        | -3.88E+04       | 2.58E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-868. Time history of  $F_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

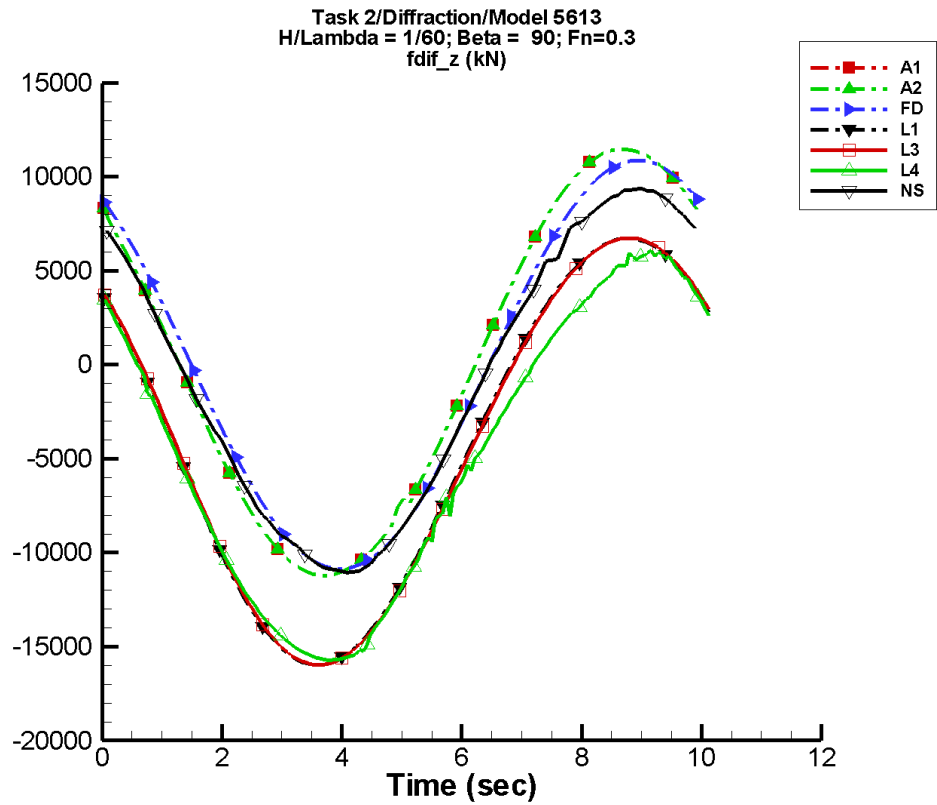
Table G-1735. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -39.3         | 3.70E+04      | 167               | 27.5          | 17                |
| A2   | -39.3         | 3.70E+04      | 167               | 27.5          | 17                |
| FD   | -8.38         | 3.43E+04      | 176               | 13.6          | -31               |
| L1   | -2.24E+04     | 3.96E+04      | 168               | 759.          | -160              |
| L3   | -2.24E+04     | 3.96E+04      | 168               | 760.          | -160              |
| L4   | -1.37E+04     | 3.06E+04      | 135               | 2.36E+03      | 127               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1736. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.76E+04       | 3.67E+04        | -3.75E+04       | 3.67E+04        |
| A2   | -3.76E+04       | 3.67E+04        | -3.75E+04       | 3.67E+04        |
| FD   | -3.43E+04       | 3.43E+04        | -3.42E+04       | 3.42E+04        |
| L1   | -6.15E+04       | 1.77E+04        | -6.15E+04       | 1.77E+04        |
| L3   | -6.15E+04       | 1.77E+04        | -6.15E+04       | 1.77E+04        |
| L4   | -5.18E+04       | 6.10E+04        | -4.42E+04       | 2.48E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-869. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1737. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

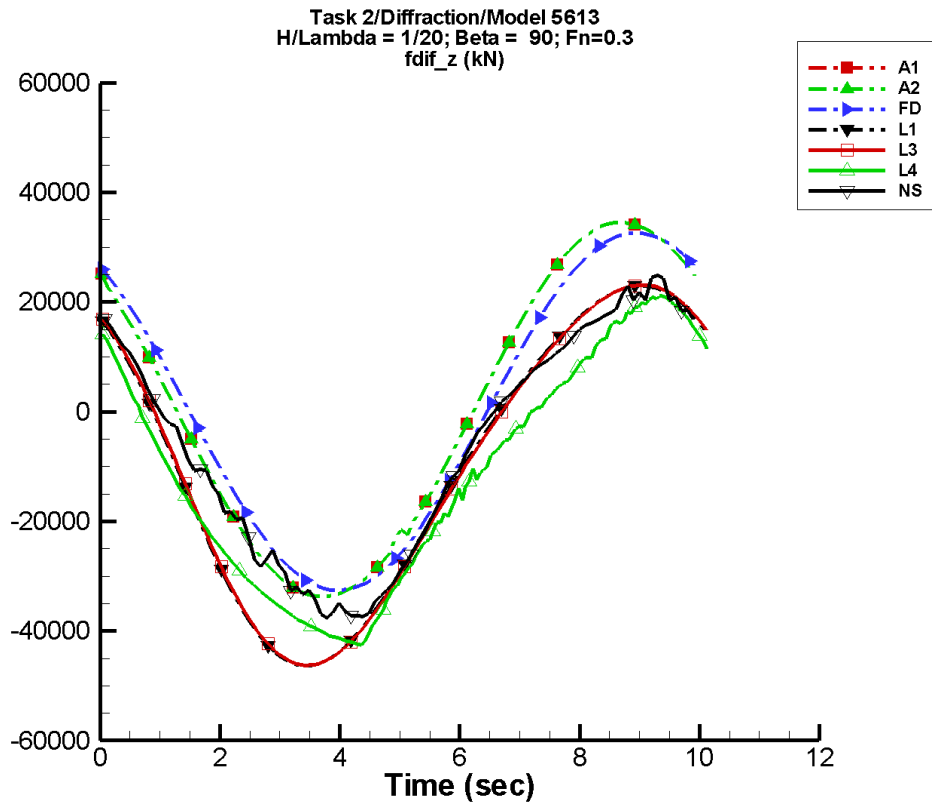
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 122.          | 1.13E+04      | 130               | 13.7          | 97                |
| A2   | 122.          | 1.13E+04      | 130               | 13.7          | 97                |
| FD   | -5.01         | 1.09E+04      | 118               | 5.14          | 151               |
| L1   | -4.42E+03     | 1.13E+04      | 132               | 438.          | 56                |
| L3   | -4.42E+03     | 1.13E+04      | 131               | 438.          | 56                |
| L4   | -4.99E+03     | 1.04E+04      | 129               | 710.          | 76                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -790.         | 1.01E+04      | 128               | 43.5          | -45               |

Table G-1738. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.12E+04       | 1.15E+04        | -1.11E+04       | 1.14E+04        |
| A2   | -1.12E+04       | 1.15E+04        | -1.11E+04       | 1.14E+04        |
| FD   | -1.09E+04       | 1.09E+04        | -1.08E+04       | 1.08E+04        |
| L1   | -1.60E+04       | 6.71E+03        | -1.59E+04       | 6.68E+03        |
| L3   | -1.60E+04       | 6.73E+03        | -1.59E+04       | 6.69E+03        |
| L4   | -1.57E+04       | 6.10E+03        | -1.57E+04       | 5.88E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.11E+04       | 9.38E+03        | -1.09E+04       | 9.23E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-870. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

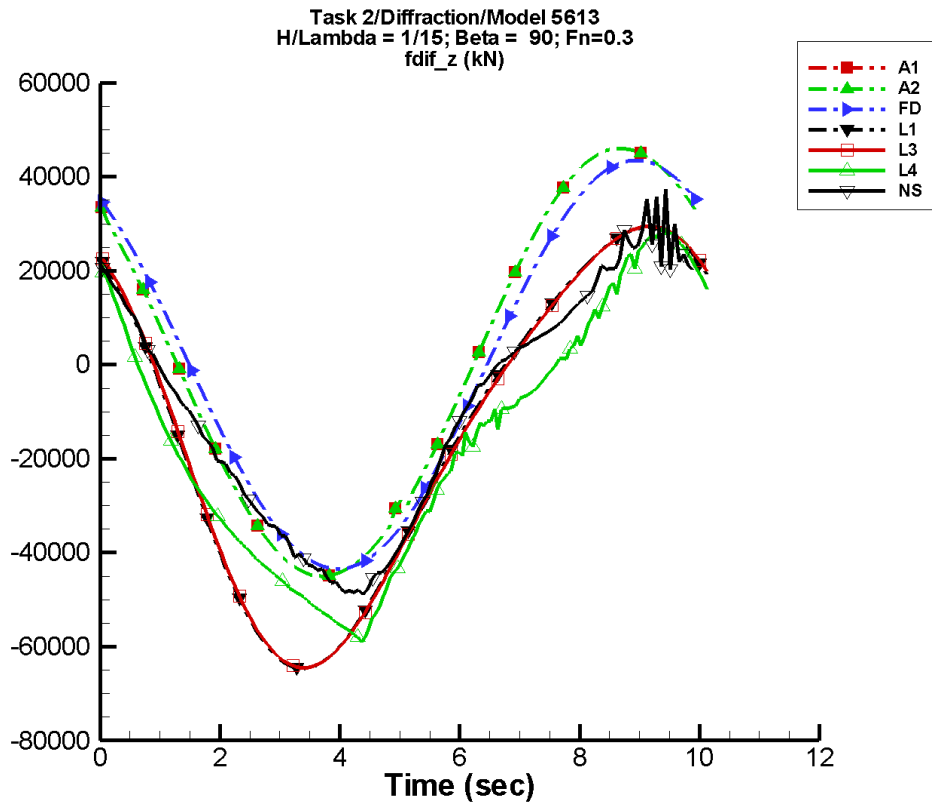
Table G-1739. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 368.          | 3.41E+04      | 130               | 41.1          | 97                |
| A2   | 368.          | 3.41E+04      | 130               | 41.1          | 97                |
| FD   | -15.0         | 3.26E+04      | 118               | 15.4          | 151               |
| L1   | -9.95E+03     | 3.40E+04      | 132               | 3.94E+03      | 56                |
| L3   | -9.95E+03     | 3.40E+04      | 131               | 3.94E+03      | 56                |
| L4   | -1.18E+04     | 2.84E+04      | 126               | 2.46E+03      | 96                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -6.53E+03     | 2.83E+04      | 129               | 1.08E+03      | 8                 |

Table G-1740. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.37E+04       | 3.45E+04        | -3.34E+04       | 3.42E+04        |
| A2   | -3.37E+04       | 3.45E+04        | -3.34E+04       | 3.42E+04        |
| FD   | -3.26E+04       | 3.26E+04        | -3.23E+04       | 3.23E+04        |
| L1   | -4.64E+04       | 2.30E+04        | -4.62E+04       | 2.28E+04        |
| L3   | -4.63E+04       | 2.31E+04        | -4.61E+04       | 2.30E+04        |
| L4   | -4.26E+04       | 2.12E+04        | -4.20E+04       | 2.06E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -3.77E+04       | 2.48E+04        | -3.67E+04       | 2.24E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-871. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

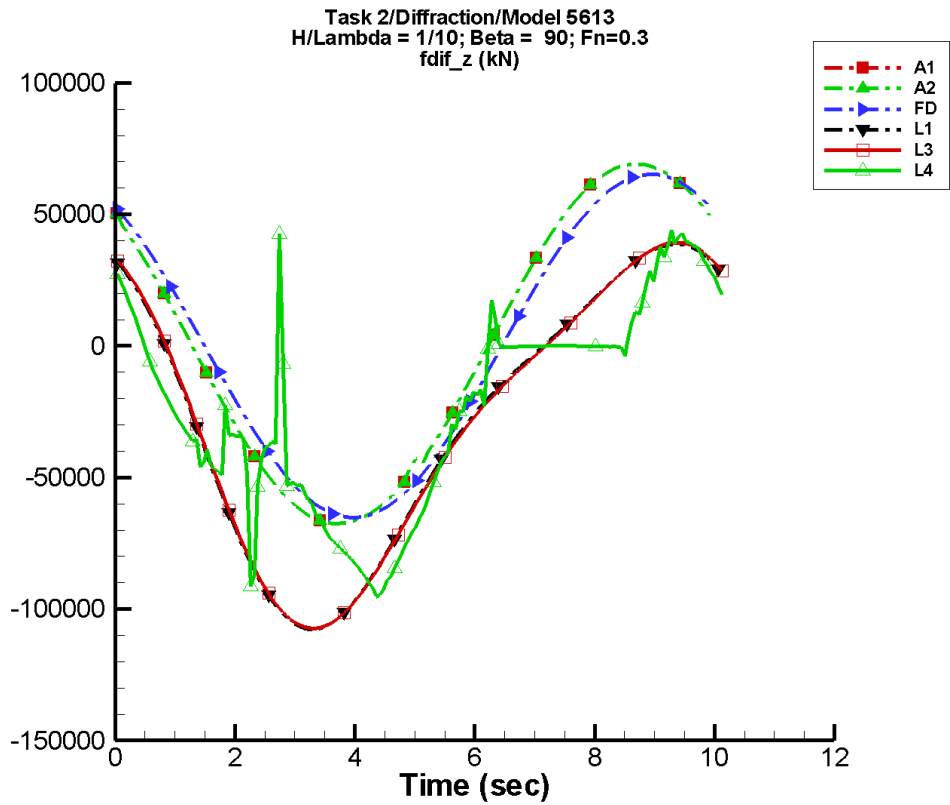
Table G-1741. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 491.          | 4.55E+04      | 130               | 54.9          | 97                |
| A2   | 491.          | 4.55E+04      | 130               | 54.9          | 97                |
| FD   | -20.1         | 4.35E+04      | 118               | 20.6          | 151               |
| L1   | -1.48E+04     | 4.53E+04      | 132               | 7.00E+03      | 56                |
| L3   | -1.48E+04     | 4.53E+04      | 131               | 7.00E+03      | 56                |
| L4   | -1.66E+04     | 3.61E+04      | 124               | 4.04E+03      | 92                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -9.52E+03     | 3.45E+04      | 128               | 1.53E+03      | 24                |

Table G-1742. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -4.50E+04       | 4.61E+04        | -4.46E+04       | 4.56E+04        |
| A2   | -4.50E+04       | 4.61E+04        | -4.46E+04       | 4.56E+04        |
| FD   | -4.35E+04       | 4.35E+04        | -4.30E+04       | 4.30E+04        |
| L1   | -6.47E+04       | 2.92E+04        | -6.44E+04       | 2.90E+04        |
| L3   | -6.45E+04       | 2.94E+04        | -6.43E+04       | 2.93E+04        |
| L4   | -5.90E+04       | 2.92E+04        | -5.71E+04       | 2.78E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -4.89E+04       | 3.74E+04        | -4.78E+04       | 2.90E+04        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-872. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

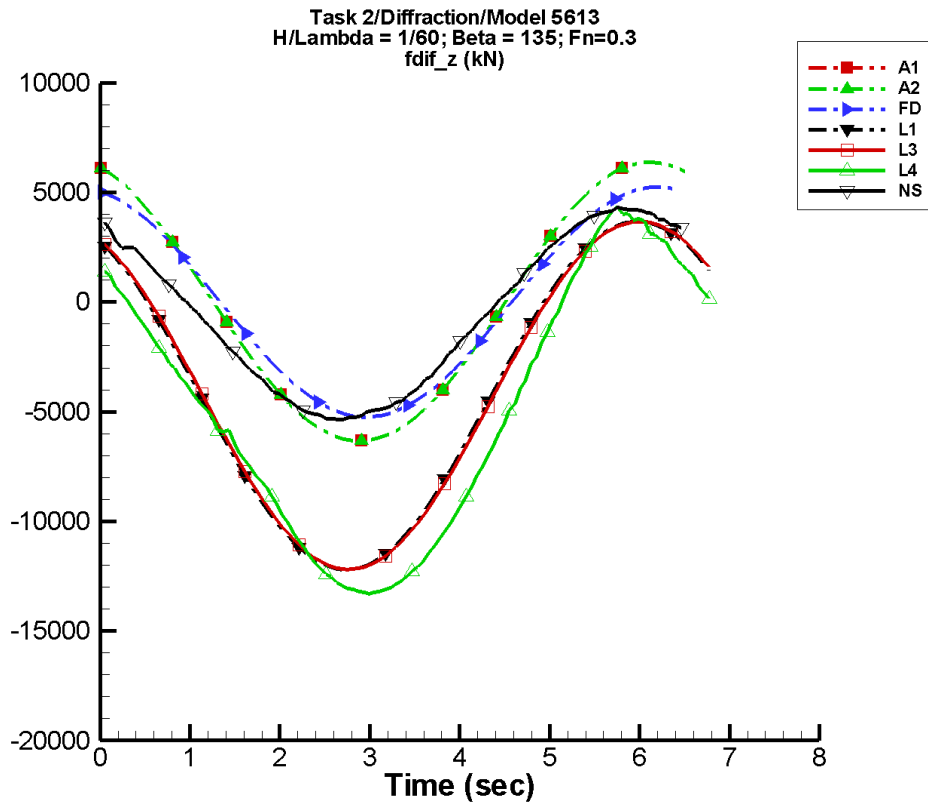
Table G-1743. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 736.          | 6.82E+04      | 130               | 82.3          | 97                |
| A2   | 736.          | 6.82E+04      | 130               | 82.3          | 97                |
| FD   | -30.1         | 6.52E+04      | 118               | 30.8          | 151               |
| L1   | -2.86E+04     | 6.79E+04      | 132               | 1.57E+04      | 56                |
| L3   | -2.86E+04     | 6.79E+04      | 131               | 1.57E+04      | 56                |
| L4   | -2.32E+04     | 4.60E+04      | 127               | 1.79E+03      | -84               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1744. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.75E+04       | 6.91E+04        | -6.69E+04       | 6.84E+04        |
| A2   | -6.75E+04       | 6.91E+04        | -6.69E+04       | 6.84E+04        |
| FD   | -6.52E+04       | 6.52E+04        | -6.45E+04       | 6.46E+04        |
| L1   | -1.08E+05       | 3.87E+04        | -1.08E+05       | 3.84E+04        |
| L3   | -1.07E+05       | 3.92E+04        | -1.07E+05       | 3.89E+04        |
| L4   | -1.13E+05       | 4.40E+04        | -9.12E+04       | 4.02E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-873. Time history of  $F_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1745. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

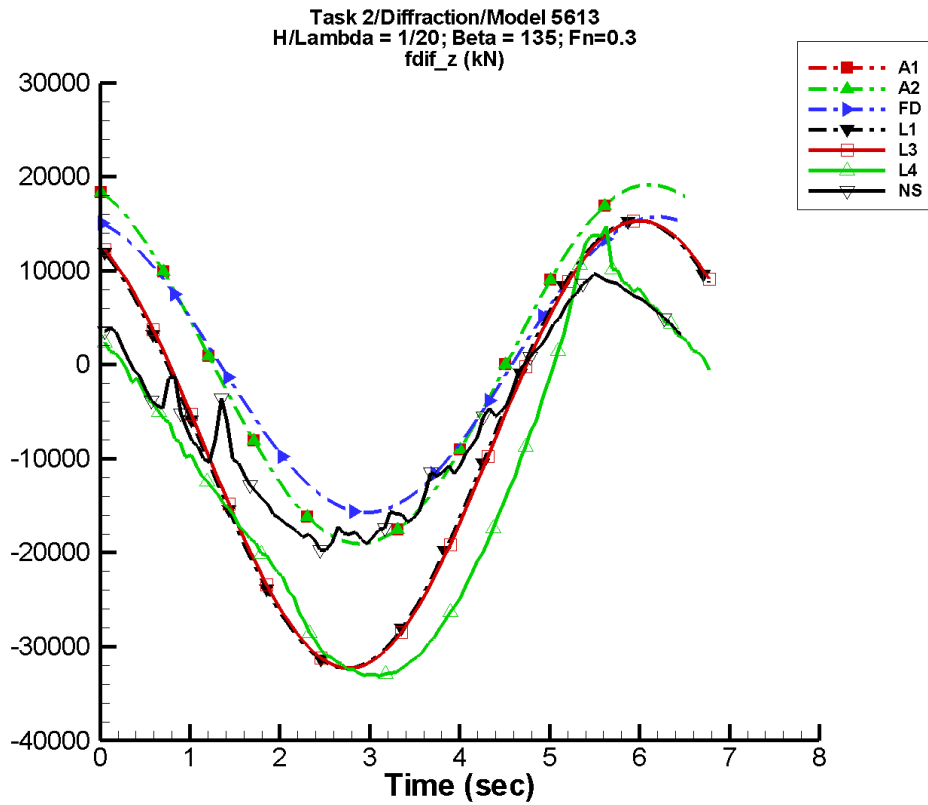
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 17.8          | 6.39E+03      | 107               | 16.6          | 155               |
| A2   | 17.8          | 6.39E+03      | 107               | 16.6          | 155               |
| FD   | 0.142         | 5.25E+03      | 107               | 0.221         | -124              |
| L1   | -4.24E+03     | 7.94E+03      | 116               | 20.4          | -63               |
| L3   | -4.24E+03     | 7.93E+03      | 114               | 20.4          | -63               |
| L4   | -5.15E+03     | 8.04E+03      | 108               | 1.03E+03      | -156              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -551.         | 4.74E+03      | 121               | 100.          | -106              |

Table G-1746. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -6.33E+03       | 6.38E+03        | -6.19E+03       | 6.23E+03        |
| A2   | -6.33E+03       | 6.38E+03        | -6.19E+03       | 6.23E+03        |
| FD   | -5.24E+03       | 5.24E+03        | -5.12E+03       | 5.12E+03        |
| L1   | -1.22E+04       | 3.68E+03        | -1.21E+04       | 3.61E+03        |
| L3   | -1.22E+04       | 3.67E+03        | -1.21E+04       | 3.60E+03        |
| L4   | -1.33E+04       | 4.34E+03        | -1.32E+04       | 3.92E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -5.37E+03       | 4.32E+03        | -5.27E+03       | 4.19E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-874. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

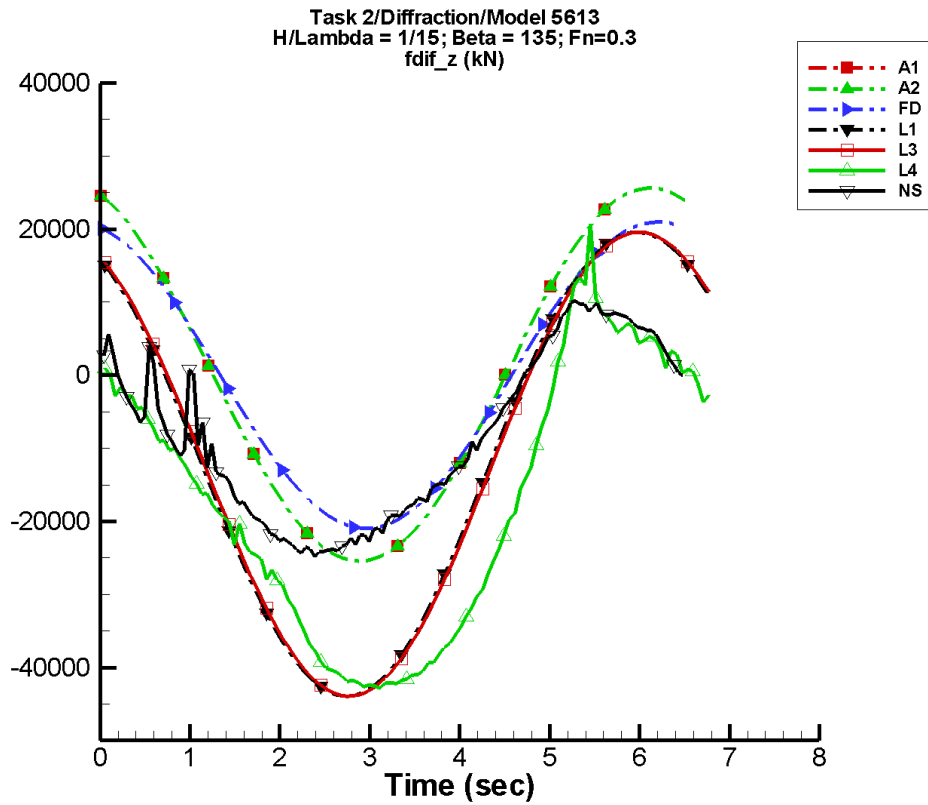
Table G-1747. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 53.6          | 1.92E+04      | 107               | 49.9          | 155               |
| A2   | 53.6          | 1.92E+04      | 107               | 49.9          | 155               |
| FD   | 0.426         | 1.57E+04      | 107               | 0.663         | -124              |
| L1   | -8.32E+03     | 2.38E+04      | 116               | 185.          | -63               |
| L3   | -8.32E+03     | 2.38E+04      | 114               | 185.          | -63               |
| L4   | -1.27E+04     | 2.05E+04      | 109               | 3.91E+03      | -150              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -5.92E+03     | 1.30E+04      | 125               | 1.53E+03      | -139              |

Table G-1748. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.90E+04       | 1.92E+04        | -1.86E+04       | 1.87E+04        |
| A2   | -1.90E+04       | 1.92E+04        | -1.86E+04       | 1.87E+04        |
| FD   | -1.57E+04       | 1.57E+04        | -1.54E+04       | 1.53E+04        |
| L1   | -3.23E+04       | 1.53E+04        | -3.21E+04       | 1.51E+04        |
| L3   | -3.23E+04       | 1.53E+04        | -3.21E+04       | 1.51E+04        |
| L4   | -3.31E+04       | 1.47E+04        | -3.29E+04       | 1.23E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -1.97E+04       | 9.71E+03        | -1.86E+04       | 8.87E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-875. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

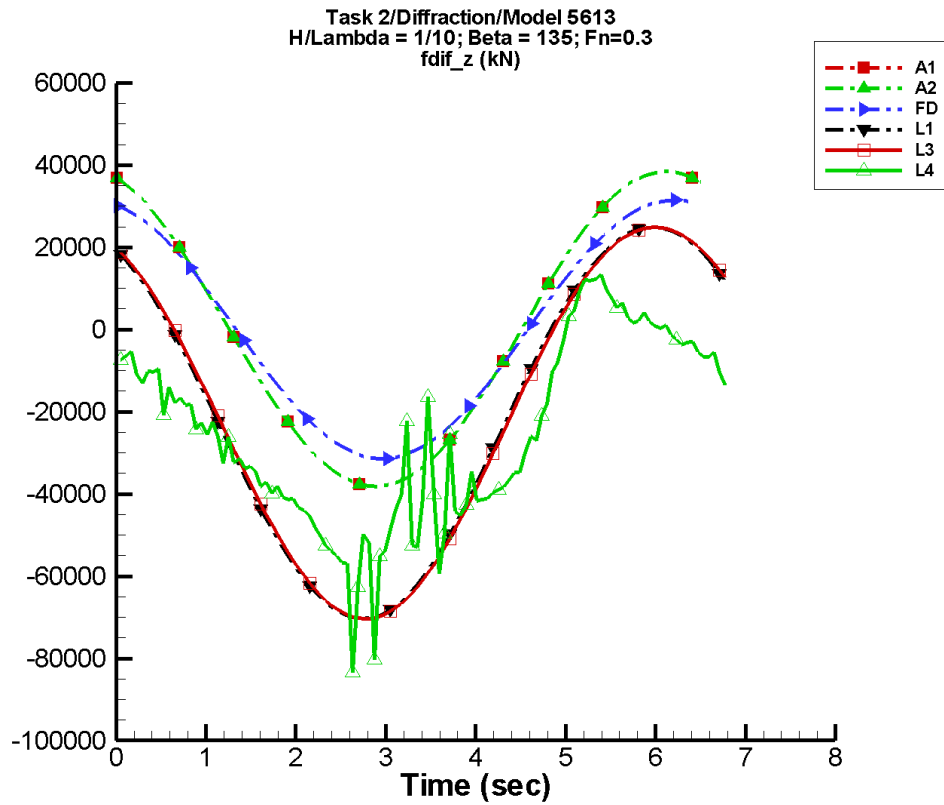
Table G-1749. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 71.5          | 2.56E+04      | 107               | 66.6          | 155               |
| A2   | 71.5          | 2.56E+04      | 107               | 66.6          | 155               |
| FD   | 0.568         | 2.10E+04      | 107               | 0.884         | -124              |
| L1   | -1.19E+04     | 3.17E+04      | 116               | 329.          | -63               |
| L3   | -1.19E+04     | 3.17E+04      | 114               | 329.          | -63               |
| L4   | -1.80E+04     | 2.49E+04      | 107               | 5.10E+03      | -147              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -8.26E+03     | 1.57E+04      | 129               | 1.33E+03      | -119              |

Table G-1750. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.54E+04       | 2.56E+04        | -2.48E+04       | 2.50E+04        |
| A2   | -2.54E+04       | 2.56E+04        | -2.48E+04       | 2.50E+04        |
| FD   | -2.10E+04       | 2.10E+04        | -2.05E+04       | 2.05E+04        |
| L1   | -4.39E+04       | 1.96E+04        | -4.36E+04       | 1.93E+04        |
| L3   | -4.39E+04       | 1.96E+04        | -4.36E+04       | 1.93E+04        |
| L4   | -4.28E+04       | 2.07E+04        | -4.23E+04       | 1.16E+04        |
| NF   | —               | —               | —               | —               |
| NS   | -2.48E+04       | 1.02E+04        | -2.41E+04       | 9.47E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-876. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

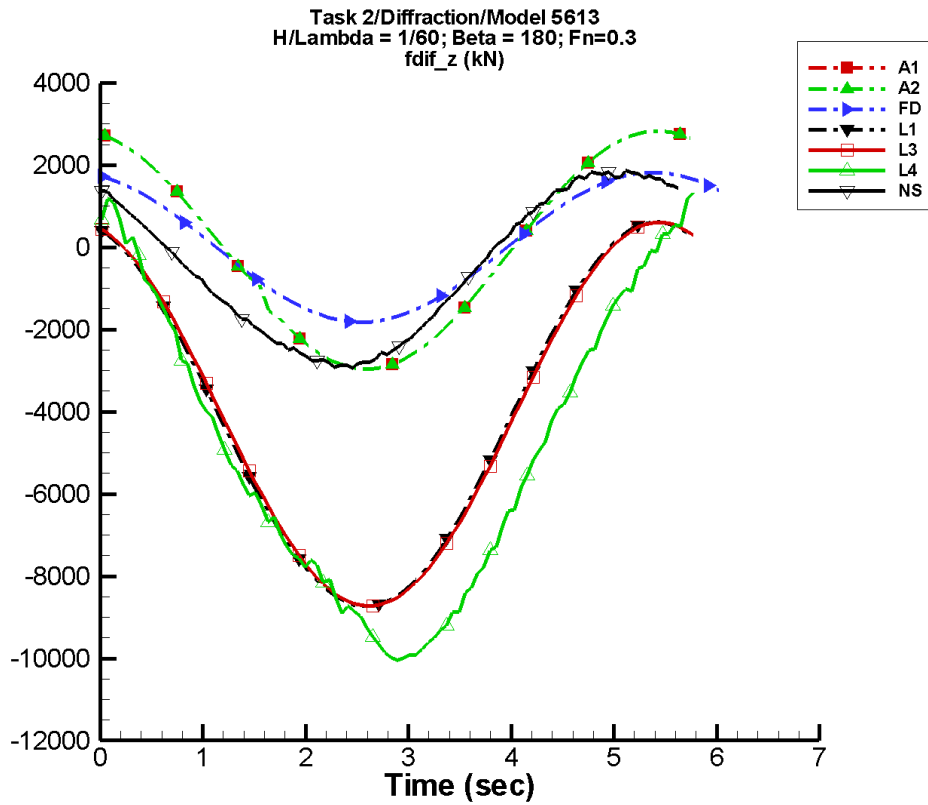
Table G-1751. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | 107.          | 3.85E+04      | 107               | 100.          | 155               |
| A2   | 107.          | 3.85E+04      | 107               | 100.          | 155               |
| FD   | 0.852         | 3.15E+04      | 107               | 1.33          | -124              |
| L1   | -2.21E+04     | 4.76E+04      | 116               | 740.          | -63               |
| L3   | -2.21E+04     | 4.76E+04      | 114               | 740.          | -63               |
| L4   | -2.59E+04     | 2.86E+04      | 116               | 3.61E+03      | -151              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1752. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -3.81E+04       | 3.84E+04        | -3.73E+04       | 3.75E+04        |
| A2   | -3.81E+04       | 3.84E+04        | -3.73E+04       | 3.75E+04        |
| FD   | -3.15E+04       | 3.15E+04        | -3.07E+04       | 3.07E+04        |
| L1   | -7.04E+04       | 2.49E+04        | -6.99E+04       | 2.45E+04        |
| L3   | -7.04E+04       | 2.49E+04        | -6.99E+04       | 2.45E+04        |
| L4   | -8.34E+04       | 1.33E+04        | -6.17E+04       | 1.02E+04        |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-877. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1753. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

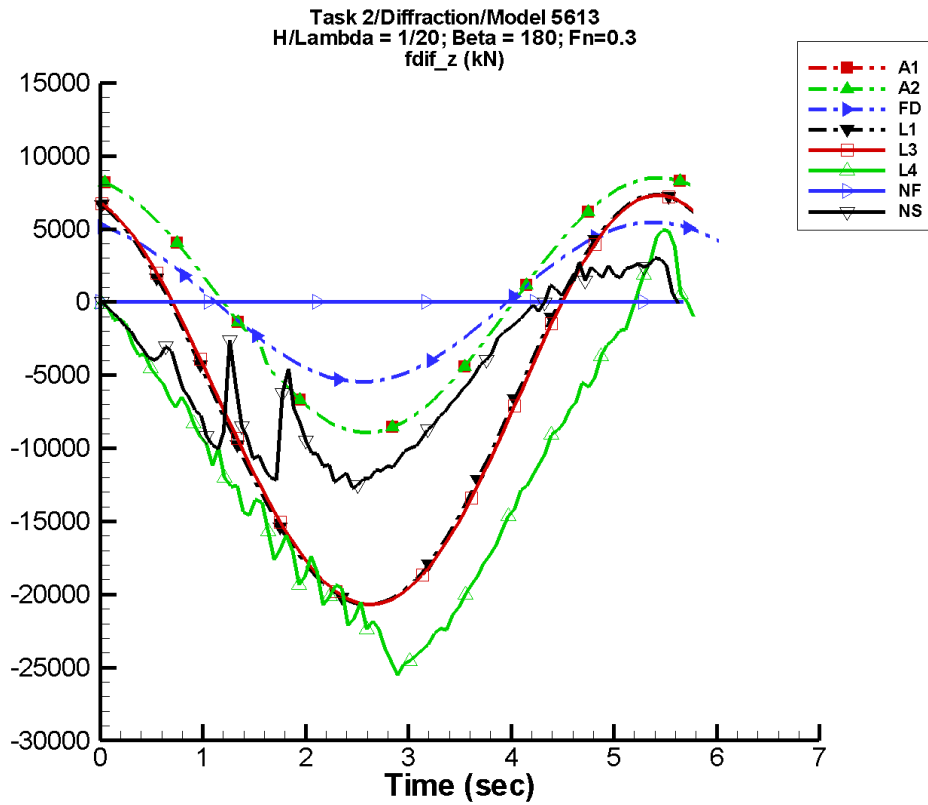
| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -30.9         | 2.90E+03      | 97                | 46.6          | -71               |
| A2   | -30.9         | 2.90E+03      | 97                | 46.6          | -71               |
| FD   | -2.11         | 1.82E+03      | 72                | 2.41          | 35                |
| L1   | -4.10E+03     | 4.67E+03      | 92                | 38.2          | 116               |
| L3   | -4.10E+03     | 4.66E+03      | 90                | 38.2          | 116               |
| L4   | -5.03E+03     | 4.90E+03      | 78                | 512.          | 92                |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -497.         | 2.35E+03      | 125               | 90.4          | -109              |

Table G-1754. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -2.96E+03       | 2.83E+03        | -2.87E+03       | 2.74E+03        |
| A2   | -2.96E+03       | 2.83E+03        | -2.87E+03       | 2.74E+03        |
| FD   | -1.82E+03       | 1.82E+03        | -1.76E+03       | 1.76E+03        |
| L1   | -8.73E+03       | 614.            | -8.68E+03       | 560.            |
| L3   | -8.73E+03       | 605.            | -8.68E+03       | 551.            |
| L4   | -1.00E+04       | 1.34E+03        | -9.88E+03       | 764.            |
| NF   | —               | —               | —               | —               |
| NS   | -2.95E+03       | 1.87E+03        | -2.85E+03       | 1.79E+03        |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-878. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

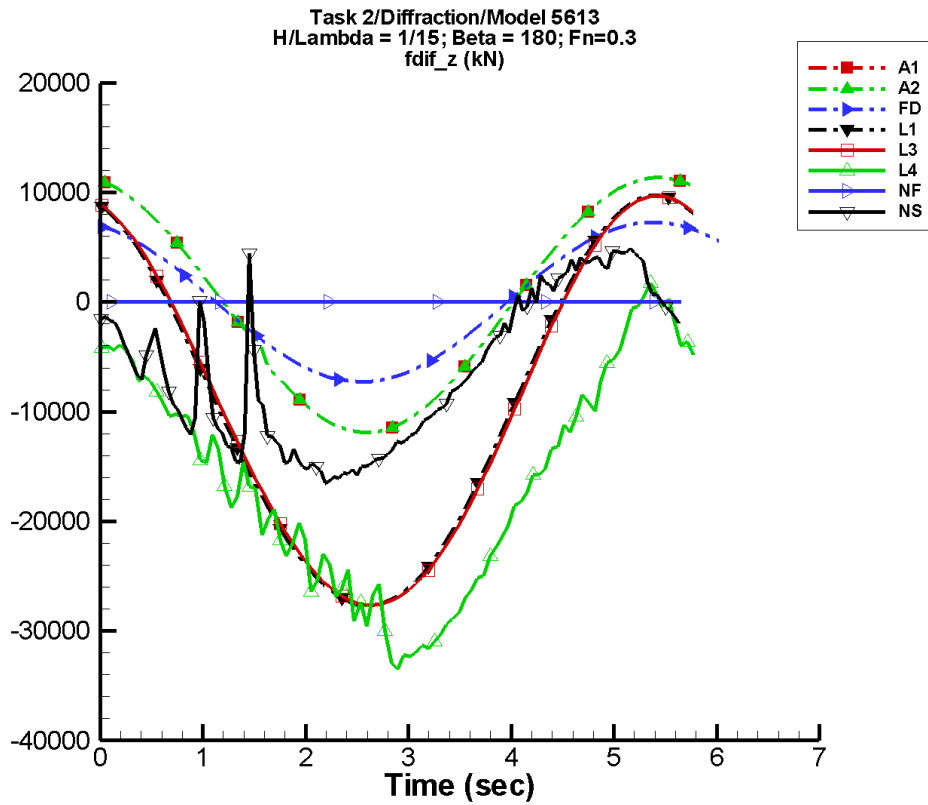
Table G-1755. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -92.9         | 8.71E+03      | 97                | 140.          | -71               |
| A2   | -92.9         | 8.71E+03      | 97                | 140.          | -71               |
| FD   | -6.34         | 5.46E+03      | 72                | 7.23          | 35                |
| L1   | -6.97E+03     | 1.40E+04      | 92                | 310.          | 119               |
| L3   | -6.97E+03     | 1.40E+04      | 90                | 310.          | 119               |
| L4   | -1.21E+04     | 1.15E+04      | 81                | 1.46E+03      | 132               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -4.93E+03     | 6.86E+03      | 130               | 961.          | -155              |

Table G-1756. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -8.92E+03       | 8.51E+03        | -8.64E+03       | 8.25E+03        |
| A2   | -8.92E+03       | 8.51E+03        | -8.64E+03       | 8.25E+03        |
| FD   | -5.46E+03       | 5.46E+03        | -5.29E+03       | 5.27E+03        |
| L1   | -2.07E+04       | 7.34E+03        | -2.06E+04       | 7.17E+03        |
| L3   | -2.07E+04       | 7.32E+03        | -2.05E+04       | 7.15E+03        |
| L4   | -2.55E+04       | 4.94E+03        | -2.42E+04       | 2.88E+03        |
| NF   | —               | —               | —               | —               |
| NS   | -1.27E+04       | 3.00E+03        | -1.22E+04       | 2.41E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-879. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

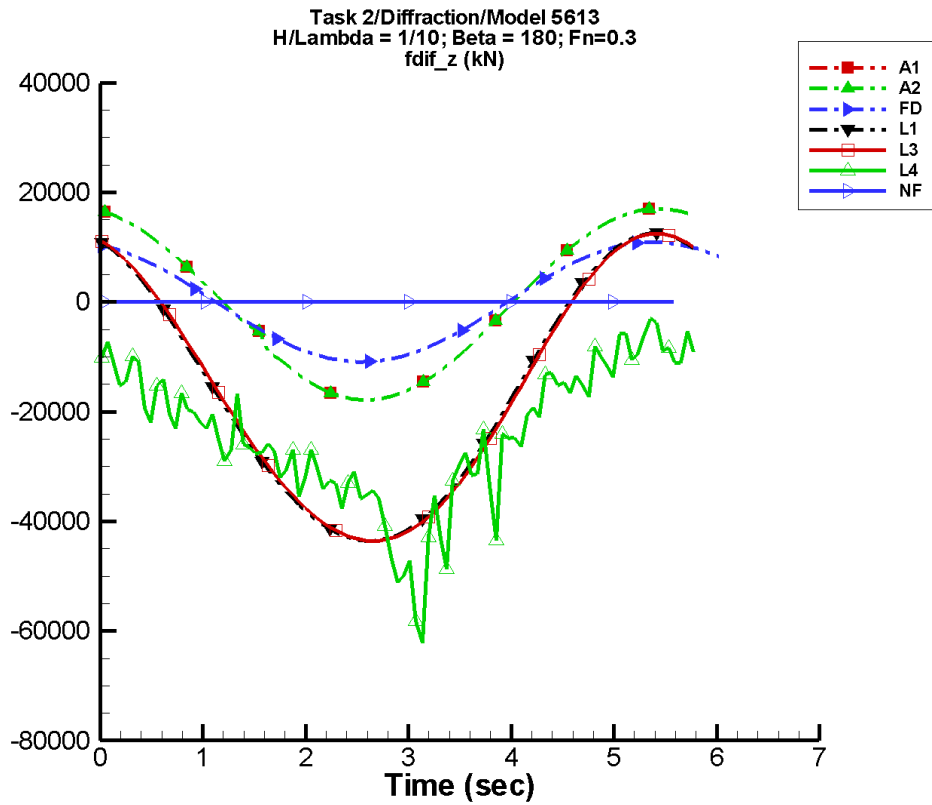
Table G-1757. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -124.         | 1.16E+04      | 97                | 187.          | -71               |
| A2   | -124.         | 1.16E+04      | 97                | 187.          | -71               |
| FD   | -8.45         | 7.28E+03      | 72                | 9.64          | 35                |
| L1   | -9.47E+03     | 1.87E+04      | 92                | 543.          | 119               |
| L3   | -9.47E+03     | 1.86E+04      | 90                | 543.          | 119               |
| L4   | -1.68E+04     | 1.35E+04      | 79                | 2.11E+03      | 151               |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | -6.37E+03     | 9.00E+03      | 135               | 1.74E+03      | -129              |

Table G-1758. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.19E+04       | 1.14E+04        | -1.15E+04       | 1.10E+04        |
| A2   | -1.19E+04       | 1.14E+04        | -1.15E+04       | 1.10E+04        |
| FD   | -7.28E+03       | 7.27E+03        | -7.05E+03       | 7.03E+03        |
| L1   | -2.77E+04       | 9.73E+03        | -2.75E+04       | 9.50E+03        |
| L3   | -2.77E+04       | 9.69E+03        | -2.75E+04       | 9.46E+03        |
| L4   | -3.35E+04       | 1.77E+03        | -3.20E+04       | -195.           |
| NF   | —               | —               | —               | —               |
| NS   | -1.66E+04       | 4.93E+03        | -1.59E+04       | 4.36E+03        |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-880. Time history of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

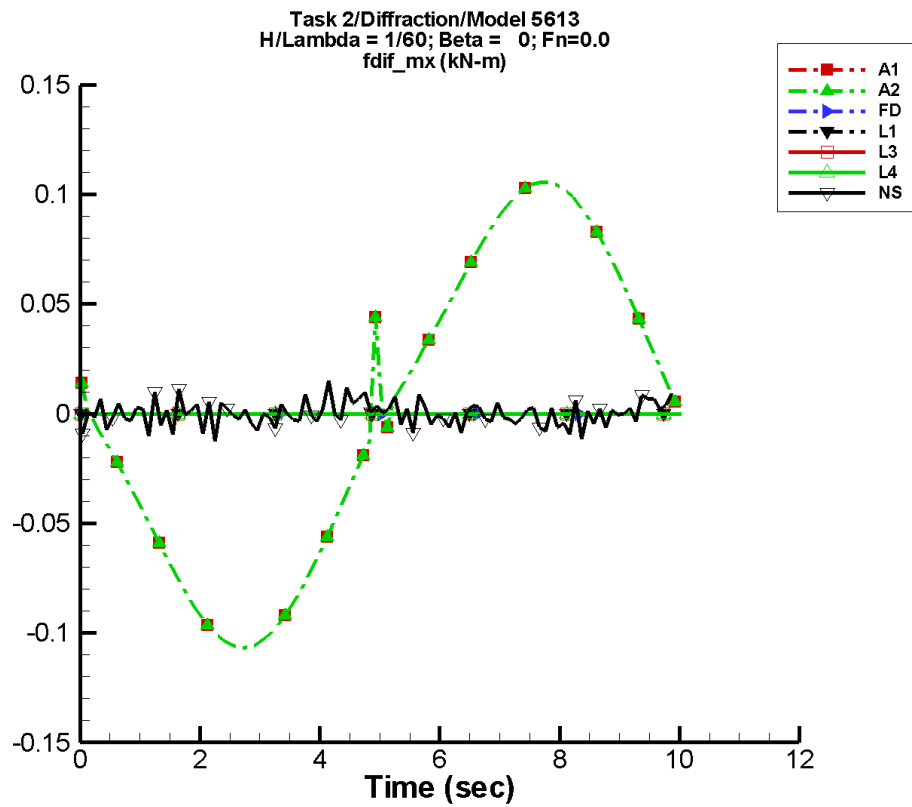
Table G-1759. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN) | $a_1$<br>(kN) | $\Phi_1$<br>(deg) | $a_2$<br>(kN) | $\Phi_2$<br>(deg) |
|------|---------------|---------------|-------------------|---------------|-------------------|
| A1   | -186.         | 1.74E+04      | 97                | 280.          | -71               |
| A2   | -186.         | 1.74E+04      | 97                | 280.          | -71               |
| FD   | -12.7         | 1.09E+04      | 72                | 14.5          | 35                |
| L1   | -1.66E+04     | 2.80E+04      | 92                | 1.21E+03      | 119               |
| L3   | -1.66E+04     | 2.80E+04      | 90                | 1.20E+03      | 119               |
| L4   | -2.45E+04     | 1.56E+04      | 84                | 4.27E+03      | -179              |
| NF   | —             | —             | —                 | —             | —                 |
| NS   | —             | —             | —                 | —             | —                 |

Table G-1760. Minimum and maximum of  $F_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered      |                 | Filtered        |                 |
|------|-----------------|-----------------|-----------------|-----------------|
|      | Minimum<br>(kN) | Maximum<br>(kN) | Minimum<br>(kN) | Maximum<br>(kN) |
| A1   | -1.79E+04       | 1.70E+04        | -1.73E+04       | 1.65E+04        |
| A2   | -1.79E+04       | 1.70E+04        | -1.73E+04       | 1.65E+04        |
| FD   | -1.09E+04       | 1.09E+04        | -1.06E+04       | 1.05E+04        |
| L1   | -4.36E+04       | 1.25E+04        | -4.33E+04       | 1.22E+04        |
| L3   | -4.36E+04       | 1.25E+04        | -4.33E+04       | 1.21E+04        |
| L4   | -6.43E+04       | -2.97E+03       | -4.95E+04       | -7.07E+03       |
| NF   | —               | —               | —               | —               |
| NS   | —               | —               | —               | —               |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-881. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1761. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

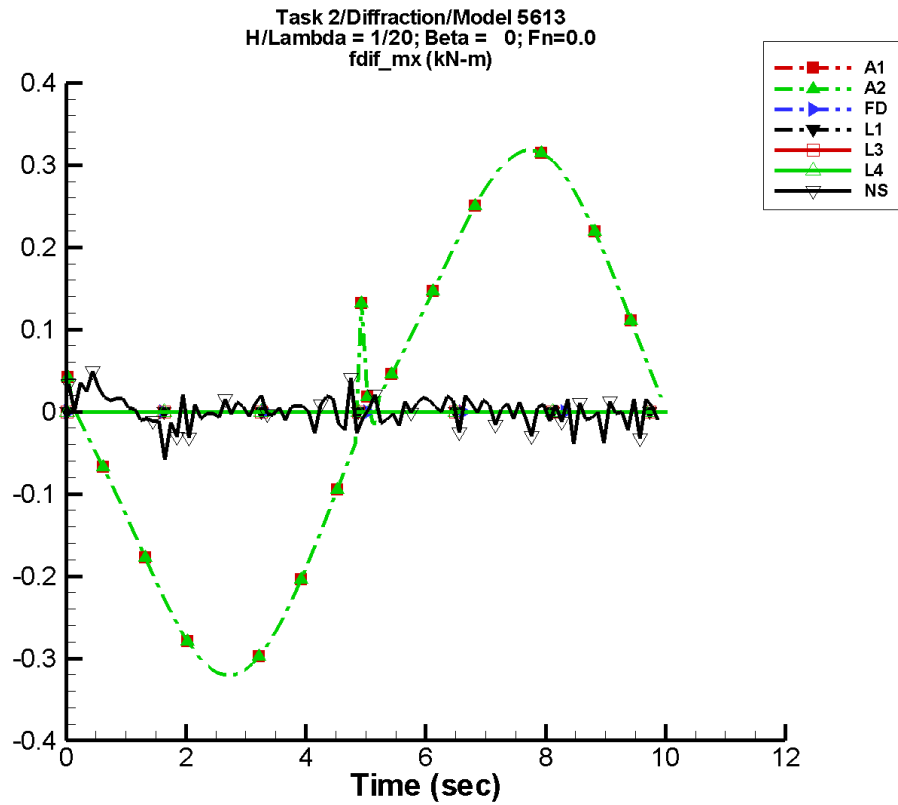
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.79E-04        | 9.84E-02        | 169               | 7.11E-04        | 24                |
| A2   | 6.79E-04        | 9.84E-02        | 169               | 7.11E-04        | 24                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 9.24E-05        | 1.09E-03        | -37               | 2.26E-03        | 106               |

Table G-1762. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.107            | 0.106             | -0.105            | 0.104             |
| A2   | -0.107            | 0.106             | -0.105            | 0.104             |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.26E-02         | 1.49E-02          | -5.19E-03         | 5.14E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-882. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

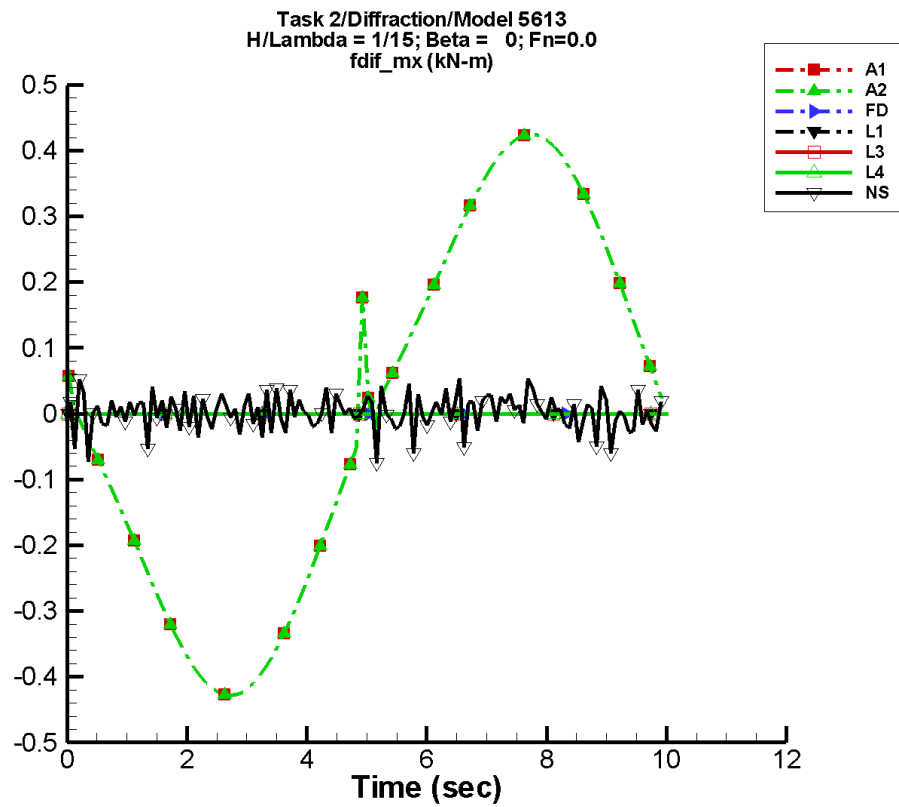
Table G-1763. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.04E-03        | 0.296           | 169               | 2.14E-03        | 24                |
| A2   | 2.04E-03        | 0.296           | 169               | 2.14E-03        | 24                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.48E-03        | 1.17E-03        | 81                | 6.33E-03        | 52                |

Table G-1764. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.321            | 0.318             | -0.316            | 0.313             |
| A2   | -0.321            | 0.318             | -0.316            | 0.313             |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.85E-02         | 4.96E-02          | -1.75E-02         | 2.98E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-883. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

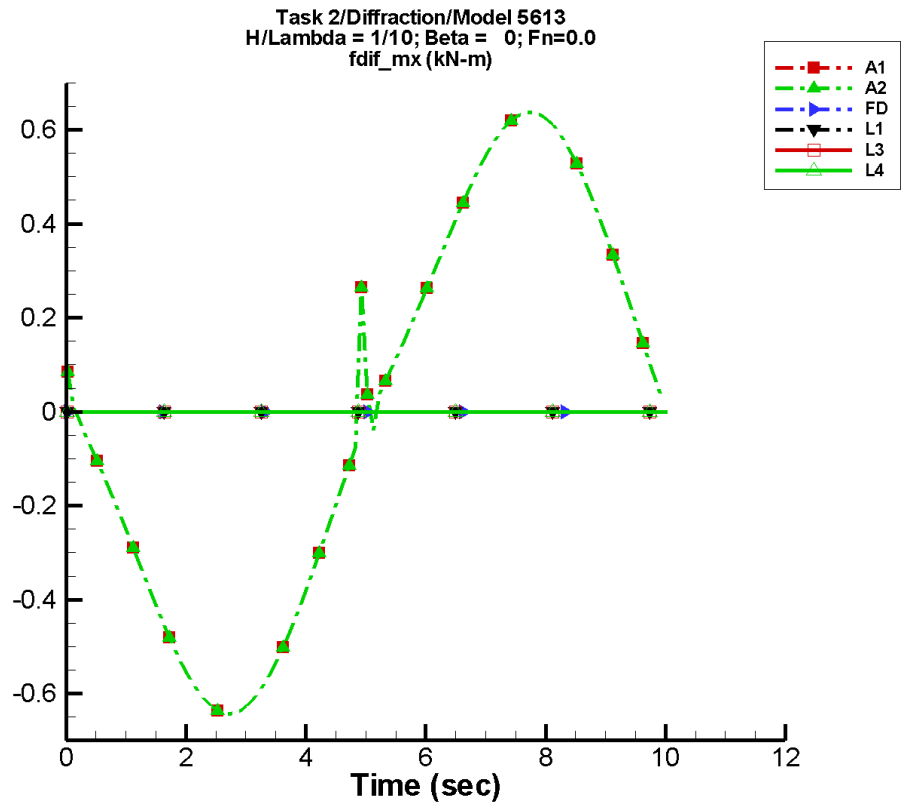
Table G-1765. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.73E-03        | 0.395           | 169               | 2.85E-03        | 24                |
| A2   | 2.73E-03        | 0.395           | 169               | 2.85E-03        | 24                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.33E-03        | 2.67E-03        | -138              | 4.71E-03        | -57               |

Table G-1766. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.428            | 0.424             | -0.422            | 0.418             |
| A2   | -0.428            | 0.424             | -0.422            | 0.418             |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.27E-02         | 7.42E-02          | -8.85E-03         | 3.68E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-884. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

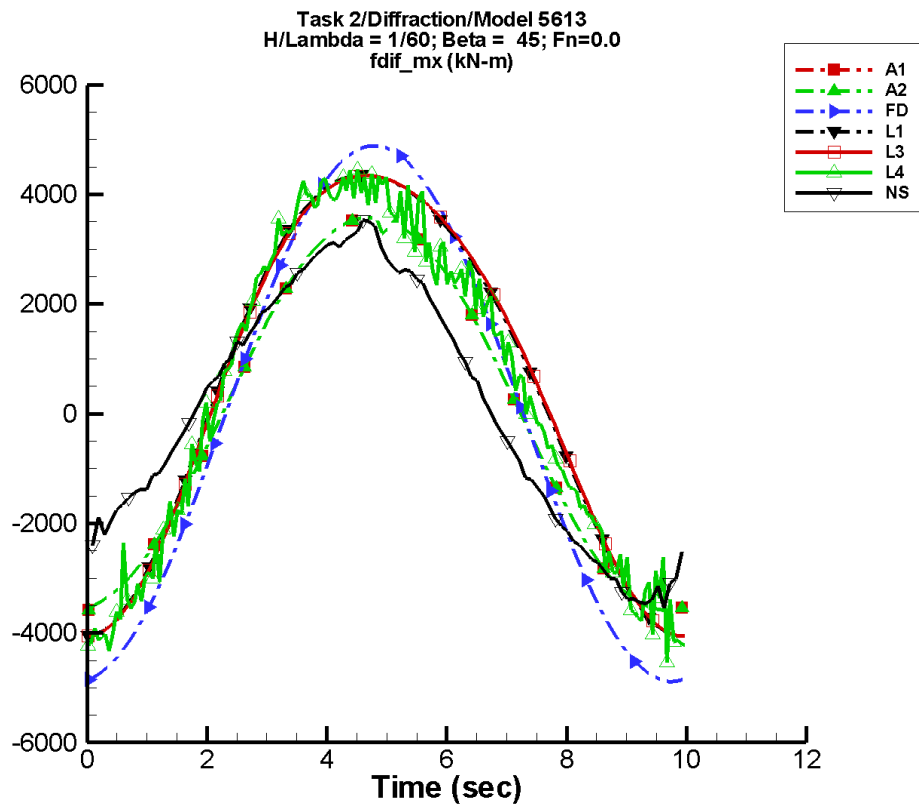
Table G-1767. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.09E-03        | 0.593           | 169               | 4.28E-03        | 24                |
| A2   | 4.09E-03        | 0.593           | 169               | 4.28E-03        | 24                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1768. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.643            | 0.637             | -0.634            | 0.627             |
| A2   | -0.643            | 0.637             | -0.634            | 0.627             |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-885. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1769. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

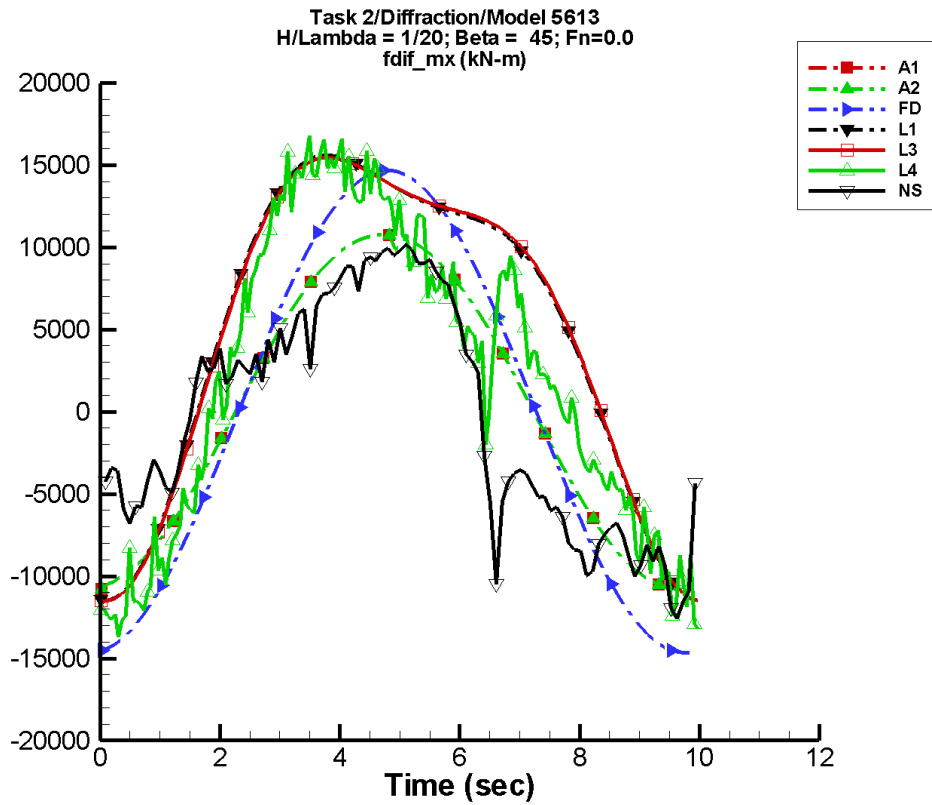
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 0.500           | 3.60E+03        | -86               | 3.75            | -168              |
| A2   | 0.500           | 3.60E+03        | -86               | 3.75            | -168              |
| FD   | 1.88            | 4.89E+03        | -91               | 2.23            | -56               |
| L1   | 539.            | 4.18E+03        | -89               | 440.            | -115              |
| L3   | 539.            | 4.18E+03        | -90               | 440.            | -115              |
| L4   | 359.            | 4.04E+03        | -86               | 484.            | -140              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 50.4            | 3.08E+03        | -66               | 206.            | 47                |

Table G-1770. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.59E+03         | 3.58E+03          | -3.53E+03         | 3.51E+03          |
| A2   | -3.59E+03         | 3.58E+03          | -3.53E+03         | 3.51E+03          |
| FD   | -4.89E+03         | 4.89E+03          | -4.84E+03         | 4.84E+03          |
| L1   | -4.06E+03         | 4.36E+03          | -4.06E+03         | 4.35E+03          |
| L3   | -4.06E+03         | 4.34E+03          | -4.07E+03         | 4.33E+03          |
| L4   | -4.63E+03         | 4.50E+03          | -4.21E+03         | 4.19E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.55E+03         | 3.53E+03          | -3.36E+03         | 3.28E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-886. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

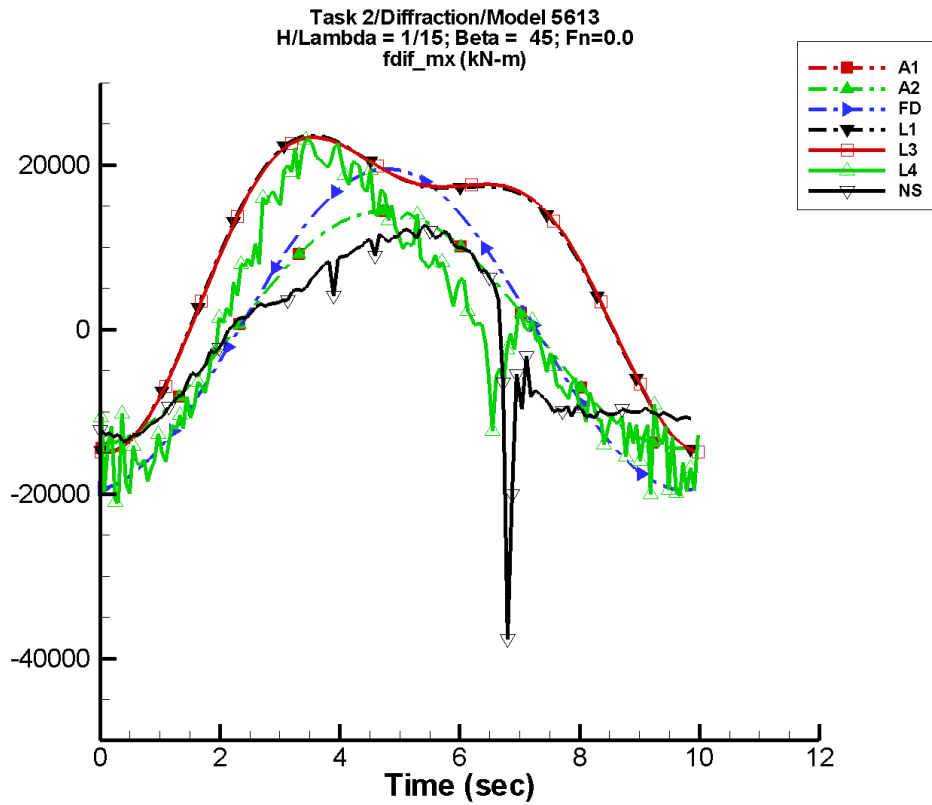
Table G-1771. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.50            | 1.08E+04        | -86               | 11.3            | -168              |
| A2   | 1.50            | 1.08E+04        | -86               | 11.3            | -168              |
| FD   | 5.66            | 1.47E+04        | -91               | 6.69            | -56               |
| L1   | 4.84E+03        | 1.25E+04        | -89               | 3.96E+03        | -115              |
| L3   | 4.84E+03        | 1.25E+04        | -90               | 3.96E+03        | -115              |
| L4   | 2.10E+03        | 1.20E+04        | -82               | 3.92E+03        | -151              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -355.           | 9.09E+03        | -59               | 1.47E+03        | 66                |

Table G-1772. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.08E+04         | 1.08E+04          | -1.06E+04         | 1.06E+04          |
| A2   | -1.08E+04         | 1.08E+04          | -1.06E+04         | 1.06E+04          |
| FD   | -1.47E+04         | 1.47E+04          | -1.45E+04         | 1.45E+04          |
| L1   | -1.15E+04         | 1.56E+04          | -1.15E+04         | 1.55E+04          |
| L3   | -1.15E+04         | 1.54E+04          | -1.16E+04         | 1.54E+04          |
| L4   | -1.37E+04         | 1.70E+04          | -1.24E+04         | 1.54E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.26E+04         | 1.02E+04          | -9.92E+03         | 9.59E+03          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-887. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

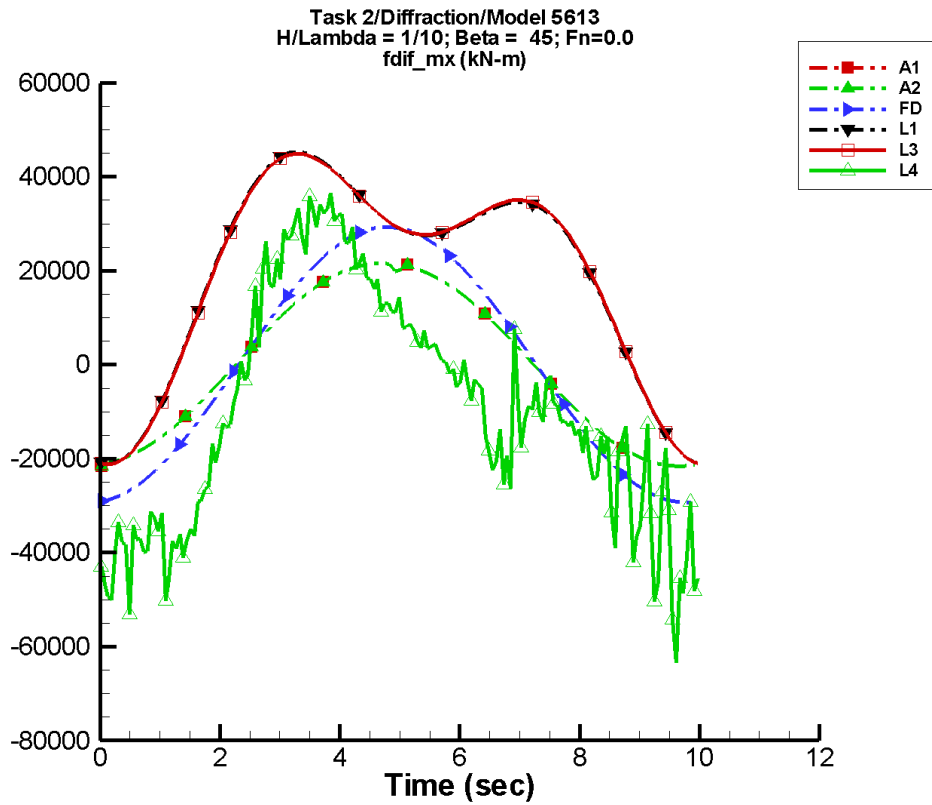
Table G-1773. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.01            | 1.45E+04        | -86               | 15.1            | -168              |
| A2   | 2.01            | 1.45E+04        | -86               | 15.1            | -168              |
| FD   | 7.54            | 1.96E+04        | -91               | 8.92            | -56               |
| L1   | 8.61E+03        | 1.67E+04        | -89               | 7.04E+03        | -115              |
| L3   | 8.61E+03        | 1.67E+04        | -90               | 7.04E+03        | -115              |
| L4   | -239.           | 1.72E+04        | -70               | 5.67E+03        | -169              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.89E+03       | 1.23E+04        | -74               | 1.80E+03        | 99                |

Table G-1774. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.44E+04         | 1.44E+04          | -1.42E+04         | 1.41E+04          |
| A2   | -1.44E+04         | 1.44E+04          | -1.42E+04         | 1.41E+04          |
| FD   | -1.95E+04         | 1.96E+04          | -1.94E+04         | 1.94E+04          |
| L1   | -1.49E+04         | 2.36E+04          | -1.50E+04         | 2.35E+04          |
| L3   | -1.49E+04         | 2.34E+04          | -1.50E+04         | 2.33E+04          |
| L4   | -2.15E+04         | 2.49E+04          | -1.75E+04         | 2.16E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.76E+04         | 1.28E+04          | -1.30E+04         | 1.21E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-888. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

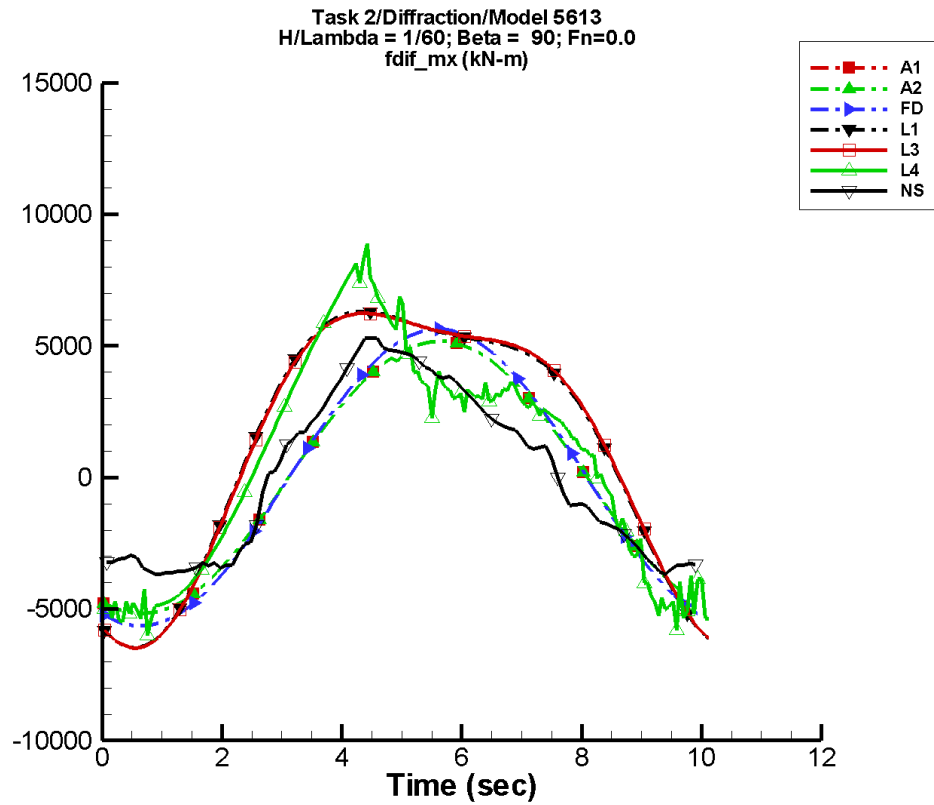
Table G-1775. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.01            | 2.17E+04        | -86               | 22.6            | -168              |
| A2   | 3.01            | 2.17E+04        | -86               | 22.6            | -168              |
| FD   | 11.3            | 2.93E+04        | -91               | 13.4            | -56               |
| L1   | 1.94E+04        | 2.51E+04        | -89               | 1.59E+04        | -115              |
| L3   | 1.94E+04        | 2.51E+04        | -90               | 1.59E+04        | -115              |
| L4   | -9.48E+03       | 2.95E+04        | -77               | 1.41E+04        | -168              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1776. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.16E+04         | 2.16E+04          | -2.13E+04         | 2.11E+04          |
| A2   | -2.16E+04         | 2.16E+04          | -2.13E+04         | 2.11E+04          |
| FD   | -2.93E+04         | 2.93E+04          | -2.90E+04         | 2.90E+04          |
| L1   | -2.11E+04         | 4.53E+04          | -2.12E+04         | 4.51E+04          |
| L3   | -2.12E+04         | 4.49E+04          | -2.12E+04         | 4.47E+04          |
| L4   | -6.33E+04         | 3.83E+04          | -4.48E+04         | 3.27E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-889. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1777. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

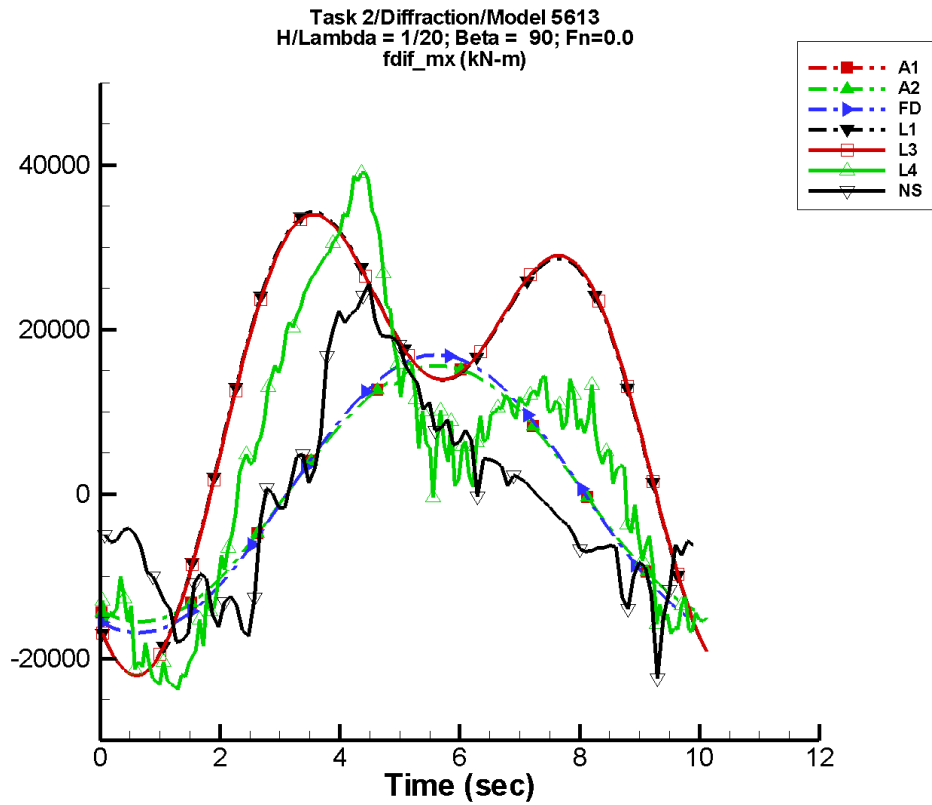
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.30            | 5.18E+03        | -118              | 6.49            | 164               |
| A2   | 4.30            | 5.18E+03        | -118              | 6.49            | 164               |
| FD   | 1.18            | 5.64E+03        | -121              | 2.41            | -86               |
| L1   | 1.39E+03        | 6.06E+03        | -109              | 1.84E+03        | -146              |
| L3   | 1.39E+03        | 6.06E+03        | -110              | 1.84E+03        | -146              |
| L4   | 713.            | 5.41E+03        | -100              | 1.40E+03        | -175              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 38.5            | 4.21E+03        | -101              | 926.            | 112               |

Table G-1778. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.18E+03         | 5.18E+03          | -5.12E+03         | 5.13E+03          |
| A2   | -5.18E+03         | 5.18E+03          | -5.12E+03         | 5.13E+03          |
| FD   | -5.64E+03         | 5.64E+03          | -5.58E+03         | 5.58E+03          |
| L1   | -6.47E+03         | 6.31E+03          | -6.42E+03         | 6.29E+03          |
| L3   | -6.48E+03         | 6.24E+03          | -6.43E+03         | 6.22E+03          |
| L4   | -6.19E+03         | 8.89E+03          | -5.31E+03         | 7.87E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.69E+03         | 5.31E+03          | -3.57E+03         | 5.02E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-890. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

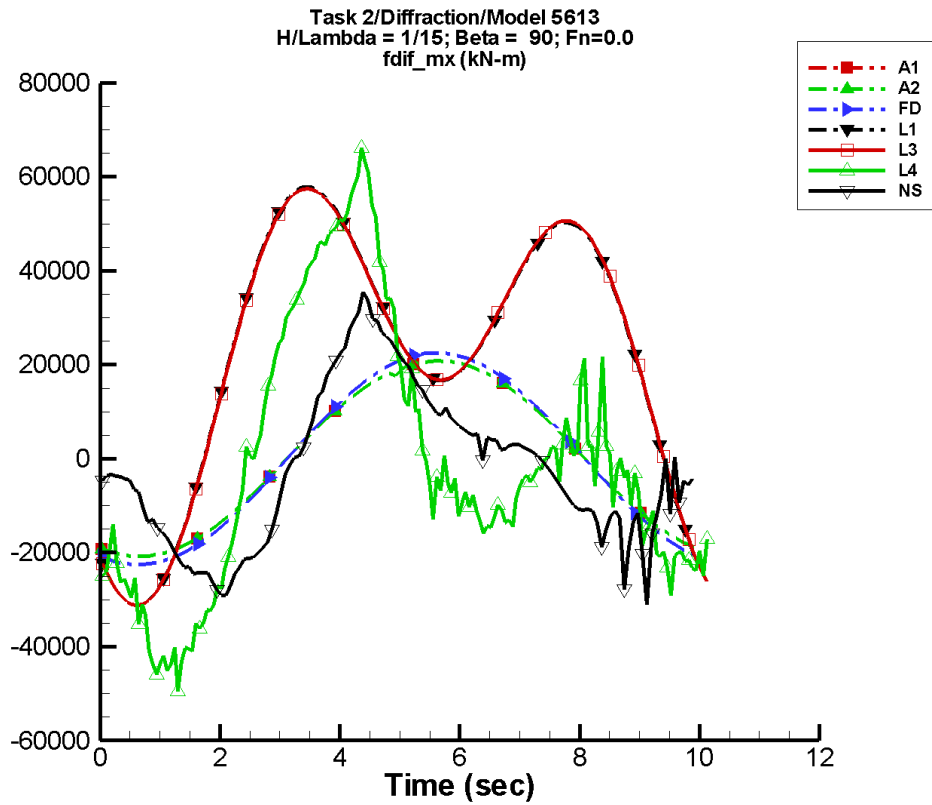
Table G-1779. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 12.9            | 1.56E+04        | -118              | 19.5            | 164               |
| A2   | 12.9            | 1.56E+04        | -118              | 19.5            | 164               |
| FD   | 3.55            | 1.69E+04        | -121              | 7.23            | -86               |
| L1   | 1.25E+04        | 1.82E+04        | -109              | 1.65E+04        | -146              |
| L3   | 1.25E+04        | 1.82E+04        | -110              | 1.65E+04        | -146              |
| L4   | 4.48E+03        | 1.85E+04        | -99               | 1.18E+04        | -180              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -613.           | 1.32E+04        | -96               | 6.95E+03        | 111               |

Table G-1780. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.56E+04         | 1.56E+04          | -1.54E+04         | 1.54E+04          |
| A2   | -1.56E+04         | 1.56E+04          | -1.54E+04         | 1.54E+04          |
| FD   | -1.69E+04         | 1.69E+04          | -1.67E+04         | 1.67E+04          |
| L1   | -2.21E+04         | 3.43E+04          | -2.18E+04         | 3.40E+04          |
| L3   | -2.21E+04         | 3.40E+04          | -2.18E+04         | 3.37E+04          |
| L4   | -2.58E+04         | 3.91E+04          | -2.31E+04         | 3.73E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.24E+04         | 2.56E+04          | -1.53E+04         | 2.25E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-891. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

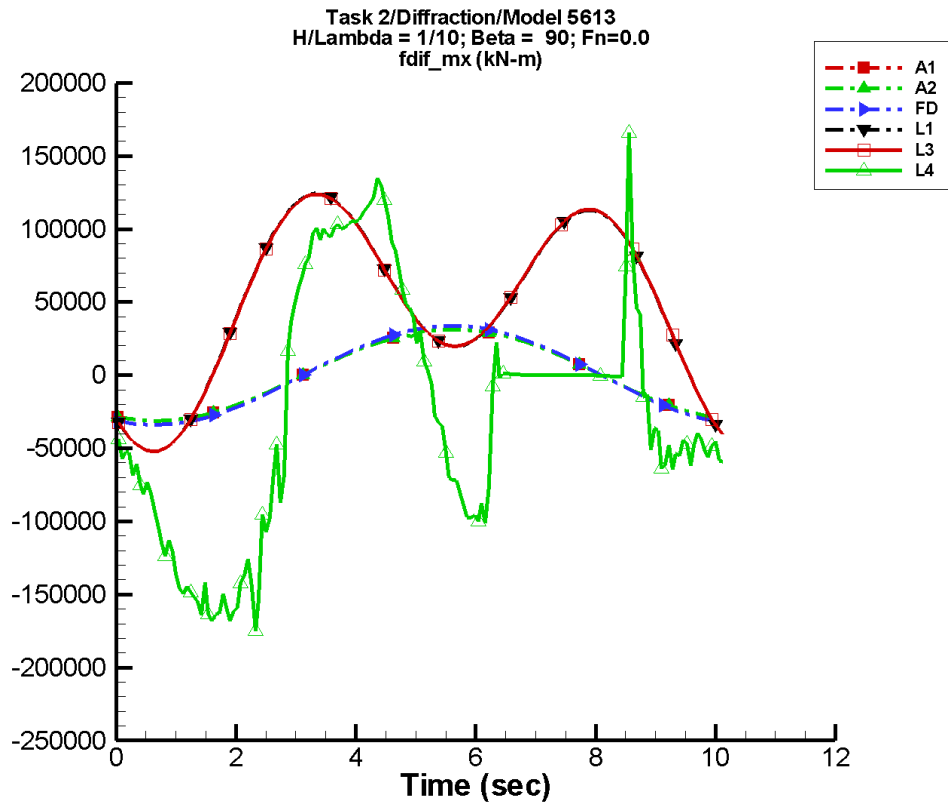
Table G-1781. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 17.3            | 2.08E+04        | -118              | 26.1            | 164               |
| A2   | 17.3            | 2.08E+04        | -118              | 26.1            | 164               |
| FD   | 4.74            | 2.25E+04        | -121              | 9.64            | -86               |
| L1   | 2.22E+04        | 2.42E+04        | -109              | 2.94E+04        | -146              |
| L3   | 2.22E+04        | 2.42E+04        | -110              | 2.94E+04        | -146              |
| L4   | -531.           | 2.63E+04        | -87               | 2.57E+04        | 164               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.39E+03       | 1.69E+04        | -103              | 1.26E+04        | 104               |

Table G-1782. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.08E+04         | 2.08E+04          | -2.06E+04         | 2.06E+04          |
| A2   | -2.08E+04         | 2.08E+04          | -2.06E+04         | 2.06E+04          |
| FD   | -2.25E+04         | 2.25E+04          | -2.23E+04         | 2.23E+04          |
| L1   | -3.12E+04         | 5.79E+04          | -3.07E+04         | 5.74E+04          |
| L3   | -3.13E+04         | 5.74E+04          | -3.08E+04         | 5.70E+04          |
| L4   | -4.95E+04         | 6.61E+04          | -4.45E+04         | 5.85E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.10E+04         | 3.55E+04          | -2.64E+04         | 3.02E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-892. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

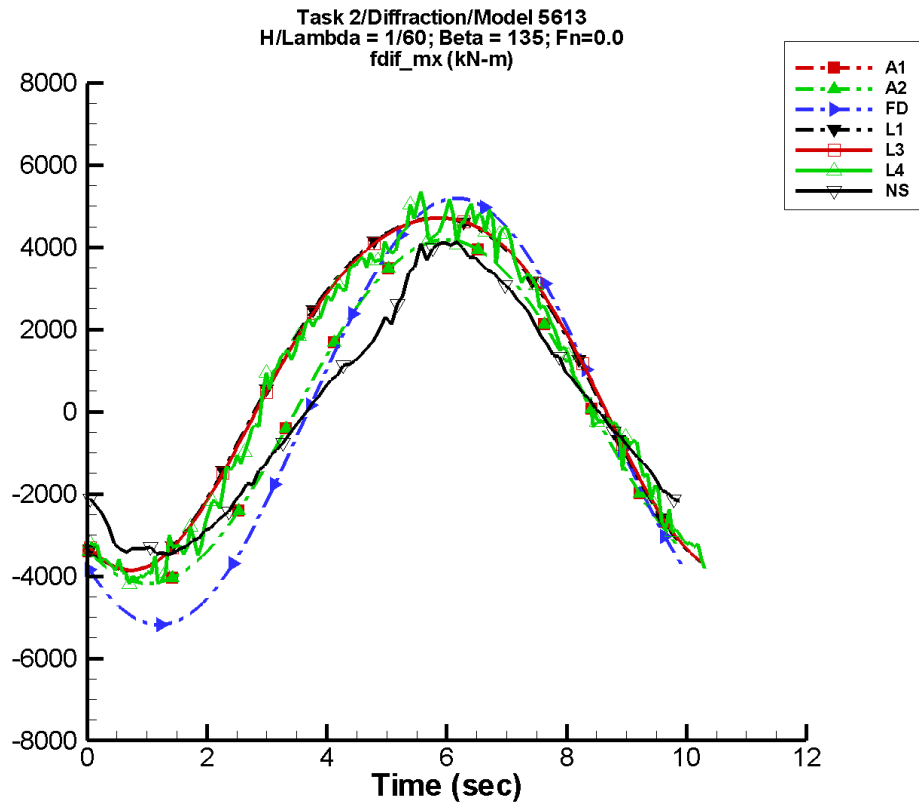
Table G-1783. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 25.9            | 3.12E+04        | -118              | 39.1            | 164               |
| A2   | 25.9            | 3.12E+04        | -118              | 39.1            | 164               |
| FD   | 7.10            | 3.38E+04        | -121              | 14.5            | -86               |
| L1   | 5.00E+04        | 3.63E+04        | -109              | 6.62E+04        | -146              |
| L3   | 5.00E+04        | 3.63E+04        | -110              | 6.62E+04        | -146              |
| L4   | -2.36E+04       | 6.05E+04        | -117              | 8.32E+04        | 157               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1784. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.12E+04         | 3.12E+04          | -3.08E+04         | 3.09E+04          |
| A2   | -3.12E+04         | 3.12E+04          | -3.08E+04         | 3.09E+04          |
| FD   | -3.38E+04         | 3.38E+04          | -3.35E+04         | 3.35E+04          |
| L1   | -5.22E+04         | 1.24E+05          | -5.12E+04         | 1.23E+05          |
| L3   | -5.22E+04         | 1.24E+05          | -5.12E+04         | 1.23E+05          |
| L4   | -1.81E+05         | 1.66E+05          | -1.62E+05         | 1.19E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-893. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1785. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

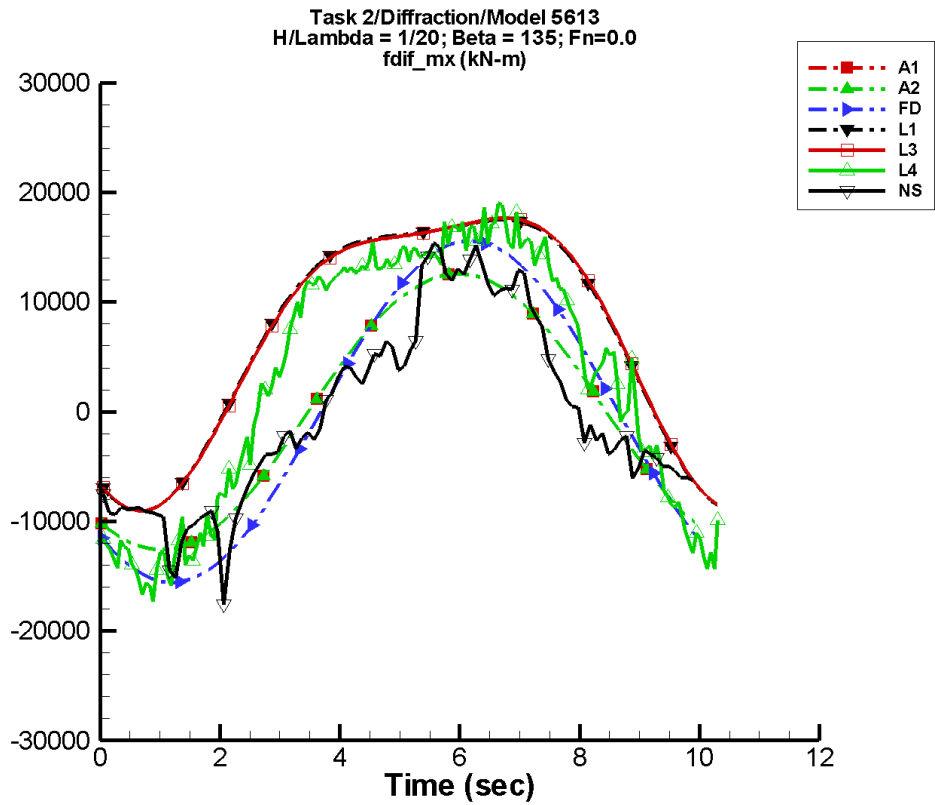
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.02            | 4.20E+03        | -130              | 5.22            | 132               |
| A2   | 6.02            | 4.20E+03        | -130              | 5.22            | 132               |
| FD   | 0.278           | 5.19E+03        | -141              | 2.16            | -108              |
| L1   | 833.            | 4.28E+03        | -122              | 419.            | -141              |
| L3   | 833.            | 4.28E+03        | -123              | 419.            | -141              |
| L4   | 685.            | 4.29E+03        | -124              | 305.            | -150              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 36.2            | 3.47E+03        | -133              | 159.            | 6                 |

Table G-1786. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.18E+03         | 4.18E+03          | -4.14E+03         | 4.14E+03          |
| A2   | -4.18E+03         | 4.18E+03          | -4.14E+03         | 4.14E+03          |
| FD   | -5.19E+03         | 5.19E+03          | -5.14E+03         | 5.14E+03          |
| L1   | -3.86E+03         | 4.71E+03          | -3.84E+03         | 4.70E+03          |
| L3   | -3.85E+03         | 4.72E+03          | -3.84E+03         | 4.71E+03          |
| L4   | -4.32E+03         | 5.35E+03          | -4.01E+03         | 4.74E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.48E+03         | 4.13E+03          | -3.41E+03         | 4.00E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-894. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

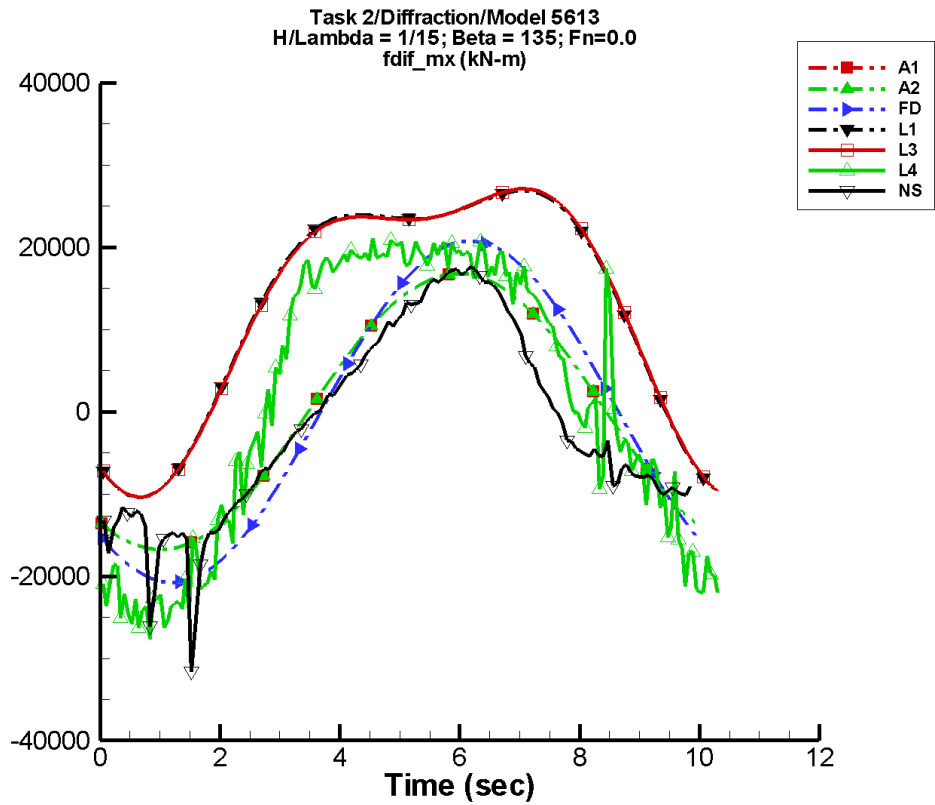
Table G-1787. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 18.1            | 1.26E+04        | -130              | 15.7            | 132               |
| A2   | 18.1            | 1.26E+04        | -130              | 15.7            | 132               |
| FD   | 0.837           | 1.56E+04        | -141              | 6.47            | -108              |
| L1   | 7.48E+03        | 1.28E+04        | -122              | 3.75E+03        | -141              |
| L3   | 7.48E+03        | 1.28E+04        | -123              | 3.75E+03        | -141              |
| L4   | 3.60E+03        | 1.55E+04        | -123              | 3.27E+03        | -151              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -438.           | 1.14E+04        | -130              | 1.49E+03        | 33                |

Table G-1788. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.26E+04         | 1.26E+04          | -1.25E+04         | 1.24E+04          |
| A2   | -1.26E+04         | 1.26E+04          | -1.25E+04         | 1.24E+04          |
| FD   | -1.56E+04         | 1.56E+04          | -1.54E+04         | 1.54E+04          |
| L1   | -9.07E+03         | 1.75E+04          | -8.98E+03         | 1.75E+04          |
| L3   | -9.05E+03         | 1.77E+04          | -8.96E+03         | 1.76E+04          |
| L4   | -1.73E+04         | 1.98E+04          | -1.53E+04         | 1.72E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.76E+04         | 1.54E+04          | -1.14E+04         | 1.36E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-895. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

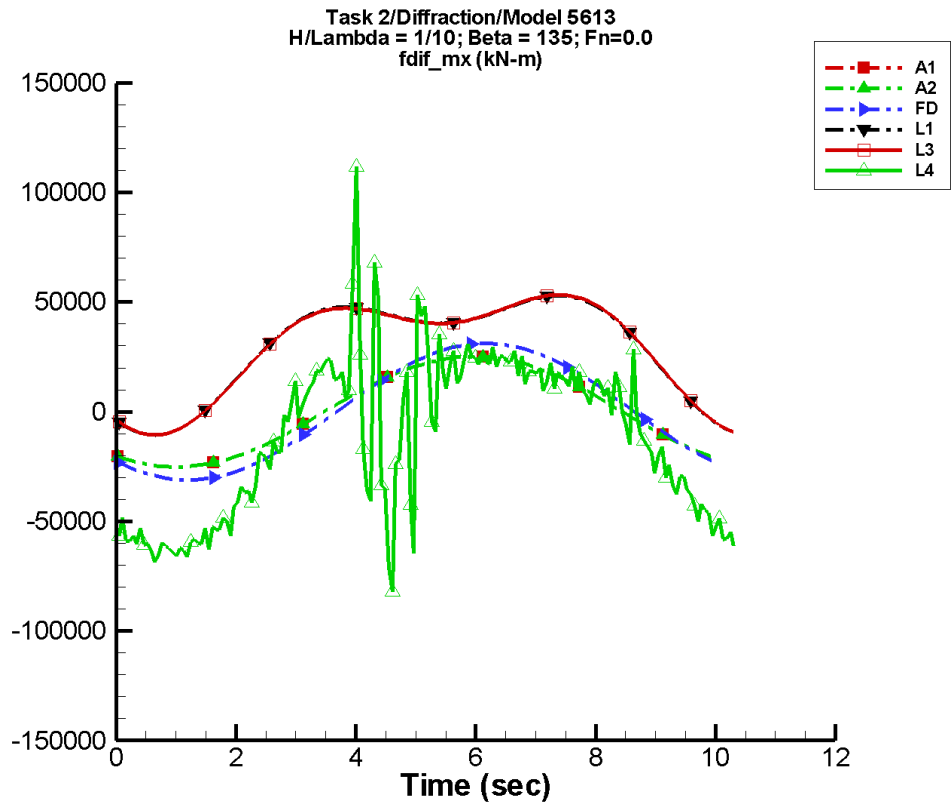
Table G-1789. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 24.2            | 1.69E+04        | -130              | 21.0            | 132               |
| A2   | 24.2            | 1.69E+04        | -130              | 21.0            | 132               |
| FD   | 1.11            | 2.08E+04        | -141              | 8.63            | -108              |
| L1   | 1.33E+04        | 1.71E+04        | -122              | 6.65E+03        | -141              |
| L3   | 1.33E+04        | 1.71E+04        | -123              | 6.65E+03        | -141              |
| L4   | 1.81E+03        | 2.21E+04        | -115              | 4.83E+03        | -176              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.98E+03       | 1.57E+04        | -121              | 2.27E+03        | 64                |

Table G-1790. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.68E+04         | 1.68E+04          | -1.66E+04         | 1.66E+04          |
| A2   | -1.68E+04         | 1.68E+04          | -1.66E+04         | 1.66E+04          |
| FD   | -2.08E+04         | 2.08E+04          | -2.06E+04         | 2.05E+04          |
| L1   | -1.04E+04         | 2.69E+04          | -1.03E+04         | 2.68E+04          |
| L3   | -1.04E+04         | 2.71E+04          | -1.03E+04         | 2.70E+04          |
| L4   | -2.76E+04         | 2.14E+04          | -2.51E+04         | 1.98E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.16E+04         | 1.76E+04          | -1.89E+04         | 1.70E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-896. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

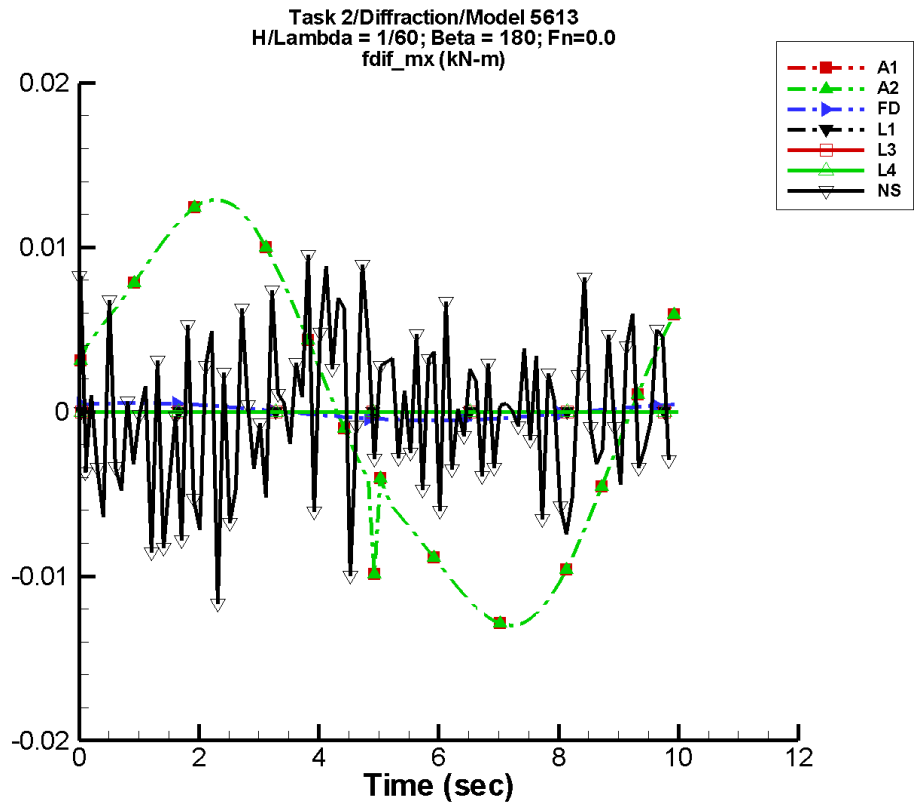
Table G-1791. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 36.2            | 2.53E+04        | -130              | 31.5            | 132               |
| A2   | 36.2            | 2.53E+04        | -130              | 31.5            | 132               |
| FD   | 1.67            | 3.11E+04        | -141              | 12.9            | -108              |
| L1   | 2.99E+04        | 2.56E+04        | -122              | 1.50E+04        | -141              |
| L3   | 2.99E+04        | 2.56E+04        | -123              | 1.50E+04        | -141              |
| L4   | -1.08E+04       | 3.81E+04        | -127              | 1.60E+04        | -144              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1792. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.52E+04         | 2.52E+04          | -2.50E+04         | 2.49E+04          |
| A2   | -2.52E+04         | 2.52E+04          | -2.50E+04         | 2.49E+04          |
| FD   | -3.11E+04         | 3.11E+04          | -3.08E+04         | 3.08E+04          |
| L1   | -1.07E+04         | 5.29E+04          | -1.04E+04         | 5.27E+04          |
| L3   | -1.06E+04         | 5.33E+04          | -1.03E+04         | 5.31E+04          |
| L4   | -8.32E+04         | 1.14E+05          | -6.36E+04         | 2.75E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-897. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G-1793. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

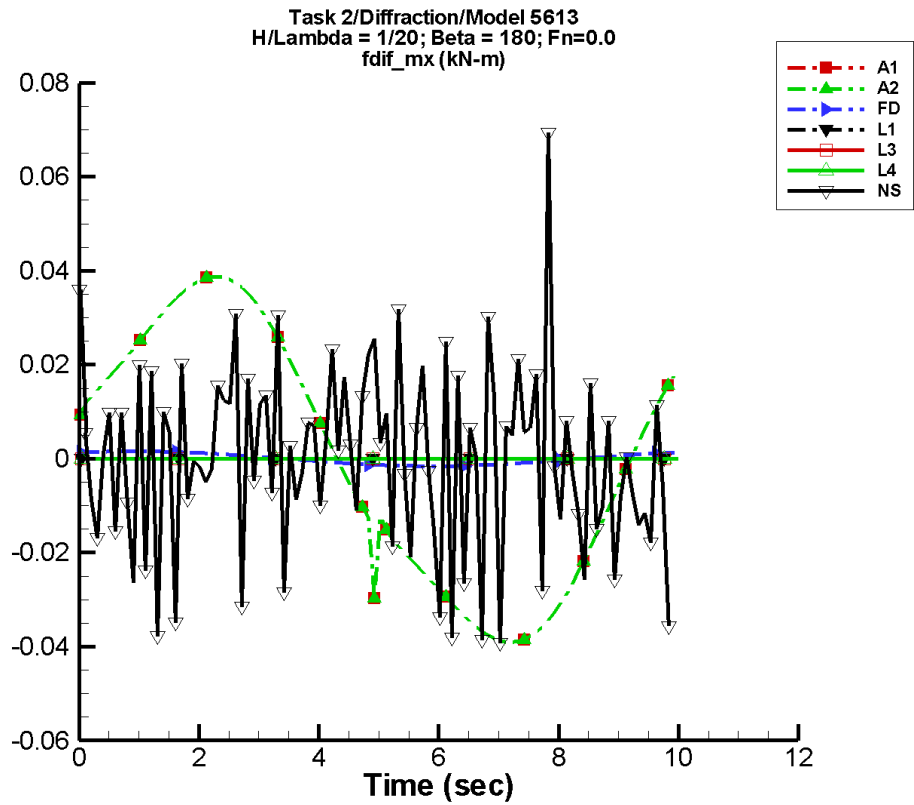
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.75E-06        | 1.24E-02        | 16                | 2.39E-04        | -179              |
| A2   | 5.75E-06        | 1.24E-02        | 16                | 2.39E-04        | -179              |
| FD   | -6.86E-08       | 5.25E-04        | 48                | 2.21E-07        | 83                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.18E-04        | 8.88E-04        | -108              | 1.84E-03        | 123               |

Table G-1794. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.30E-02         | 1.34E-02          | -1.28E-02         | 1.33E-02          |
| A2   | -1.30E-02         | 1.34E-02          | -1.28E-02         | 1.33E-02          |
| FD   | -5.25E-04         | 5.25E-04          | -5.20E-04         | 5.20E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.17E-02         | 9.52E-03          | -2.81E-03         | 3.81E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-898. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

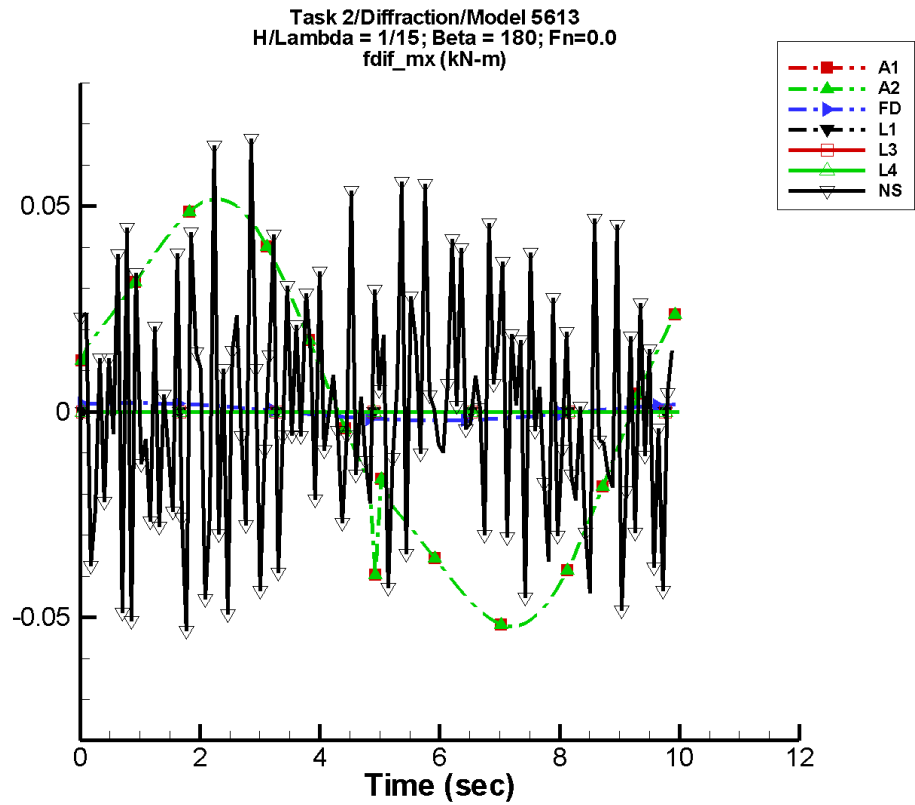
Table G-1795. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.73E-05        | 3.73E-02        | 16                | 7.19E-04        | -179              |
| A2   | 1.73E-05        | 3.73E-02        | 16                | 7.19E-04        | -179              |
| FD   | -2.06E-07       | 1.58E-03        | 48                | 6.62E-07        | 83                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 7.80E-05        | 2.87E-03        | -76               | 1.91E-03        | 148               |

Table G-1796. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.91E-02         | 4.04E-02          | -3.85E-02         | 4.01E-02          |
| A2   | -3.91E-02         | 4.04E-02          | -3.85E-02         | 4.01E-02          |
| FD   | -1.58E-03         | 1.58E-03          | -1.56E-03         | 1.56E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.92E-02         | 6.94E-02          | -2.57E-02         | 1.96E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-899. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

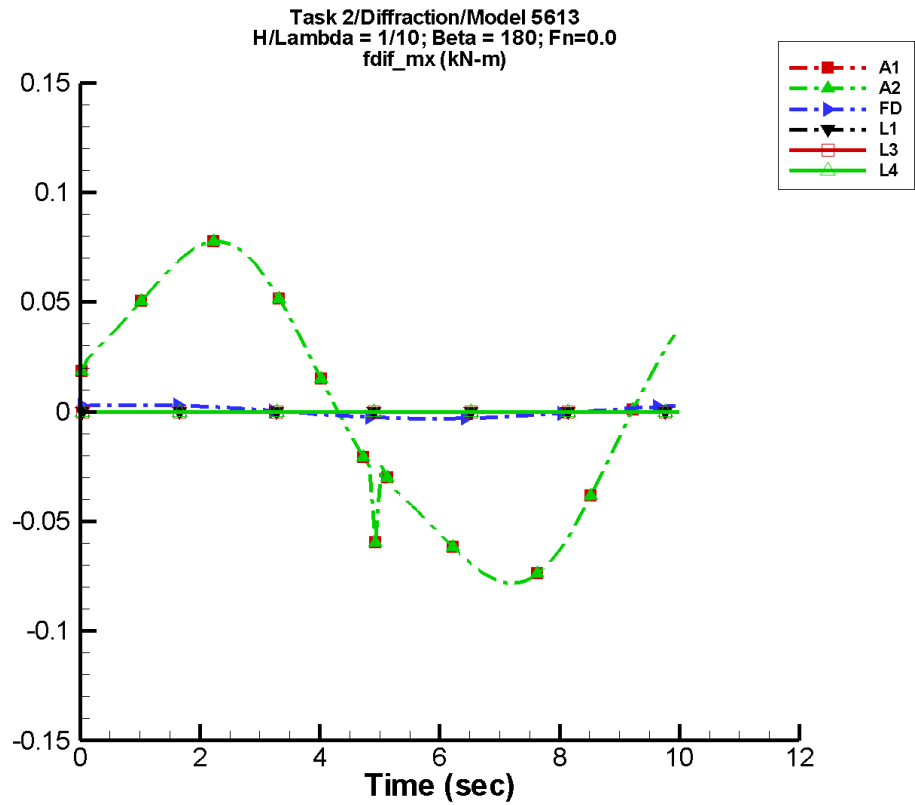
Table G-1797. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.31E-05        | 4.98E-02        | 16                | 9.60E-04        | -179              |
| A2   | 2.31E-05        | 4.98E-02        | 16                | 9.60E-04        | -179              |
| FD   | -2.75E-07       | 2.10E-03        | 48                | 8.82E-07        | 83                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.26E-04        | 7.23E-03        | -86               | 3.39E-03        | -42               |

Table G-1798. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.22E-02         | 5.39E-02          | -5.14E-02         | 5.35E-02          |
| A2   | -5.22E-02         | 5.39E-02          | -5.14E-02         | 5.35E-02          |
| FD   | -2.10E-03         | 2.10E-03          | -2.08E-03         | 2.08E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.272            | 0.292             | -1.29E-02         | 1.08E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-900. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

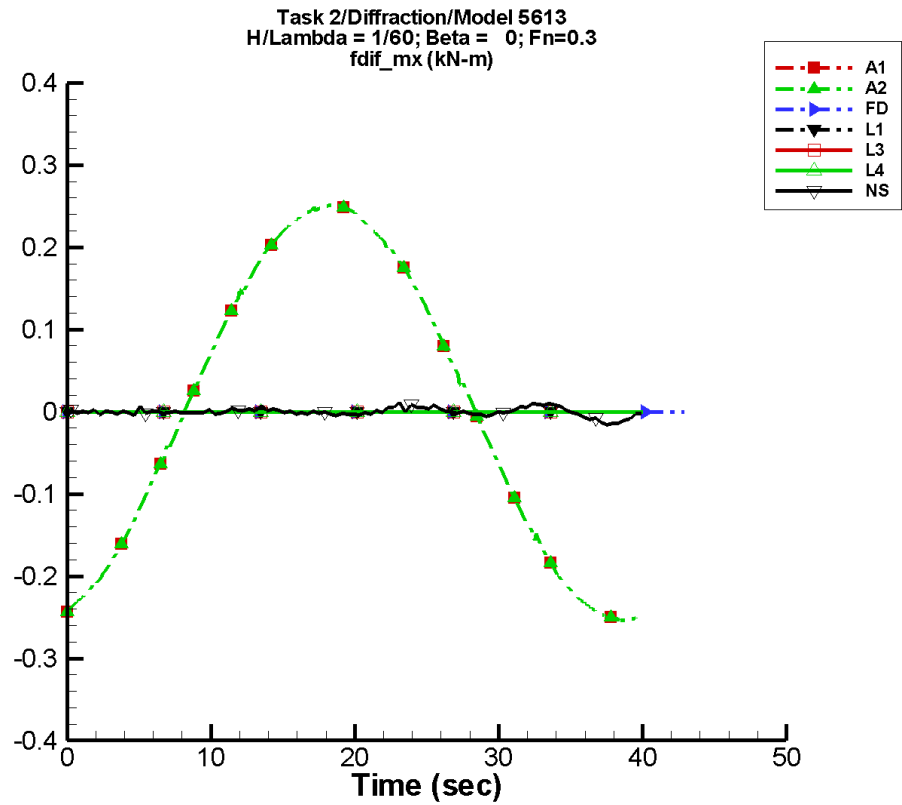
Table G-1799. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.46E-05        | 7.47E-02        | 16                | 1.44E-03        | -179              |
| A2   | 3.46E-05        | 7.47E-02        | 16                | 1.44E-03        | -179              |
| FD   | -4.12E-07       | 3.15E-03        | 48                | 1.32E-06        | 83                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1800. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.83E-02         | 8.09E-02          | -7.71E-02         | 8.03E-02          |
| A2   | -7.83E-02         | 8.09E-02          | -7.71E-02         | 8.03E-02          |
| FD   | -3.15E-03         | 3.15E-03          | -3.12E-03         | 3.12E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-901. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1801. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

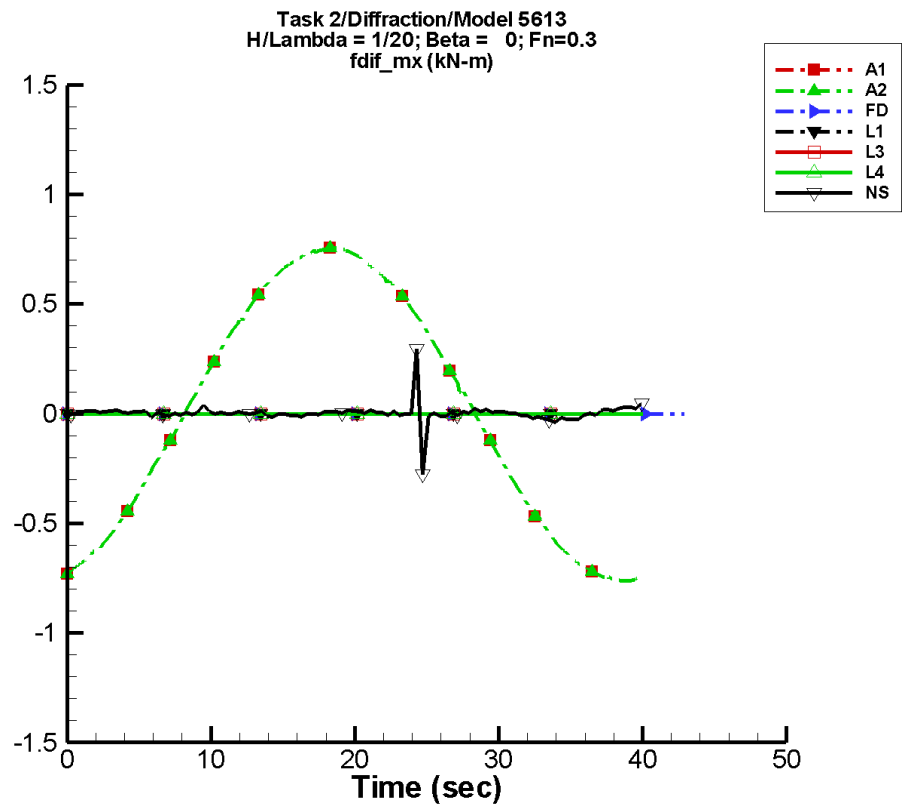
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.44E-04        | 0.251           | -75               | 1.98E-03        | -116              |
| A2   | 2.44E-04        | 0.251           | -75               | 1.98E-03        | -116              |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.23E-04       | 2.04E-03        | 172               | 2.84E-03        | 52                |

Table G–1802. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.254            | 0.251             | -0.254            | 0.251             |
| A2   | -0.254            | 0.251             | -0.254            | 0.251             |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.79E-02         | 2.45E-02          | -1.85E-02         | 2.04E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-902. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

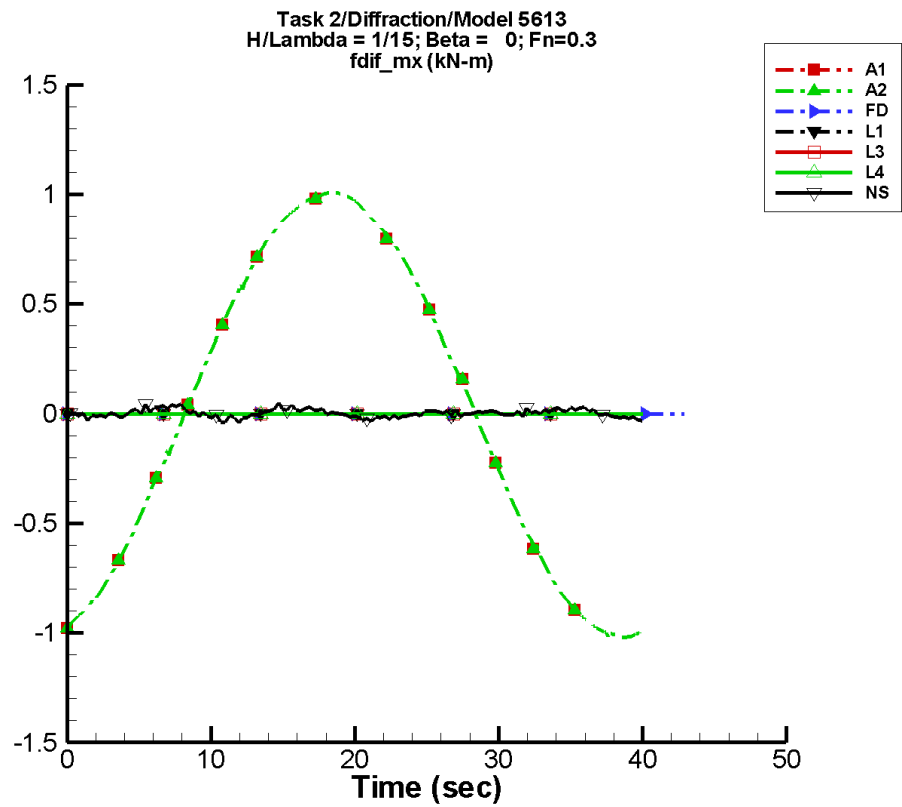
Table G–1803. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.34E-04        | 0.755           | -75               | 5.97E-03        | -116              |
| A2   | 7.34E-04        | 0.755           | -75               | 5.97E-03        | -116              |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.42E-03        | 3.93E-03        | 20                | 7.22E-03        | 46                |

Table G–1804. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.763            | 0.756             | -0.763            | 0.755             |
| A2   | -0.763            | 0.756             | -0.763            | 0.755             |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.278            | 0.296             | -2.45E-02         | 2.67E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-903. Time history of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

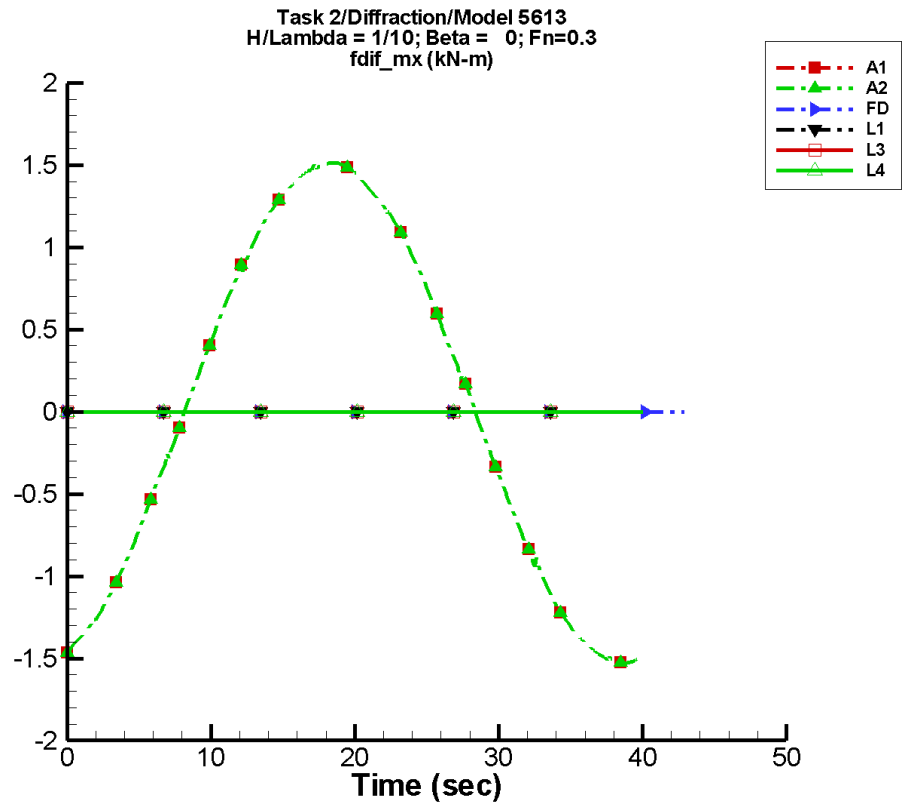
Table G–1805. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 9.80E-04        | 1.01            | -75               | 7.96E-03        | -116              |
| A2   | 9.80E-04        | 1.01            | -75               | 7.96E-03        | -116              |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.50E-04       | 2.24E-03        | -176              | 6.38E-03        | -131              |

Table G–1806. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.02             | 1.01              | -1.02             | 1.01              |
| A2   | -1.02             | 1.01              | -1.02             | 1.01              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.39E-02         | 4.96E-02          | -2.43E-02         | 3.08E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-904. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

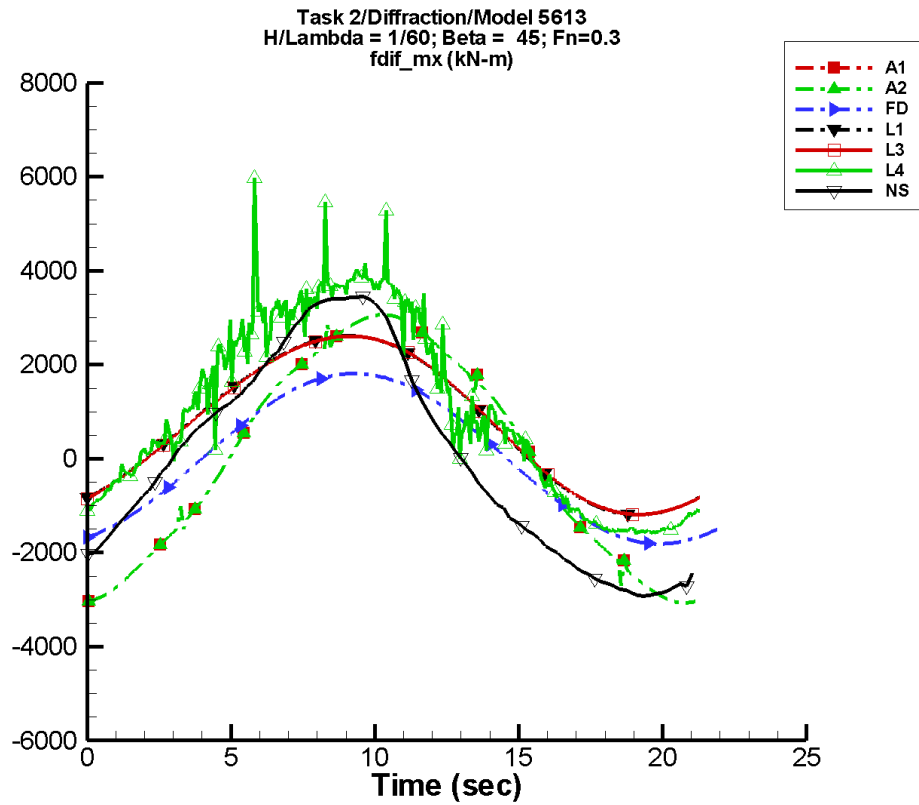
Table G–1807. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.47E-03        | 1.51            | -75               | 1.19E-02        | -116              |
| A2   | 1.47E-03        | 1.51            | -75               | 1.19E-02        | -116              |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1808. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.53             | 1.51              | -1.53             | 1.51              |
| A2   | -1.53             | 1.51              | -1.53             | 1.51              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-905. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1809. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

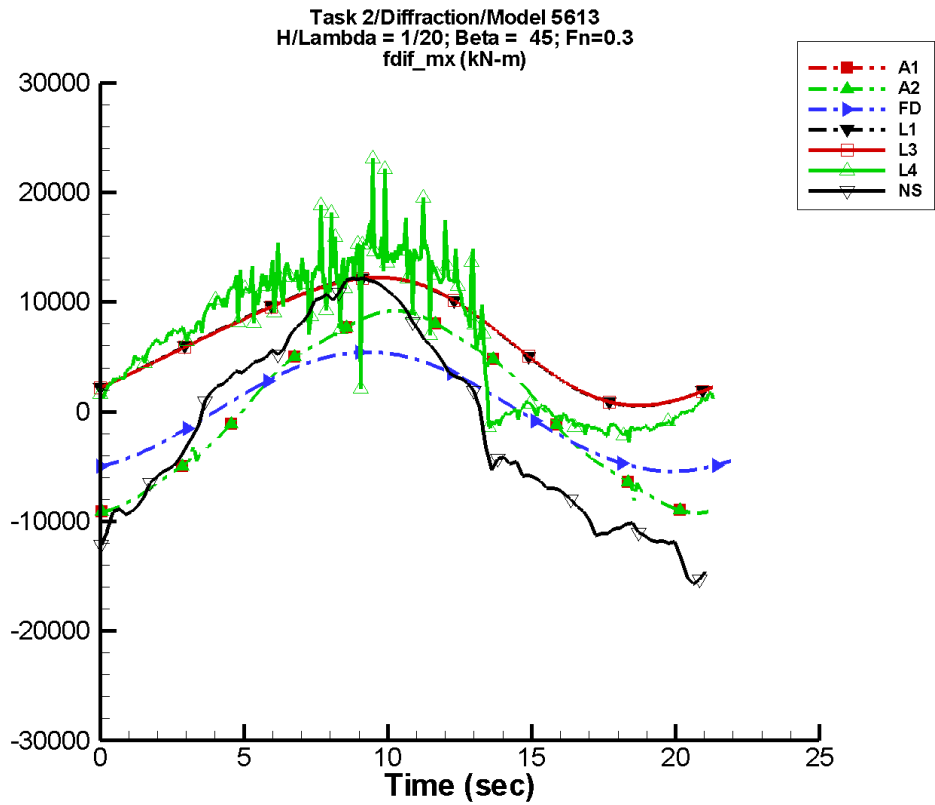
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.93           | 2.98E+03        | -81               | 2.94            | 75                |
| A2   | -1.93           | 2.98E+03        | -81               | 2.94            | 75                |
| FD   | -1.72E-02       | 1.81E+03        | -62               | 2.87E-02        | -47               |
| L1   | 723.            | 1.90E+03        | -59               | 80.7            | 52                |
| L3   | 723.            | 1.89E+03        | -59               | 80.6            | 52                |
| L4   | 1.01E+03        | 2.64E+03        | -54               | 160.            | 147               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.70           | 2.94E+03        | -49               | 282.            | 134               |

Table G–1810. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.07E+03         | 3.06E+03          | -3.06E+03         | 3.05E+03          |
| A2   | -3.07E+03         | 3.06E+03          | -3.06E+03         | 3.05E+03          |
| FD   | -1.81E+03         | 1.81E+03          | -1.81E+03         | 1.81E+03          |
| L1   | -1.20E+03         | 2.61E+03          | -1.19E+03         | 2.61E+03          |
| L3   | -1.19E+03         | 2.61E+03          | -1.18E+03         | 2.61E+03          |
| L4   | -1.61E+03         | 5.98E+03          | -1.56E+03         | 3.95E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.92E+03         | 3.45E+03          | -2.87E+03         | 3.43E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-906. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

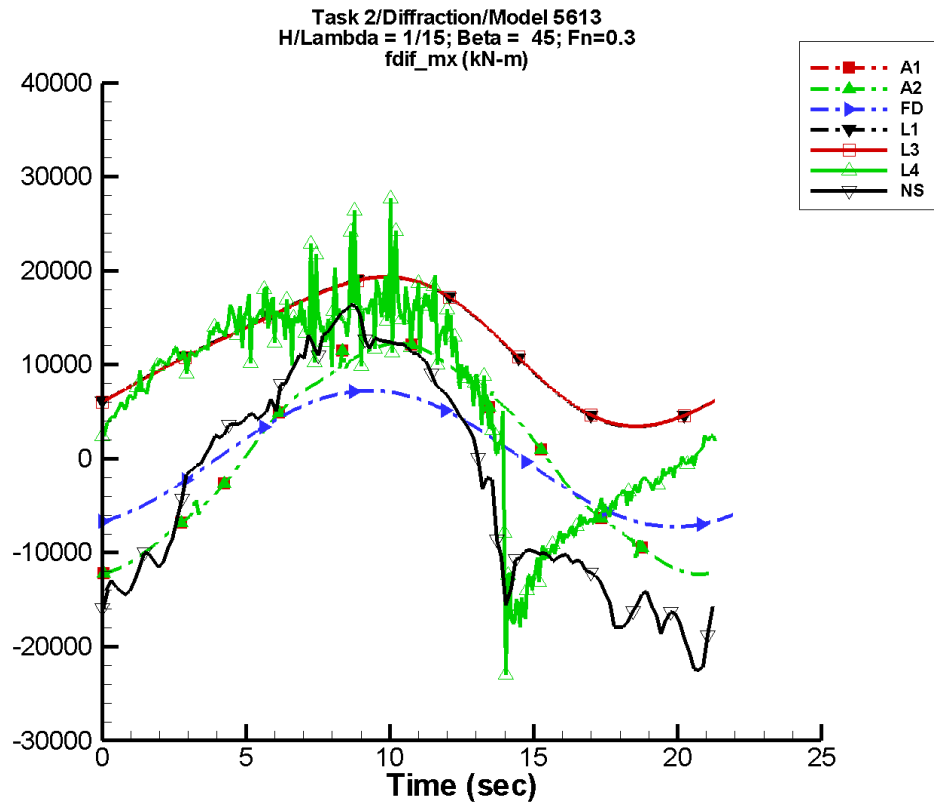
Table G–1811. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -5.81           | 8.98E+03        | -81               | 8.84            | 75                |
| A2   | -5.81           | 8.98E+03        | -81               | 8.84            | 75                |
| FD   | -5.21E-02       | 5.44E+03        | -62               | 8.56E-02        | -47               |
| L1   | 6.51E+03        | 5.69E+03        | -59               | 725.            | 52                |
| L3   | 6.51E+03        | 5.67E+03        | -59               | 725.            | 52                |
| L4   | 6.36E+03        | 8.25E+03        | -43               | 1.61E+03        | 75                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.39E+03       | 1.17E+04        | -55               | 773.            | 170               |

Table G–1812. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.22E+03         | 9.21E+03          | -9.19E+03         | 9.18E+03          |
| A2   | -9.22E+03         | 9.21E+03          | -9.19E+03         | 9.18E+03          |
| FD   | -5.43E+03         | 5.43E+03          | -5.42E+03         | 5.42E+03          |
| L1   | 529.              | 1.23E+04          | 535.              | 1.22E+04          |
| L3   | 566.              | 1.22E+04          | 572.              | 1.22E+04          |
| L4   | -2.77E+03         | 2.31E+04          | -1.91E+03         | 1.62E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.57E+04         | 1.22E+04          | -1.36E+04         | 1.18E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-907. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

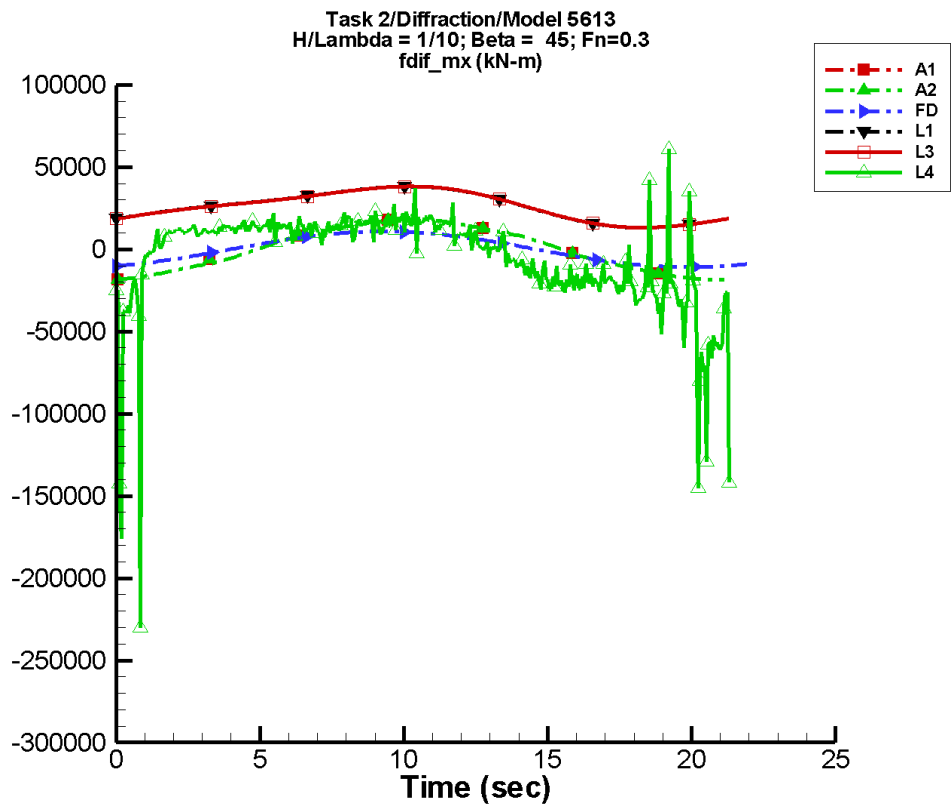
Table G–1813. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -7.76           | 1.20E+04        | -81               | 11.8            | 75                |
| A2   | -7.76           | 1.20E+04        | -81               | 11.8            | 75                |
| FD   | -6.89E-02       | 7.25E+03        | -62               | 0.115           | -47               |
| L1   | 1.16E+04        | 7.59E+03        | -59               | 1.29E+03        | 52                |
| L3   | 1.16E+04        | 7.56E+03        | -59               | 1.29E+03        | 52                |
| L4   | 6.20E+03        | 1.27E+04        | -25               | 3.72E+03        | 89                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.69E+03       | 1.59E+04        | -54               | 1.07E+03        | 170               |

Table G–1814. Minimum and maximum of of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.23E+04         | 1.23E+04          | -1.23E+04         | 1.23E+04          |
| A2   | -1.23E+04         | 1.23E+04          | -1.23E+04         | 1.23E+04          |
| FD   | -7.25E+03         | 7.25E+03          | -7.23E+03         | 7.23E+03          |
| L1   | 3.40E+03          | 1.93E+04          | 3.41E+03          | 1.93E+04          |
| L3   | 3.45E+03          | 1.93E+04          | 3.46E+03          | 1.93E+04          |
| L4   | -2.30E+04         | 2.77E+04          | -1.67E+04         | 1.81E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.25E+04         | 1.64E+04          | -1.97E+04         | 1.50E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-908. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

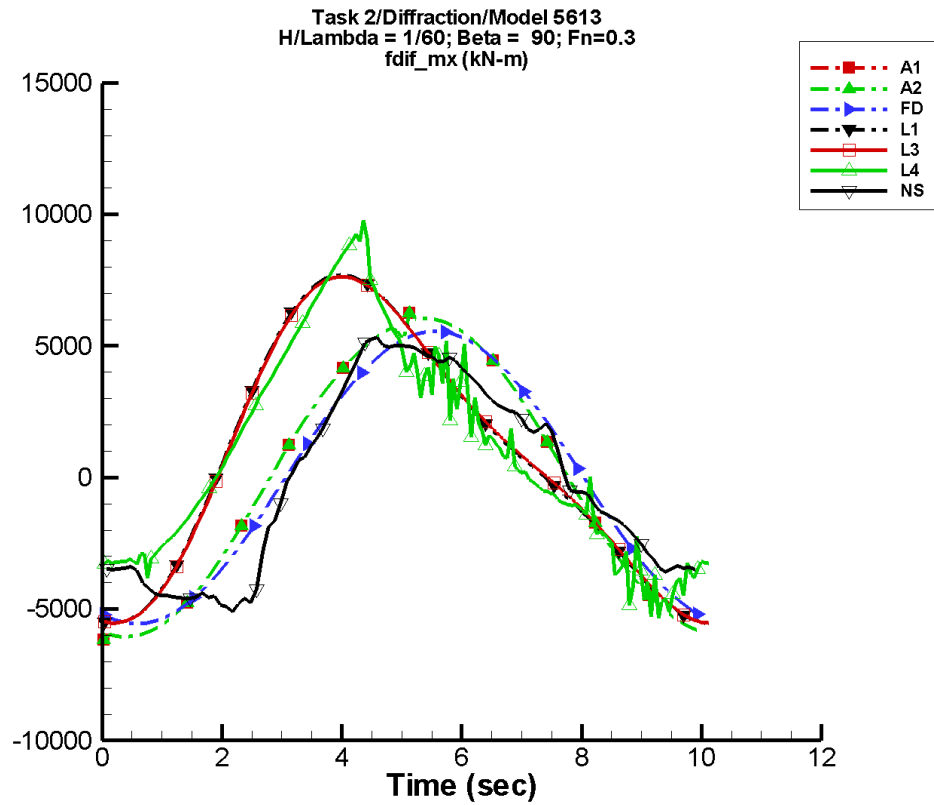
Table G–1815. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -11.6           | 1.80E+04        | -81               | 17.7            | 75                |
| A2   | -11.6           | 1.80E+04        | -81               | 17.7            | 75                |
| FD   | -0.104          | 1.09E+04        | -62               | 0.171           | -47               |
| L1   | 2.60E+04        | 1.14E+04        | -59               | 2.90E+03        | 52                |
| L3   | 2.60E+04        | 1.13E+04        | -59               | 2.90E+03        | 52                |
| L4   | -4.65E+03       | 2.71E+04        | -49               | 9.39E+03        | -44               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1816. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.85E+04         | 1.84E+04          | -1.84E+04         | 1.84E+04          |
| A2   | -1.85E+04         | 1.84E+04          | -1.84E+04         | 1.84E+04          |
| FD   | -1.09E+04         | 1.09E+04          | -1.08E+04         | 1.08E+04          |
| L1   | 1.31E+04          | 3.82E+04          | 1.31E+04          | 3.82E+04          |
| L3   | 1.32E+04          | 3.82E+04          | 1.32E+04          | 3.82E+04          |
| L4   | -2.30E+05         | 6.10E+04          | -8.01E+04         | 1.83E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-909. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1817. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

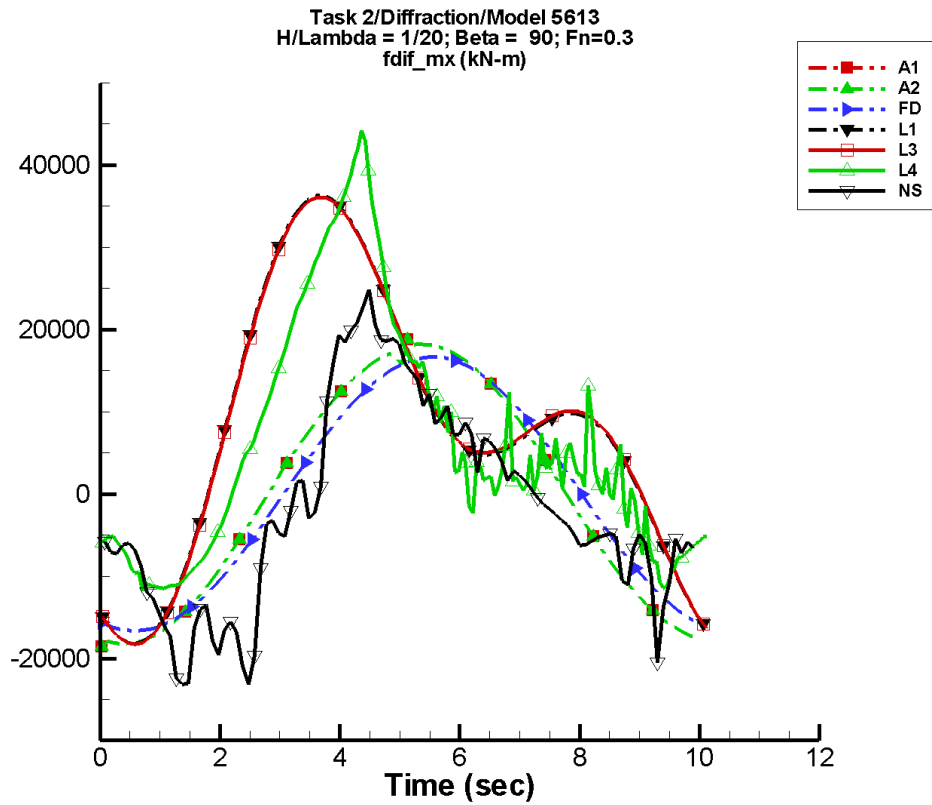
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.21           | 6.05E+03        | -107              | 15.3            | -172              |
| A2   | -2.21           | 6.05E+03        | -107              | 15.3            | -172              |
| FD   | 1.25            | 5.55E+03        | -119              | 2.39            | -84               |
| L1   | 932.            | 6.03E+03        | -78               | 1.47E+03        | -164              |
| L3   | 932.            | 5.99E+03        | -79               | 1.47E+03        | -164              |
| L4   | 1.06E+03        | 5.32E+03        | -74               | 985.            | 163               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -177.           | 4.73E+03        | -114              | 1.19E+03        | 102               |

Table G–1818. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.28E+03         | 6.25E+03          | -6.14E+03         | 5.95E+03          |
| A2   | -6.28E+03         | 6.25E+03          | -6.14E+03         | 5.95E+03          |
| FD   | -5.55E+03         | 5.55E+03          | -5.50E+03         | 5.50E+03          |
| L1   | -5.53E+03         | 7.70E+03          | -5.57E+03         | 7.66E+03          |
| L3   | -5.53E+03         | 7.63E+03          | -5.56E+03         | 7.59E+03          |
| L4   | -5.33E+03         | 9.77E+03          | -4.61E+03         | 8.89E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.10E+03         | 5.33E+03          | -4.77E+03         | 5.08E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-910. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

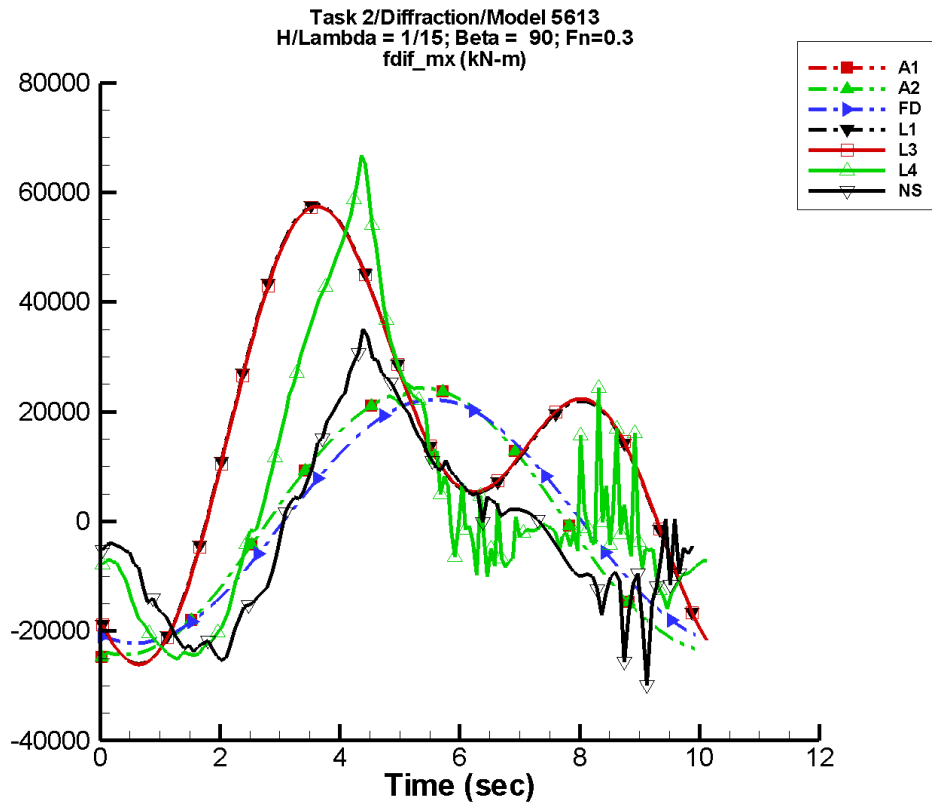
Table G–1819. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -6.64           | 1.82E+04        | -107              | 46.0            | -172              |
| A2   | -6.64           | 1.82E+04        | -107              | 46.0            | -172              |
| FD   | 3.74            | 1.67E+04        | -119              | 7.16            | -84               |
| L1   | 8.38E+03        | 1.81E+04        | -78               | 1.32E+04        | -164              |
| L3   | 8.38E+03        | 1.80E+04        | -79               | 1.32E+04        | -164              |
| L4   | 6.13E+03        | 1.60E+04        | -82               | 9.85E+03        | 156               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.67E+03       | 1.39E+04        | -109              | 7.81E+03        | 110               |

Table G–1820. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.89E+04         | 1.88E+04          | -1.85E+04         | 1.79E+04          |
| A2   | -1.89E+04         | 1.88E+04          | -1.85E+04         | 1.79E+04          |
| FD   | -1.67E+04         | 1.67E+04          | -1.65E+04         | 1.65E+04          |
| L1   | -1.82E+04         | 3.63E+04          | -1.80E+04         | 3.61E+04          |
| L3   | -1.83E+04         | 3.61E+04          | -1.80E+04         | 3.58E+04          |
| L4   | -1.17E+04         | 4.42E+04          | -1.13E+04         | 4.01E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.32E+04         | 2.48E+04          | -1.91E+04         | 2.12E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-911. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

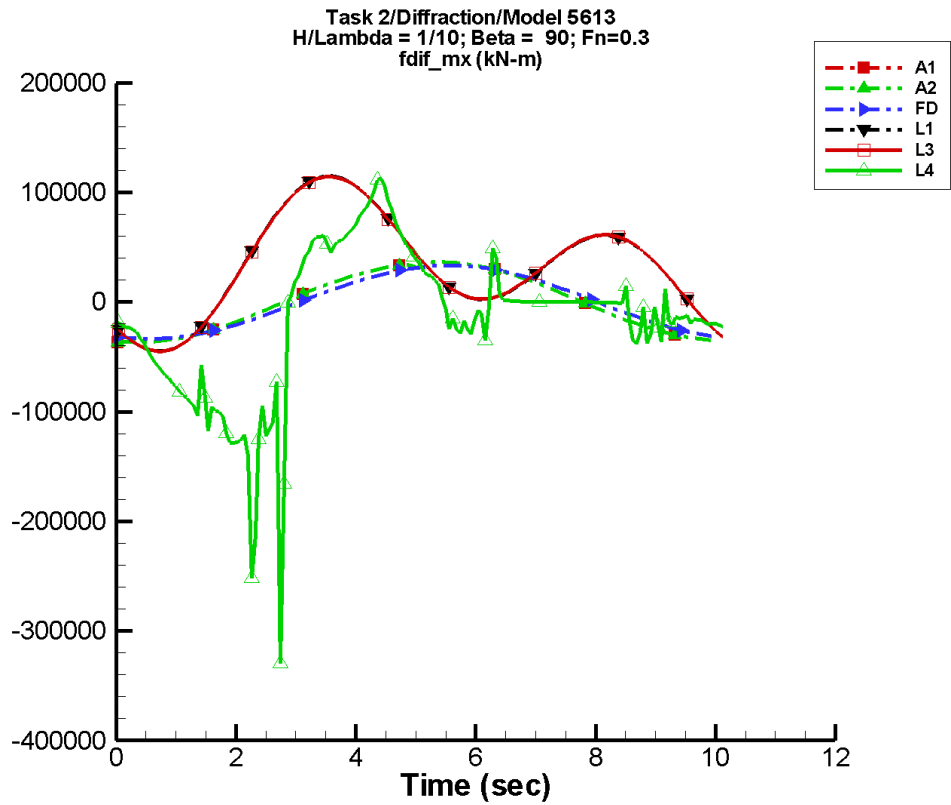
Table G–1821. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -8.86           | 2.43E+04        | -107              | 61.4            | -172              |
| A2   | -8.86           | 2.43E+04        | -107              | 61.4            | -172              |
| FD   | 4.99            | 2.22E+04        | -119              | 9.54            | -84               |
| L1   | 1.49E+04        | 2.41E+04        | -78               | 2.35E+04        | -164              |
| L3   | 1.49E+04        | 2.40E+04        | -79               | 2.35E+04        | -164              |
| L4   | 4.67E+03        | 2.24E+04        | -87               | 1.97E+04        | 144               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.44E+03       | 1.68E+04        | -99               | 1.14E+04        | 112               |

Table G–1822. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.52E+04         | 2.51E+04          | -2.46E+04         | 2.39E+04          |
| A2   | -2.52E+04         | 2.51E+04          | -2.46E+04         | 2.39E+04          |
| FD   | -2.22E+04         | 2.22E+04          | -2.20E+04         | 2.20E+04          |
| L1   | -2.60E+04         | 5.77E+04          | -2.56E+04         | 5.73E+04          |
| L3   | -2.61E+04         | 5.74E+04          | -2.58E+04         | 5.70E+04          |
| L4   | -2.53E+04         | 6.67E+04          | -2.45E+04         | 5.94E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.99E+04         | 3.52E+04          | -2.35E+04         | 3.01E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-912. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

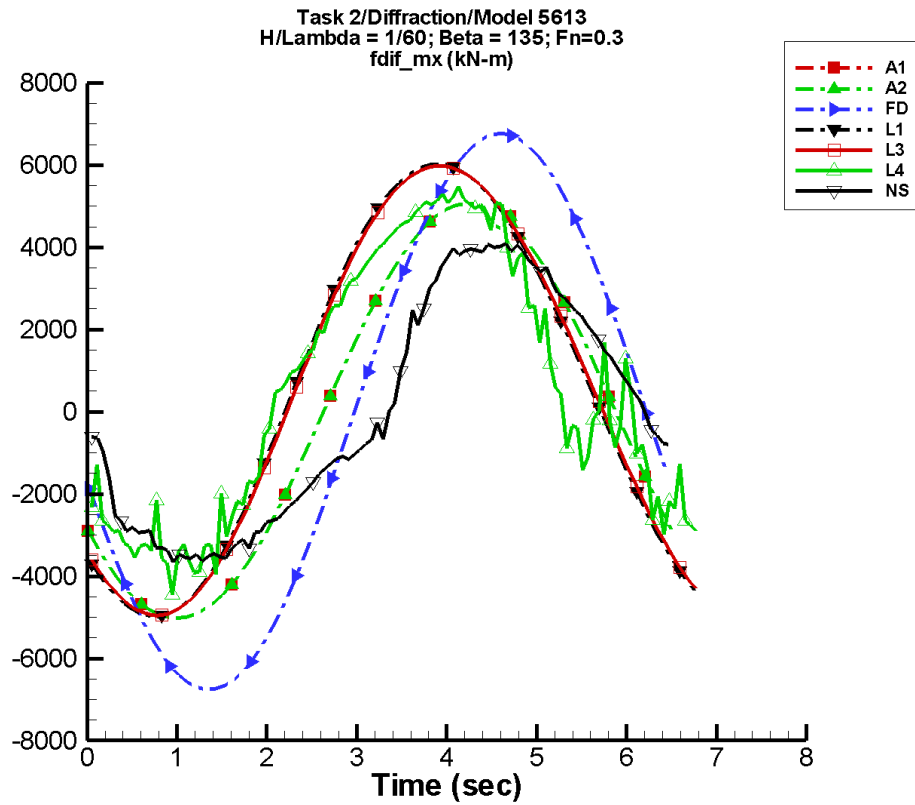
Table G–1823. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -13.3           | 3.64E+04        | -107              | 92.1            | -172              |
| A2   | -13.3           | 3.64E+04        | -107              | 92.1            | -172              |
| FD   | 7.49            | 3.33E+04        | -119              | 14.3            | -84               |
| L1   | 3.35E+04        | 3.62E+04        | -78               | 5.30E+04        | -164              |
| L3   | 3.35E+04        | 3.59E+04        | -79               | 5.30E+04        | -164              |
| L4   | -1.63E+04       | 5.37E+04        | -130              | 5.66E+04        | 125               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1824. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.79E+04         | 3.76E+04          | -3.70E+04         | 3.58E+04          |
| A2   | -3.79E+04         | 3.76E+04          | -3.70E+04         | 3.58E+04          |
| FD   | -3.33E+04         | 3.33E+04          | -3.30E+04         | 3.30E+04          |
| L1   | -4.48E+04         | 1.15E+05          | -4.40E+04         | 1.14E+05          |
| L3   | -4.50E+04         | 1.14E+05          | -4.42E+04         | 1.14E+05          |
| L4   | -3.30E+05         | 1.12E+05          | -1.56E+05         | 9.79E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-913. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1825. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

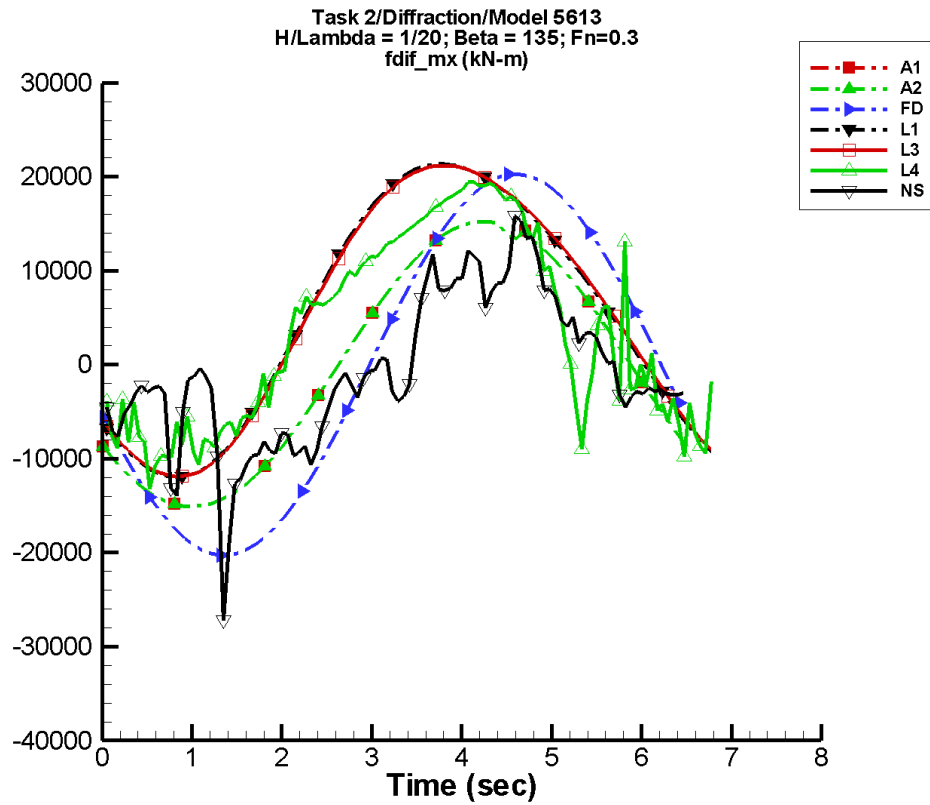
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.04           | 5.06E+03        | -149              | 27.1            | 161               |
| A2   | -2.04           | 5.06E+03        | -149              | 27.1            | 161               |
| FD   | -0.225          | 6.76E+03        | -164              | 0.306           | -4                |
| L1   | 617.            | 5.49E+03        | -132              | 167.            | 132               |
| L3   | 617.            | 5.46E+03        | -134              | 167.            | 132               |
| L4   | 676.            | 4.27E+03        | -130              | 440.            | 75                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -62.5           | 3.77E+03        | -168              | 338.            | -75               |

Table G–1826. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.14E+03         | 5.06E+03          | -5.00E+03         | 4.90E+03          |
| A2   | -5.14E+03         | 5.06E+03          | -5.00E+03         | 4.90E+03          |
| FD   | -6.76E+03         | 6.76E+03          | -6.63E+03         | 6.60E+03          |
| L1   | -4.98E+03         | 6.02E+03          | -4.93E+03         | 5.97E+03          |
| L3   | -4.95E+03         | 5.98E+03          | -4.91E+03         | 5.93E+03          |
| L4   | -4.46E+03         | 5.47E+03          | -3.65E+03         | 5.18E+03          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.66E+03         | 4.08E+03          | -3.55E+03         | 3.99E+03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-914. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

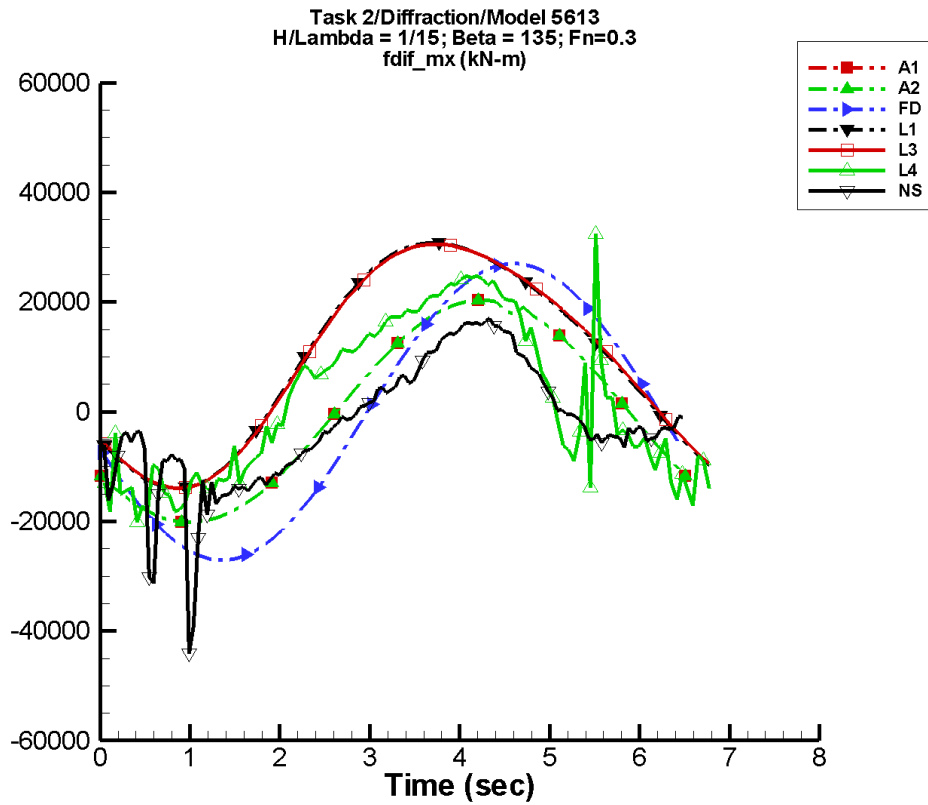
Table G–1827. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -6.15           | 1.52E+04        | -149              | 81.6            | 161               |
| A2   | -6.15           | 1.52E+04        | -149              | 81.6            | 161               |
| FD   | -0.672          | 2.03E+04        | -164              | 0.919           | -4                |
| L1   | 5.55E+03        | 1.65E+04        | -132              | 1.50E+03        | 132               |
| L3   | 5.55E+03        | 1.64E+04        | -134              | 1.50E+03        | 132               |
| L4   | 3.84E+03        | 1.34E+04        | -128              | 889.            | 42                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -893.           | 9.40E+03        | -163              | 3.06E+03        | -3                |

Table G–1828. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.55E+04         | 1.52E+04          | -1.51E+04         | 1.47E+04          |
| A2   | -1.55E+04         | 1.52E+04          | -1.51E+04         | 1.47E+04          |
| FD   | -2.03E+04         | 2.03E+04          | -1.99E+04         | 1.98E+04          |
| L1   | -1.19E+04         | 2.14E+04          | -1.18E+04         | 2.12E+04          |
| L3   | -1.19E+04         | 2.12E+04          | -1.17E+04         | 2.11E+04          |
| L4   | -1.33E+04         | 1.95E+04          | -9.24E+03         | 1.91E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.73E+04         | 1.58E+04          | -1.37E+04         | 1.21E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-915. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

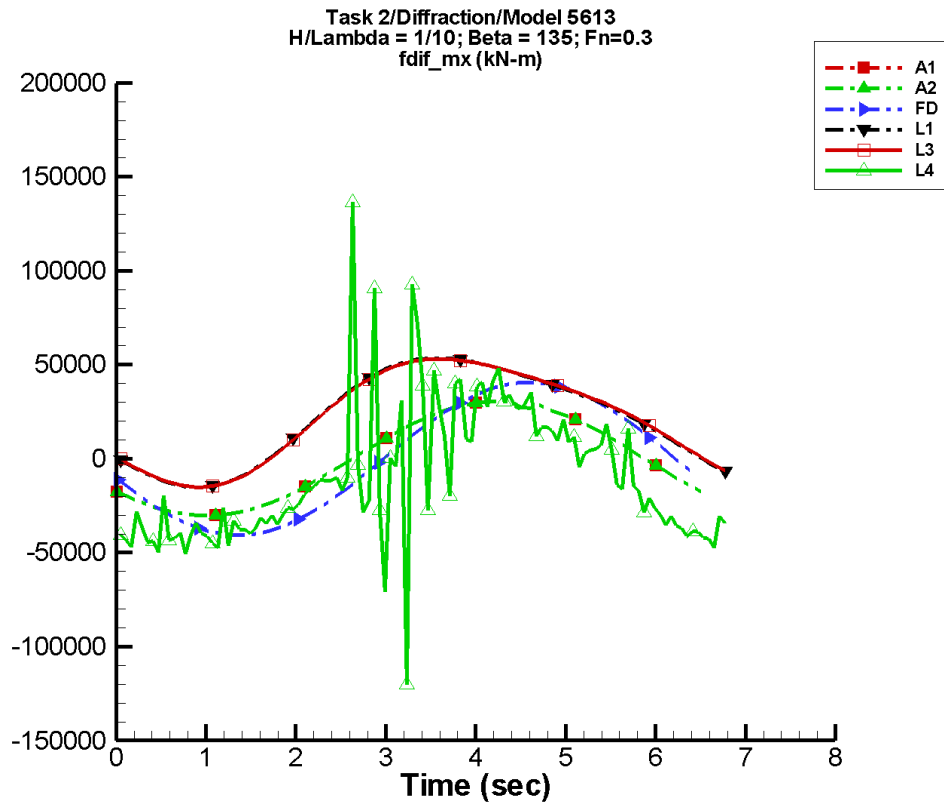
Table G–1829. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -8.21           | 2.03E+04        | -149              | 109.            | 161               |
| A2   | -8.21           | 2.03E+04        | -149              | 109.            | 161               |
| FD   | -0.899          | 2.71E+04        | -164              | 1.22            | -4                |
| L1   | 9.86E+03        | 2.20E+04        | -132              | 2.66E+03        | 132               |
| L3   | 9.86E+03        | 2.18E+04        | -134              | 2.66E+03        | 132               |
| L4   | 2.62E+03        | 1.86E+04        | -125              | 1.05E+03        | 60                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.53E+03       | 1.40E+04        | -145              | 2.90E+03        | 51                |

Table G–1830. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.07E+04         | 2.03E+04          | -2.01E+04         | 1.97E+04          |
| A2   | -2.07E+04         | 2.03E+04          | -2.01E+04         | 1.97E+04          |
| FD   | -2.70E+04         | 2.70E+04          | -2.65E+04         | 2.64E+04          |
| L1   | -1.40E+04         | 3.08E+04          | -1.37E+04         | 3.06E+04          |
| L3   | -1.39E+04         | 3.06E+04          | -1.37E+04         | 3.04E+04          |
| L4   | -2.04E+04         | 3.24E+04          | -1.52E+04         | 2.41E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.43E+04         | 1.70E+04          | -2.10E+04         | 1.61E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-916. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

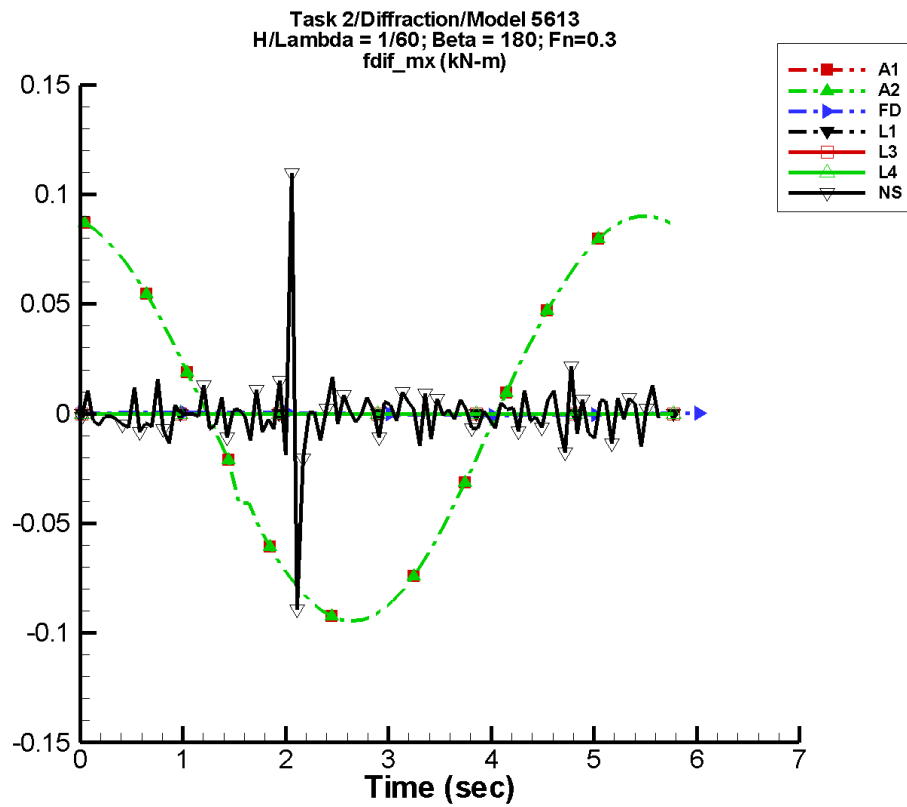
Table G–1831. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -12.3           | 3.05E+04        | -149              | 164.            | 161               |
| A2   | -12.3           | 3.05E+04        | -149              | 164.            | 161               |
| FD   | -1.34           | 4.06E+04        | -164              | 1.84            | -4                |
| L1   | 2.22E+04        | 3.29E+04        | -132              | 5.99E+03        | 132               |
| L3   | 2.22E+04        | 3.28E+04        | -134              | 5.99E+03        | 132               |
| L4   | -8.85E+03       | 3.58E+04        | -137              | 3.17E+03        | -65               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1832. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.10E+04         | 3.05E+04          | -3.01E+04         | 2.95E+04          |
| A2   | -3.10E+04         | 3.05E+04          | -3.01E+04         | 2.95E+04          |
| FD   | -4.06E+04         | 4.06E+04          | -3.98E+04         | 3.96E+04          |
| L1   | -1.52E+04         | 5.36E+04          | -1.48E+04         | 5.33E+04          |
| L3   | -1.52E+04         | 5.31E+04          | -1.47E+04         | 5.28E+04          |
| L4   | -1.20E+05         | 1.36E+05          | -4.12E+04         | 3.55E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-917. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1833. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

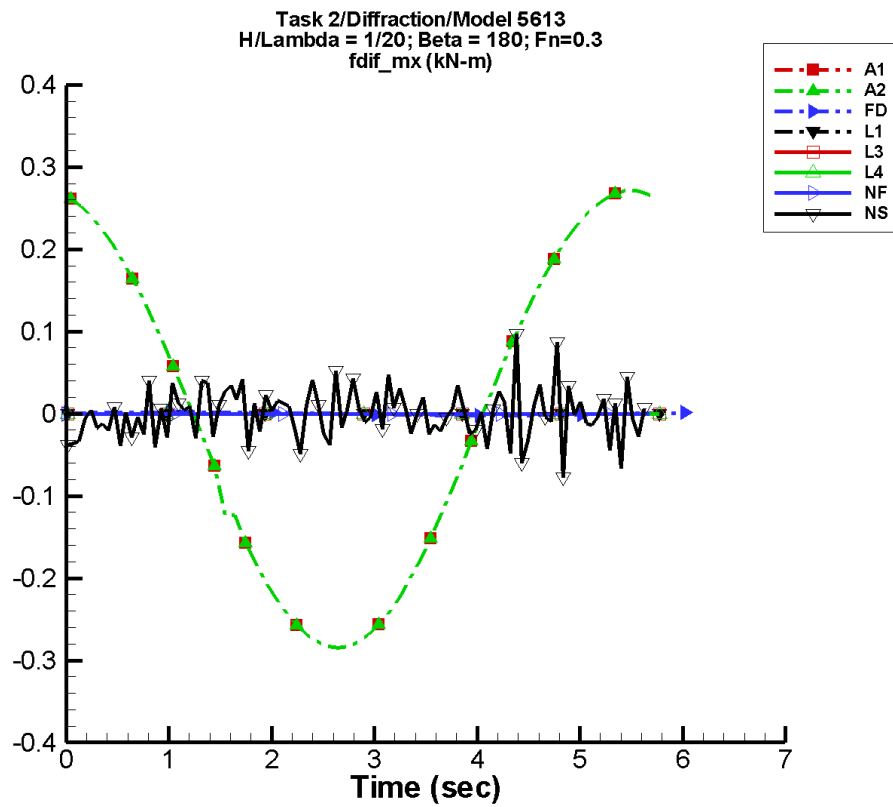
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -9.16E-04       | 9.27E-02        | 94                | 1.75E-03        | -60               |
| A2   | -9.16E-04       | 9.27E-02        | 94                | 1.75E-03        | -60               |
| FD   | -3.85E-07       | 6.64E-04        | -23               | 1.09E-06        | -79               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.35E-04       | 5.04E-05        | 159               | 7.03E-04        | 59                |

Table G–1834. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.46E-02         | 9.01E-02          | -9.16E-02         | 8.75E-02          |
| A2   | -9.46E-02         | 9.01E-02          | -9.16E-02         | 8.75E-02          |
| FD   | -6.64E-04         | 6.64E-04          | -6.44E-04         | 6.44E-04          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.91E-02         | 0.110             | -3.30E-03         | 2.99E-03          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-918. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

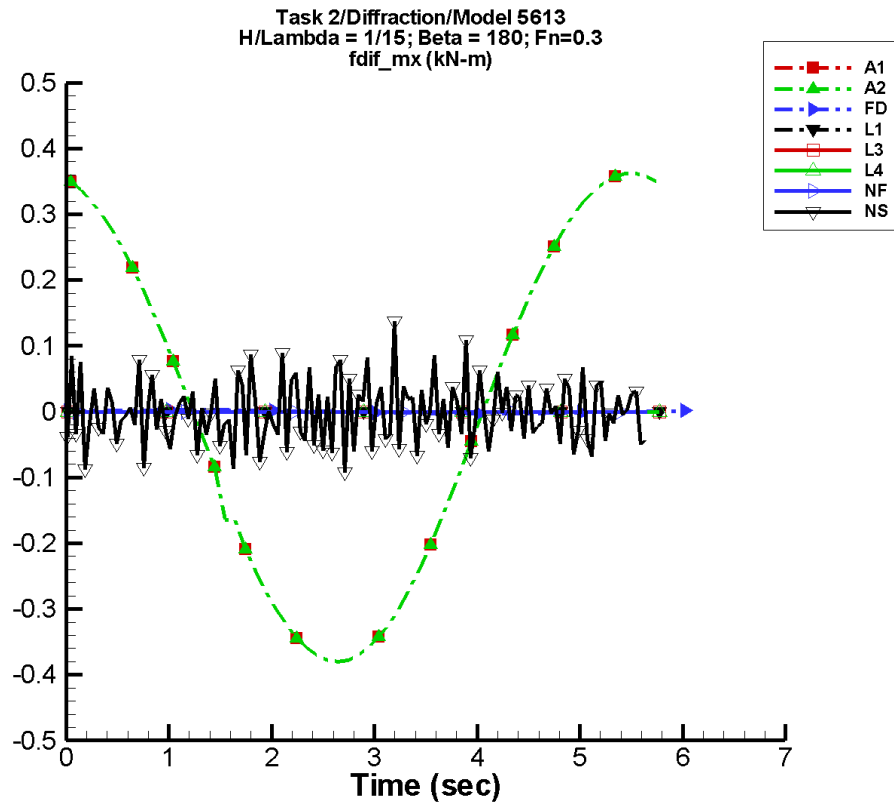
Table G–1835. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.76E-03       | 0.279           | 94                | 5.26E-03        | -60               |
| A2   | -2.76E-03       | 0.279           | 94                | 5.26E-03        | -60               |
| FD   | -1.15E-06       | 1.99E-03        | -23               | 3.27E-06        | -79               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.69E-05       | 6.34E-03        | -72               | 4.56E-03        | -122              |

Table G–1836. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.284            | 0.271             | -0.276            | 0.263             |
| A2   | -0.284            | 0.271             | -0.276            | 0.263             |
| FD   | -1.99E-03         | 1.99E-03          | -1.93E-03         | 1.93E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.73E-02         | 9.72E-02          | -3.12E-02         | 1.37E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-919. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

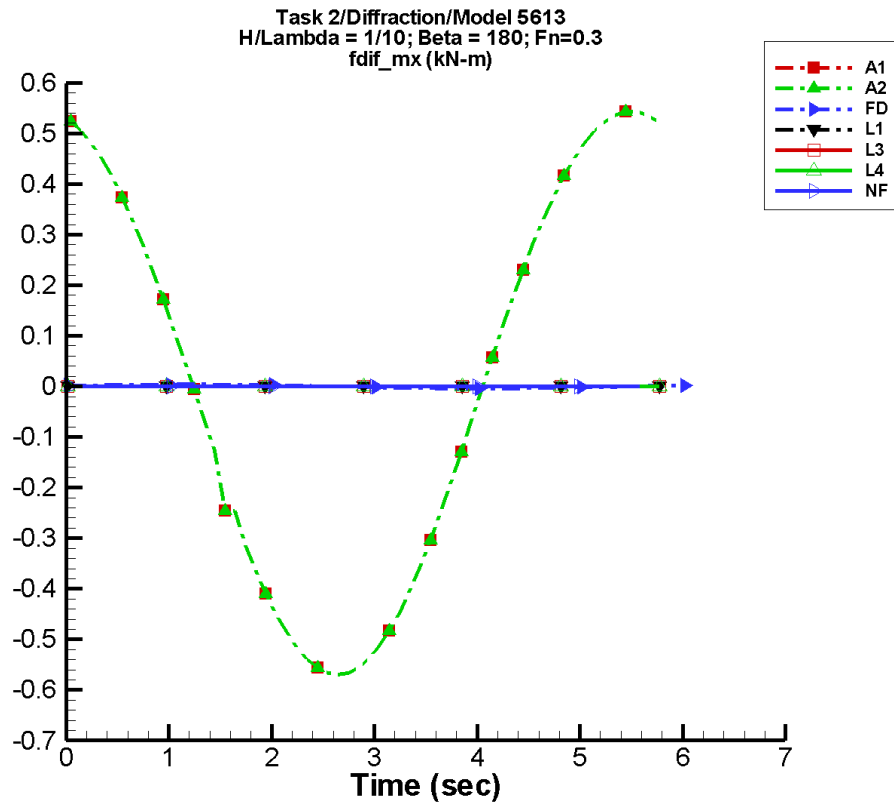
Table G–1837. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.68E-03       | 0.372           | 94                | 7.02E-03        | -60               |
| A2   | -3.68E-03       | 0.372           | 94                | 7.02E-03        | -60               |
| FD   | -1.54E-06       | 2.66E-03        | -23               | 4.36E-06        | -79               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.10E-04        | 5.47E-03        | -136              | 2.39E-03        | 51                |

Table G–1838. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.380            | 0.362             | -0.368            | 0.351             |
| A2   | -0.380            | 0.362             | -0.368            | 0.351             |
| FD   | -2.66E-03         | 2.66E-03          | -2.57E-03         | 2.58E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.486            | 0.456             | -2.61E-02         | 1.55E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-920. Time history of  $M_x^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

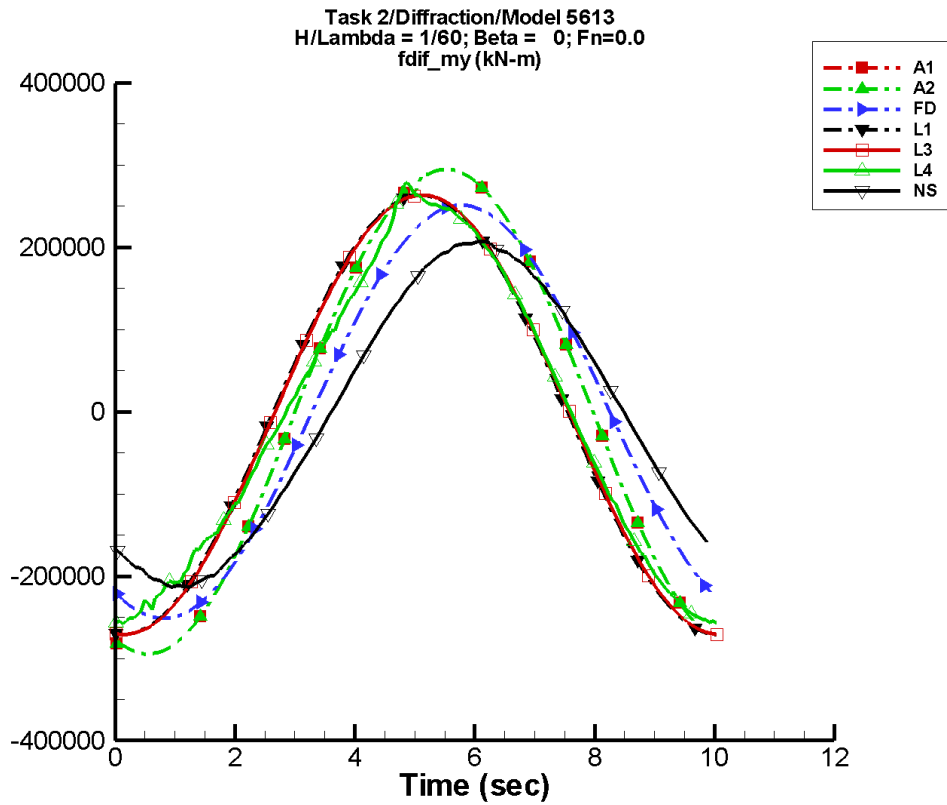
Table G–1839. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -5.52E-03       | 0.559           | 94                | 1.05E-02        | -60               |
| A2   | -5.52E-03       | 0.559           | 94                | 1.05E-02        | -60               |
| FD   | -2.31E-06       | 3.99E-03        | -23               | 6.53E-06        | -79               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1840. Minimum and maximum of  $M_x^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -0.570            | 0.543             | -0.552            | 0.527             |
| A2   | -0.570            | 0.543             | -0.552            | 0.527             |
| FD   | -3.98E-03         | 3.98E-03          | -3.86E-03         | 3.86E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-921. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1841. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

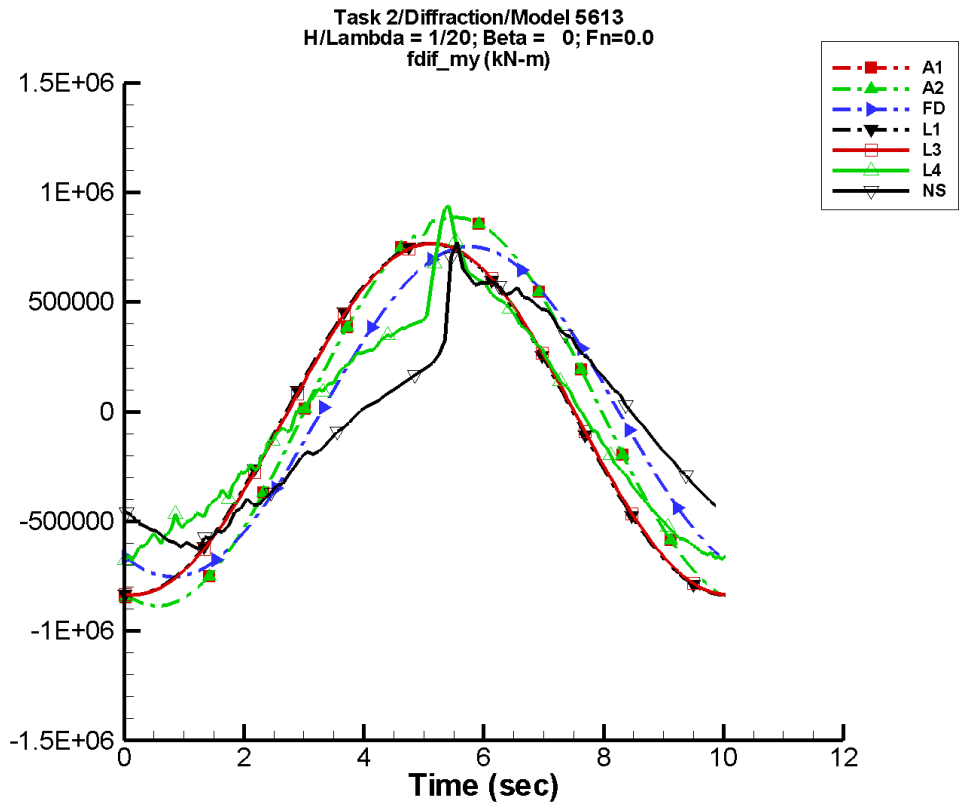
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -286.           | 2.94E+05        | -113              | 144.            | -142              |
| A2   | -286.           | 2.94E+05        | -113              | 144.            | -142              |
| FD   | 41.5            | 2.51E+05        | -127              | 106.            | -92               |
| L1   | -4.34E+03       | 2.67E+05        | -99               | 716.            | 33                |
| L3   | -4.34E+03       | 2.67E+05        | -100              | 712.            | 33                |
| L4   | -7.08E+03       | 2.46E+05        | -103              | 1.68E+04        | 16                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.92E+03       | 2.06E+05        | -129              | 1.28E+03        | -1                |

Table G–1842. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.95E+05         | 2.95E+05          | -2.91E+05         | 2.91E+05          |
| A2   | -2.95E+05         | 2.95E+05          | -2.91E+05         | 2.91E+05          |
| FD   | -2.51E+05         | 2.51E+05          | -2.49E+05         | 2.49E+05          |
| L1   | -2.71E+05         | 2.64E+05          | -2.71E+05         | 2.63E+05          |
| L3   | -2.71E+05         | 2.64E+05          | -2.71E+05         | 2.63E+05          |
| L4   | -2.58E+05         | 2.80E+05          | -2.57E+05         | 2.66E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.13E+05         | 2.07E+05          | -2.10E+05         | 2.03E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-922. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

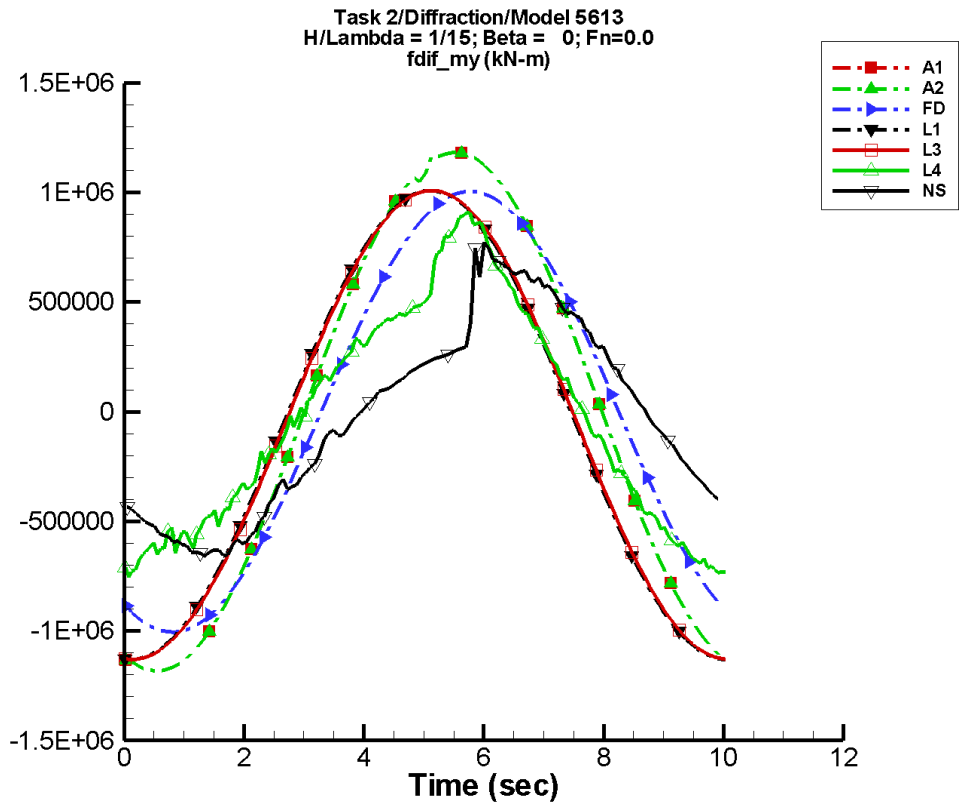
Table G–1843. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -860.           | 8.84E+05        | -113              | 432.            | -142              |
| A2   | -860.           | 8.84E+05        | -113              | 432.            | -142              |
| FD   | 124.            | 7.54E+05        | -127              | 319.            | -92               |
| L1   | -4.04E+04       | 8.02E+05        | -99               | 7.14E+03        | 43                |
| L3   | -4.04E+04       | 8.02E+05        | -100              | 7.13E+03        | 43                |
| L4   | -3.44E+04       | 6.04E+05        | -106              | 8.77E+04        | -10               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.14E+04       | 5.46E+05        | -134              | 5.67E+04        | -52               |

Table G–1844. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.87E+05         | 8.86E+05          | -8.75E+05         | 8.76E+05          |
| A2   | -8.87E+05         | 8.86E+05          | -8.75E+05         | 8.76E+05          |
| FD   | -7.54E+05         | 7.54E+05          | -7.46E+05         | 7.46E+05          |
| L1   | -8.36E+05         | 7.68E+05          | -8.37E+05         | 7.65E+05          |
| L3   | -8.36E+05         | 7.68E+05          | -8.36E+05         | 7.65E+05          |
| L4   | -6.80E+05         | 9.55E+05          | -6.66E+05         | 8.22E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.28E+05         | 7.73E+05          | -6.00E+05         | 6.12E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-923. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

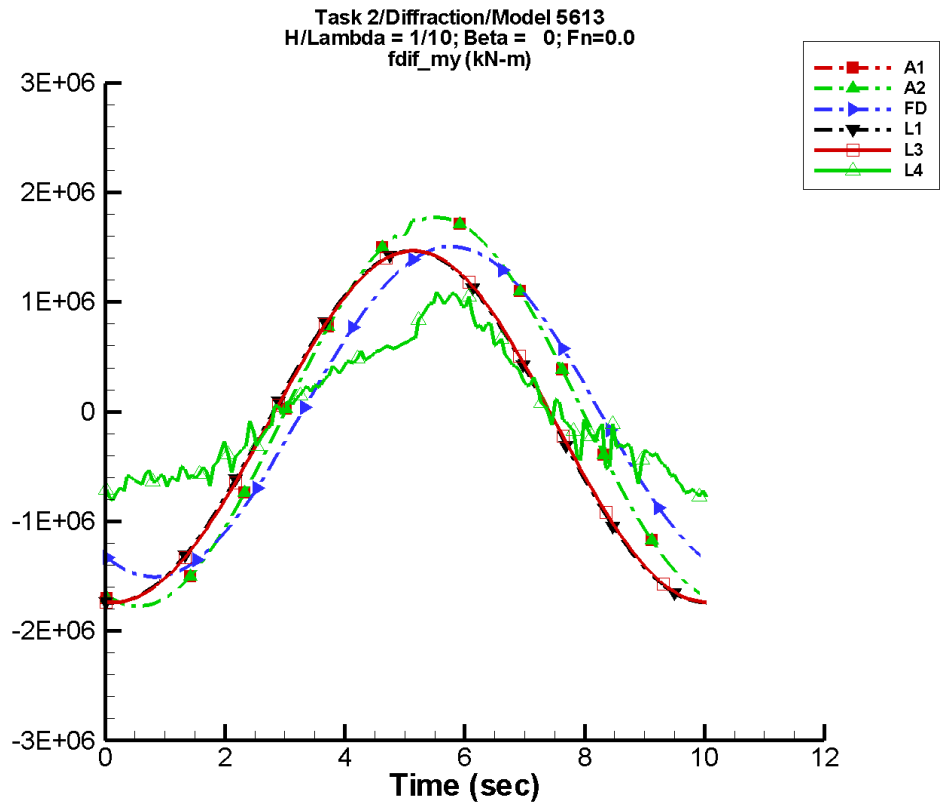
Table G–1845. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.15E+03       | 1.18E+06        | -113              | 577.            | -142              |
| A2   | -1.15E+03       | 1.18E+06        | -113              | 577.            | -142              |
| FD   | 166.            | 1.01E+06        | -127              | 425.            | -92               |
| L1   | -7.21E+04       | 1.07E+06        | -99               | 1.29E+04        | 45                |
| L3   | -7.21E+04       | 1.07E+06        | -100              | 1.29E+04        | 45                |
| L4   | -2.58E+04       | 6.86E+05        | -108              | 9.99E+04        | -9                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.12E+04       | 5.87E+05        | -142              | 5.15E+04        | -90               |

Table G–1846. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.18E+06         | 1.18E+06          | -1.17E+06         | 1.17E+06          |
| A2   | -1.18E+06         | 1.18E+06          | -1.17E+06         | 1.17E+06          |
| FD   | -1.01E+06         | 1.00E+06          | -9.95E+05         | 9.95E+05          |
| L1   | -1.13E+06         | 1.01E+06          | -1.13E+06         | 1.00E+06          |
| L3   | -1.13E+06         | 1.01E+06          | -1.13E+06         | 1.00E+06          |
| L4   | -7.56E+05         | 9.06E+05          | -7.17E+05         | 8.76E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.57E+05         | 7.72E+05          | -6.41E+05         | 6.88E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-924. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

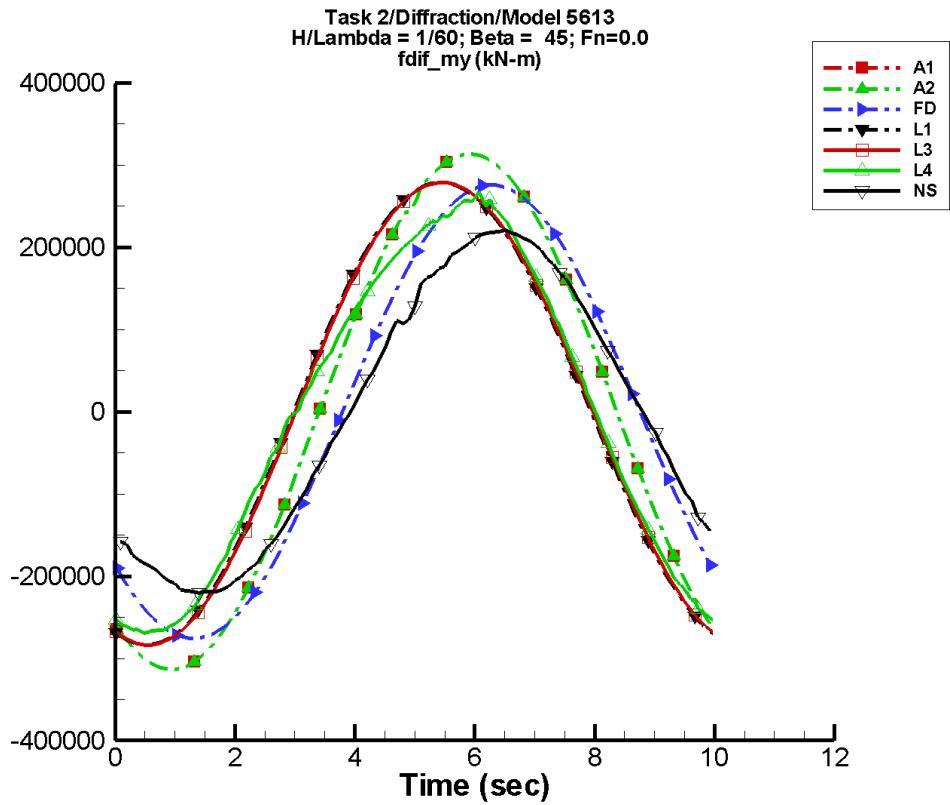
Table G–1847. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.72E+03       | 1.77E+06        | -113              | 866.            | -142              |
| A2   | -1.72E+03       | 1.77E+06        | -113              | 866.            | -142              |
| FD   | 249.            | 1.51E+06        | -127              | 637.            | -92               |
| L1   | -1.63E+05       | 1.60E+06        | -99               | 2.94E+04        | 46                |
| L3   | -1.63E+05       | 1.60E+06        | -100              | 2.94E+04        | 46                |
| L4   | 2.11E+03        | 7.62E+05        | -109              | 1.14E+05        | 26                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1848. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.78E+06         | 1.77E+06          | -1.75E+06         | 1.75E+06          |
| A2   | -1.78E+06         | 1.77E+06          | -1.75E+06         | 1.75E+06          |
| FD   | -1.51E+06         | 1.51E+06          | -1.49E+06         | 1.49E+06          |
| L1   | -1.74E+06         | 1.47E+06          | -1.74E+06         | 1.46E+06          |
| L3   | -1.74E+06         | 1.47E+06          | -1.74E+06         | 1.46E+06          |
| L4   | -8.05E+05         | 1.13E+06          | -7.45E+05         | 1.04E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-925. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1849. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

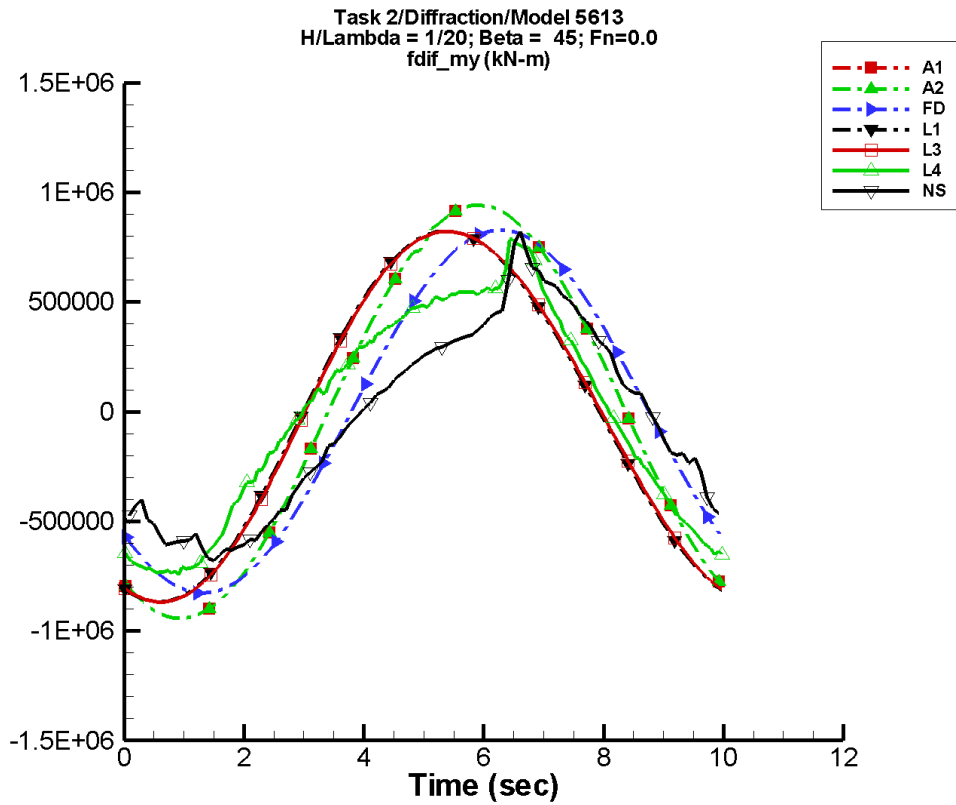
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -161.           | 3.12E+05        | -128              | 169.            | 159               |
| A2   | -161.           | 3.12E+05        | -128              | 169.            | 159               |
| FD   | 6.03            | 2.76E+05        | -145              | 114.            | -113              |
| L1   | -1.65E+03       | 2.81E+05        | -112              | 2.73E+03        | 152               |
| L3   | -1.65E+03       | 2.81E+05        | -113              | 2.73E+03        | 152               |
| L4   | -3.78E+03       | 2.57E+05        | -116              | 1.92E+04        | -75               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.74E+03       | 2.18E+05        | -141              | 3.04E+03        | -29               |

Table G–1850. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.13E+05         | 3.13E+05          | -3.11E+05         | 3.10E+05          |
| A2   | -3.13E+05         | 3.13E+05          | -3.11E+05         | 3.10E+05          |
| FD   | -2.76E+05         | 2.76E+05          | -2.73E+05         | 2.73E+05          |
| L1   | -2.84E+05         | 2.79E+05          | -2.83E+05         | 2.78E+05          |
| L3   | -2.84E+05         | 2.79E+05          | -2.83E+05         | 2.78E+05          |
| L4   | -2.69E+05         | 2.68E+05          | -2.67E+05         | 2.58E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.21E+05         | 2.20E+05          | -2.18E+05         | 2.17E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-926. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

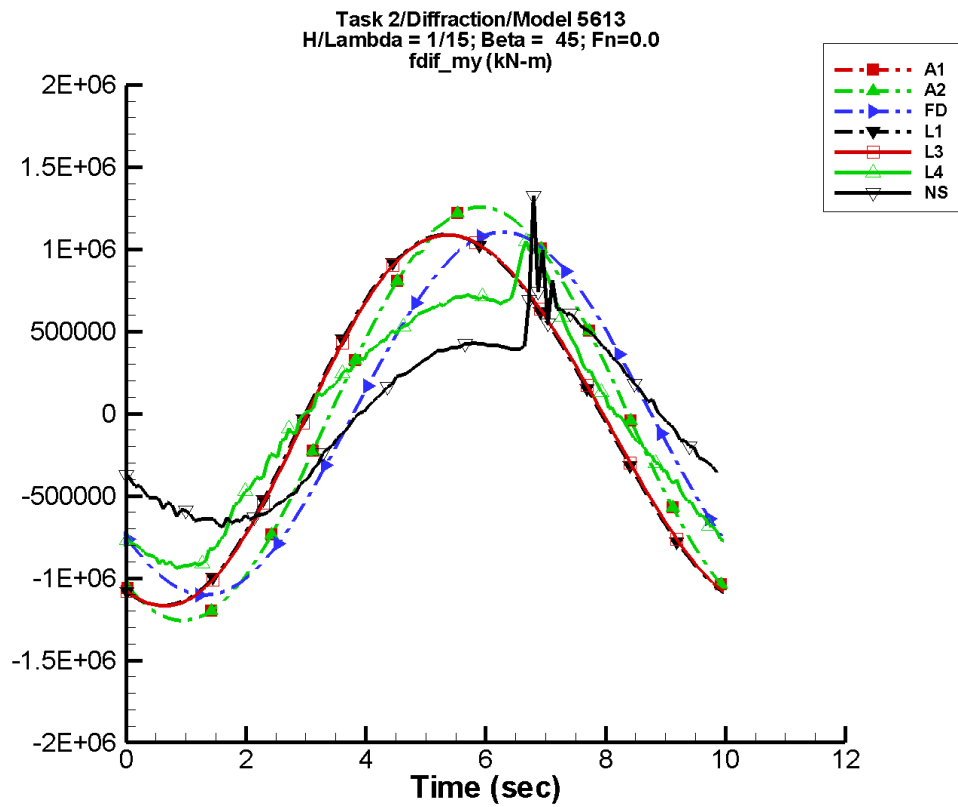
Table G–1851. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -485.           | 9.40E+05        | -128              | 508.            | 159               |
| A2   | -485.           | 9.40E+05        | -128              | 508.            | 159               |
| FD   | 18.1            | 8.27E+05        | -145              | 343.            | -113              |
| L1   | -1.51E+04       | 8.44E+05        | -112              | 2.54E+04        | 152               |
| L3   | -1.51E+04       | 8.43E+05        | -113              | 2.54E+04        | 152               |
| L4   | -6.00E+03       | 6.66E+05        | -120              | 1.03E+05        | -98               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.92E+04       | 5.87E+05        | -145              | 4.57E+04        | -106              |

Table G–1852. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.43E+05         | 9.42E+05          | -9.34E+05         | 9.33E+05          |
| A2   | -9.43E+05         | 9.42E+05          | -9.34E+05         | 9.33E+05          |
| FD   | -8.27E+05         | 8.27E+05          | -8.19E+05         | 8.19E+05          |
| L1   | -8.67E+05         | 8.23E+05          | -8.64E+05         | 8.20E+05          |
| L3   | -8.68E+05         | 8.22E+05          | -8.65E+05         | 8.19E+05          |
| L4   | -7.43E+05         | 8.37E+05          | -7.31E+05         | 7.52E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.80E+05         | 8.20E+05          | -6.34E+05         | 6.63E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-927. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

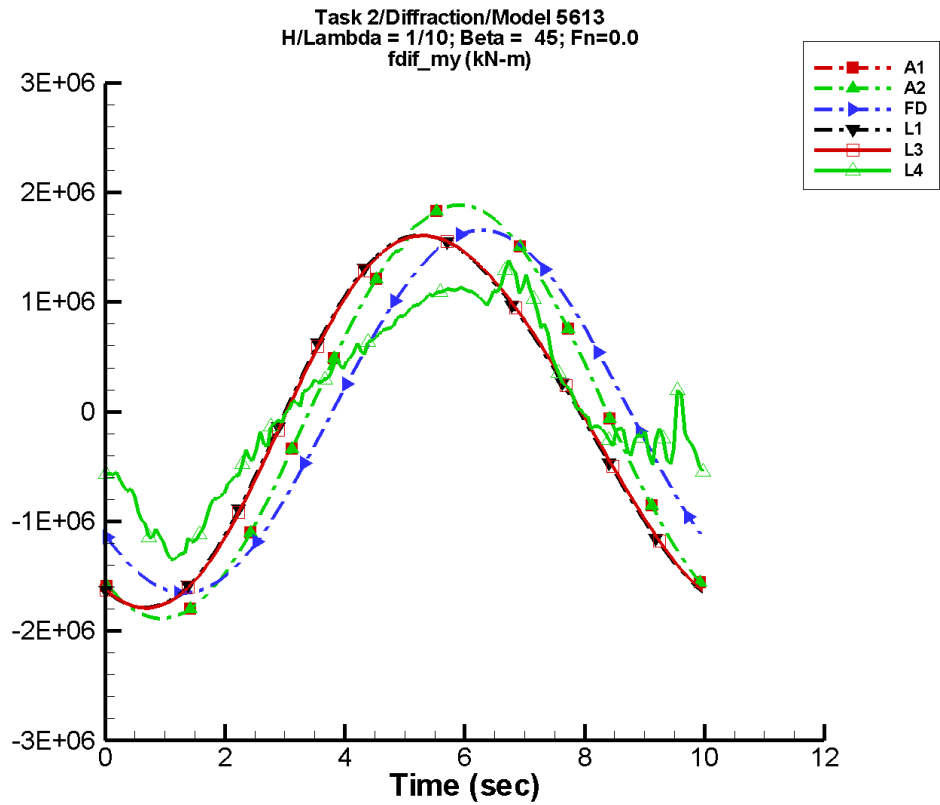
Table G–1853. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -647.           | 1.25E+06        | -128              | 678.            | 159               |
| A2   | -647.           | 1.25E+06        | -128              | 678.            | 159               |
| FD   | 24.2            | 1.10E+06        | -145              | 458.            | -113              |
| L1   | -2.70E+04       | 1.12E+06        | -112              | 4.53E+04        | 152               |
| L3   | -2.70E+04       | 1.12E+06        | -113              | 4.53E+04        | 152               |
| L4   | 1.17E+04        | 8.27E+05        | -123              | 1.22E+05        | -112              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.67E+04       | 6.27E+05        | -147              | 4.19E+04        | -145              |

Table G–1854. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.26E+06         | 1.26E+06          | -1.25E+06         | 1.25E+06          |
| A2   | -1.26E+06         | 1.26E+06          | -1.25E+06         | 1.25E+06          |
| FD   | -1.10E+06         | 1.10E+06          | -1.09E+06         | 1.09E+06          |
| L1   | -1.17E+06         | 1.09E+06          | -1.16E+06         | 1.08E+06          |
| L3   | -1.17E+06         | 1.09E+06          | -1.16E+06         | 1.08E+06          |
| L4   | -9.39E+05         | 1.10E+06          | -9.27E+05         | 1.01E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.92E+05         | 1.33E+06          | -6.56E+05         | 7.66E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-928. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

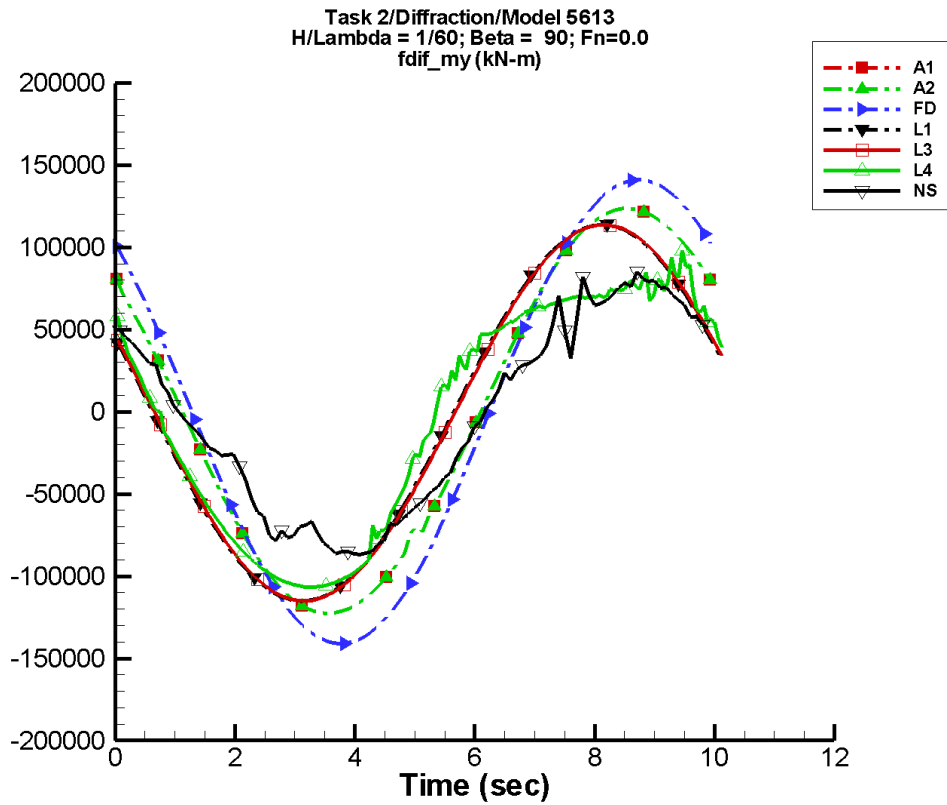
Table G–1855. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -971.           | 1.88E+06        | -128              | 1.02E+03        | 159               |
| A2   | -971.           | 1.88E+06        | -128              | 1.02E+03        | 159               |
| FD   | 36.3            | 1.65E+06        | -145              | 687.            | -113              |
| L1   | -6.08E+04       | 1.69E+06        | -112              | 1.02E+05        | 152               |
| L3   | -6.09E+04       | 1.69E+06        | -113              | 1.02E+05        | 152               |
| L4   | 8.98E+04        | 1.04E+06        | -128              | 4.35E+04        | 161               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1856. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.89E+06         | 1.89E+06          | -1.87E+06         | 1.87E+06          |
| A2   | -1.89E+06         | 1.89E+06          | -1.87E+06         | 1.87E+06          |
| FD   | -1.65E+06         | 1.65E+06          | -1.64E+06         | 1.64E+06          |
| L1   | -1.79E+06         | 1.61E+06          | -1.78E+06         | 1.60E+06          |
| L3   | -1.79E+06         | 1.61E+06          | -1.78E+06         | 1.60E+06          |
| L4   | -1.38E+06         | 1.42E+06          | -1.28E+06         | 1.35E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-929. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1857. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

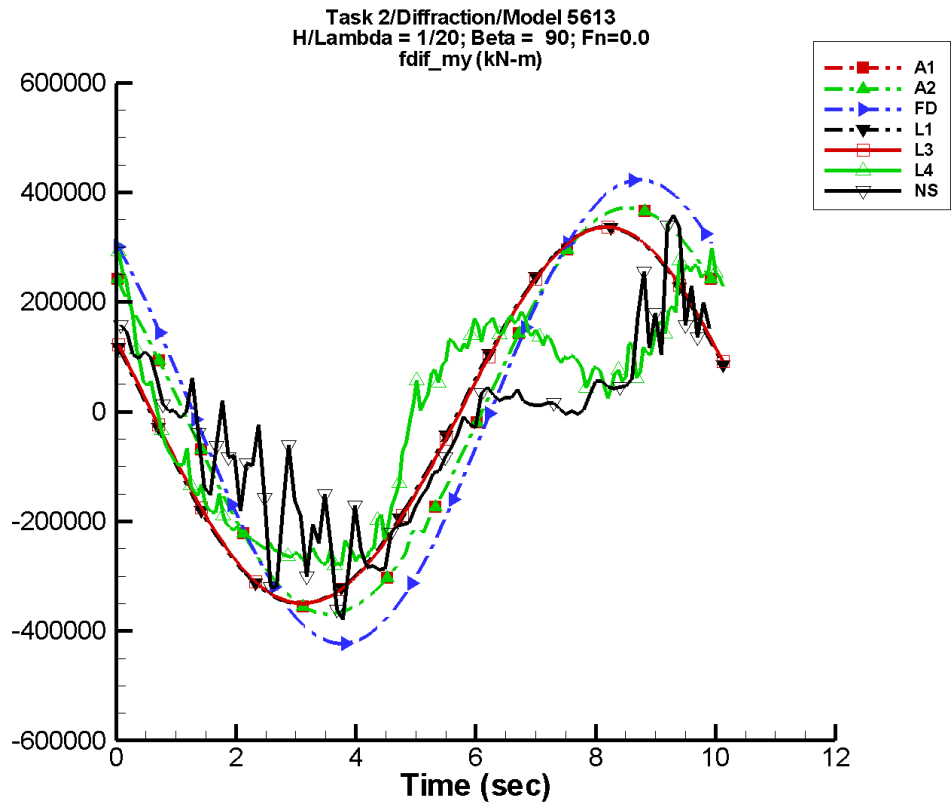
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 350.            | 1.23E+05        | 135               | 329.            | 100               |
| A2   | 350.            | 1.23E+05        | 135               | 329.            | 100               |
| FD   | -65.1           | 1.41E+05        | 126               | 66.7            | 157               |
| L1   | -1.39E+03       | 1.14E+05        | 152               | 978.            | 169               |
| L3   | -1.39E+03       | 1.14E+05        | 151               | 977.            | 169               |
| L4   | -3.01E+03       | 9.54E+04        | 153               | 1.34E+04        | 55                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.35E+03       | 7.99E+04        | 135               | 1.55E+03        | -78               |

Table G–1858. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.23E+05         | 1.24E+05          | -1.21E+05         | 1.22E+05          |
| A2   | -1.23E+05         | 1.24E+05          | -1.21E+05         | 1.22E+05          |
| FD   | -1.41E+05         | 1.41E+05          | -1.40E+05         | 1.40E+05          |
| L1   | -1.15E+05         | 1.14E+05          | -1.16E+05         | 1.13E+05          |
| L3   | -1.15E+05         | 1.14E+05          | -1.16E+05         | 1.13E+05          |
| L4   | -1.07E+05         | 9.80E+04          | -1.07E+05         | 8.50E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -8.71E+04         | 8.51E+04          | -8.53E+04         | 7.86E+04          |



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Data identically zero, insufficient, or not available from NFA.

Figure G-930. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

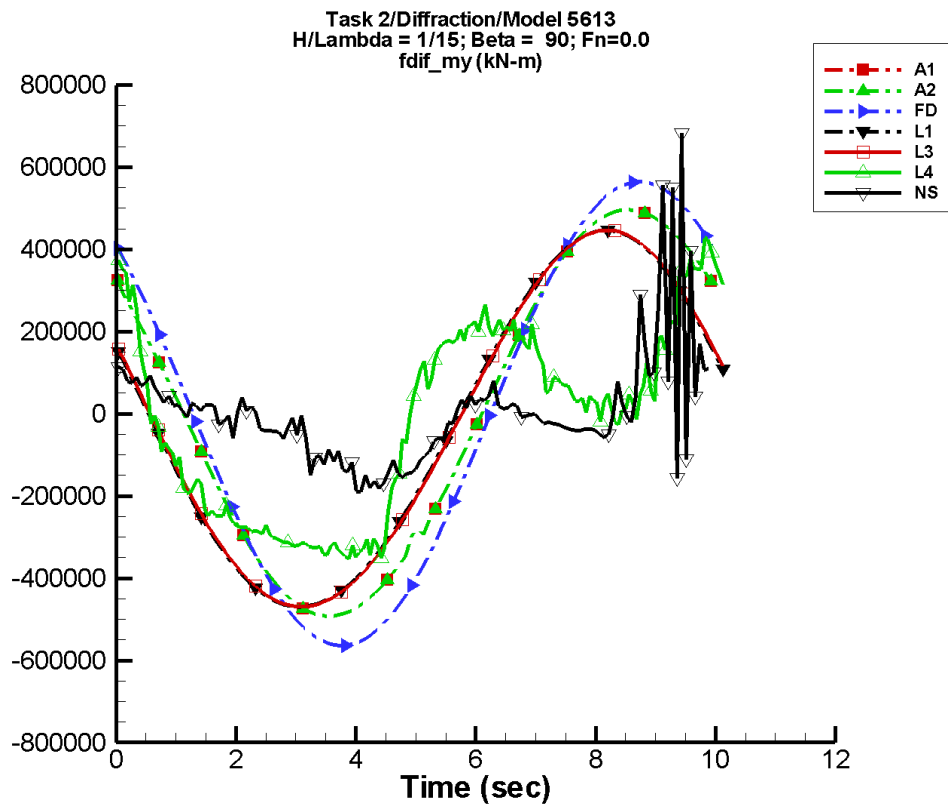
Table G–1859. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.05E+03        | 3.69E+05        | 135               | 991.            | 100               |
| A2   | 1.05E+03        | 3.69E+05        | 135               | 991.            | 100               |
| FD   | -195.           | 4.23E+05        | 126               | 200.            | 157               |
| L1   | -1.27E+04       | 3.43E+05        | 152               | 8.54E+03        | 170               |
| L3   | -1.27E+04       | 3.43E+05        | 151               | 8.54E+03        | 170               |
| L4   | -1.07E+04       | 2.16E+05        | 156               | 8.45E+04        | 54                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.79E+04       | 1.90E+05        | 128               | 3.78E+04        | 52                |

Table G–1860. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.69E+05         | 3.72E+05          | -3.65E+05         | 3.68E+05          |
| A2   | -3.69E+05         | 3.72E+05          | -3.65E+05         | 3.68E+05          |
| FD   | -4.23E+05         | 4.23E+05          | -4.19E+05         | 4.19E+05          |
| L1   | -3.50E+05         | 3.37E+05          | -3.52E+05         | 3.35E+05          |
| L3   | -3.50E+05         | 3.37E+05          | -3.52E+05         | 3.35E+05          |
| L4   | -2.81E+05         | 2.98E+05          | -2.70E+05         | 2.65E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.79E+05         | 3.59E+05          | -2.78E+05         | 2.38E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-931. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

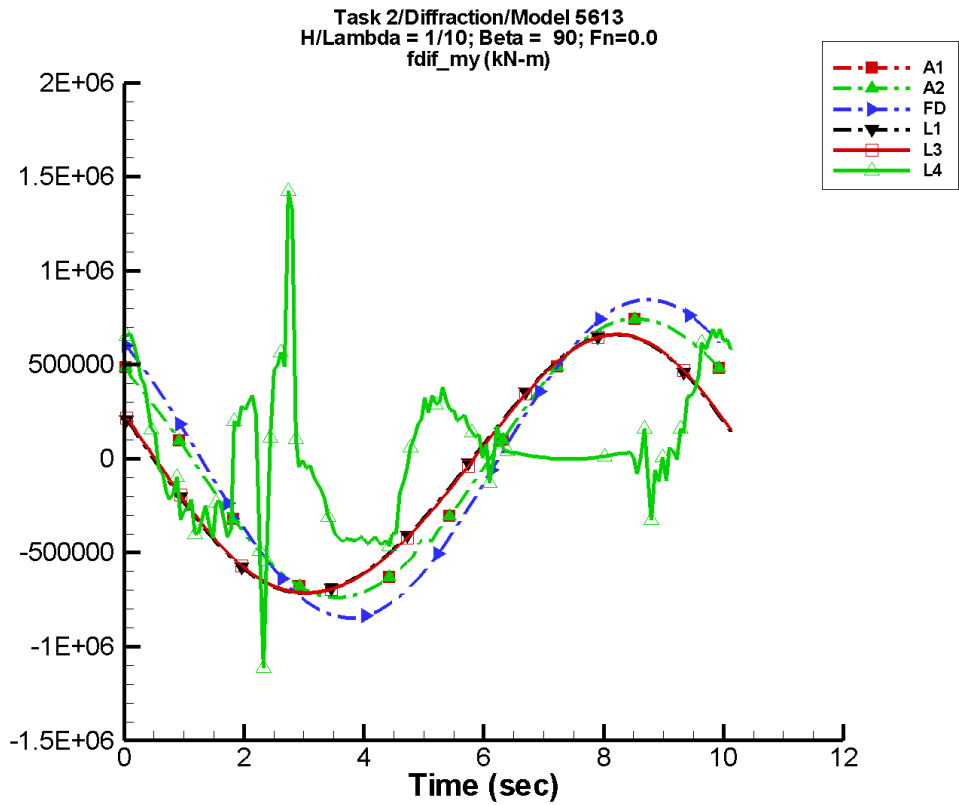
Table G–1861. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.41E+03        | 4.93E+05        | 135               | 1.32E+03        | 100               |
| A2   | 1.41E+03        | 4.93E+05        | 135               | 1.32E+03        | 100               |
| FD   | -260.           | 5.64E+05        | 126               | 267.            | 157               |
| L1   | -2.26E+04       | 4.57E+05        | 152               | 1.51E+04        | 170               |
| L3   | -2.26E+04       | 4.57E+05        | 151               | 1.51E+04        | 170               |
| L4   | -1.91E+04       | 2.45E+05        | 158               | 1.33E+05        | 54                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.14E+03       | 1.08E+05        | 113               | 1.93E+04        | 69                |

Table G–1862. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.92E+05         | 4.96E+05          | -4.87E+05         | 4.91E+05          |
| A2   | -4.92E+05         | 4.96E+05          | -4.87E+05         | 4.91E+05          |
| FD   | -5.64E+05         | 5.64E+05          | -5.59E+05         | 5.59E+05          |
| L1   | -4.70E+05         | 4.46E+05          | -4.72E+05         | 4.44E+05          |
| L3   | -4.69E+05         | 4.46E+05          | -4.72E+05         | 4.44E+05          |
| L4   | -3.53E+05         | 4.29E+05          | -3.35E+05         | 3.82E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.89E+05         | 6.82E+05          | -1.65E+05         | 2.59E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-932. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

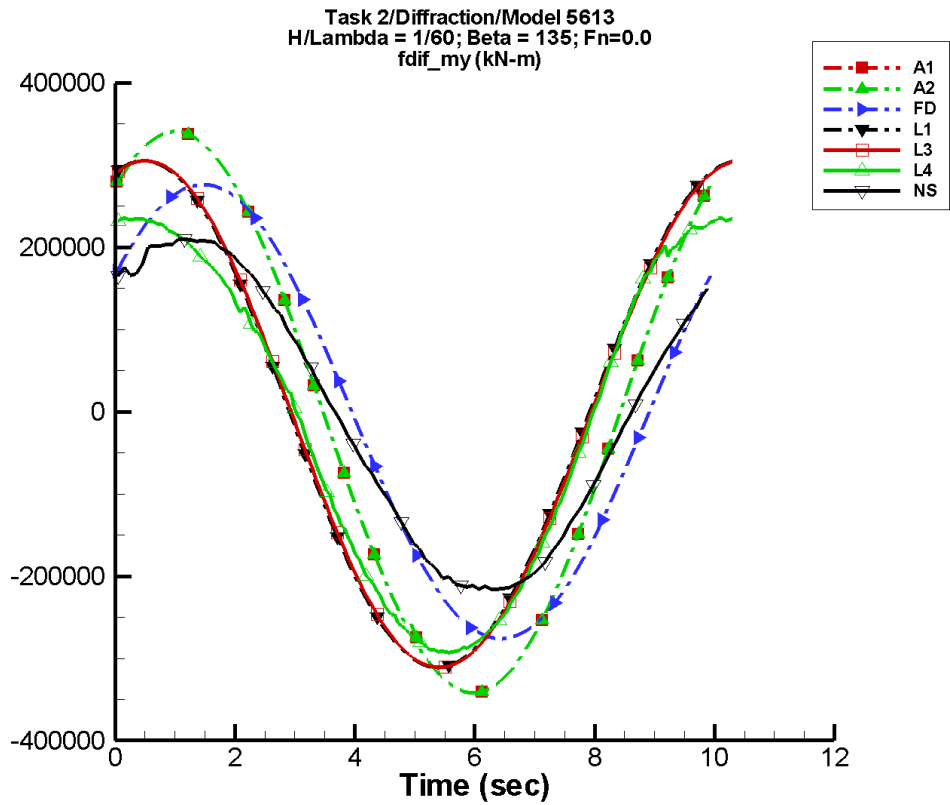
Table G–1863. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.11E+03        | 7.40E+05        | 135               | 1.98E+03        | 100               |
| A2   | 2.11E+03        | 7.40E+05        | 135               | 1.98E+03        | 100               |
| FD   | -390.           | 8.46E+05        | 126               | 400.            | 157               |
| L1   | -5.10E+04       | 6.86E+05        | 152               | 3.39E+04        | 170               |
| L3   | -5.10E+04       | 6.86E+05        | 151               | 3.39E+04        | 170               |
| L4   | 3.37E+04        | 8.84E+04        | 128               | 4.53E+04        | 109               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1864. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.39E+05         | 7.44E+05          | -7.31E+05         | 7.36E+05          |
| A2   | -7.39E+05         | 7.44E+05          | -7.31E+05         | 7.36E+05          |
| FD   | -8.46E+05         | 8.47E+05          | -8.38E+05         | 8.38E+05          |
| L1   | -7.15E+05         | 6.61E+05          | -7.17E+05         | 6.58E+05          |
| L3   | -7.14E+05         | 6.61E+05          | -7.17E+05         | 6.58E+05          |
| L4   | -1.28E+06         | 1.58E+06          | -4.43E+05         | 6.43E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-933. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1865. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

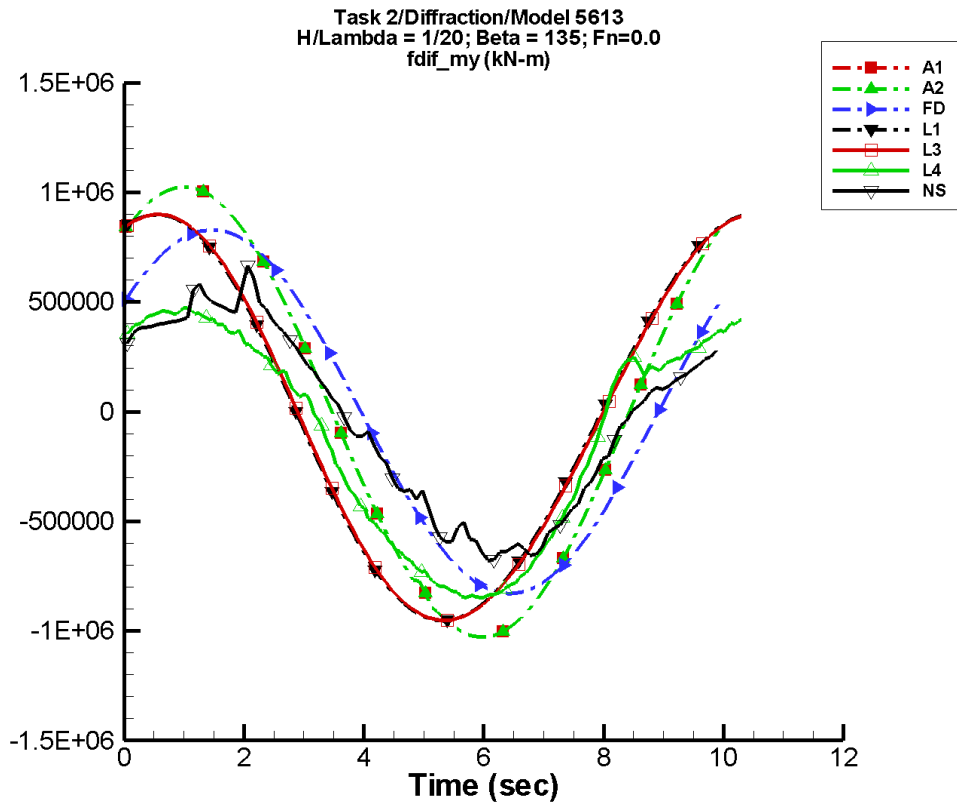
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 255.            | 3.41E+05        | 50                | 234.            | 43                |
| A2   | 255.            | 3.41E+05        | 50                | 234.            | 43                |
| FD   | 6.66            | 2.76E+05        | 29                | 115.            | 61                |
| L1   | -3.97E+03       | 3.08E+05        | 70                | 3.38E+03        | -25               |
| L3   | -3.96E+03       | 3.08E+05        | 69                | 3.39E+03        | -25               |
| L4   | -1.54E+04       | 2.70E+05        | 68                | 1.94E+04        | -175              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.47E+03       | 2.15E+05        | 46                | 2.77E+03        | 162               |

Table G–1866. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.42E+05         | 3.44E+05          | -3.38E+05         | 3.41E+05          |
| A2   | -3.42E+05         | 3.44E+05          | -3.38E+05         | 3.41E+05          |
| FD   | -2.76E+05         | 2.76E+05          | -2.74E+05         | 2.74E+05          |
| L1   | -3.11E+05         | 3.05E+05          | -3.10E+05         | 3.04E+05          |
| L3   | -3.11E+05         | 3.05E+05          | -3.10E+05         | 3.04E+05          |
| L4   | -2.94E+05         | 2.36E+05          | -2.92E+05         | 2.34E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.16E+05         | 2.10E+05          | -2.14E+05         | 2.08E+05          |



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Data identically zero, insufficient, or not available from NFA.

Figure G-934. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

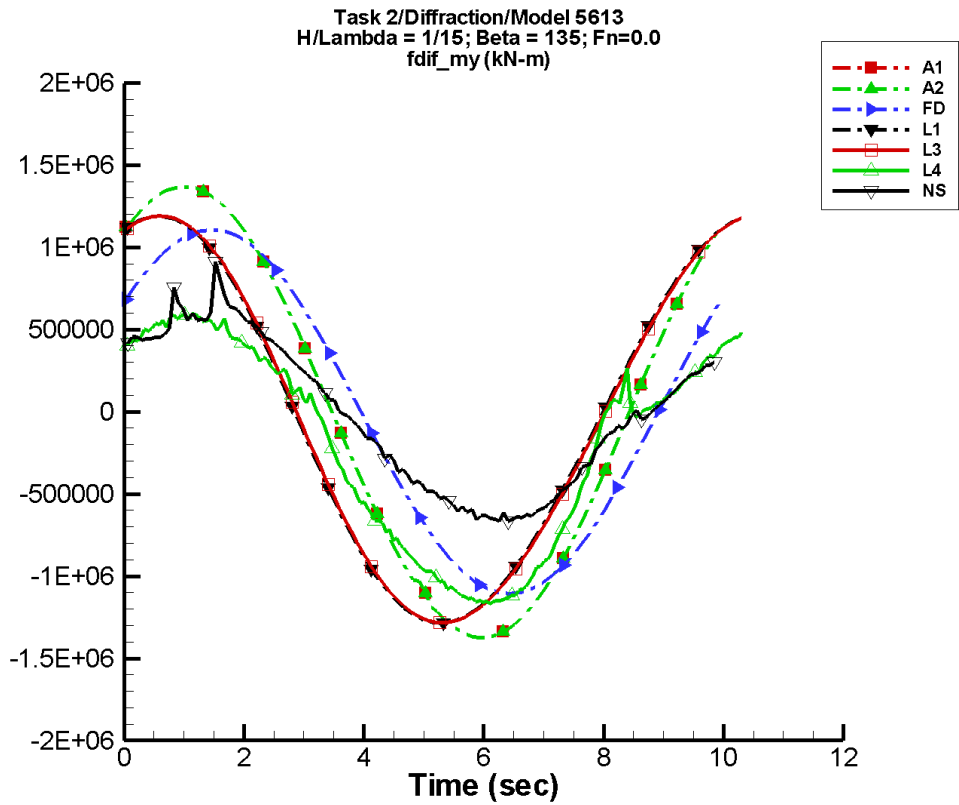
Table G–1867. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 766.            | 1.03E+06        | 50                | 703.            | 43                |
| A2   | 766.            | 1.03E+06        | 50                | 703.            | 43                |
| FD   | 20.1            | 8.29E+05        | 29                | 344.            | 61                |
| L1   | -3.39E+04       | 9.24E+05        | 70                | 3.02E+04        | -28               |
| L3   | -3.39E+04       | 9.24E+05        | 69                | 3.03E+04        | -28               |
| L4   | -1.26E+05       | 6.57E+05        | 60                | 9.36E+04        | -152              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.55E+04       | 5.72E+05        | 43                | 5.48E+04        | -135              |

Table G–1868. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.03E+06         | 1.03E+06          | -1.02E+06         | 1.03E+06          |
| A2   | -1.03E+06         | 1.03E+06          | -1.02E+06         | 1.03E+06          |
| FD   | -8.29E+05         | 8.29E+05          | -8.21E+05         | 8.21E+05          |
| L1   | -9.53E+05         | 8.99E+05          | -9.50E+05         | 8.95E+05          |
| L3   | -9.52E+05         | 9.00E+05          | -9.49E+05         | 8.96E+05          |
| L4   | -8.49E+05         | 4.74E+05          | -8.44E+05         | 4.58E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.80E+05         | 6.66E+05          | -6.39E+05         | 5.27E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-935. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

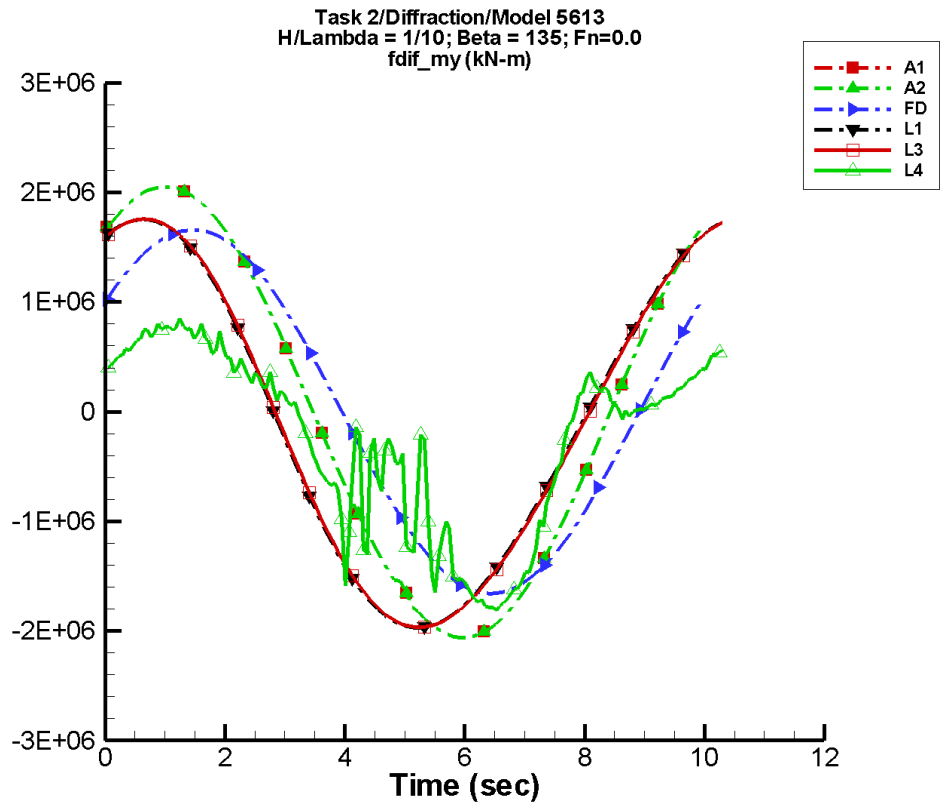
Table G–1869. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.02E+03        | 1.37E+06        | 50                | 939.            | 43                |
| A2   | 1.02E+03        | 1.37E+06        | 50                | 939.            | 43                |
| FD   | 26.7            | 1.11E+06        | 29                | 459.            | 61                |
| L1   | -5.98E+04       | 1.23E+06        | 70                | 5.37E+04        | -28               |
| L3   | -5.98E+04       | 1.23E+06        | 69                | 5.38E+04        | -28               |
| L4   | -2.16E+05       | 8.40E+05        | 54                | 1.10E+05        | -145              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.40E+04       | 6.21E+05        | 44                | 3.71E+04        | -78               |

Table G–1870. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.37E+06         | 1.38E+06          | -1.36E+06         | 1.37E+06          |
| A2   | -1.37E+06         | 1.38E+06          | -1.36E+06         | 1.37E+06          |
| FD   | -1.11E+06         | 1.11E+06          | -1.09E+06         | 1.09E+06          |
| L1   | -1.28E+06         | 1.19E+06          | -1.28E+06         | 1.18E+06          |
| L3   | -1.28E+06         | 1.19E+06          | -1.28E+06         | 1.19E+06          |
| L4   | -1.17E+06         | 6.06E+05          | -1.15E+06         | 5.79E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.69E+05         | 9.10E+05          | -6.48E+05         | 6.80E+05          |

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Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-936. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

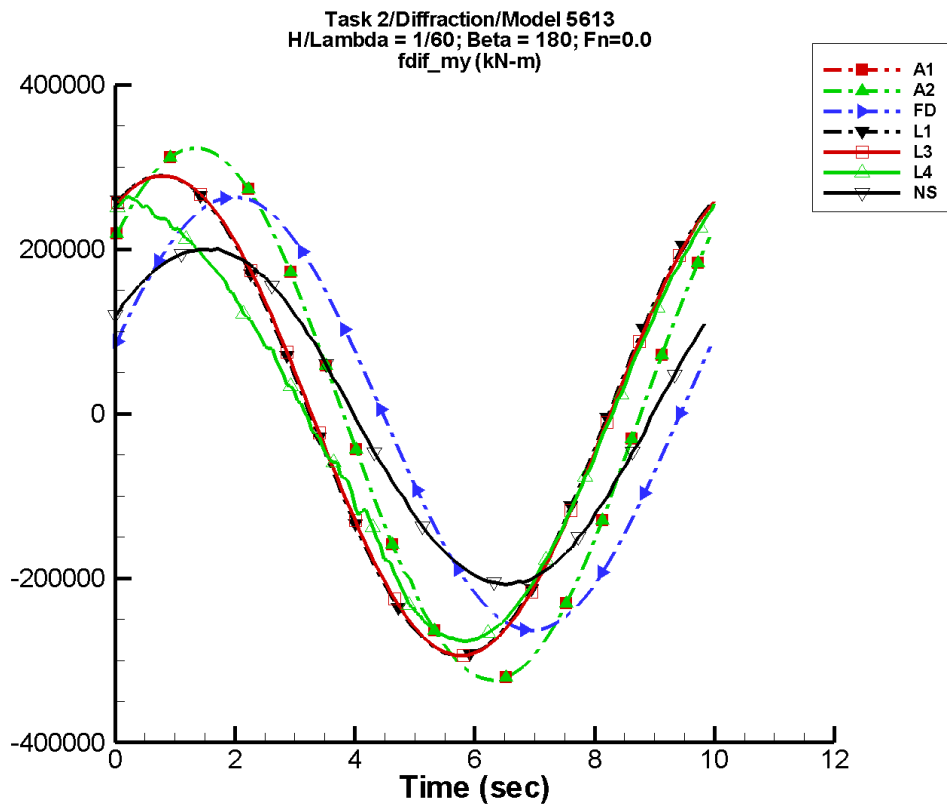
Table G–1871. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.53E+03        | 2.06E+06        | 50                | 1.41E+03        | 43                |
| A2   | 1.53E+03        | 2.06E+06        | 50                | 1.41E+03        | 43                |
| FD   | 40.1            | 1.66E+06        | 29                | 688.            | 61                |
| L1   | -1.34E+05       | 1.85E+06        | 70                | 1.21E+05        | -29               |
| L3   | -1.34E+05       | 1.85E+06        | 69                | 1.21E+05        | -29               |
| L4   | -2.53E+05       | 1.02E+06        | 52                | 1.47E+05        | 174               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1872. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.06E+06         | 2.07E+06          | -2.04E+06         | 2.05E+06          |
| A2   | -2.06E+06         | 2.07E+06          | -2.04E+06         | 2.05E+06          |
| FD   | -1.66E+06         | 1.66E+06          | -1.64E+06         | 1.64E+06          |
| L1   | -1.97E+06         | 1.75E+06          | -1.97E+06         | 1.75E+06          |
| L3   | -1.97E+06         | 1.76E+06          | -1.96E+06         | 1.75E+06          |
| L4   | -1.82E+06         | 8.51E+05          | -1.77E+06         | 7.74E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-937. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

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Table G–1873. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

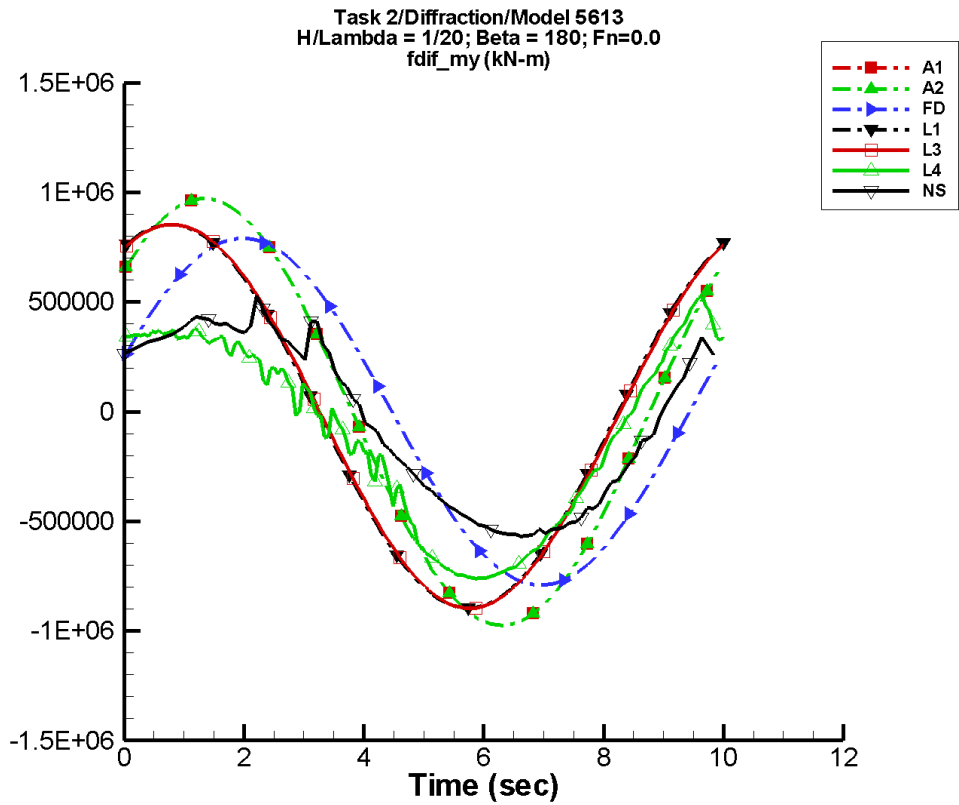
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 53.1            | 3.24E+05        | 38                | 216.            | 17                |
| A2   | 53.1            | 3.24E+05        | 38                | 216.            | 17                |
| FD   | 44.9            | 2.64E+05        | 10                | 112.            | 40                |
| L1   | -1.95E+03       | 2.92E+05        | 58                | 509.            | -174              |
| L3   | -1.94E+03       | 2.92E+05        | 57                | 504.            | -174              |
| L4   | -1.19E+04       | 2.56E+05        | 59                | 2.24E+04        | 126               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.93E+03       | 2.06E+05        | 35                | 1.76E+03        | 97                |

Table G–1874. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.24E+05         | 3.26E+05          | -3.21E+05         | 3.22E+05          |
| A2   | -3.24E+05         | 3.26E+05          | -3.21E+05         | 3.22E+05          |
| FD   | -2.64E+05         | 2.64E+05          | -2.61E+05         | 2.61E+05          |
| L1   | -2.94E+05         | 2.89E+05          | -2.93E+05         | 2.88E+05          |
| L3   | -2.94E+05         | 2.89E+05          | -2.93E+05         | 2.88E+05          |
| L4   | -2.76E+05         | 2.64E+05          | -2.75E+05         | 2.58E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.08E+05         | 2.00E+05          | -2.05E+05         | 1.98E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-938. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

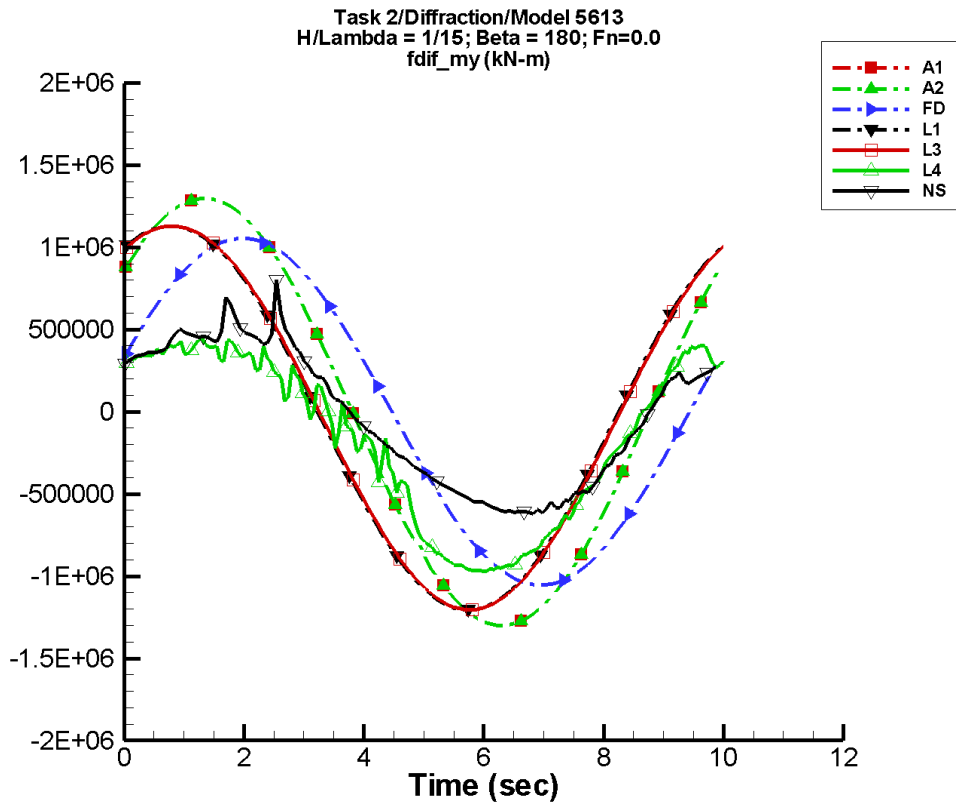
Table G–1875. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 160.            | 9.73E+05        | 38                | 648.            | 17                |
| A2   | 160.            | 9.73E+05        | 38                | 648.            | 17                |
| FD   | 135.            | 7.91E+05        | 10                | 335.            | 40                |
| L1   | -1.68E+04       | 8.75E+05        | 58                | 5.05E+03        | -156              |
| L3   | -1.67E+04       | 8.75E+05        | 57                | 5.04E+03        | -156              |
| L4   | -1.05E+05       | 5.64E+05        | 53                | 1.12E+05        | 161               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.15E+04       | 5.10E+05        | 33                | 4.50E+04        | 156               |

Table G–1876. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.75E+05         | 9.79E+05          | -9.64E+05         | 9.69E+05          |
| A2   | -9.75E+05         | 9.79E+05          | -9.64E+05         | 9.69E+05          |
| FD   | -7.91E+05         | 7.91E+05          | -7.83E+05         | 7.83E+05          |
| L1   | -8.97E+05         | 8.53E+05          | -8.94E+05         | 8.50E+05          |
| L3   | -8.97E+05         | 8.53E+05          | -8.94E+05         | 8.50E+05          |
| L4   | -7.62E+05         | 5.26E+05          | -7.57E+05         | 4.70E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.69E+05         | 5.29E+05          | -5.58E+05         | 4.62E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-939. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

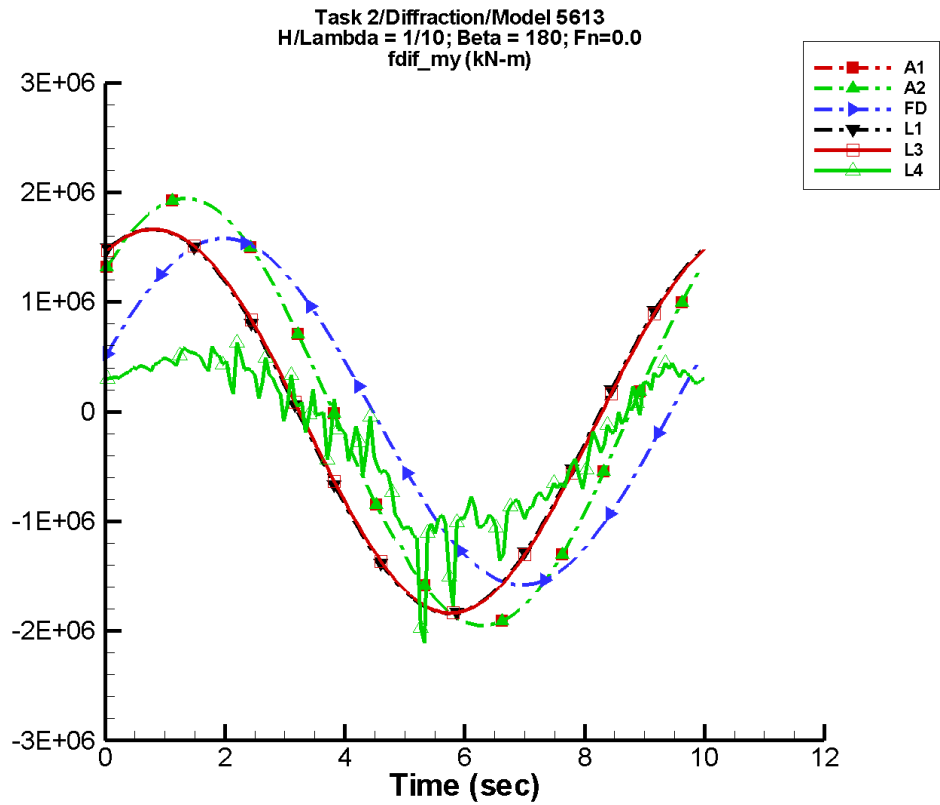
Table G-1877. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 214.            | 1.30E+06        | 38                | 865.            | 17                |
| A2   | 214.            | 1.30E+06        | 38                | 865.            | 17                |
| FD   | 180.            | 1.05E+06        | 10                | 446.            | 40                |
| L1   | -2.96E+04       | 1.17E+06        | 58                | 9.14E+03        | -155              |
| L3   | -2.96E+04       | 1.17E+06        | 57                | 9.12E+03        | -154              |
| L4   | -1.67E+05       | 6.80E+05        | 46                | 1.30E+05        | 170               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.25E+04       | 5.66E+05        | 36                | 2.93E+04        | -162              |

Table G-1878. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.30E+06         | 1.31E+06          | -1.29E+06         | 1.29E+06          |
| A2   | -1.30E+06         | 1.31E+06          | -1.29E+06         | 1.29E+06          |
| FD   | -1.05E+06         | 1.05E+06          | -1.04E+06         | 1.04E+06          |
| L1   | -1.21E+06         | 1.13E+06          | -1.20E+06         | 1.12E+06          |
| L3   | -1.21E+06         | 1.13E+06          | -1.20E+06         | 1.12E+06          |
| L4   | -9.71E+05         | 4.44E+05          | -9.65E+05         | 4.01E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.21E+05         | 8.01E+05          | -6.09E+05         | 5.33E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-940. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

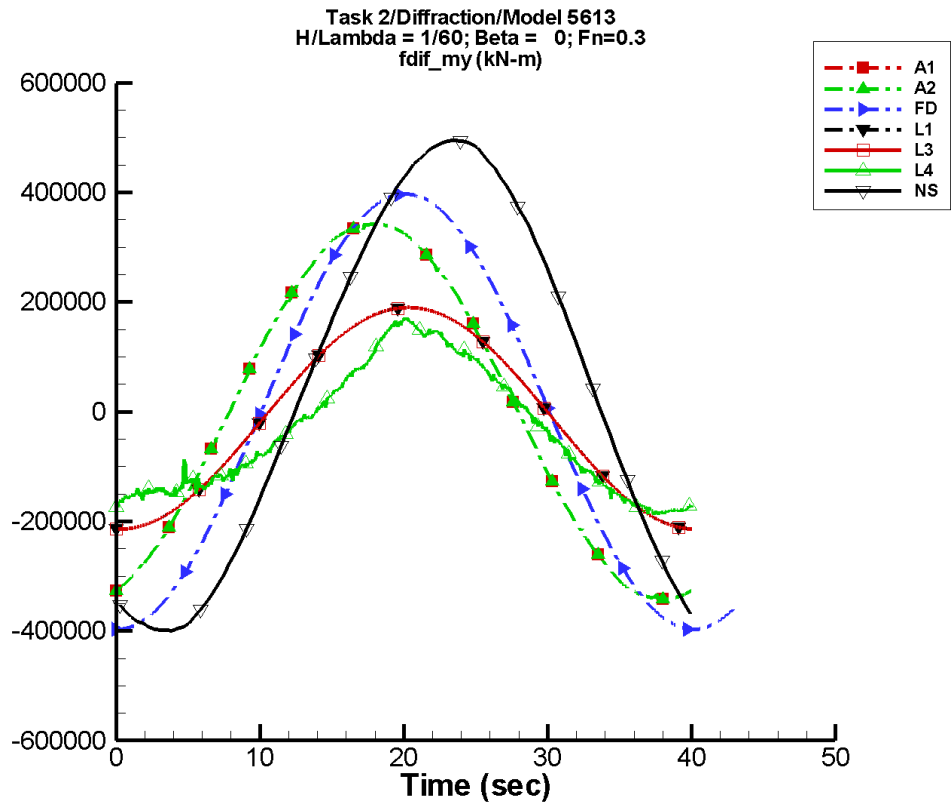
Table G–1879. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 320.            | 1.95E+06        | 38                | 1.30E+03        | 17                |
| A2   | 320.            | 1.95E+06        | 38                | 1.30E+03        | 17                |
| FD   | 270.            | 1.58E+06        | 10                | 670.            | 40                |
| L1   | -6.63E+04       | 1.75E+06        | 58                | 2.09E+04        | -153              |
| L3   | -6.63E+04       | 1.75E+06        | 57                | 2.09E+04        | -153              |
| L4   | -2.12E+05       | 8.17E+05        | 45                | 1.52E+05        | -166              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1880. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.95E+06         | 1.96E+06          | -1.93E+06         | 1.94E+06          |
| A2   | -1.95E+06         | 1.96E+06          | -1.93E+06         | 1.94E+06          |
| FD   | -1.58E+06         | 1.58E+06          | -1.57E+06         | 1.57E+06          |
| L1   | -1.84E+06         | 1.66E+06          | -1.83E+06         | 1.66E+06          |
| L3   | -1.84E+06         | 1.66E+06          | -1.83E+06         | 1.66E+06          |
| L4   | -2.14E+06         | 6.33E+05          | -1.33E+06         | 5.19E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-941. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1881. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

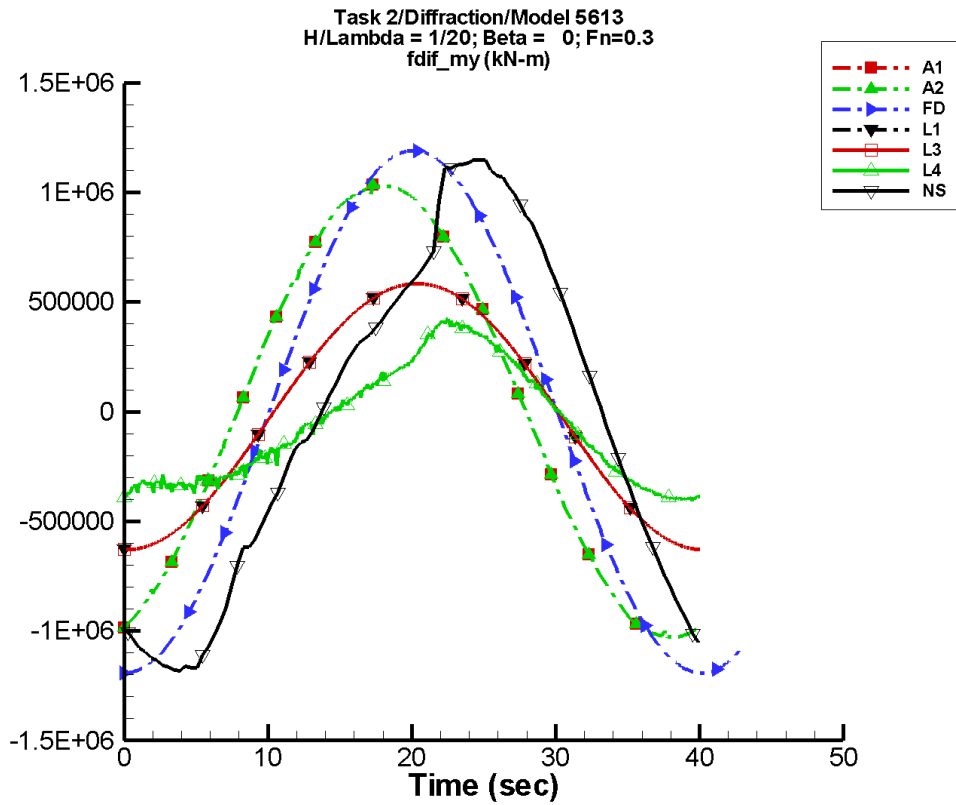
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 113.            | 3.43E+05        | -71               | 970.            | -143              |
| A2   | 113.            | 3.43E+05        | -71               | 970.            | -143              |
| FD   | -0.660          | 3.97E+05        | -93               | 12.4            | -12               |
| L1   | -1.13E+04       | 2.02E+05        | -94               | 863.            | -57               |
| L3   | -1.13E+04       | 2.02E+05        | -94               | 891.            | -57               |
| L4   | -3.73E+04       | 1.53E+05        | -98               | 3.29E+04        | 50                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.57E+04        | 4.58E+05        | -120              | 3.34E+03        | -167              |

Table G–1882. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.45E+05         | 3.44E+05          | -3.42E+05         | 3.42E+05          |
| A2   | -3.45E+05         | 3.44E+05          | -3.42E+05         | 3.42E+05          |
| FD   | -3.97E+05         | 3.97E+05          | -3.98E+05         | 3.97E+05          |
| L1   | -2.14E+05         | 1.90E+05          | -2.14E+05         | 1.90E+05          |
| L3   | -2.14E+05         | 1.90E+05          | -2.14E+05         | 1.90E+05          |
| L4   | -1.87E+05         | 1.72E+05          | -1.84E+05         | 1.68E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.48E+05         | 4.95E+05          | -4.42E+05         | 4.90E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-942. Time history of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

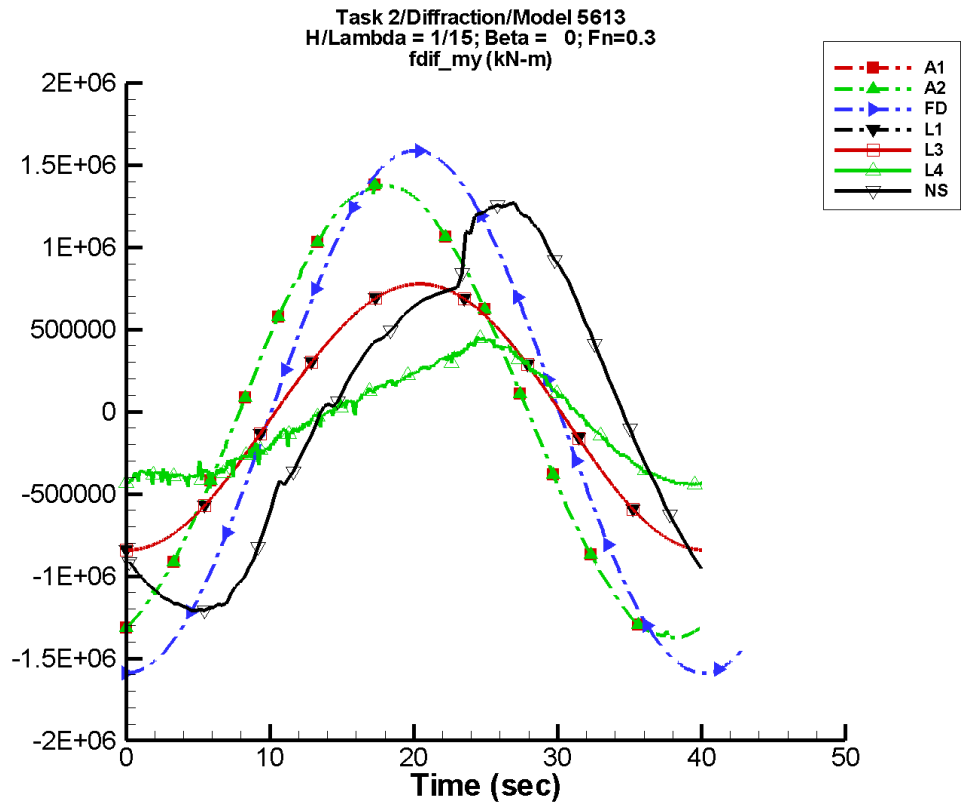
Table G–1883. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 341.            | 1.03E+06        | -71               | 2.92E+03        | -143              |
| A2   | 341.            | 1.03E+06        | -71               | 2.92E+03        | -143              |
| FD   | -2.12           | 1.19E+06        | -93               | 37.5            | -12               |
| L1   | -1.72E+04       | 6.07E+05        | -94               | 6.77E+03        | -60               |
| L3   | -1.72E+04       | 6.07E+05        | -94               | 6.85E+03        | -59               |
| L4   | -6.83E+04       | 3.55E+05        | -110              | 8.32E+04        | 11                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.02E+04       | 1.10E+06        | -124              | 1.16E+05        | -81               |

Table G–1884. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.04E+06         | 1.03E+06          | -1.03E+06         | 1.03E+06          |
| A2   | -1.04E+06         | 1.03E+06          | -1.03E+06         | 1.03E+06          |
| FD   | -1.19E+06         | 1.19E+06          | -1.19E+06         | 1.19E+06          |
| L1   | -6.29E+05         | 5.84E+05          | -6.30E+05         | 5.84E+05          |
| L3   | -6.29E+05         | 5.84E+05          | -6.30E+05         | 5.84E+05          |
| L4   | -4.06E+05         | 4.25E+05          | -3.97E+05         | 4.13E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.32E+06         | 1.15E+06          | -1.30E+06         | 1.14E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-943. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

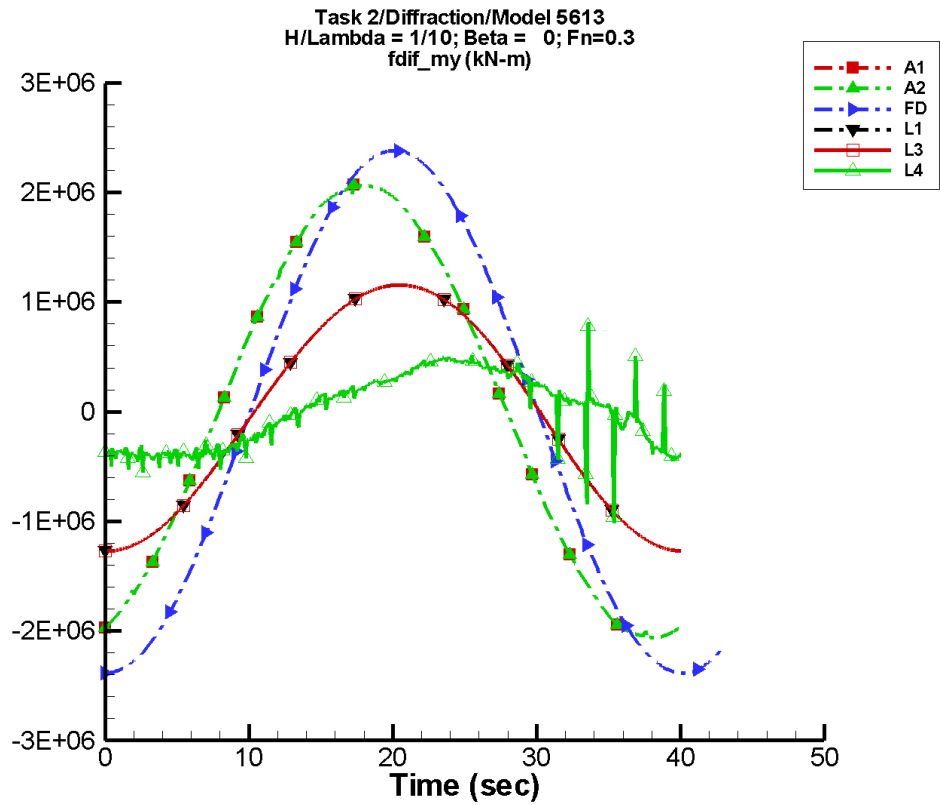
Table G–1885. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 455.            | 1.38E+06        | -71               | 3.90E+03        | -143              |
| A2   | 455.            | 1.38E+06        | -71               | 3.90E+03        | -143              |
| FD   | -2.67           | 1.59E+06        | -93               | 49.6            | -12               |
| L1   | -2.24E+04       | 8.09E+05        | -94               | 1.18E+04        | -60               |
| L3   | -2.24E+04       | 8.09E+05        | -94               | 1.19E+04        | -60               |
| L4   | -5.92E+04       | 3.94E+05        | -116              | 7.58E+04        | -25               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.19E+04       | 1.19E+06        | -134              | 1.24E+05        | -121              |

Table G–1886. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.38E+06         | 1.38E+06          | -1.37E+06         | 1.37E+06          |
| A2   | -1.38E+06         | 1.38E+06          | -1.37E+06         | 1.37E+06          |
| FD   | -1.59E+06         | 1.59E+06          | -1.59E+06         | 1.59E+06          |
| L1   | -8.41E+05         | 7.77E+05          | -8.41E+05         | 7.77E+05          |
| L3   | -8.41E+05         | 7.77E+05          | -8.41E+05         | 7.77E+05          |
| L4   | -4.65E+05         | 4.58E+05          | -4.41E+05         | 4.45E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.39E+06         | 1.27E+06          | -1.38E+06         | 1.25E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-944. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

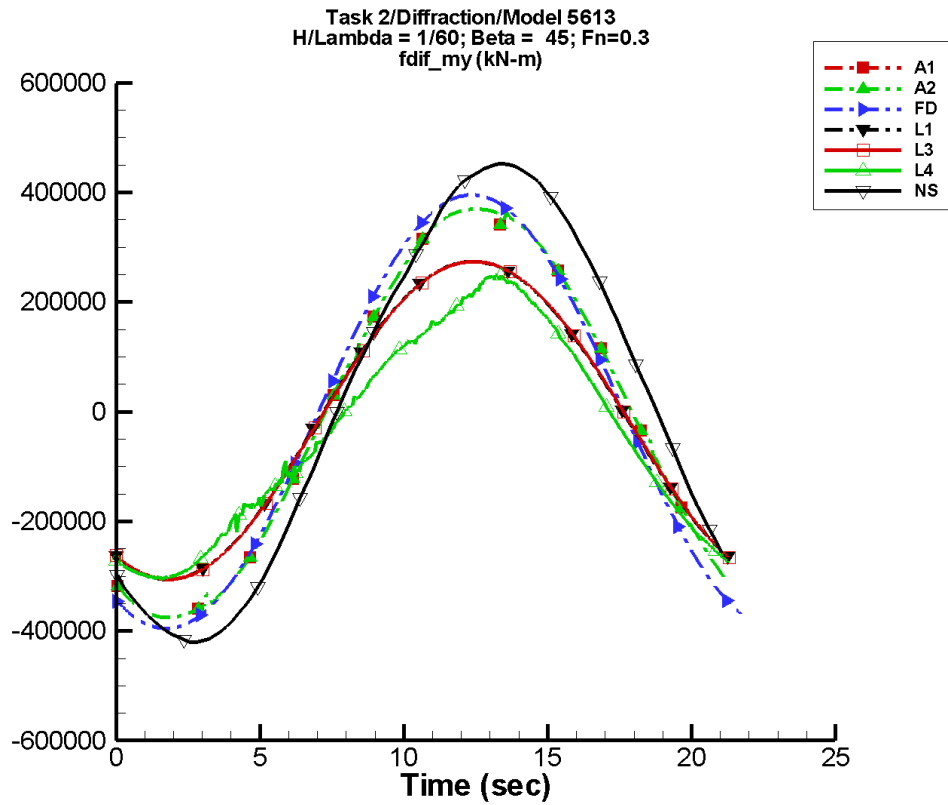
Table G-1887. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 682.            | 2.07E+06        | -71               | 5.84E+03        | -143              |
| A2   | 682.            | 2.07E+06        | -71               | 5.84E+03        | -143              |
| FD   | -4.24           | 2.38E+06        | -93               | 74.9            | -12               |
| L1   | -3.74E+04       | 1.21E+06        | -94               | 2.61E+04        | -60               |
| L3   | -3.74E+04       | 1.21E+06        | -94               | 2.63E+04        | -60               |
| L4   | 8.28E+03        | 4.28E+05        | -128              | 4.52E+03        | -78               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G-1888. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.08E+06         | 2.07E+06          | -2.06E+06         | 2.06E+06          |
| A2   | -2.08E+06         | 2.07E+06          | -2.06E+06         | 2.06E+06          |
| FD   | -2.38E+06         | 2.38E+06          | -2.39E+06         | 2.38E+06          |
| L1   | -1.27E+06         | 1.16E+06          | -1.27E+06         | 1.16E+06          |
| L3   | -1.27E+06         | 1.16E+06          | -1.27E+06         | 1.16E+06          |
| L4   | -1.02E+06         | 8.18E+05          | -4.30E+05         | 4.83E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-945. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1889. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

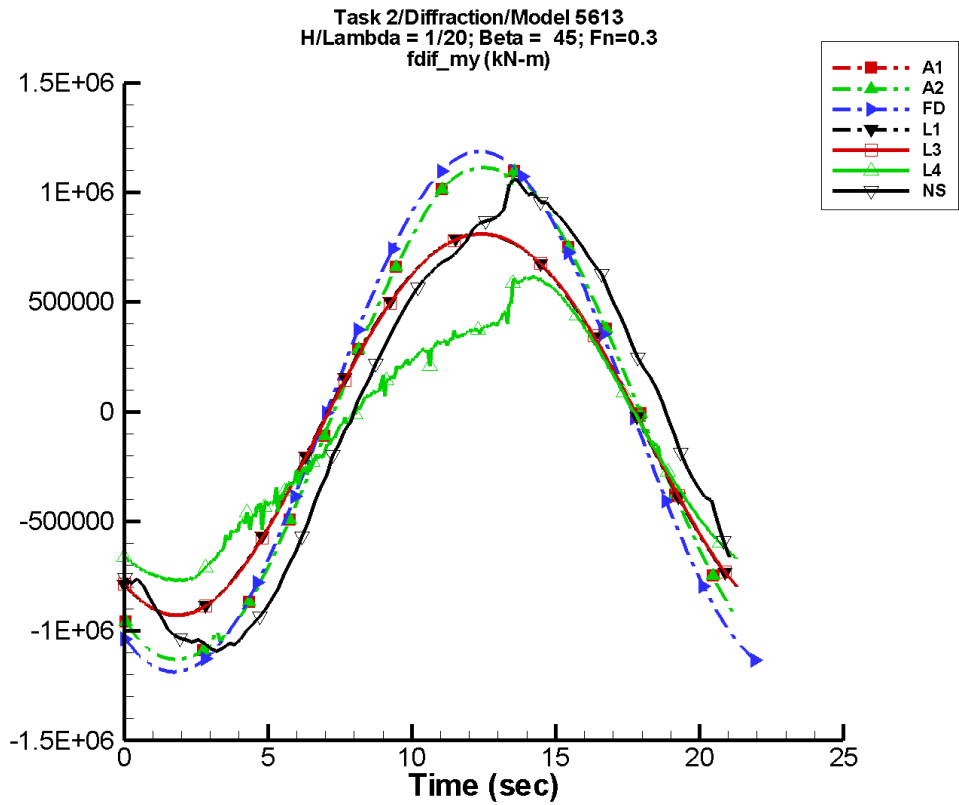
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.10E+03        | 3.71E+05        | -123              | 641.            | -162              |
| A2   | 1.10E+03        | 3.71E+05        | -123              | 641.            | -162              |
| FD   | -93.7           | 3.96E+05        | -114              | 152.            | -32               |
| L1   | -1.26E+04       | 2.90E+05        | -120              | 3.48E+03        | -155              |
| L3   | -1.26E+04       | 2.90E+05        | -121              | 3.49E+03        | -155              |
| L4   | -4.12E+04       | 2.53E+05        | -121              | 2.87E+04        | -53               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.31E+04        | 4.24E+05        | -135              | 4.94E+03        | -122              |

Table G–1890. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.75E+05         | 3.70E+05          | -3.75E+05         | 3.69E+05          |
| A2   | -3.75E+05         | 3.70E+05          | -3.75E+05         | 3.69E+05          |
| FD   | -3.96E+05         | 3.96E+05          | -3.95E+05         | 3.95E+05          |
| L1   | -3.06E+05         | 2.74E+05          | -3.06E+05         | 2.74E+05          |
| L3   | -3.06E+05         | 2.74E+05          | -3.06E+05         | 2.74E+05          |
| L4   | -3.05E+05         | 2.49E+05          | -3.03E+05         | 2.46E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.20E+05         | 4.52E+05          | -4.14E+05         | 4.47E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-946. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

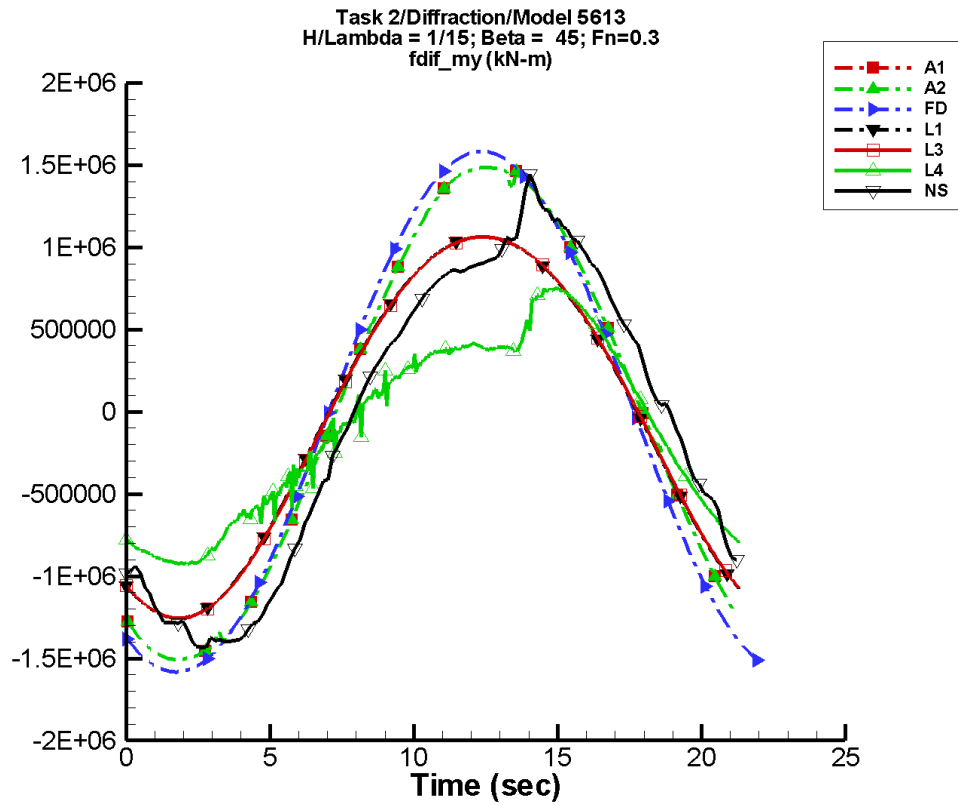
Table G–1891. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.32E+03        | 1.12E+06        | -123              | 1.93E+03        | -162              |
| A2   | 3.32E+03        | 1.12E+06        | -123              | 1.93E+03        | -162              |
| FD   | -281.           | 1.19E+06        | -114              | 458.            | -32               |
| L1   | -2.73E+04       | 8.69E+05        | -120              | 3.18E+04        | -155              |
| L3   | -2.73E+04       | 8.70E+05        | -121              | 3.18E+04        | -155              |
| L4   | -9.83E+04       | 6.14E+05        | -128              | 1.06E+05        | -88               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.49E+04       | 1.00E+06        | -139              | 3.50E+04        | -179              |

Table G–1892. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.13E+06         | 1.11E+06          | -1.13E+06         | 1.11E+06          |
| A2   | -1.13E+06         | 1.11E+06          | -1.13E+06         | 1.11E+06          |
| FD   | -1.19E+06         | 1.19E+06          | -1.18E+06         | 1.18E+06          |
| L1   | -9.29E+05         | 8.10E+05          | -9.28E+05         | 8.10E+05          |
| L3   | -9.29E+05         | 8.11E+05          | -9.28E+05         | 8.10E+05          |
| L4   | -7.70E+05         | 6.15E+05          | -7.68E+05         | 6.09E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.09E+06         | 1.06E+06          | -1.07E+06         | 9.90E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-947. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

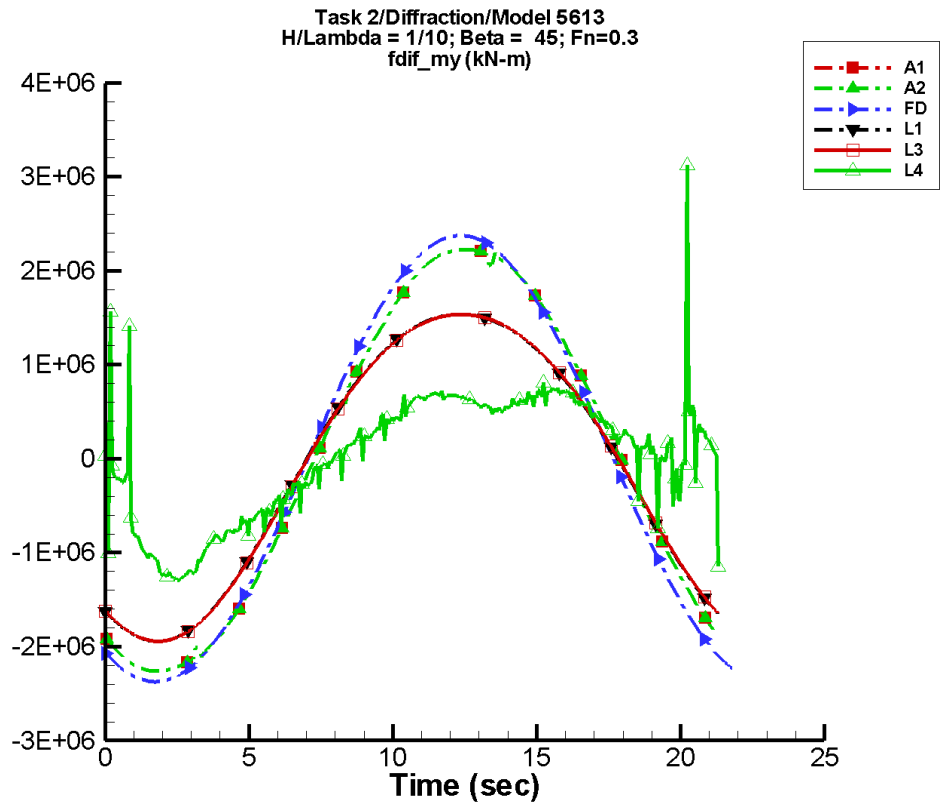
Table G–1893. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.43E+03        | 1.49E+06        | -123              | 2.57E+03        | -162              |
| A2   | 4.43E+03        | 1.49E+06        | -123              | 2.57E+03        | -162              |
| FD   | -375.           | 1.58E+06        | -114              | 610.            | -32               |
| L1   | -4.02E+04       | 1.16E+06        | -120              | 5.66E+04        | -155              |
| L3   | -4.01E+04       | 1.16E+06        | -121              | 5.66E+04        | -155              |
| L4   | -1.06E+05       | 7.22E+05        | -132              | 1.54E+05        | -108              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.40E+04       | 1.26E+06        | -139              | 8.46E+04        | -167              |

Table G–1894. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.51E+06         | 1.49E+06          | -1.50E+06         | 1.48E+06          |
| A2   | -1.51E+06         | 1.49E+06          | -1.50E+06         | 1.48E+06          |
| FD   | -1.58E+06         | 1.58E+06          | -1.58E+06         | 1.58E+06          |
| L1   | -1.26E+06         | 1.06E+06          | -1.25E+06         | 1.06E+06          |
| L3   | -1.26E+06         | 1.06E+06          | -1.26E+06         | 1.06E+06          |
| L4   | -9.28E+05         | 7.53E+05          | -9.22E+05         | 7.45E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.43E+06         | 1.45E+06          | -1.40E+06         | 1.27E+06          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-948. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

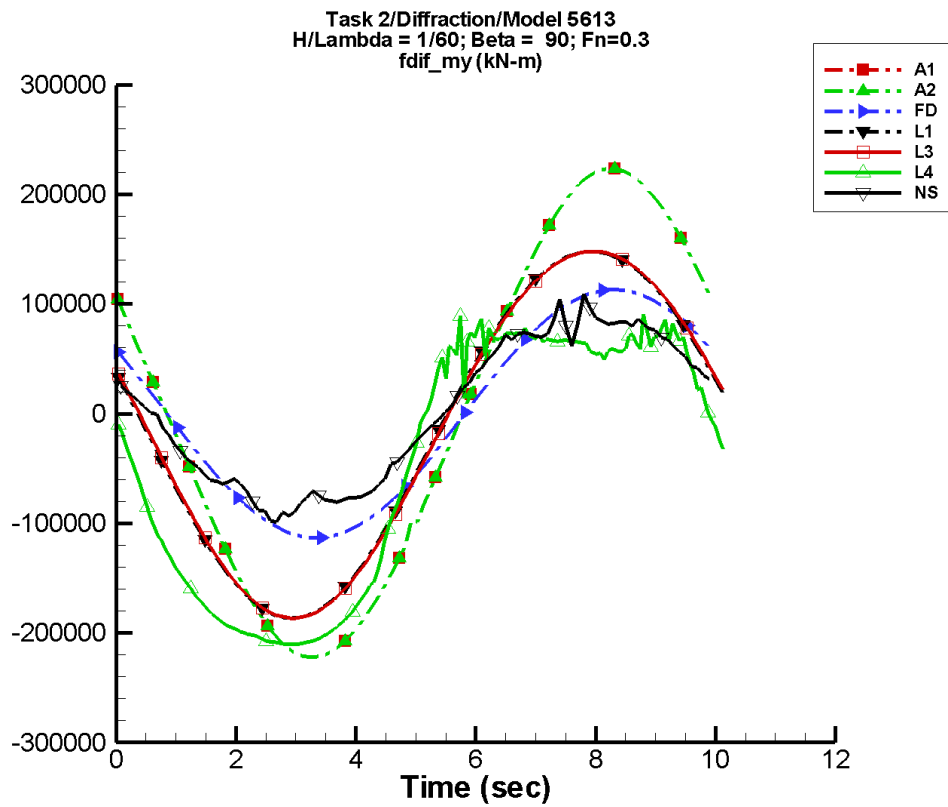
Table G–1895. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.65E+03        | 2.23E+06        | -123              | 3.86E+03        | -162              |
| A2   | 6.65E+03        | 2.23E+06        | -123              | 3.86E+03        | -162              |
| FD   | -563.           | 2.37E+06        | -114              | 915.            | -32               |
| L1   | -7.68E+04       | 1.74E+06        | -120              | 1.28E+05        | -155              |
| L3   | -7.67E+04       | 1.74E+06        | -121              | 1.28E+05        | -156              |
| L4   | 2.01E+04        | 7.89E+05        | -146              | 2.35E+05        | 152               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1896. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.26E+06         | 2.23E+06          | -2.26E+06         | 2.23E+06          |
| A2   | -2.26E+06         | 2.23E+06          | -2.26E+06         | 2.23E+06          |
| FD   | -2.37E+06         | 2.37E+06          | -2.37E+06         | 2.37E+06          |
| L1   | -1.94E+06         | 1.54E+06          | -1.94E+06         | 1.53E+06          |
| L3   | -1.94E+06         | 1.54E+06          | -1.94E+06         | 1.53E+06          |
| L4   | -1.30E+06         | 3.12E+06          | -1.27E+06         | 7.23E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-949. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1897. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

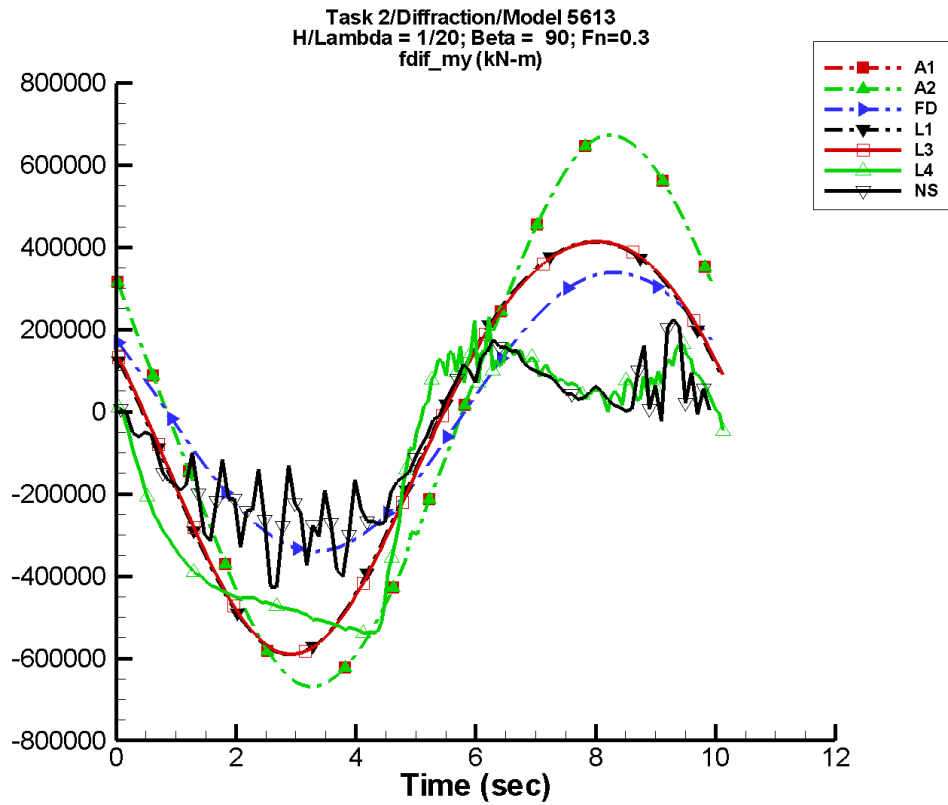
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 708.            | 2.18E+05        | 146               | 360.            | -61               |
| A2   | 708.            | 2.18E+05        | 146               | 360.            | -61               |
| FD   | -49.4           | 1.13E+05        | 141               | 52.8            | 171               |
| L1   | -1.47E+04       | 1.67E+05        | 159               | 4.70E+03        | 61                |
| L3   | -1.47E+04       | 1.67E+05        | 158               | 4.69E+03        | 61                |
| L4   | -4.86E+04       | 1.55E+05        | 172               | 2.30E+04        | 67                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.86E+03        | 9.01E+04        | 161               | 1.97E+03        | -12               |

Table G–1898. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.22E+05         | 2.24E+05          | -2.20E+05         | 2.21E+05          |
| A2   | -2.22E+05         | 2.24E+05          | -2.20E+05         | 2.21E+05          |
| FD   | -1.13E+05         | 1.13E+05          | -1.12E+05         | 1.12E+05          |
| L1   | -1.87E+05         | 1.48E+05          | -1.86E+05         | 1.47E+05          |
| L3   | -1.87E+05         | 1.48E+05          | -1.86E+05         | 1.47E+05          |
| L4   | -2.10E+05         | 9.04E+04          | -2.10E+05         | 7.49E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.85E+04         | 1.09E+05          | -8.95E+04         | 8.77E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-950. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

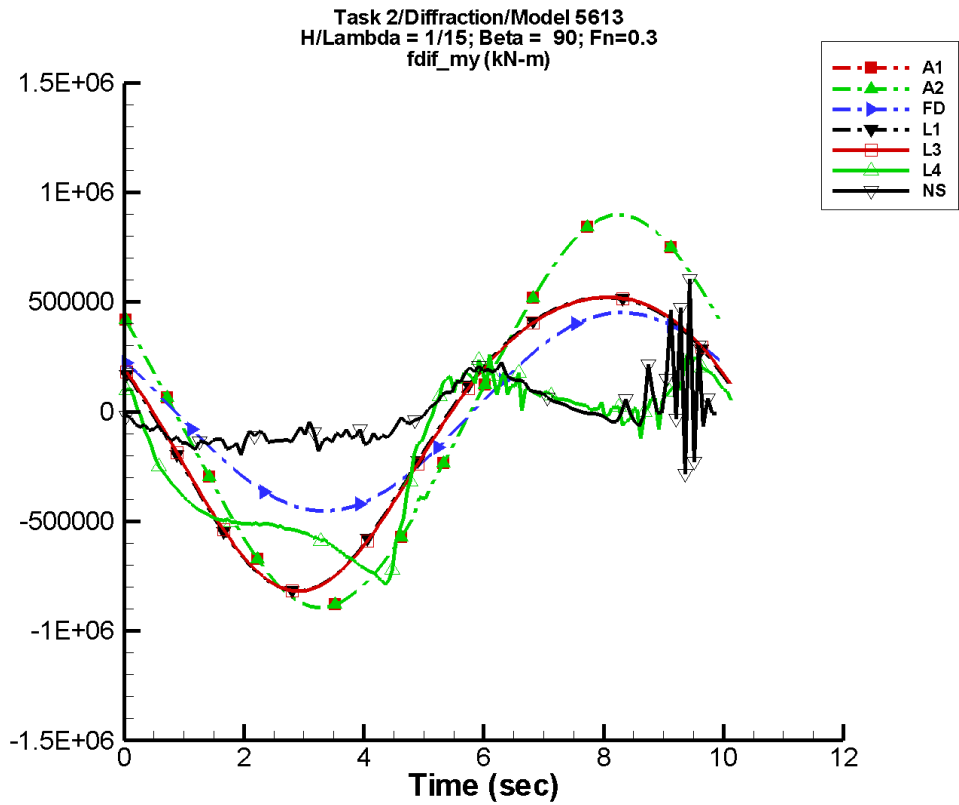
Table G–1899. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.13E+03        | 6.55E+05        | 146               | 1.08E+03        | -61               |
| A2   | 2.13E+03        | 6.55E+05        | 146               | 1.08E+03        | -61               |
| FD   | -148.           | 3.39E+05        | 141               | 159.            | 171               |
| L1   | -4.73E+04       | 5.01E+05        | 159               | 4.22E+04        | 60                |
| L3   | -4.73E+04       | 5.02E+05        | 158               | 4.22E+04        | 60                |
| L4   | -1.49E+05       | 3.36E+05        | 170               | 7.13E+04        | 39                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.38E+04       | 2.07E+05        | 170               | 4.36E+04        | 33                |

Table G–1900. Minimum and maximum of of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.68E+05         | 6.73E+05          | -6.60E+05         | 6.65E+05          |
| A2   | -6.68E+05         | 6.73E+05          | -6.60E+05         | 6.65E+05          |
| FD   | -3.39E+05         | 3.39E+05          | -3.36E+05         | 3.36E+05          |
| L1   | -5.90E+05         | 4.13E+05          | -5.88E+05         | 4.12E+05          |
| L3   | -5.90E+05         | 4.14E+05          | -5.88E+05         | 4.12E+05          |
| L4   | -5.39E+05         | 2.30E+05          | -5.37E+05         | 1.44E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.26E+05         | 2.25E+05          | -2.91E+05         | 1.44E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-951. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

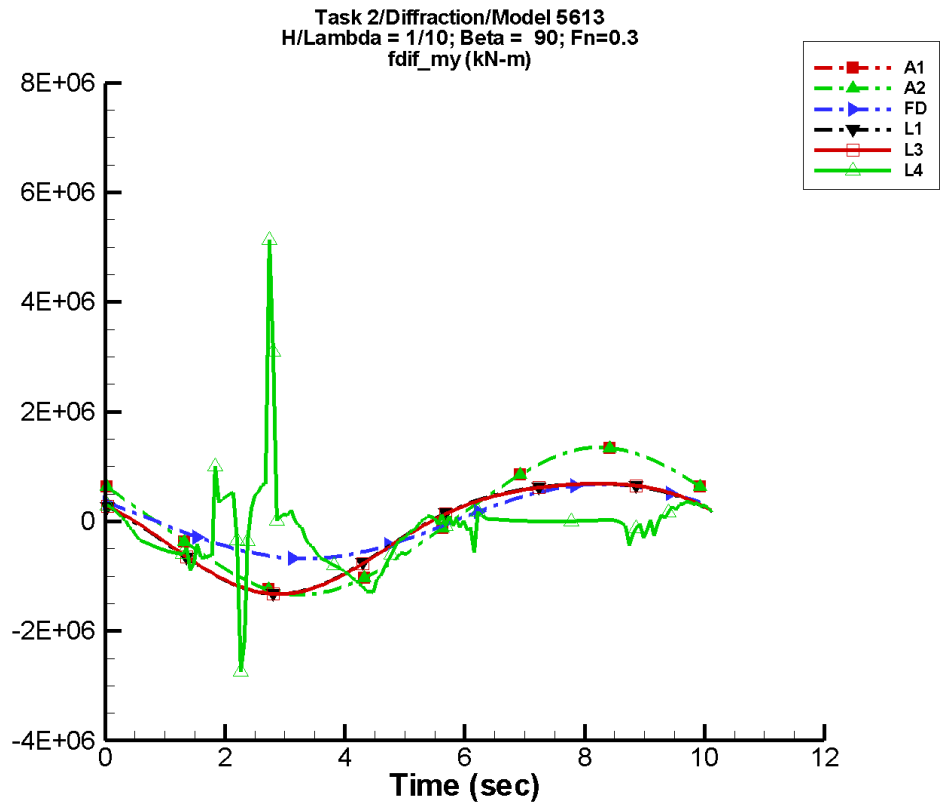
Table G–1901. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 2.84E+03        | 8.75E+05        | 146               | 1.45E+03        | -61               |
| A2   | 2.84E+03        | 8.75E+05        | 146               | 1.45E+03        | -61               |
| FD   | -197.           | 4.52E+05        | 141               | 211.            | 171               |
| L1   | -7.58E+04       | 6.69E+05        | 159               | 7.49E+04        | 60                |
| L3   | -7.58E+04       | 6.69E+05        | 158               | 7.49E+04        | 60                |
| L4   | -1.90E+05       | 3.77E+05        | 164               | 1.01E+05        | 35                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.68E+04       | 1.26E+05        | -167              | 3.06E+04        | 57                |

Table G–1902. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.92E+05         | 8.98E+05          | -8.81E+05         | 8.88E+05          |
| A2   | -8.92E+05         | 8.98E+05          | -8.81E+05         | 8.88E+05          |
| FD   | -4.53E+05         | 4.52E+05          | -4.48E+05         | 4.48E+05          |
| L1   | -8.19E+05         | 5.20E+05          | -8.15E+05         | 5.19E+05          |
| L3   | -8.18E+05         | 5.21E+05          | -8.15E+05         | 5.20E+05          |
| L4   | -7.88E+05         | 2.64E+05          | -7.48E+05         | 2.11E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.85E+05         | 6.04E+05          | -1.46E+05         | 1.92E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-952. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

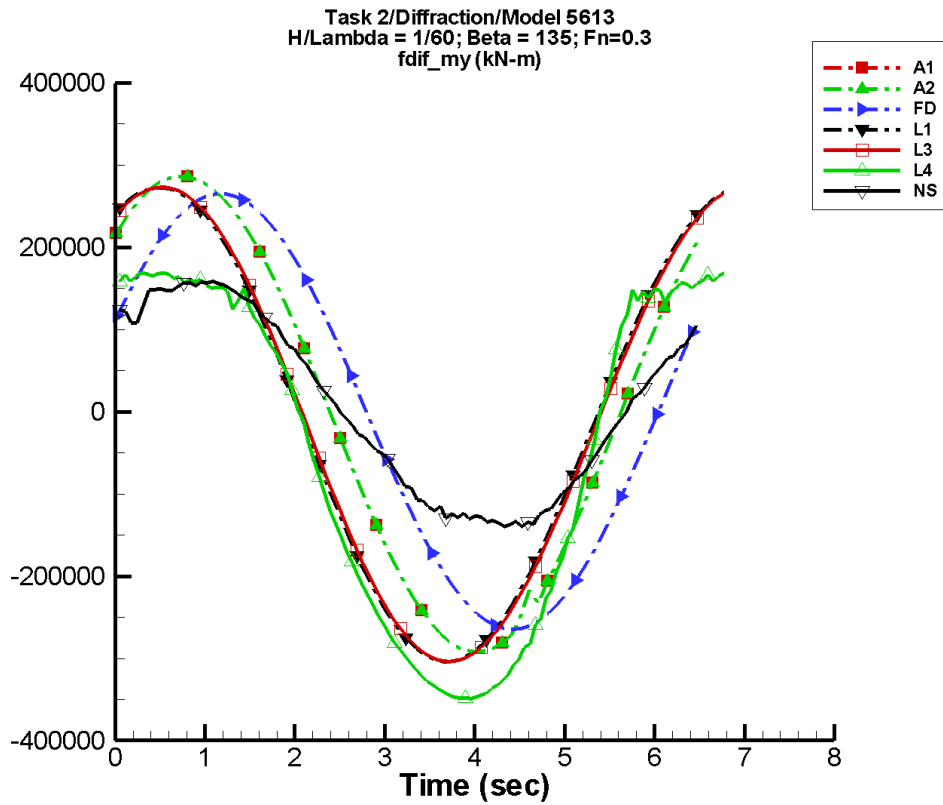
Table G–1903. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.27E+03        | 1.31E+06        | 146               | 2.17E+03        | -61               |
| A2   | 4.27E+03        | 1.31E+06        | 146               | 2.17E+03        | -61               |
| FD   | -296.           | 6.79E+05        | 141               | 317.            | 171               |
| L1   | -1.57E+05       | 1.00E+06        | 159               | 1.69E+05        | 60                |
| L3   | -1.57E+05       | 1.00E+06        | 158               | 1.69E+05        | 60                |
| L4   | -1.24E+05       | 1.36E+05        | 122               | 2.54E+05        | -116              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1904. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.34E+06         | 1.35E+06          | -1.32E+06         | 1.33E+06          |
| A2   | -1.34E+06         | 1.35E+06          | -1.32E+06         | 1.33E+06          |
| FD   | -6.79E+05         | 6.79E+05          | -6.72E+05         | 6.72E+05          |
| L1   | -1.33E+06         | 6.86E+05          | -1.32E+06         | 6.84E+05          |
| L3   | -1.33E+06         | 6.90E+05          | -1.32E+06         | 6.88E+05          |
| L4   | -3.62E+06         | 5.14E+06          | -1.16E+06         | 1.39E+06          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-953. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1905. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

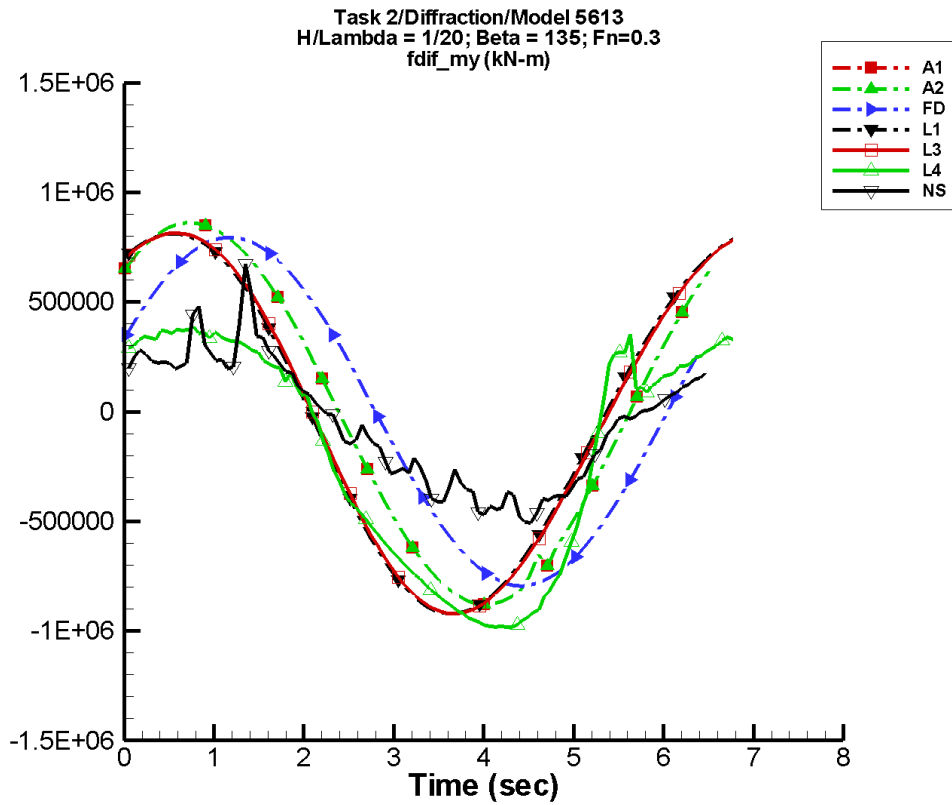
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -188.           | 2.89E+05        | 45                | 1.27E+03        | -139              |
| A2   | -188.           | 2.89E+05        | 45                | 1.27E+03        | -139              |
| FD   | 9.91            | 2.65E+05        | 26                | 12.9            | -176              |
| L1   | -1.39E+04       | 2.88E+05        | 61                | 3.97E+03        | -84               |
| L3   | -1.39E+04       | 2.88E+05        | 60                | 3.97E+03        | -84               |
| L4   | -5.84E+04       | 2.76E+05        | 59                | 3.96E+04        | -166              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 7.32E+03        | 1.50E+05        | 41                | 3.56E+03        | 18                |

Table G–1906. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.93E+05         | 2.89E+05          | -2.85E+05         | 2.82E+05          |
| A2   | -2.93E+05         | 2.89E+05          | -2.85E+05         | 2.82E+05          |
| FD   | -2.65E+05         | 2.65E+05          | -2.59E+05         | 2.65E+05          |
| L1   | -3.04E+05         | 2.73E+05          | -3.01E+05         | 2.70E+05          |
| L3   | -3.04E+05         | 2.73E+05          | -3.01E+05         | 2.71E+05          |
| L4   | -3.49E+05         | 1.69E+05          | -3.46E+05         | 1.67E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.40E+05         | 1.63E+05          | -1.36E+05         | 1.61E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-954. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

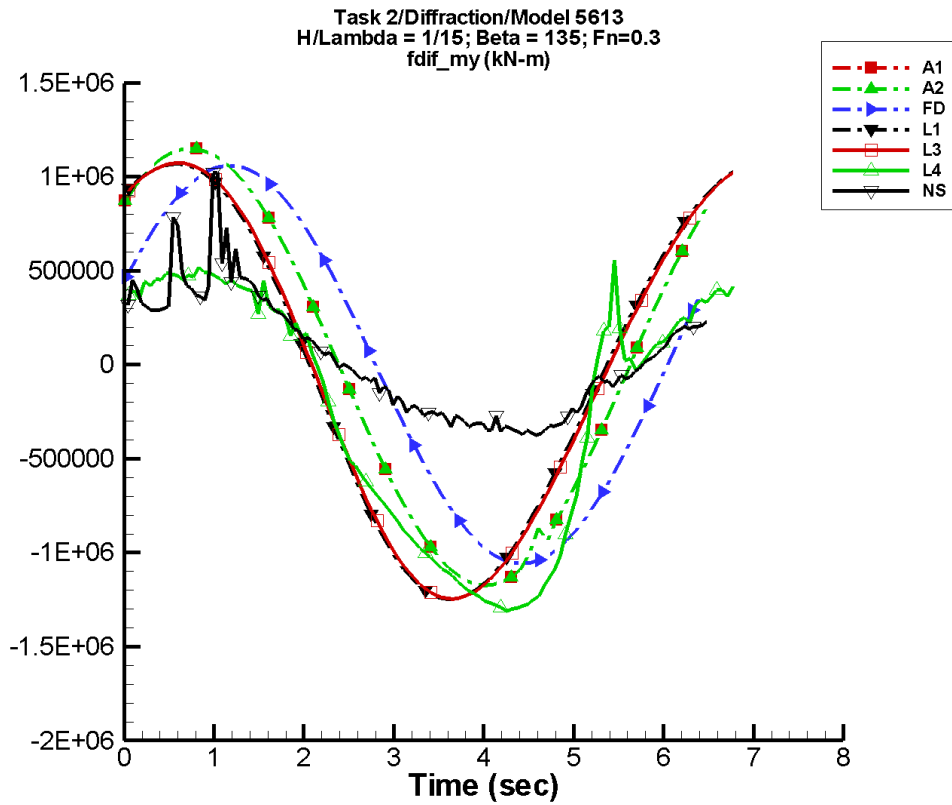
Table G–1907. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -565.           | 8.68E+05        | 45                | 3.81E+03        | -139              |
| A2   | -565.           | 8.68E+05        | 45                | 3.81E+03        | -139              |
| FD   | 29.8            | 7.95E+05        | 26                | 38.8            | -176              |
| L1   | -3.96E+04       | 8.64E+05        | 61                | 3.55E+04        | -84               |
| L3   | -3.96E+04       | 8.65E+05        | 60                | 3.55E+04        | -84               |
| L4   | -2.07E+05       | 6.92E+05        | 54                | 1.22E+05        | -170              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.94E+04       | 3.83E+05        | 41                | 2.00E+04        | -118              |

Table G–1908. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -8.80E+05         | 8.68E+05          | -8.56E+05         | 8.49E+05          |
| A2   | -8.80E+05         | 8.68E+05          | -8.56E+05         | 8.49E+05          |
| FD   | -7.95E+05         | 7.94E+05          | -7.76E+05         | 7.95E+05          |
| L1   | -9.22E+05         | 8.11E+05          | -9.14E+05         | 8.04E+05          |
| L3   | -9.21E+05         | 8.14E+05          | -9.13E+05         | 8.08E+05          |
| L4   | -9.83E+05         | 3.88E+05          | -9.77E+05         | 3.69E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.08E+05         | 6.76E+05          | -4.47E+05         | 3.93E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-955. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

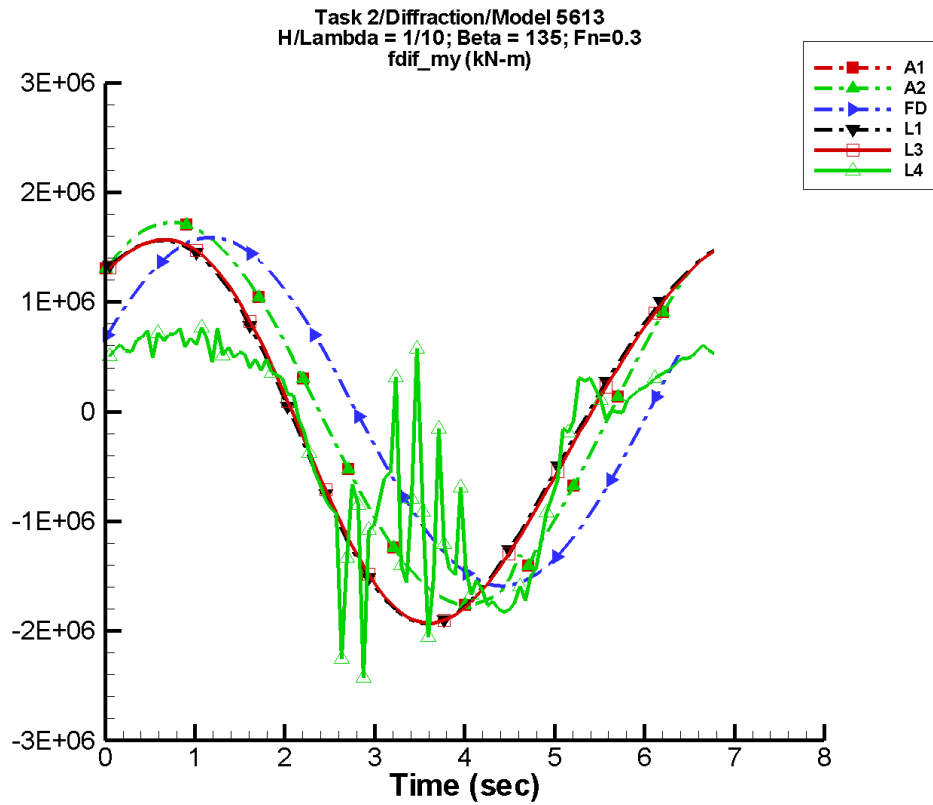
Table G–1909. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -754.           | 1.16E+06        | 45                | 5.08E+03        | -139              |
| A2   | -754.           | 1.16E+06        | 45                | 5.08E+03        | -139              |
| FD   | 39.7            | 1.06E+06        | 26                | 51.9            | -176              |
| L1   | -6.20E+04       | 1.15E+06        | 61                | 6.30E+04        | -84               |
| L3   | -6.20E+04       | 1.15E+06        | 60                | 6.30E+04        | -84               |
| L4   | -2.71E+05       | 8.93E+05        | 51                | 1.53E+05        | -168              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 4.04E+04        | 4.28E+05        | 41                | 6.68E+04        | -18               |

Table G–1910. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.17E+06         | 1.16E+06          | -1.14E+06         | 1.13E+06          |
| A2   | -1.17E+06         | 1.16E+06          | -1.14E+06         | 1.13E+06          |
| FD   | -1.06E+06         | 1.06E+06          | -1.03E+06         | 1.06E+06          |
| L1   | -1.25E+06         | 1.07E+06          | -1.24E+06         | 1.06E+06          |
| L3   | -1.25E+06         | 1.07E+06          | -1.23E+06         | 1.06E+06          |
| L4   | -1.31E+06         | 5.56E+05          | -1.29E+06         | 4.82E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.76E+05         | 1.04E+06          | -3.58E+05         | 6.50E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-956. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

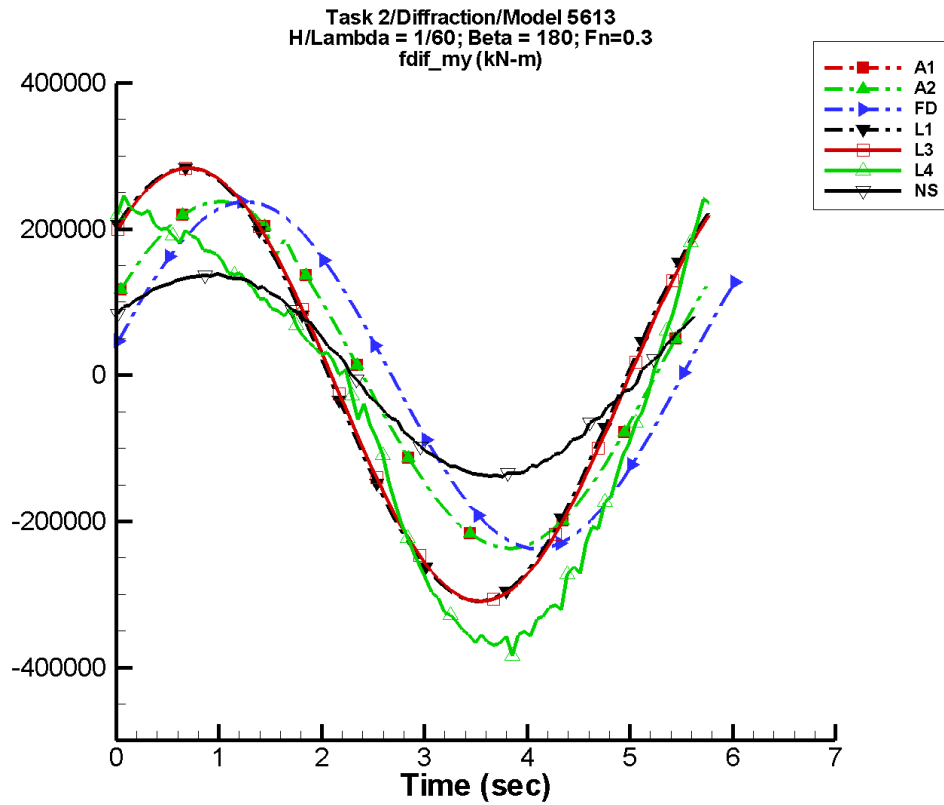
Table G–1911. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.13E+03       | 1.74E+06        | 45                | 7.62E+03        | -139              |
| A2   | -1.13E+03       | 1.74E+06        | 45                | 7.62E+03        | -139              |
| FD   | 59.5            | 1.59E+06        | 26                | 77.6            | -176              |
| L1   | -1.26E+05       | 1.73E+06        | 61                | 1.42E+05        | -84               |
| L3   | -1.26E+05       | 1.73E+06        | 60                | 1.42E+05        | -84               |
| L4   | -2.88E+05       | 1.09E+06        | 52                | 8.18E+04        | -167              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1912. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.76E+06         | 1.74E+06          | -1.71E+06         | 1.70E+06          |
| A2   | -1.76E+06         | 1.74E+06          | -1.71E+06         | 1.70E+06          |
| FD   | -1.59E+06         | 1.59E+06          | -1.55E+06         | 1.59E+06          |
| L1   | -1.93E+06         | 1.56E+06          | -1.92E+06         | 1.55E+06          |
| L3   | -1.93E+06         | 1.57E+06          | -1.91E+06         | 1.56E+06          |
| L4   | -2.42E+06         | 7.94E+05          | -1.76E+06         | 6.80E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-957. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1913. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

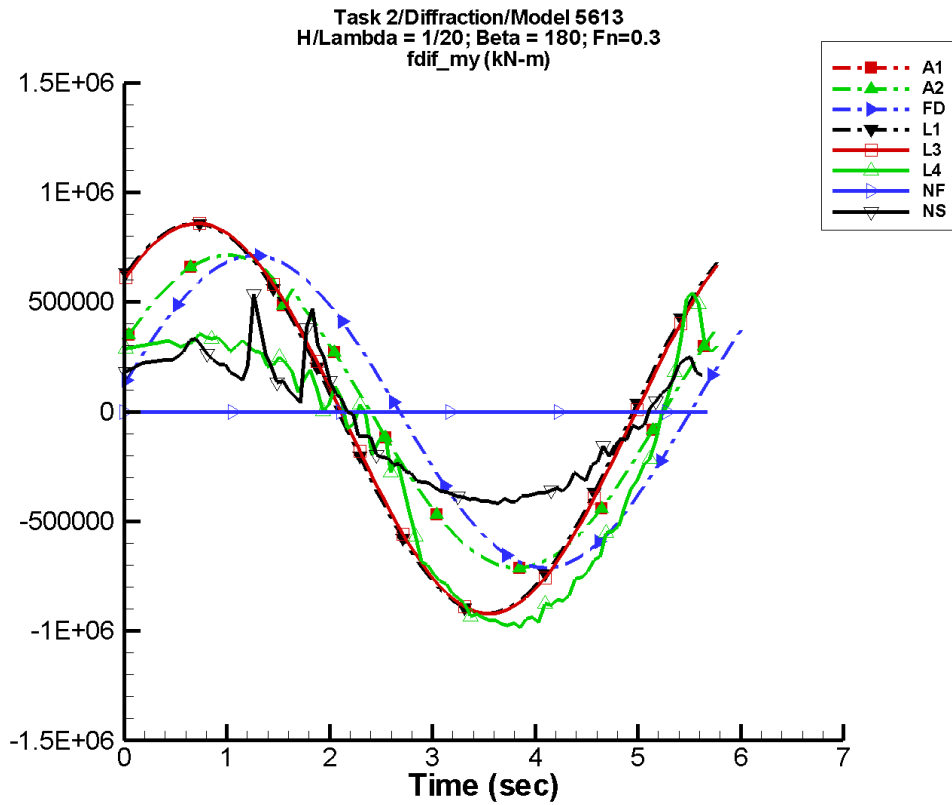
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.02E+03       | 2.36E+05        | 20                | 1.21E+03        | -60               |
| A2   | -2.02E+03       | 2.36E+05        | 20                | 1.21E+03        | -60               |
| FD   | -120.           | 2.38E+05        | -26               | 395.            | -81               |
| L1   | -1.25E+04       | 2.96E+05        | 33                | 698.            | 97                |
| L3   | -1.25E+04       | 2.97E+05        | 31                | 689.            | 96                |
| L4   | -6.22E+04       | 2.86E+05        | 24                | 5.05E+04        | 88                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.49E+03        | 1.40E+05        | 34                | 3.50E+03        | -152              |

Table G–1914. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.37E+05         | 2.42E+05          | -2.30E+05         | 2.29E+05          |
| A2   | -2.37E+05         | 2.42E+05          | -2.30E+05         | 2.29E+05          |
| FD   | -2.38E+05         | 2.38E+05          | -2.30E+05         | 2.30E+05          |
| L1   | -3.09E+05         | 2.83E+05          | -3.06E+05         | 2.80E+05          |
| L3   | -3.09E+05         | 2.84E+05          | -3.06E+05         | 2.80E+05          |
| L4   | -3.84E+05         | 2.46E+05          | -3.64E+05         | 2.27E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.39E+05         | 1.43E+05          | -1.36E+05         | 1.39E+05          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-958. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

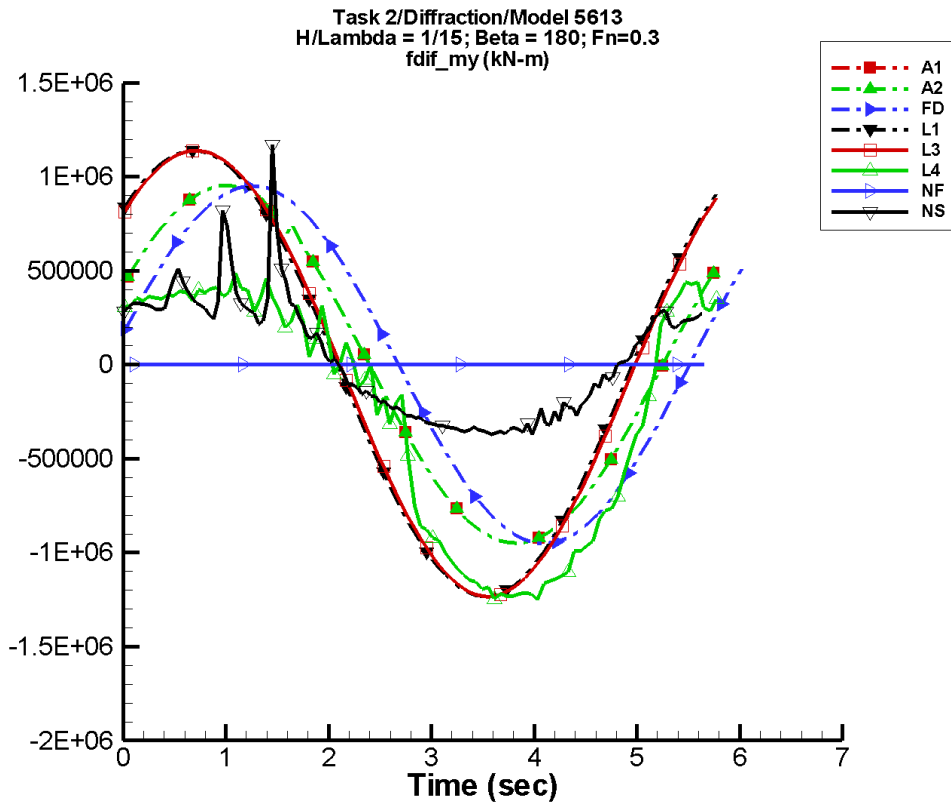
Table G–1915. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -6.06E+03       | 7.10E+05        | 20                | 3.65E+03        | -60               |
| A2   | -6.06E+03       | 7.10E+05        | 20                | 3.65E+03        | -60               |
| FD   | -359.           | 7.14E+05        | -26               | 1.19E+03        | -81               |
| L1   | -2.54E+04       | 8.89E+05        | 33                | 6.02E+03        | 132               |
| L3   | -2.54E+04       | 8.90E+05        | 31                | 5.97E+03        | 132               |
| L4   | -2.19E+05       | 6.74E+05        | 19                | 1.41E+05        | 103               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.51E+04       | 3.61E+05        | 38                | 3.98E+04        | 176               |

Table G–1916. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.12E+05         | 7.27E+05          | -6.91E+05         | 6.89E+05          |
| A2   | -7.12E+05         | 7.27E+05          | -6.91E+05         | 6.89E+05          |
| FD   | -7.13E+05         | 7.13E+05          | -6.91E+05         | 6.91E+05          |
| L1   | -9.20E+05         | 8.58E+05          | -9.10E+05         | 8.49E+05          |
| L3   | -9.21E+05         | 8.58E+05          | -9.11E+05         | 8.49E+05          |
| L4   | -9.84E+05         | 5.43E+05          | -9.64E+05         | 3.75E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.18E+05         | 5.38E+05          | -4.09E+05         | 3.83E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-959. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

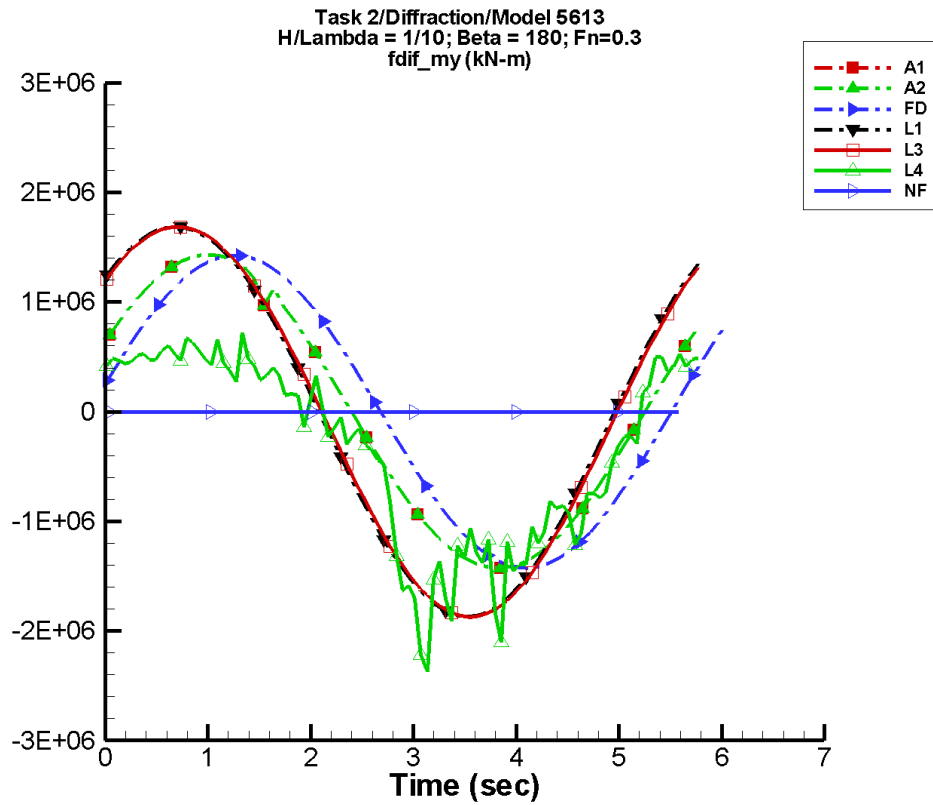
Table G–1917. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -8.09E+03       | 9.48E+05        | 20                | 4.87E+03        | -60               |
| A2   | -8.09E+03       | 9.48E+05        | 20                | 4.87E+03        | -60               |
| FD   | -479.           | 9.51E+05        | -26               | 1.58E+03        | -81               |
| L1   | -3.65E+04       | 1.19E+06        | 33                | 1.09E+04        | 136               |
| L3   | -3.64E+04       | 1.19E+06        | 31                | 1.09E+04        | 136               |
| L4   | -2.80E+05       | 8.56E+05        | 17                | 1.84E+05        | 105               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.22E+04        | 4.09E+05        | 45                | 4.04E+04        | -108              |

Table G–1918. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.51E+05         | 9.70E+05          | -9.22E+05         | 9.20E+05          |
| A2   | -9.51E+05         | 9.70E+05          | -9.22E+05         | 9.20E+05          |
| FD   | -9.51E+05         | 9.50E+05          | -9.21E+05         | 9.22E+05          |
| L1   | -1.23E+06         | 1.14E+06          | -1.22E+06         | 1.13E+06          |
| L3   | -1.23E+06         | 1.14E+06          | -1.22E+06         | 1.13E+06          |
| L4   | -1.25E+06         | 4.98E+05          | -1.23E+06         | 4.00E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.73E+05         | 1.17E+06          | -3.58E+05         | 5.00E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-960. Time history of  $M_y^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

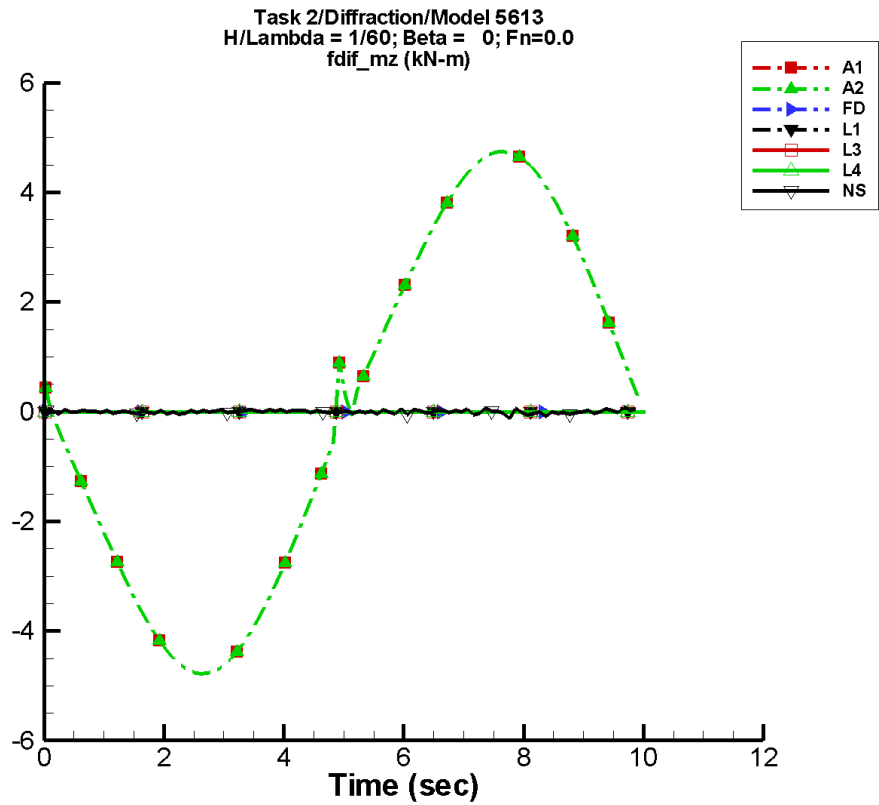
Table G–1919. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.21E+04       | 1.42E+06        | 20                | 7.30E+03        | -60               |
| A2   | -1.21E+04       | 1.42E+06        | 20                | 7.30E+03        | -60               |
| FD   | -719.           | 1.43E+06        | -26               | 2.37E+03        | -81               |
| L1   | -6.80E+04       | 1.78E+06        | 33                | 2.52E+04        | 140               |
| L3   | -6.79E+04       | 1.78E+06        | 31                | 2.51E+04        | 141               |
| L4   | -3.64E+05       | 1.10E+06        | 25                | 1.75E+05        | 147               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1920. Minimum and maximum of  $M_y^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.43E+06         | 1.46E+06          | -1.38E+06         | 1.38E+06          |
| A2   | -1.43E+06         | 1.46E+06          | -1.38E+06         | 1.38E+06          |
| FD   | -1.43E+06         | 1.43E+06          | -1.38E+06         | 1.38E+06          |
| L1   | -1.87E+06         | 1.68E+06          | -1.85E+06         | 1.67E+06          |
| L3   | -1.87E+06         | 1.69E+06          | -1.85E+06         | 1.67E+06          |
| L4   | -2.54E+06         | 7.21E+05          | -1.78E+06         | 5.59E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-961. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1921. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

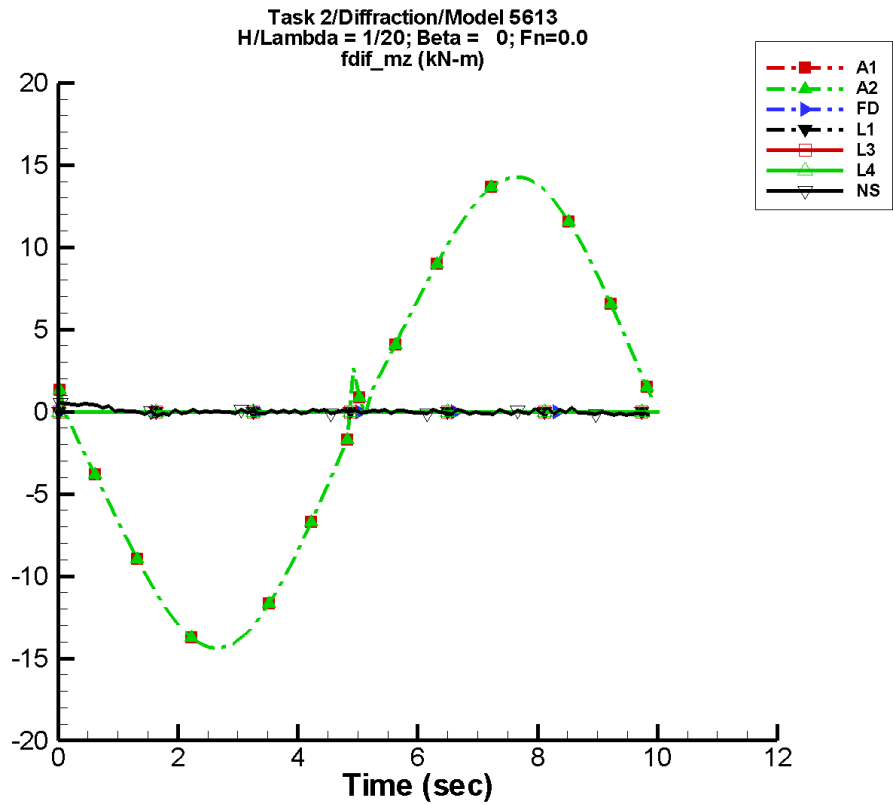
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.81E-02        | 4.55            | 171               | 2.18E-02        | 31                |
| A2   | 1.81E-02        | 4.55            | 171               | 2.18E-02        | 31                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.95E-03        | 8.08E-03        | 2                 | 9.57E-03        | 80                |

Table G–1922. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.78             | 4.74              | -4.72             | 4.68              |
| A2   | -4.78             | 4.74              | -4.72             | 4.68              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.123            | 9.02E-02          | -3.38E-02         | 4.07E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-962. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

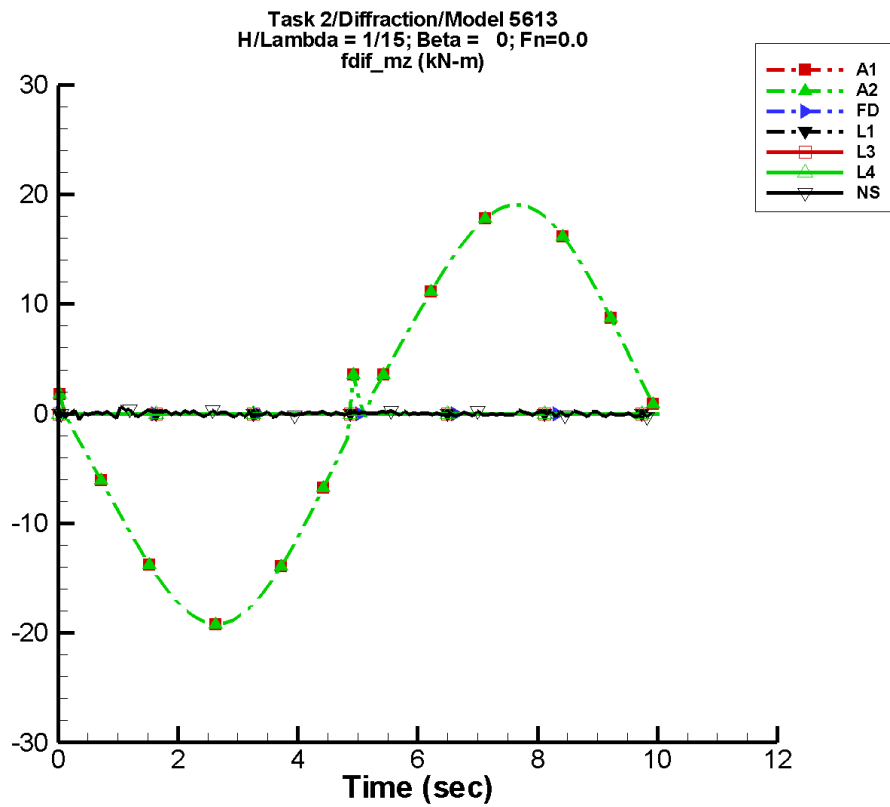
Table G–1923. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 5.46E-02        | 13.7            | 171               | 6.55E-02        | 31                |
| A2   | 5.46E-02        | 13.7            | 171               | 6.55E-02        | 31                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.31E-02        | 4.62E-02        | 58                | 7.25E-02        | 55                |

Table G–1924. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -14.4             | 14.3              | -14.2             | 14.1              |
| A2   | -14.4             | 14.3              | -14.2             | 14.1              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.229            | 0.550             | -0.133            | 0.517             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-963. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

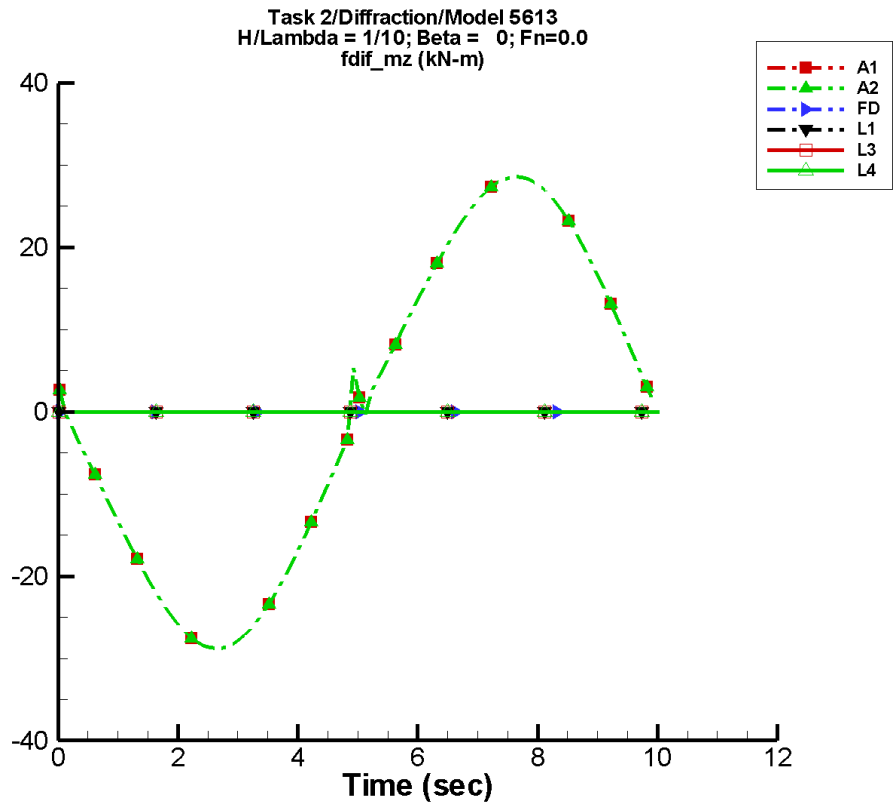
Table G–1925. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.29E-02        | 18.3            | 171               | 8.75E-02        | 31                |
| A2   | 7.29E-02        | 18.3            | 171               | 8.75E-02        | 31                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.89E-03       | 3.10E-02        | -52               | 4.56E-02        | -39               |

Table G–1926. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -19.2             | 19.0              | -18.9             | 18.8              |
| A2   | -19.2             | 19.0              | -18.9             | 18.8              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.558            | 0.650             | -0.124            | 0.131             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-964. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

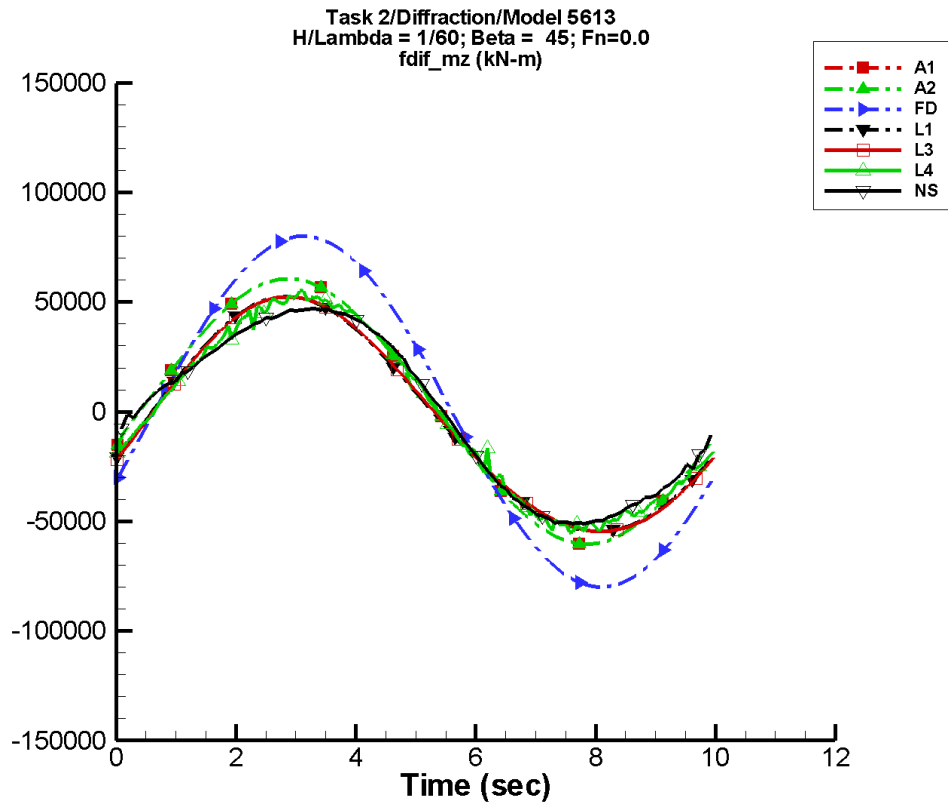
Table G–1927. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 0.109           | 27.4            | 171               | 0.131           | 31                |
| A2   | 0.109           | 27.4            | 171               | 0.131           | 31                |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1928. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -28.8             | 28.6              | -28.4             | 28.2              |
| A2   | -28.8             | 28.6              | -28.4             | 28.2              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-965. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1929. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

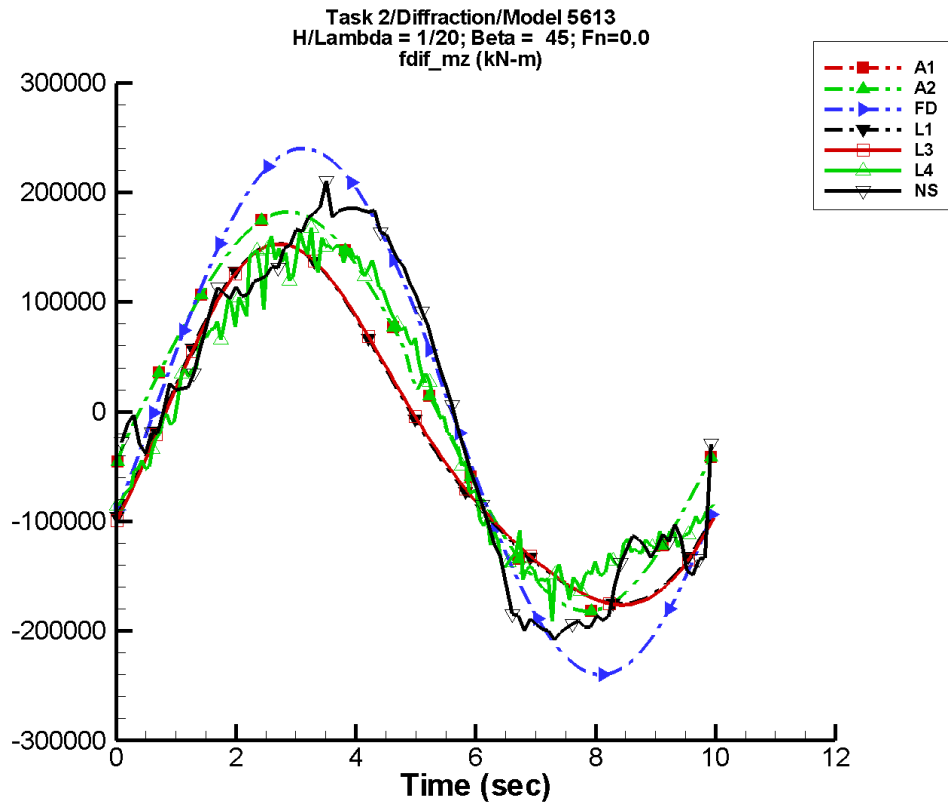
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -117.           | 5.94E+04        | -18               | 106.            | -124              |
| A2   | -117.           | 5.94E+04        | -18               | 106.            | -124              |
| FD   | 33.0            | 8.00E+04        | -31               | 37.0            | -2                |
| L1   | -2.94E+03       | 5.33E+04        | -21               | 2.76E+03        | -85               |
| L3   | -2.94E+03       | 5.33E+04        | -22               | 2.76E+03        | -85               |
| L4   | -1.50E+03       | 5.24E+04        | -23               | 2.26E+03        | 168               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -739.           | 4.92E+04        | -17               | 4.51E+03        | 117               |

Table G–1930. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.05E+04         | 6.06E+04          | -5.98E+04         | 5.99E+04          |
| A2   | -6.05E+04         | 6.06E+04          | -5.98E+04         | 5.99E+04          |
| FD   | -8.00E+04         | 8.00E+04          | -7.92E+04         | 7.92E+04          |
| L1   | -5.45E+04         | 5.24E+04          | -5.44E+04         | 5.22E+04          |
| L3   | -5.46E+04         | 5.23E+04          | -5.44E+04         | 5.21E+04          |
| L4   | -5.51E+04         | 5.61E+04          | -5.29E+04         | 5.27E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.12E+04         | 4.70E+04          | -5.06E+04         | 4.64E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-966. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

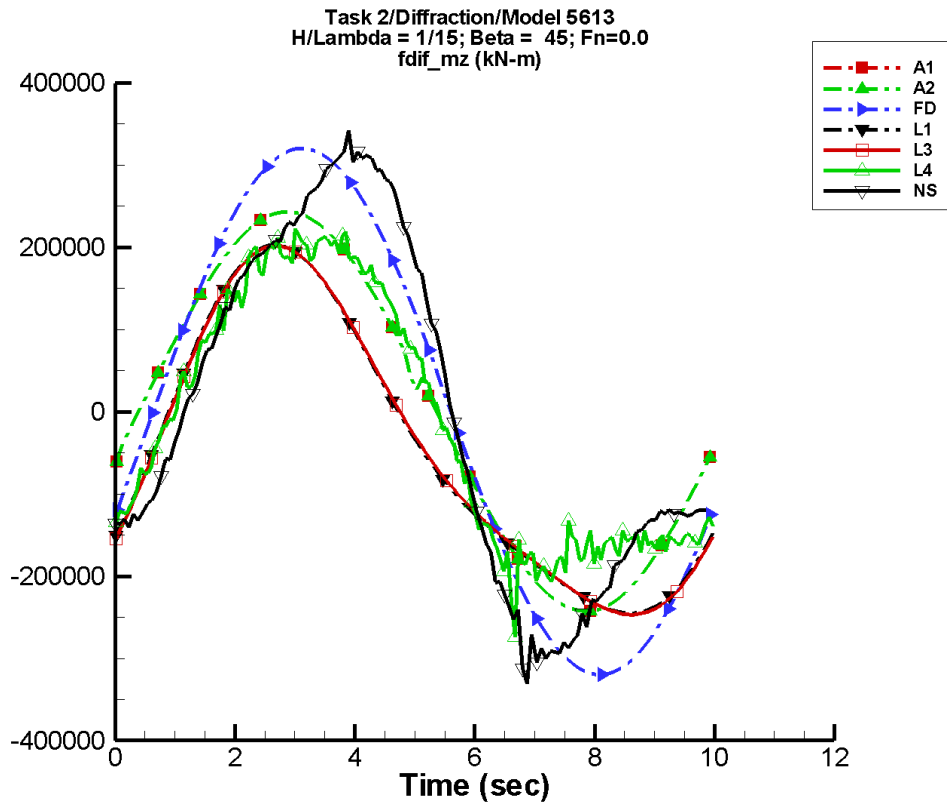
Table G–1931. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -353.           | 1.79E+05        | -18               | 318.            | -124              |
| A2   | -353.           | 1.79E+05        | -18               | 318.            | -124              |
| FD   | 98.9            | 2.40E+05        | -31               | 111.            | -2                |
| L1   | -2.67E+04       | 1.60E+05        | -21               | 2.49E+04        | -86               |
| L3   | -2.67E+04       | 1.60E+05        | -22               | 2.49E+04        | -86               |
| L4   | -1.26E+04       | 1.58E+05        | -27               | 1.99E+04        | 171               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -4.52E+03       | 1.87E+05        | -24               | 3.70E+04        | 132               |

Table G–1932. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.82E+05         | 1.82E+05          | -1.80E+05         | 1.80E+05          |
| A2   | -1.82E+05         | 1.82E+05          | -1.80E+05         | 1.80E+05          |
| FD   | -2.40E+05         | 2.40E+05          | -2.38E+05         | 2.38E+05          |
| L1   | -1.75E+05         | 1.53E+05          | -1.75E+05         | 1.52E+05          |
| L3   | -1.76E+05         | 1.53E+05          | -1.76E+05         | 1.52E+05          |
| L4   | -1.91E+05         | 1.68E+05          | -1.58E+05         | 1.53E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.08E+05         | 2.10E+05          | -2.00E+05         | 1.87E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-967. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

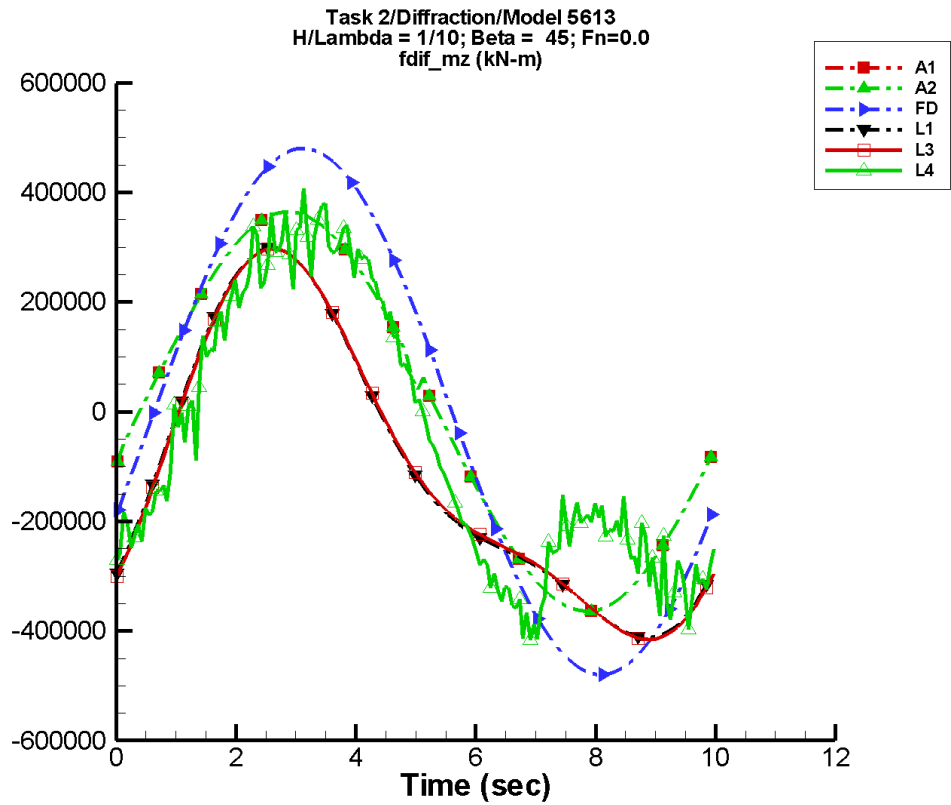
Table G–1933. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -472.           | 2.39E+05        | -18               | 425.            | -124              |
| A2   | -472.           | 2.39E+05        | -18               | 425.            | -124              |
| FD   | 132.            | 3.20E+05        | -31               | 148.            | -2                |
| L1   | -4.75E+04       | 2.13E+05        | -21               | 4.43E+04        | -86               |
| L3   | -4.75E+04       | 2.13E+05        | -22               | 4.43E+04        | -86               |
| L4   | -1.59E+04       | 2.09E+05        | -27               | 3.67E+04        | -173              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.94E+03       | 2.73E+05        | -30               | 8.21E+04        | 156               |

Table G–1934. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.43E+05         | 2.43E+05          | -2.40E+05         | 2.41E+05          |
| A2   | -2.43E+05         | 2.43E+05          | -2.40E+05         | 2.41E+05          |
| FD   | -3.20E+05         | 3.20E+05          | -3.17E+05         | 3.17E+05          |
| L1   | -2.45E+05         | 2.03E+05          | -2.44E+05         | 2.01E+05          |
| L3   | -2.47E+05         | 2.02E+05          | -2.46E+05         | 2.00E+05          |
| L4   | -2.75E+05         | 2.49E+05          | -2.03E+05         | 2.06E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.31E+05         | 3.42E+05          | -2.96E+05         | 3.14E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-968. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

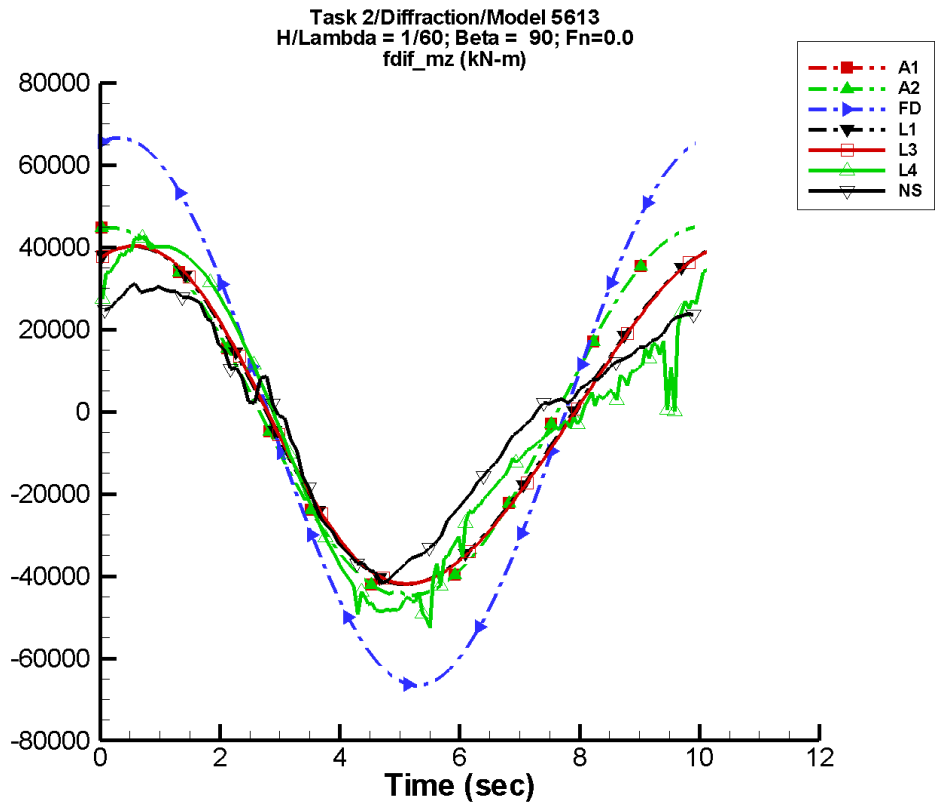
Table G–1935. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -708.           | 3.58E+05        | -18               | 638.            | -124              |
| A2   | -708.           | 3.58E+05        | -18               | 638.            | -124              |
| FD   | 198.            | 4.80E+05        | -31               | 222.            | -2                |
| L1   | -1.07E+05       | 3.20E+05        | -21               | 9.97E+04        | -86               |
| L3   | -1.07E+05       | 3.20E+05        | -22               | 9.97E+04        | -86               |
| L4   | -5.58E+04       | 3.22E+05        | -27               | 1.06E+05        | -155              |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1936. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.64E+05         | 3.65E+05          | -3.60E+05         | 3.61E+05          |
| A2   | -3.64E+05         | 3.65E+05          | -3.60E+05         | 3.61E+05          |
| FD   | -4.80E+05         | 4.80E+05          | -4.75E+05         | 4.75E+05          |
| L1   | -4.12E+05         | 2.99E+05          | -4.11E+05         | 2.96E+05          |
| L3   | -4.16E+05         | 2.97E+05          | -4.14E+05         | 2.95E+05          |
| L4   | -4.16E+05         | 4.23E+05          | -3.88E+05         | 3.31E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-969. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1937. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

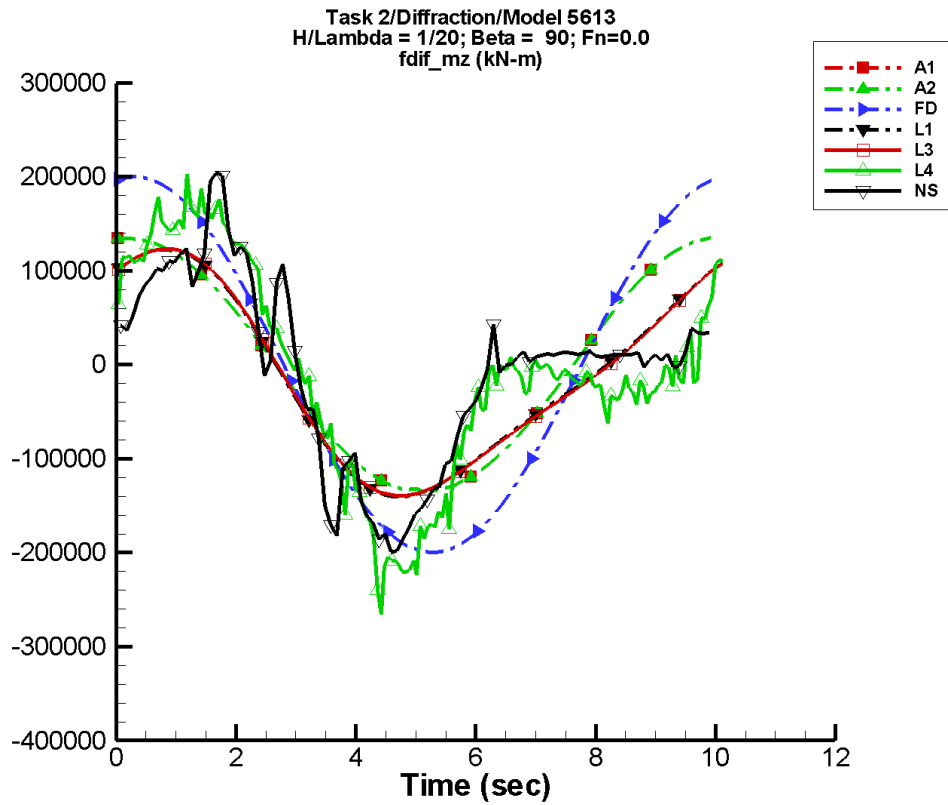
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -44.3           | 4.52E+04        | 79                | 77.9            | -74               |
| A2   | -44.3           | 4.52E+04        | 79                | 77.9            | -74               |
| FD   | -19.3           | 6.66E+04        | 71                | 29.2            | 107               |
| L1   | -1.45E+03       | 4.07E+04        | 73                | 2.95E+03        | -22               |
| L3   | -1.45E+03       | 4.07E+04        | 72                | 2.95E+03        | -22               |
| L4   | -2.69E+03       | 3.89E+04        | 71                | 1.17E+04        | -44               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.03E+03       | 3.12E+04        | 83                | 7.82E+03        | -46               |

Table G–1938. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.50E+04         | 4.50E+04          | -4.43E+04         | 4.49E+04          |
| A2   | -4.50E+04         | 4.50E+04          | -4.43E+04         | 4.49E+04          |
| FD   | -6.66E+04         | 6.66E+04          | -6.59E+04         | 6.64E+04          |
| L1   | -4.20E+04         | 4.02E+04          | -4.18E+04         | 4.01E+04          |
| L3   | -4.19E+04         | 4.03E+04          | -4.17E+04         | 4.02E+04          |
| L4   | -5.26E+04         | 4.27E+04          | -4.80E+04         | 4.11E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.17E+04         | 3.12E+04          | -3.91E+04         | 2.98E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-970. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

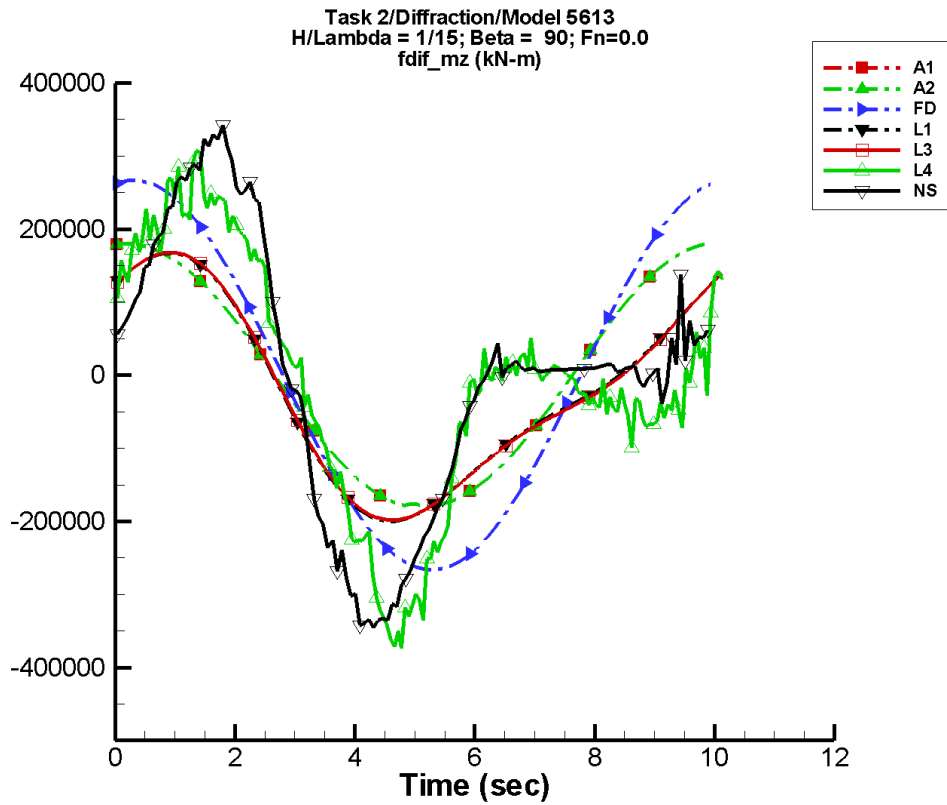
Table G–1939. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -133.           | 1.36E+05        | 79                | 234.            | -74               |
| A2   | -133.           | 1.36E+05        | 79                | 234.            | -74               |
| FD   | -58.0           | 2.00E+05        | 71                | 87.7            | 107               |
| L1   | -1.29E+04       | 1.22E+05        | 73                | 2.64E+04        | -22               |
| L3   | -1.29E+04       | 1.22E+05        | 72                | 2.64E+04        | -22               |
| L4   | -1.00E+04       | 1.25E+05        | 67                | 8.45E+04        | -42               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.52E+03       | 1.01E+05        | 79                | 8.09E+04        | -44               |

Table G–1940. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.35E+05         | 1.35E+05          | -1.33E+05         | 1.35E+05          |
| A2   | -1.35E+05         | 1.35E+05          | -1.33E+05         | 1.35E+05          |
| FD   | -2.00E+05         | 2.00E+05          | -1.98E+05         | 1.99E+05          |
| L1   | -1.40E+05         | 1.23E+05          | -1.40E+05         | 1.22E+05          |
| L3   | -1.39E+05         | 1.23E+05          | -1.39E+05         | 1.23E+05          |
| L4   | -2.66E+05         | 2.07E+05          | -2.20E+05         | 1.68E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.00E+05         | 2.04E+05          | -1.80E+05         | 1.51E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-971. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

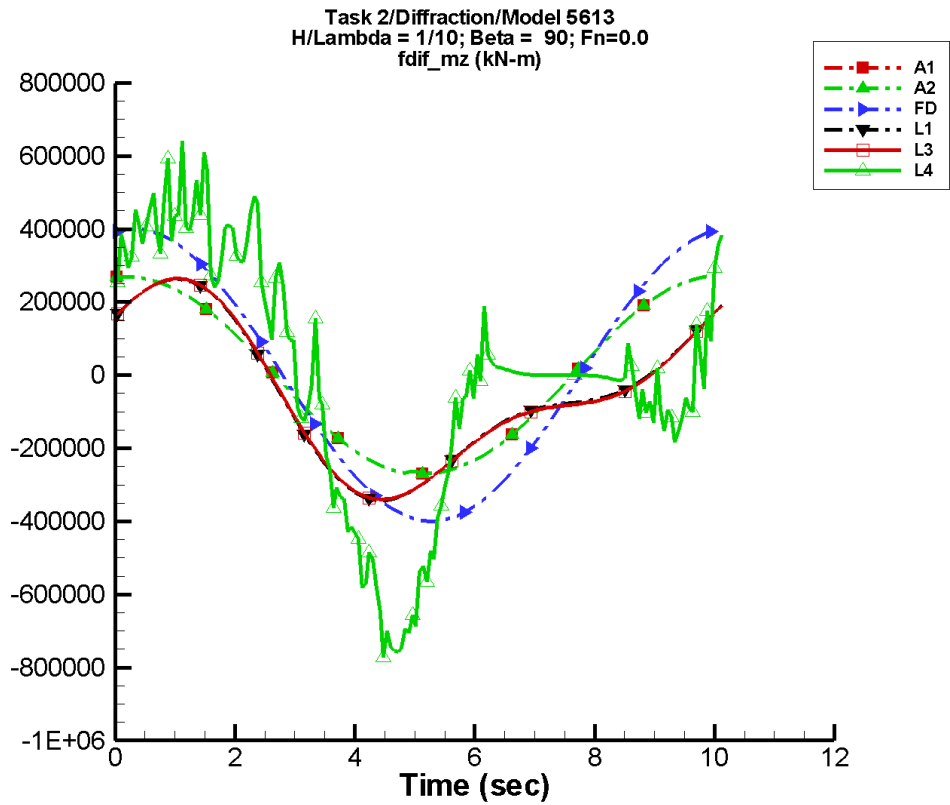
Table G–1941. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -178.           | 1.82E+05        | 79                | 313.            | -74               |
| A2   | -178.           | 1.82E+05        | 79                | 313.            | -74               |
| FD   | -77.3           | 2.67E+05        | 71                | 117.            | 107               |
| L1   | -2.30E+04       | 1.63E+05        | 73                | 4.69E+04        | -22               |
| L3   | -2.30E+04       | 1.63E+05        | 72                | 4.70E+04        | -22               |
| L4   | -9.09E+03       | 1.74E+05        | 66                | 1.43E+05        | -44               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.31E+03       | 1.84E+05        | 75                | 1.67E+05        | -39               |

Table G–1942. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.81E+05         | 1.81E+05          | -1.78E+05         | 1.80E+05          |
| A2   | -1.81E+05         | 1.81E+05          | -1.78E+05         | 1.80E+05          |
| FD   | -2.67E+05         | 2.67E+05          | -2.64E+05         | 2.66E+05          |
| L1   | -2.00E+05         | 1.67E+05          | -1.99E+05         | 1.66E+05          |
| L3   | -1.98E+05         | 1.68E+05          | -1.97E+05         | 1.67E+05          |
| L4   | -3.73E+05         | 3.08E+05          | -3.48E+05         | 2.62E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.46E+05         | 3.42E+05          | -3.32E+05         | 3.11E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-972. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

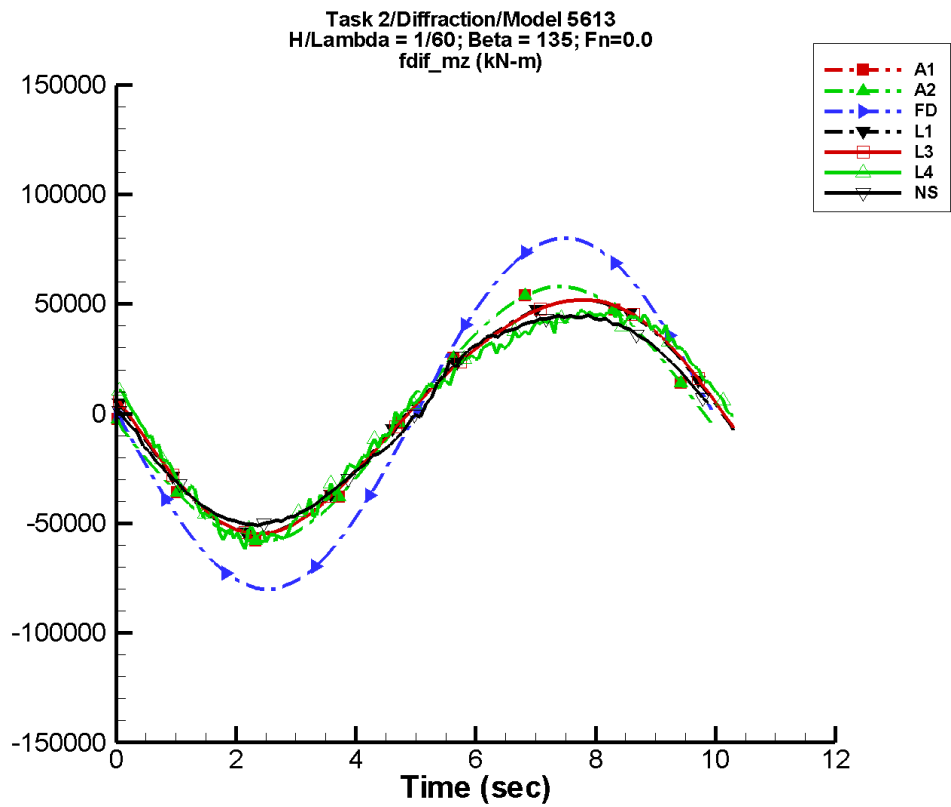
Table G–1943. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -267.           | 2.72E+05        | 79                | 469.            | -74               |
| A2   | -267.           | 2.72E+05        | 79                | 469.            | -74               |
| FD   | -116.           | 4.00E+05        | 71                | 175.            | 107               |
| L1   | -5.17E+04       | 2.44E+05        | 73                | 1.06E+05        | -22               |
| L3   | -5.17E+04       | 2.44E+05        | 72                | 1.06E+05        | -22               |
| L4   | -8.63E+03       | 3.38E+05        | 69                | 2.71E+05        | -46               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1944. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.71E+05         | 2.71E+05          | -2.67E+05         | 2.70E+05          |
| A2   | -2.71E+05         | 2.71E+05          | -2.67E+05         | 2.70E+05          |
| FD   | -4.00E+05         | 4.00E+05          | -3.96E+05         | 3.98E+05          |
| L1   | -3.43E+05         | 2.62E+05          | -3.41E+05         | 2.60E+05          |
| L3   | -3.40E+05         | 2.64E+05          | -3.38E+05         | 2.62E+05          |
| L4   | -7.71E+05         | 6.41E+05          | -7.26E+05         | 4.78E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-973. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1945. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

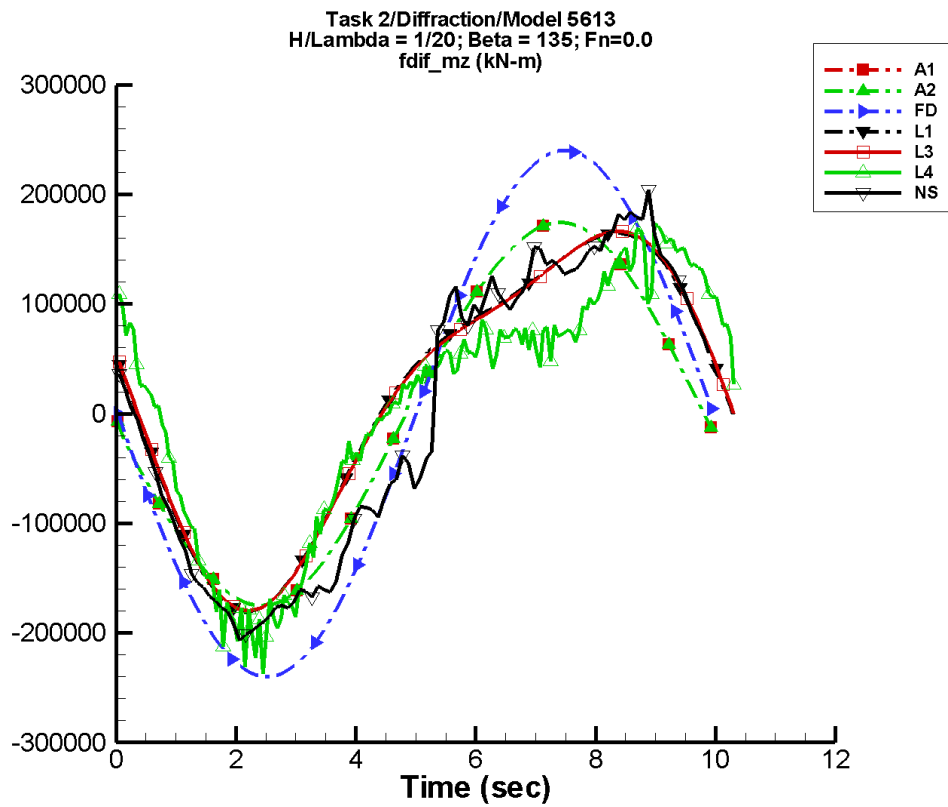
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 141.            | 5.72E+04        | 179               | 131.            | 67                |
| A2   | 141.            | 5.72E+04        | 179               | 131.            | 67                |
| FD   | -24.3           | 8.00E+04        | 171               | 35.3            | -161              |
| L1   | 1.67E+03        | 5.29E+04        | 174               | 4.89E+03        | 125               |
| L3   | 1.67E+03        | 5.29E+04        | 173               | 4.89E+03        | 125               |
| L4   | 970.            | 4.99E+04        | 172               | 9.23E+03        | 115               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -605.           | 4.86E+04        | 179               | 2.63E+03        | 131               |

Table G–1946. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -5.82E+04         | 5.80E+04          | -5.75E+04         | 5.73E+04          |
| A2   | -5.82E+04         | 5.80E+04          | -5.75E+04         | 5.73E+04          |
| FD   | -8.00E+04         | 8.00E+04          | -7.92E+04         | 8.00E+04          |
| L1   | -5.49E+04         | 5.18E+04          | -5.47E+04         | 5.16E+04          |
| L3   | -5.48E+04         | 5.20E+04          | -5.45E+04         | 5.18E+04          |
| L4   | -6.20E+04         | 4.82E+04          | -5.66E+04         | 4.57E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.09E+04         | 4.50E+04          | -5.04E+04         | 4.41E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-974. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

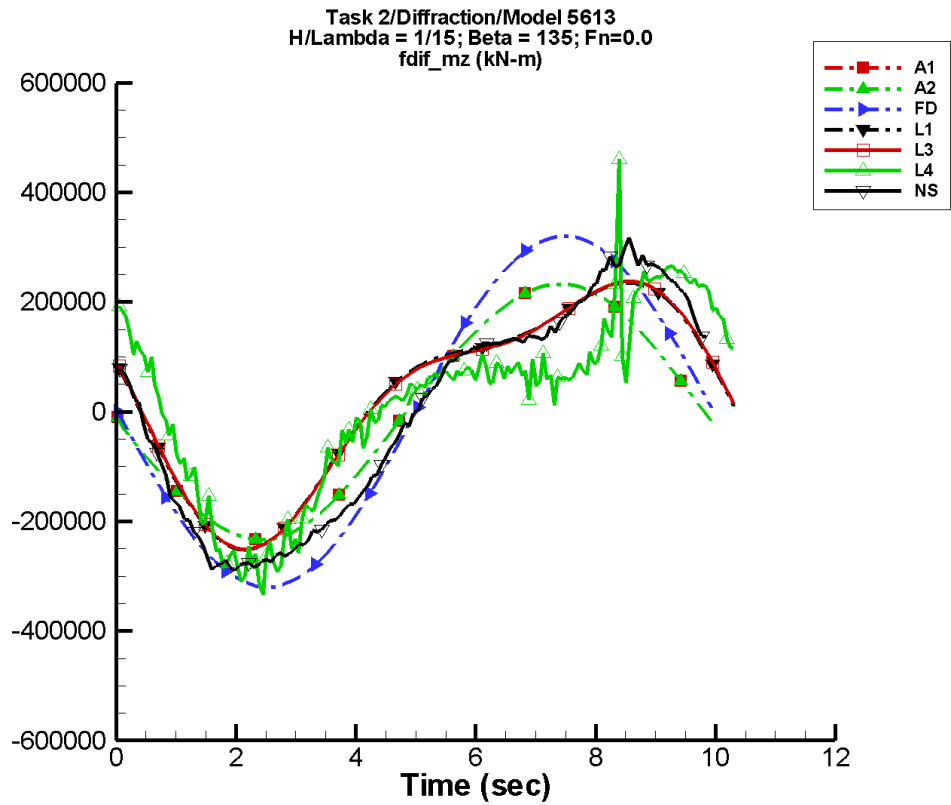
Table G–1947. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 425.            | 1.72E+05        | 179               | 395.            | 67                |
| A2   | 425.            | 1.72E+05        | 179               | 395.            | 67                |
| FD   | -72.8           | 2.40E+05        | 171               | 106.            | -161              |
| L1   | 1.51E+04        | 1.59E+05        | 174               | 4.38E+04        | 125               |
| L3   | 1.51E+04        | 1.59E+05        | 173               | 4.38E+04        | 125               |
| L4   | 6.30E+03        | 1.39E+05        | 164               | 7.09E+04        | 107               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.96E+03       | 1.82E+05        | 171               | 2.72E+04        | 131               |

Table G–1948. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.75E+05         | 1.74E+05          | -1.73E+05         | 1.72E+05          |
| A2   | -1.75E+05         | 1.74E+05          | -1.73E+05         | 1.72E+05          |
| FD   | -2.40E+05         | 2.40E+05          | -2.38E+05         | 2.40E+05          |
| L1   | -1.80E+05         | 1.65E+05          | -1.79E+05         | 1.64E+05          |
| L3   | -1.80E+05         | 1.66E+05          | -1.79E+05         | 1.66E+05          |
| L4   | -2.37E+05         | 1.75E+05          | -2.03E+05         | 1.57E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.07E+05         | 2.04E+05          | -1.99E+05         | 1.78E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-975. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

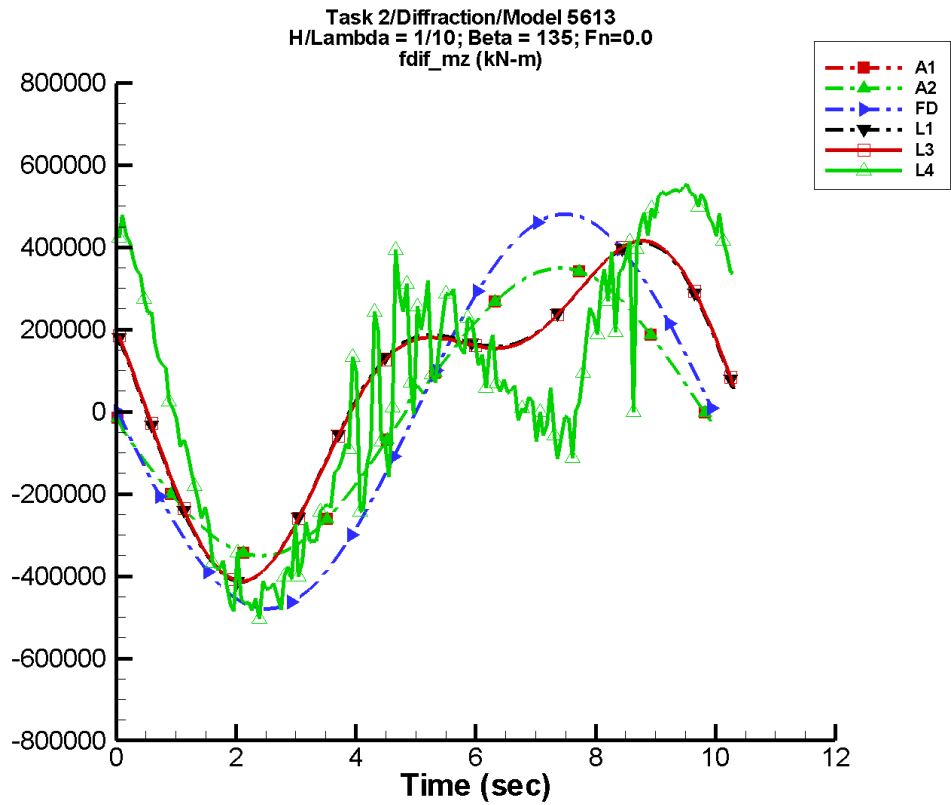
Table G–1949. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 567.            | 2.30E+05        | 179               | 527.            | 67                |
| A2   | 567.            | 2.30E+05        | 179               | 527.            | 67                |
| FD   | -97.0           | 3.20E+05        | 171               | 141.            | -161              |
| L1   | 2.69E+04        | 2.11E+05        | 174               | 7.77E+04        | 125               |
| L3   | 2.68E+04        | 2.11E+05        | 173               | 7.77E+04        | 125               |
| L4   | 1.19E+04        | 1.83E+05        | 159               | 1.24E+05        | 103               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -548.           | 2.59E+05        | 169               | 6.97E+04        | 134               |

Table G–1950. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.34E+05         | 2.33E+05          | -2.31E+05         | 2.30E+05          |
| A2   | -2.34E+05         | 2.33E+05          | -2.31E+05         | 2.30E+05          |
| FD   | -3.20E+05         | 3.20E+05          | -3.17E+05         | 3.20E+05          |
| L1   | -2.52E+05         | 2.35E+05          | -2.50E+05         | 2.34E+05          |
| L3   | -2.51E+05         | 2.37E+05          | -2.49E+05         | 2.36E+05          |
| L4   | -3.34E+05         | 4.82E+05          | -2.85E+05         | 2.57E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.89E+05         | 3.18E+05          | -2.81E+05         | 2.84E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-976. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

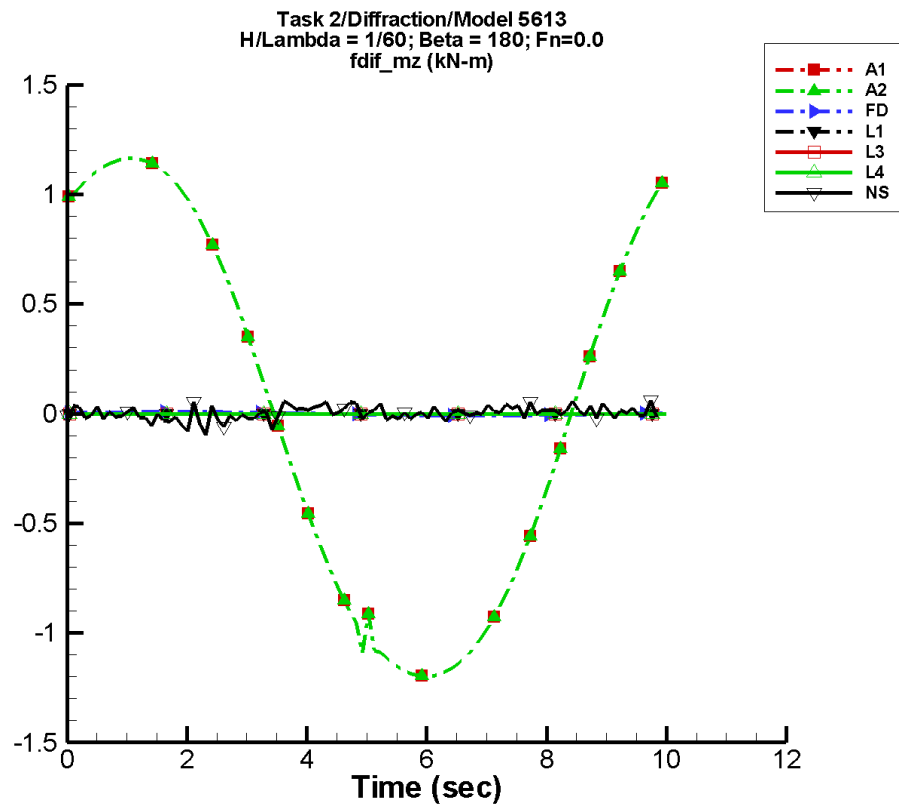
Table G–1951. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 850.            | 3.44E+05        | 179               | 791.            | 67                |
| A2   | 850.            | 3.44E+05        | 179               | 791.            | 67                |
| FD   | -146.           | 4.80E+05        | 171               | 212.            | -161              |
| L1   | 6.04E+04        | 3.17E+05        | 174               | 1.75E+05        | 125               |
| L3   | 6.04E+04        | 3.17E+05        | 173               | 1.75E+05        | 125               |
| L4   | 5.44E+04        | 2.94E+05        | 151               | 2.88E+05        | 98                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1952. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.51E+05         | 3.49E+05          | -3.46E+05         | 3.45E+05          |
| A2   | -3.51E+05         | 3.49E+05          | -3.46E+05         | 3.45E+05          |
| FD   | -4.80E+05         | 4.80E+05          | -4.75E+05         | 4.80E+05          |
| L1   | -4.14E+05         | 4.11E+05          | -4.10E+05         | 4.08E+05          |
| L3   | -4.12E+05         | 4.15E+05          | -4.08E+05         | 4.13E+05          |
| L4   | -5.09E+05         | 5.60E+05          | -4.61E+05         | 5.53E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-977. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1953. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

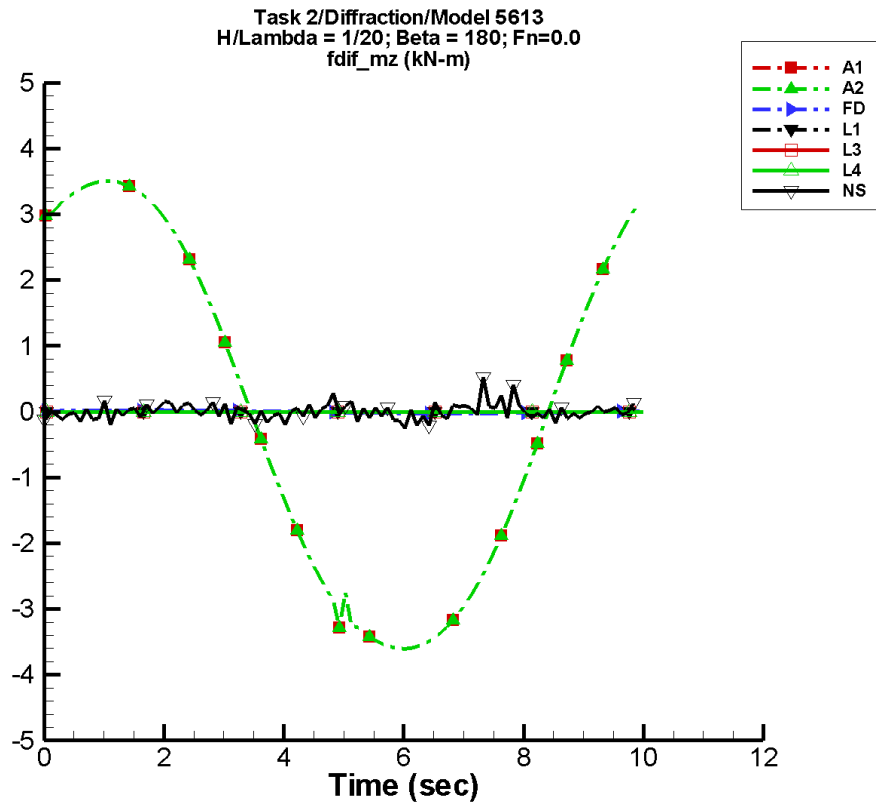
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 1.12E-03        | 1.23            | 51                | 4.74E-03        | 155               |
| A2   | 1.12E-03        | 1.23            | 51                | 4.74E-03        | 155               |
| FD   | 1.08E-06        | 8.28E-03        | 16                | 3.48E-06        | 45                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.16E-03        | 1.25E-02        | -171              | 1.39E-02        | 136               |

Table G–1954. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.20             | 1.24              | -1.19             | 1.23              |
| A2   | -1.20             | 1.24              | -1.19             | 1.23              |
| FD   | -8.28E-03         | 8.28E-03          | -8.21E-03         | 8.20E-03          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -9.67E-02         | 5.95E-02          | -3.28E-02         | 2.77E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-978. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

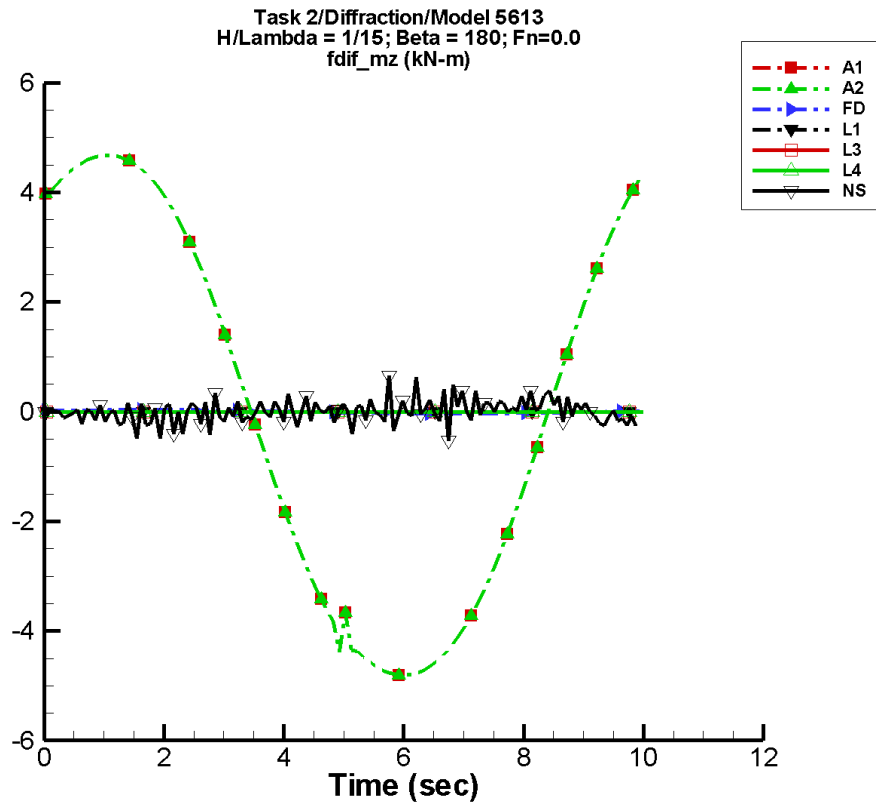
Table G–1955. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 3.38E-03        | 3.70            | 51                | 1.43E-02        | 155               |
| A2   | 3.38E-03        | 3.70            | 51                | 1.43E-02        | 155               |
| FD   | 3.23E-06        | 2.49E-02        | 16                | 1.04E-05        | 45                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -2.23E-03       | 2.68E-02        | 164               | 1.76E-02        | -141              |

Table G–1956. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.60             | 3.73              | -3.57             | 3.70              |
| A2   | -3.60             | 3.73              | -3.57             | 3.70              |
| FD   | -2.49E-02         | 2.49E-02          | -2.46E-02         | 2.46E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.349            | 0.519             | -0.185            | 0.146             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-979. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

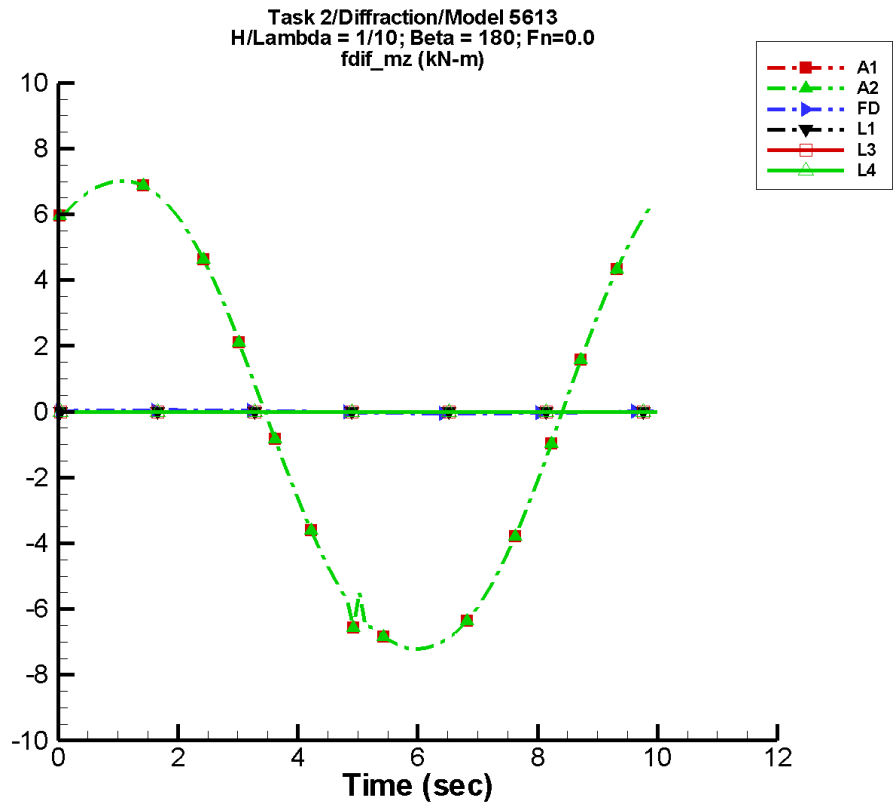
Table G–1957. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 4.51E-03        | 4.94            | 51                | 1.90E-02        | 155               |
| A2   | 4.51E-03        | 4.94            | 51                | 1.90E-02        | 155               |
| FD   | 4.31E-06        | 3.31E-02        | 16                | 1.39E-05        | 45                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.12E-03        | 9.83E-02        | -148              | 6.85E-02        | -118              |

Table G–1958. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.81             | 4.97              | -4.77             | 4.94              |
| A2   | -4.81             | 4.97              | -4.77             | 4.94              |
| FD   | -3.31E-02         | 3.31E-02          | -3.28E-02         | 3.28E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.04             | 2.89              | -0.243            | 0.187             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-980. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

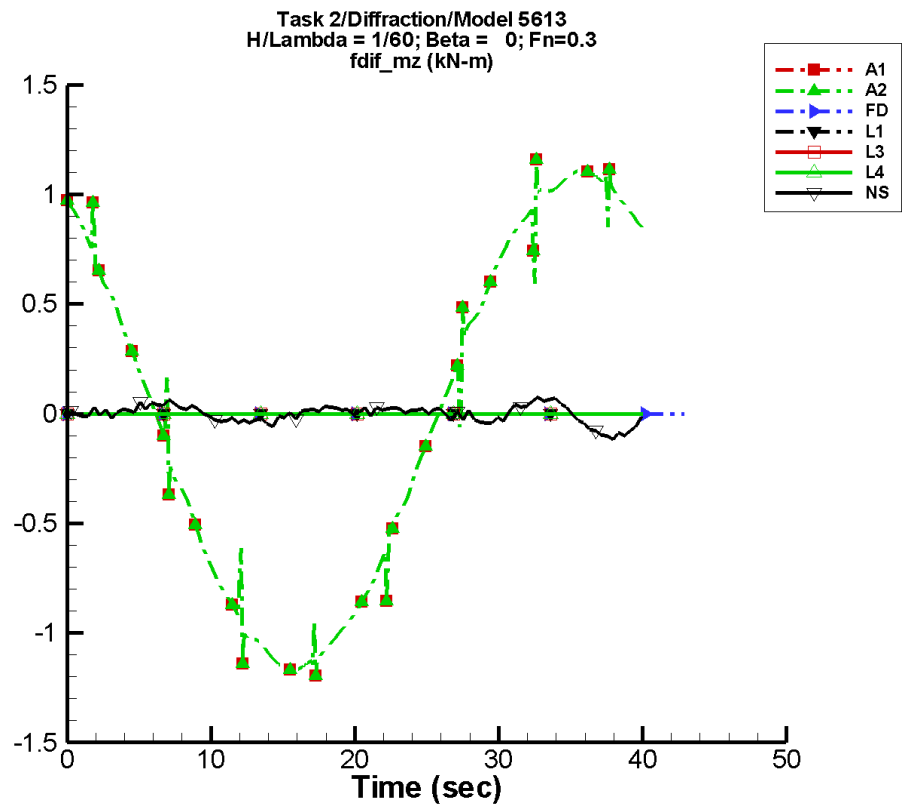
Table G–1959. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 6.77E-03        | 7.41            | 51                | 2.85E-02        | 155               |
| A2   | 6.77E-03        | 7.41            | 51                | 2.85E-02        | 155               |
| FD   | 6.46E-06        | 4.97E-02        | 16                | 2.09E-05        | 45                |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1960. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.0$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.21             | 7.46              | -7.15             | 7.41              |
| A2   | -7.21             | 7.46              | -7.15             | 7.41              |
| FD   | -4.97E-02         | 4.97E-02          | -4.92E-02         | 4.92E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-981. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1961. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

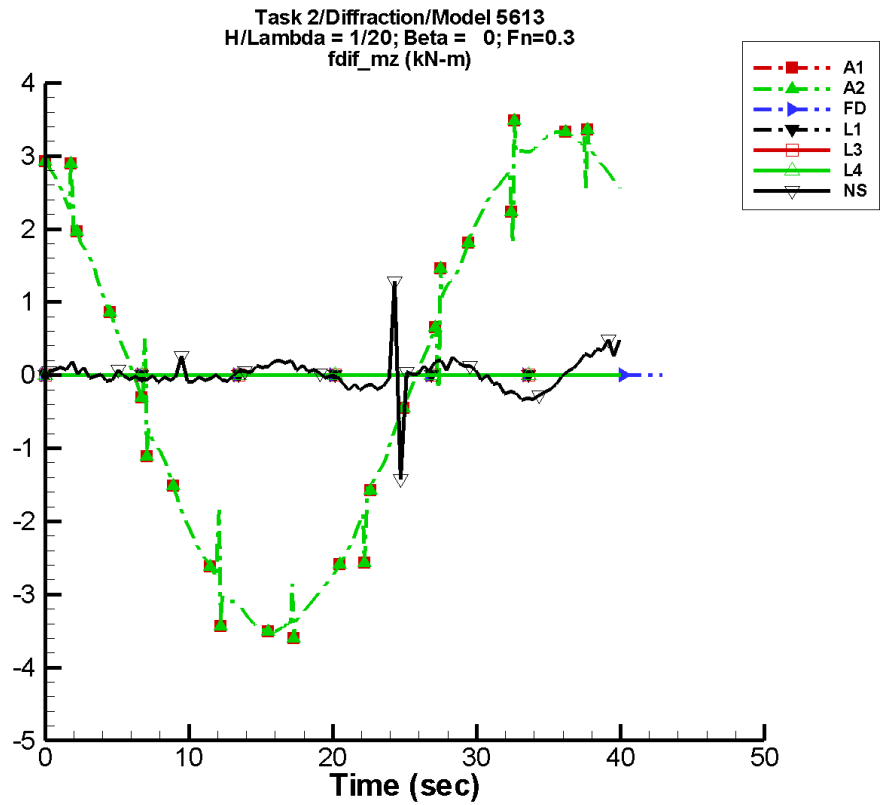
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.36E-03       | 1.12            | 127               | 2.68E-02        | -17               |
| A2   | -3.36E-03       | 1.12            | 127               | 2.68E-02        | -17               |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.12E-03        | 7.09E-03        | 112               | 3.07E-02        | 31                |

Table G–1962. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.20             | 1.16              | -1.17             | 1.11              |
| A2   | -1.20             | 1.16              | -1.17             | 1.11              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.146            | 0.205             | -9.12E-02         | 0.157             |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-982. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

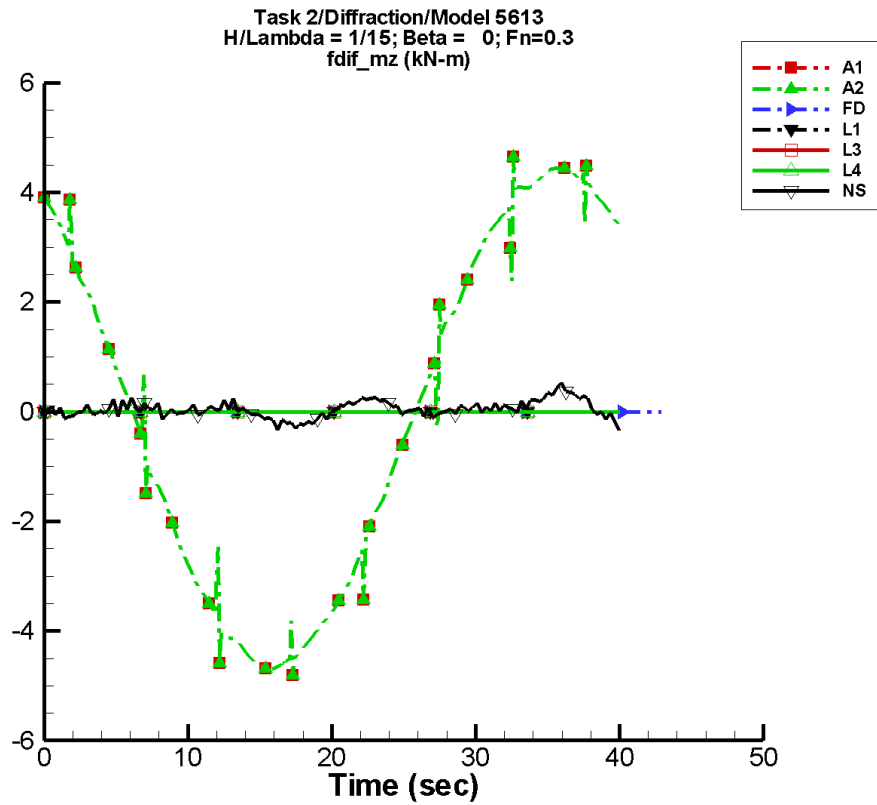
Table G–1963. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.01E-02       | 3.37            | 127               | 8.07E-02        | -17               |
| A2   | -1.01E-02       | 3.37            | 127               | 8.07E-02        | -17               |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 1.31E-02        | 3.60E-02        | 13                | 5.04E-02        | 131               |

Table G–1964. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.60             | 3.48              | -3.51             | 3.33              |
| A2   | -3.60             | 3.48              | -3.51             | 3.33              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.42             | 1.28              | -0.274            | 0.340             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-983. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

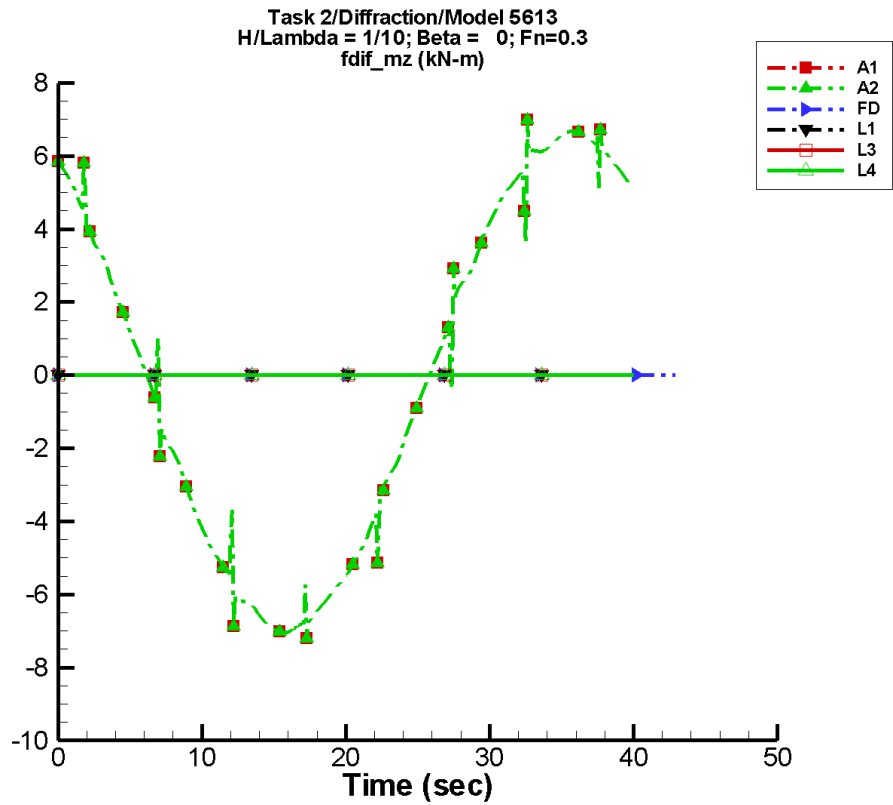
Table G–1965. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.35E-02       | 4.50            | 127               | 0.108           | -17               |
| A2   | -1.35E-02       | 4.50            | 127               | 0.108           | -17               |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 2.26E-02        | 8.43E-02        | 170               | 5.69E-02        | -130              |

Table G–1966. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.80             | 4.65              | -4.69             | 4.44              |
| A2   | -4.80             | 4.65              | -4.69             | 4.44              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.376            | 0.526             | -0.245            | 0.363             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from FREDYN, LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-984. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

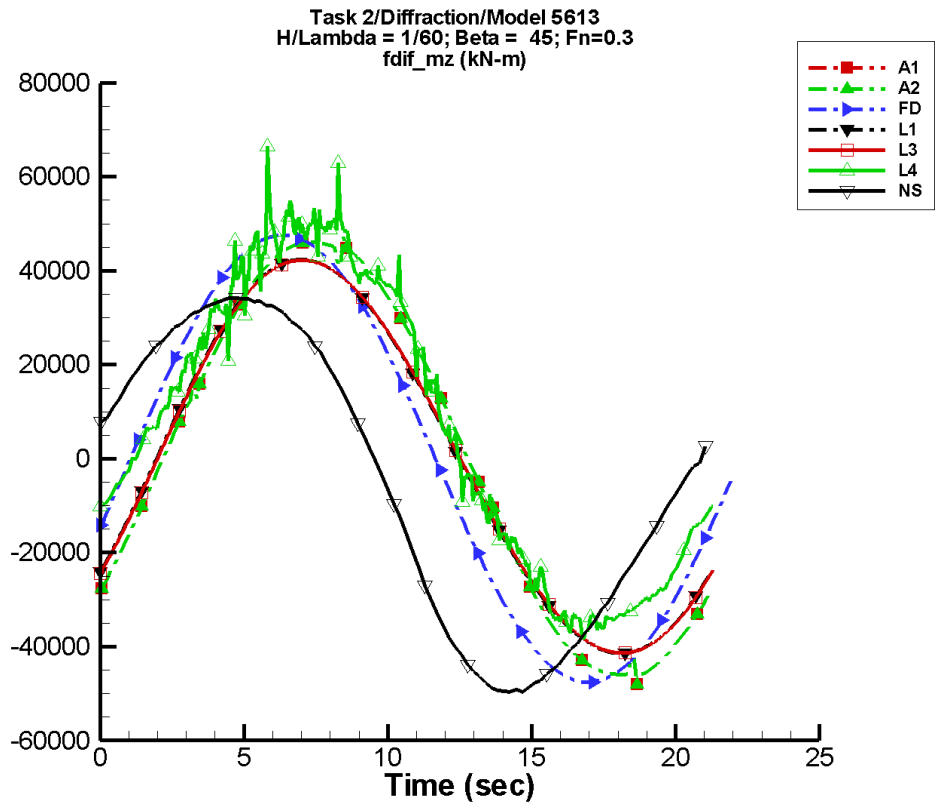
Table G–1967. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -2.02E-02       | 6.76            | 127               | 0.162           | -17               |
| A2   | -2.02E-02       | 6.76            | 127               | 0.162           | -17               |
| FD   | —               | —               | —                 | —               | —                 |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1968. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 0^\circ$ ,  $F_n = 0.3$ , and period = 40.02 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -7.20             | 6.98              | -7.03             | 6.66              |
| A2   | -7.20             | 6.98              | -7.03             | 6.66              |
| FD   | —                 | —                 | —                 | —                 |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-985. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1969. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

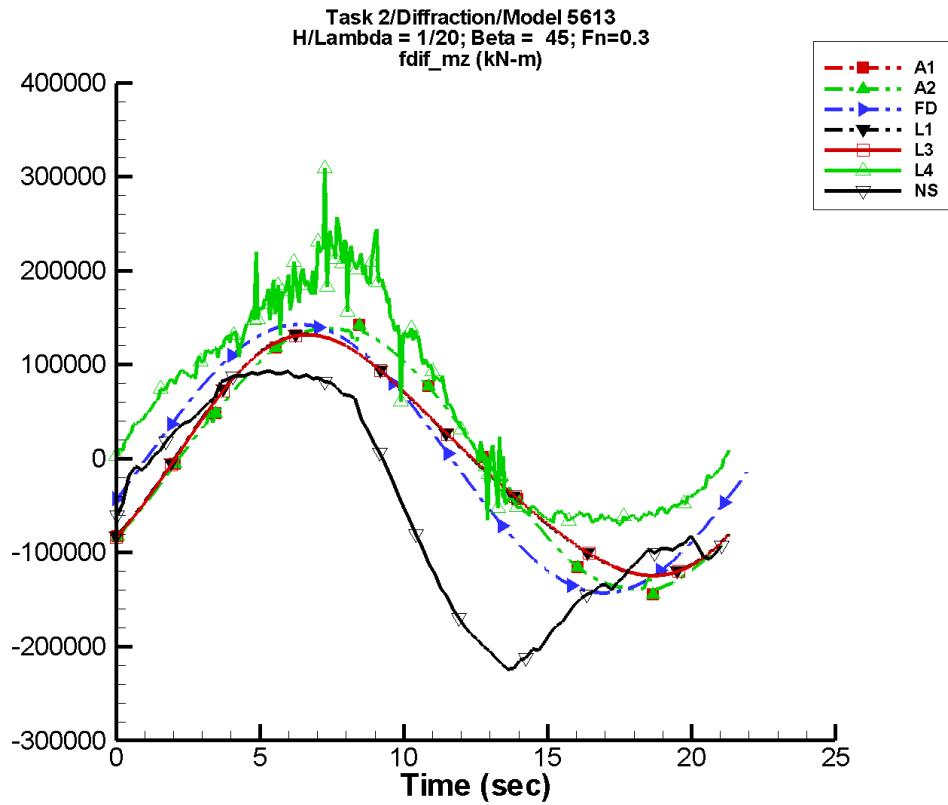
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 7.38            | 4.64E+04        | -36               | 14.1            | 143               |
| A2   | 7.38            | 4.64E+04        | -36               | 14.1            | 143               |
| FD   | 10.4            | 4.76E+04        | -13               | 16.9            | 149               |
| L1   | -31.7           | 4.18E+04        | -32               | 1.64E+03        | -83               |
| L3   | -30.8           | 4.17E+04        | -33               | 1.64E+03        | -83               |
| L4   | 6.48E+03        | 4.23E+04        | -28               | 3.06E+03        | 151               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.17E+03       | 4.17E+04        | 16                | 4.00E+03        | -180              |

Table G–1970. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -4.80E+04         | 4.71E+04          | -4.57E+04         | 4.60E+04          |
| A2   | -4.80E+04         | 4.71E+04          | -4.57E+04         | 4.60E+04          |
| FD   | -4.76E+04         | 4.76E+04          | -4.75E+04         | 4.75E+04          |
| L1   | -4.14E+04         | 4.24E+04          | -4.14E+04         | 4.23E+04          |
| L3   | -4.14E+04         | 4.23E+04          | -4.13E+04         | 4.22E+04          |
| L4   | -3.84E+04         | 6.64E+04          | -3.57E+04         | 5.17E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.97E+04         | 3.44E+04          | -4.91E+04         | 3.41E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-986. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

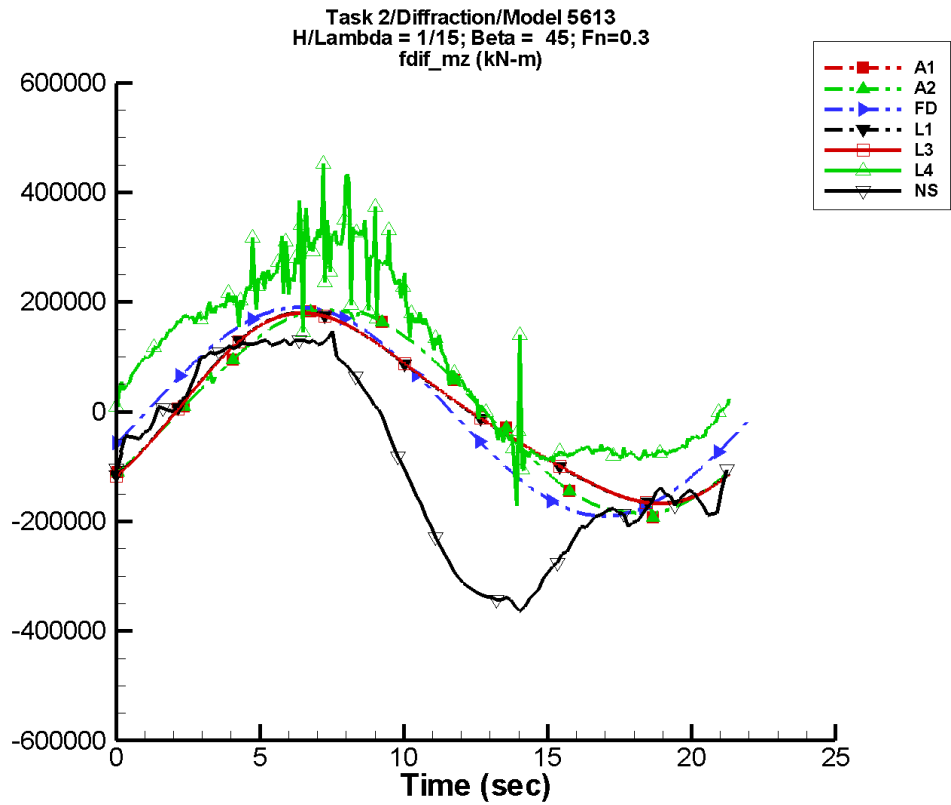
Table G–1971. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 22.2            | 1.40E+05        | -36               | 42.5            | 143               |
| A2   | 22.2            | 1.40E+05        | -36               | 42.5            | 143               |
| FD   | 31.1            | 1.43E+05        | -13               | 50.7            | 149               |
| L1   | -284.           | 1.25E+05        | -32               | 1.48E+04        | -83               |
| L3   | -281.           | 1.25E+05        | -33               | 1.48E+04        | -83               |
| L4   | 5.59E+04        | 1.37E+05        | -22               | 1.95E+04        | 162               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -5.27E+04       | 1.43E+05        | 11                | 3.37E+04        | -146              |

Table G–1972. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.44E+05         | 1.42E+05          | -1.37E+05         | 1.38E+05          |
| A2   | -1.44E+05         | 1.42E+05          | -1.37E+05         | 1.38E+05          |
| FD   | -1.43E+05         | 1.43E+05          | -1.42E+05         | 1.42E+05          |
| L1   | -1.24E+05         | 1.32E+05          | -1.24E+05         | 1.32E+05          |
| L3   | -1.24E+05         | 1.32E+05          | -1.24E+05         | 1.32E+05          |
| L4   | -6.99E+04         | 3.09E+05          | -6.64E+04         | 2.34E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.24E+05         | 9.33E+04          | -2.14E+05         | 9.36E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-987. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

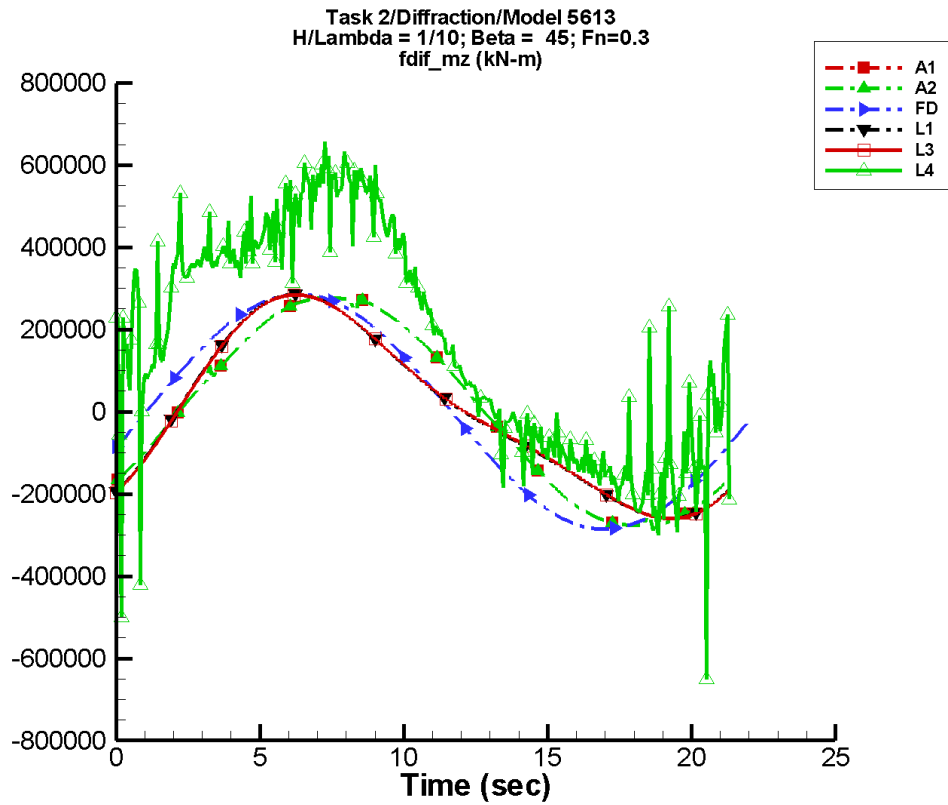
Table G–1973. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 29.6            | 1.86E+05        | -36               | 56.7            | 143               |
| A2   | 29.6            | 1.86E+05        | -36               | 56.7            | 143               |
| FD   | 41.5            | 1.90E+05        | -13               | 67.6            | 149               |
| L1   | -507.           | 1.67E+05        | -32               | 2.63E+04        | -83               |
| L3   | -503.           | 1.67E+05        | -33               | 2.63E+04        | -83               |
| L4   | 9.34E+04        | 1.99E+05        | -20               | 2.55E+04        | 159               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.38E+04       | 2.18E+05        | 12                | 6.31E+04        | -139              |

Table G–1974. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.93E+05         | 1.89E+05          | -1.83E+05         | 1.85E+05          |
| A2   | -1.93E+05         | 1.89E+05          | -1.83E+05         | 1.85E+05          |
| FD   | -1.90E+05         | 1.90E+05          | -1.90E+05         | 1.90E+05          |
| L1   | -1.67E+05         | 1.81E+05          | -1.67E+05         | 1.80E+05          |
| L3   | -1.68E+05         | 1.80E+05          | -1.67E+05         | 1.80E+05          |
| L4   | -1.71E+05         | 4.53E+05          | -8.47E+04         | 3.52E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -3.64E+05         | 1.47E+05          | -3.48E+05         | 1.31E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-988. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

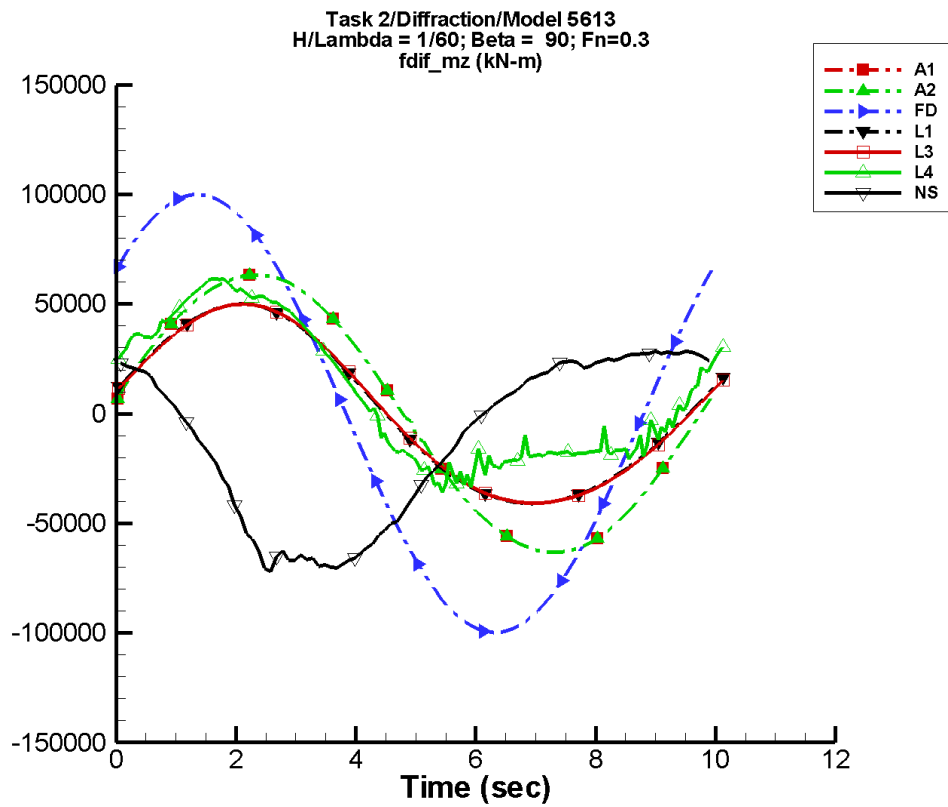
Table G–1975. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 44.4            | 2.79E+05        | -36               | 85.1            | 143               |
| A2   | 44.4            | 2.79E+05        | -36               | 85.1            | 143               |
| FD   | 62.2            | 2.86E+05        | -13               | 101.            | 149               |
| L1   | -1.14E+03       | 2.51E+05        | -32               | 5.92E+04        | -83               |
| L3   | -1.14E+03       | 2.50E+05        | -33               | 5.92E+04        | -83               |
| L4   | 1.70E+05        | 3.54E+05        | -21               | 1.30E+04        | 168               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1976. Minimum and maximum of of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 45^\circ$ ,  $F_n = 0.3$ , and period = 21.23 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.89E+05         | 2.84E+05          | -2.75E+05         | 2.77E+05          |
| A2   | -2.89E+05         | 2.84E+05          | -2.75E+05         | 2.77E+05          |
| FD   | -2.86E+05         | 2.86E+05          | -2.85E+05         | 2.85E+05          |
| L1   | -2.59E+05         | 2.85E+05          | -2.59E+05         | 2.85E+05          |
| L3   | -2.60E+05         | 2.84E+05          | -2.60E+05         | 2.84E+05          |
| L4   | -6.51E+05         | 6.56E+05          | -2.04E+05         | 5.73E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-989. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1977. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

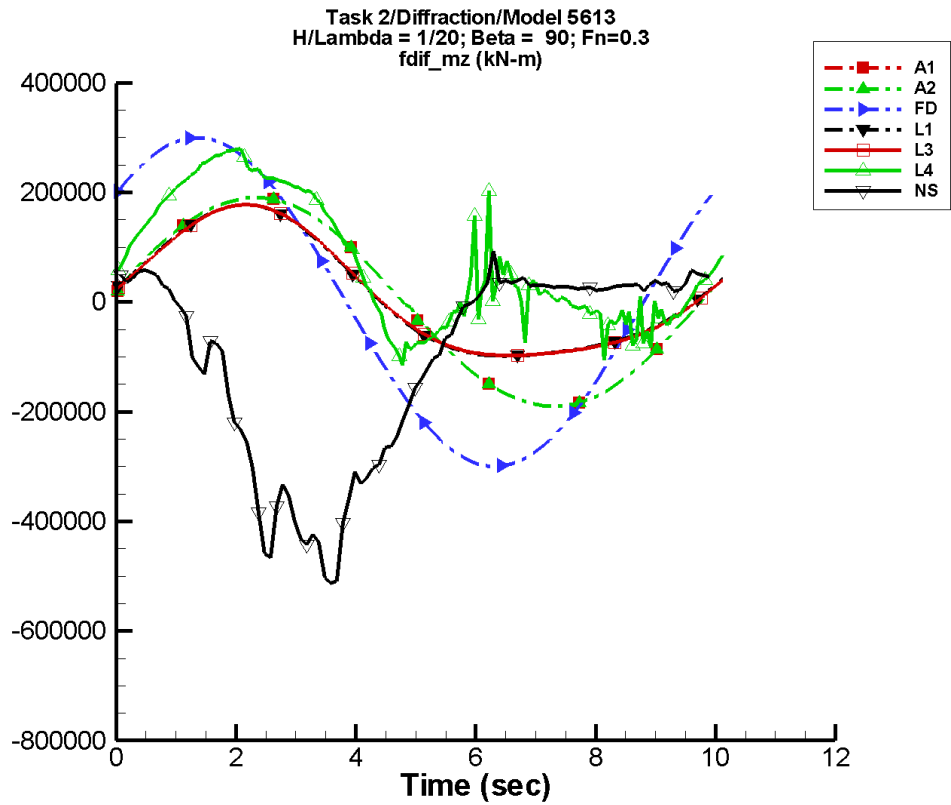
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -61.3           | 6.35E+04        | 2                 | 72.8            | 3                 |
| A2   | -61.3           | 6.35E+04        | 2                 | 72.8            | 3                 |
| FD   | -0.922          | 9.99E+04        | 33                | 41.4            | 65                |
| L1   | 1.61E+03        | 4.54E+04        | 12                | 3.06E+03        | -83               |
| L3   | 1.61E+03        | 4.54E+04        | 11                | 3.06E+03        | -83               |
| L4   | 8.72E+03        | 4.19E+04        | 23                | 1.06E+04        | -66               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.23E+04       | 4.98E+04        | 141               | 1.17E+04        | 36                |

Table G–1978. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.32E+04         | 6.33E+04          | -6.26E+04         | 6.27E+04          |
| A2   | -6.32E+04         | 6.33E+04          | -6.26E+04         | 6.27E+04          |
| FD   | -9.99E+04         | 9.99E+04          | -9.89E+04         | 9.89E+04          |
| L1   | -4.09E+04         | 5.00E+04          | -4.08E+04         | 4.98E+04          |
| L3   | -4.08E+04         | 5.00E+04          | -4.07E+04         | 4.98E+04          |
| L4   | -3.59E+04         | 6.19E+04          | -3.02E+04         | 6.09E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.20E+04         | 2.85E+04          | -6.82E+04         | 2.79E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-990. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

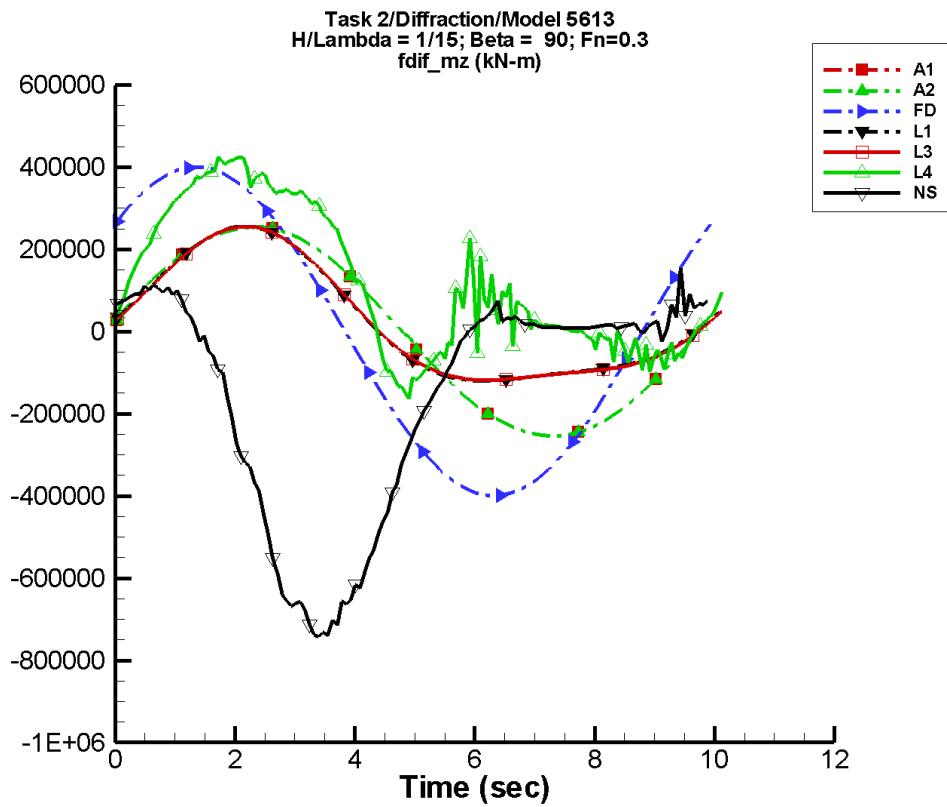
Table G–1979. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -184.           | 1.91E+05        | 2                 | 219.            | 3                 |
| A2   | -184.           | 1.91E+05        | 2                 | 219.            | 3                 |
| FD   | -2.75           | 3.00E+05        | 33                | 124.            | 65                |
| L1   | 1.46E+04        | 1.36E+05        | 12                | 2.74E+04        | -83               |
| L3   | 1.47E+04        | 1.36E+05        | 11                | 2.74E+04        | -83               |
| L4   | 7.19E+04        | 1.29E+05        | 14                | 8.02E+04        | -59               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.04E+05       | 2.20E+05        | 146               | 1.10E+05        | 26                |

Table G–1980. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.90E+05         | 1.90E+05          | -1.88E+05         | 1.89E+05          |
| A2   | -1.90E+05         | 1.90E+05          | -1.88E+05         | 1.89E+05          |
| FD   | -3.00E+05         | 3.00E+05          | -2.97E+05         | 2.97E+05          |
| L1   | -9.84E+04         | 1.78E+05          | -9.81E+04         | 1.77E+05          |
| L3   | -9.74E+04         | 1.78E+05          | -9.72E+04         | 1.77E+05          |
| L4   | -1.15E+05         | 2.82E+05          | -8.65E+04         | 2.74E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -5.12E+05         | 9.27E+04          | -4.46E+05         | 5.27E+04          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-991. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

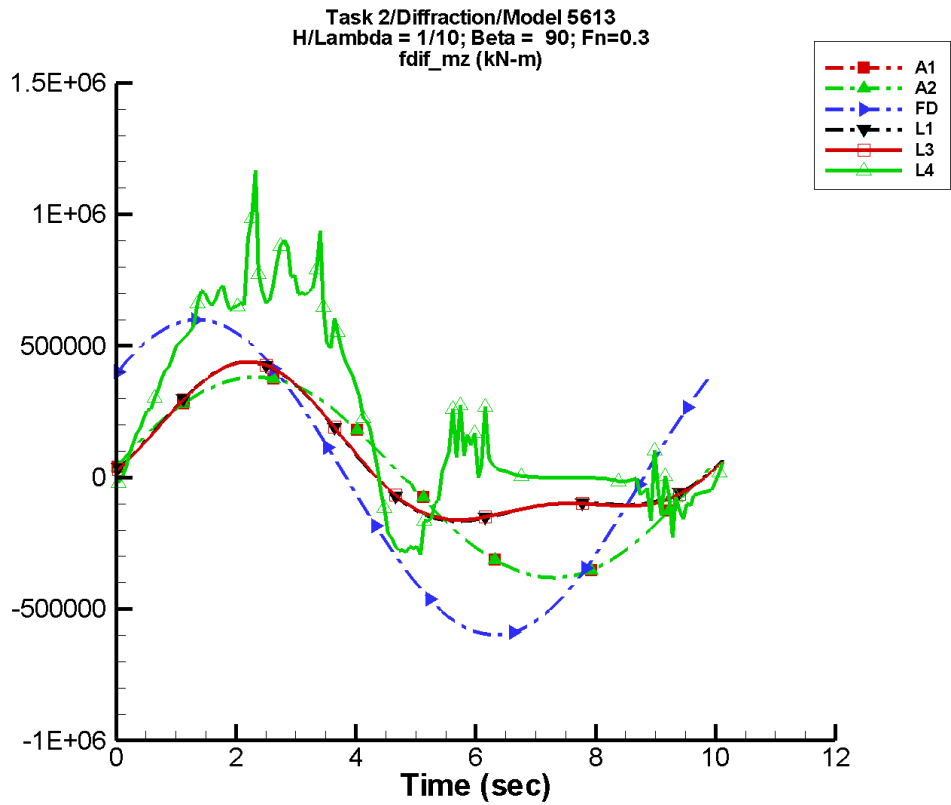
Table G–1981. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -246.           | 2.55E+05        | 2                 | 292.            | 3                 |
| A2   | -246.           | 2.55E+05        | 2                 | 292.            | 3                 |
| FD   | -3.69           | 4.00E+05        | 33                | 166.            | 65                |
| L1   | 2.61E+04        | 1.82E+05        | 12                | 4.86E+04        | -83               |
| L3   | 2.61E+04        | 1.82E+05        | 11                | 4.86E+04        | -83               |
| L4   | 1.17E+05        | 1.91E+05        | 8                 | 1.26E+05        | -62               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.56E+05       | 3.19E+05        | 138               | 2.01E+05        | 17                |

Table G–1982. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.54E+05         | 2.54E+05          | -2.51E+05         | 2.52E+05          |
| A2   | -2.54E+05         | 2.54E+05          | -2.51E+05         | 2.52E+05          |
| FD   | -4.00E+05         | 4.00E+05          | -3.95E+05         | 3.95E+05          |
| L1   | -1.20E+05         | 2.55E+05          | -1.20E+05         | 2.54E+05          |
| L3   | -1.18E+05         | 2.55E+05          | -1.18E+05         | 2.54E+05          |
| L4   | -1.64E+05         | 4.27E+05          | -1.30E+05         | 4.15E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -7.42E+05         | 1.54E+05          | -7.16E+05         | 1.04E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-992. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

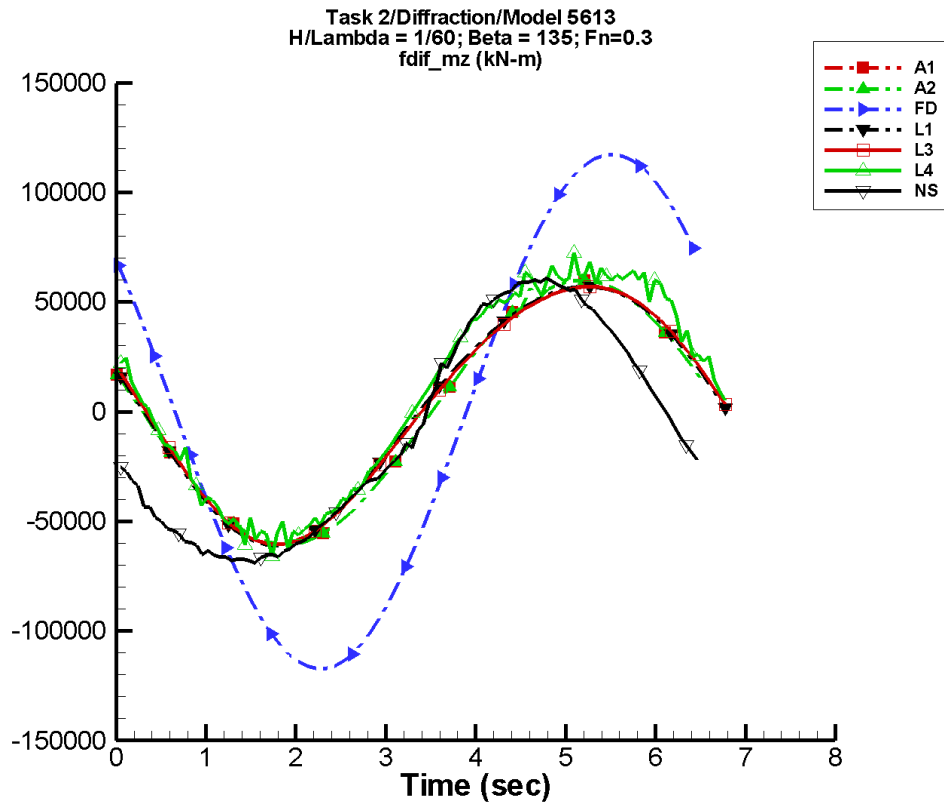
Table G–1983. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -369.           | 3.82E+05        | 2                 | 438.            | 3                 |
| A2   | -369.           | 3.82E+05        | 2                 | 438.            | 3                 |
| FD   | -5.51           | 5.99E+05        | 33                | 249.            | 65                |
| L1   | 5.87E+04        | 2.72E+05        | 12                | 1.09E+05        | -83               |
| L3   | 5.87E+04        | 2.72E+05        | 11                | 1.09E+05        | -83               |
| L4   | 2.15E+05        | 3.78E+05        | 1                 | 2.41E+05        | -84               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1984. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 90^\circ$ ,  $F_n = 0.3$ , and period = 9.93 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.81E+05         | 3.81E+05          | -3.77E+05         | 3.78E+05          |
| A2   | -3.81E+05         | 3.81E+05          | -3.77E+05         | 3.78E+05          |
| FD   | -5.99E+05         | 5.99E+05          | -5.93E+05         | 5.93E+05          |
| L1   | -1.66E+05         | 4.39E+05          | -1.65E+05         | 4.36E+05          |
| L3   | -1.62E+05         | 4.39E+05          | -1.60E+05         | 4.36E+05          |
| L4   | -2.93E+05         | 1.17E+06          | -2.70E+05         | 8.21E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-993. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1985. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

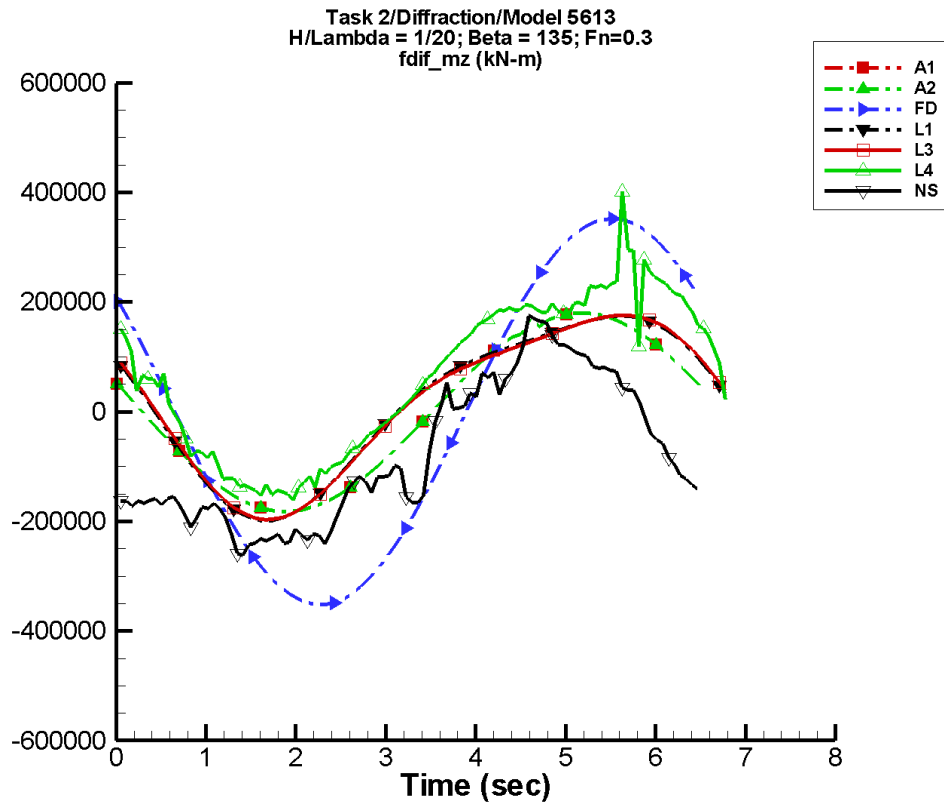
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 57.6            | 6.01E+04        | 162               | 559.            | 103               |
| A2   | 57.6            | 6.01E+04        | 162               | 559.            | 103               |
| FD   | 6.13E-02        | 1.17E+05        | 145               | 3.59            | -71               |
| L1   | 1.65E+03        | 5.87E+04        | 165               | 4.74E+03        | 99                |
| L3   | 1.65E+03        | 5.83E+04        | 163               | 4.74E+03        | 99                |
| L4   | 7.61E+03        | 6.26E+04        | 165               | 4.74E+03        | 101               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -9.83E+03       | 6.38E+04        | -173              | 6.72E+03        | -81               |

Table G–1986. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.06E+04         | 5.98E+04          | -5.91E+04         | 5.83E+04          |
| A2   | -6.06E+04         | 5.98E+04          | -5.91E+04         | 5.83E+04          |
| FD   | -1.17E+05         | 1.17E+05          | -1.15E+05         | 1.15E+05          |
| L1   | -6.09E+04         | 5.70E+04          | -6.03E+04         | 5.67E+04          |
| L3   | -6.04E+04         | 5.70E+04          | -5.99E+04         | 5.66E+04          |
| L4   | -6.60E+04         | 7.25E+04          | -5.70E+04         | 6.37E+04          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -6.89E+04         | 6.09E+04          | -6.80E+04         | 5.91E+04          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-994. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

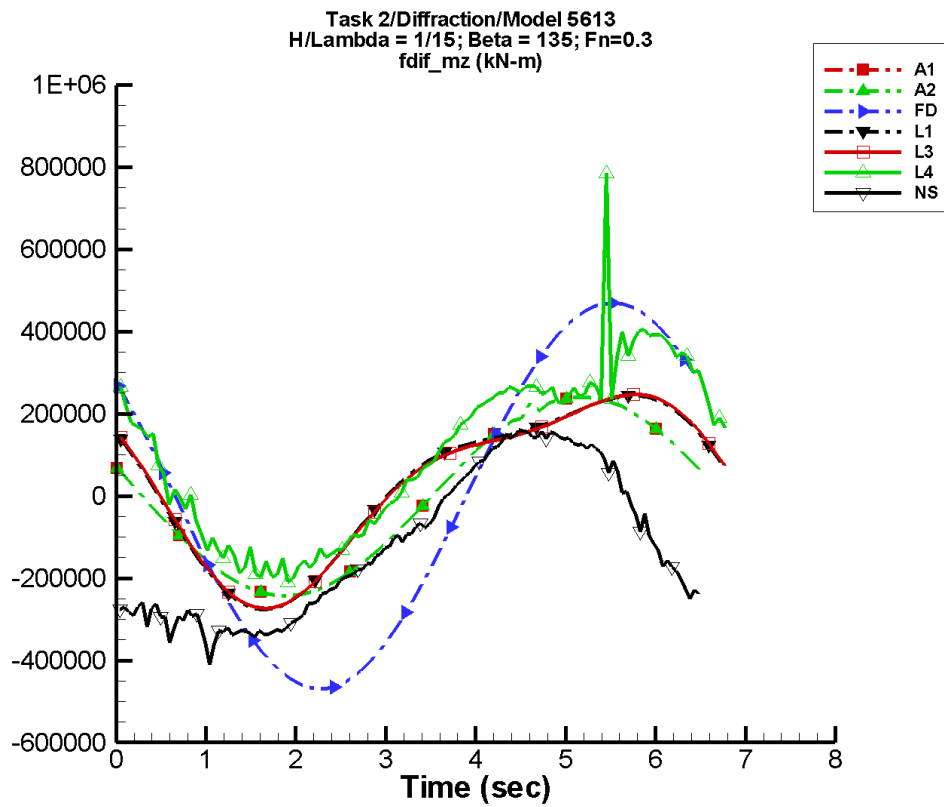
Table G–1987. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 173.            | 1.81E+05        | 162               | 1.68E+03        | 103               |
| A2   | 173.            | 1.81E+05        | 162               | 1.68E+03        | 103               |
| FD   | 0.165           | 3.52E+05        | 145               | 10.8            | -71               |
| L1   | 1.48E+04        | 1.76E+05        | 165               | 4.26E+04        | 99                |
| L3   | 1.48E+04        | 1.75E+05        | 163               | 4.26E+04        | 99                |
| L4   | 6.16E+04        | 1.92E+05        | 159               | 3.42E+04        | 107               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -7.86E+04       | 1.71E+05        | -177              | 3.60E+04        | -75               |

Table G–1988. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -1.82E+05         | 1.80E+05          | -1.78E+05         | 1.75E+05          |
| A2   | -1.82E+05         | 1.80E+05          | -1.78E+05         | 1.75E+05          |
| FD   | -3.52E+05         | 3.52E+05          | -3.44E+05         | 3.44E+05          |
| L1   | -1.99E+05         | 1.74E+05          | -1.96E+05         | 1.73E+05          |
| L3   | -1.97E+05         | 1.76E+05          | -1.94E+05         | 1.74E+05          |
| L4   | -1.64E+05         | 4.02E+05          | -1.47E+05         | 2.65E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -2.63E+05         | 1.75E+05          | -2.39E+05         | 1.44E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA.

Figure G-995. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

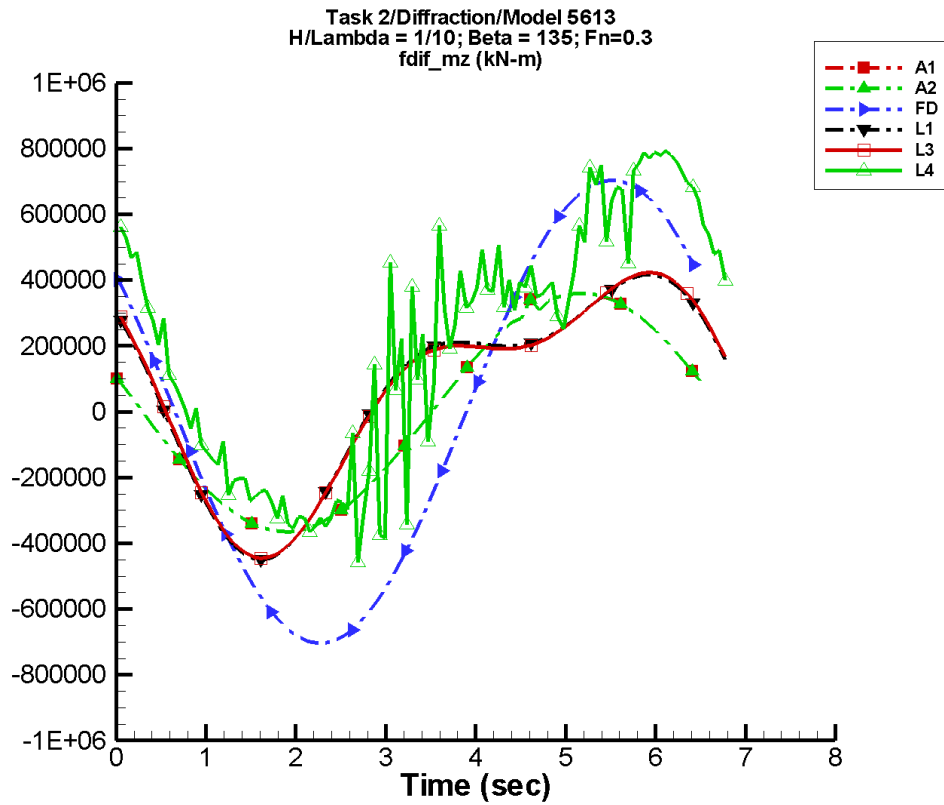
Table G–1989. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 231.            | 2.41E+05        | 162               | 2.25E+03        | 103               |
| A2   | 231.            | 2.41E+05        | 162               | 2.25E+03        | 103               |
| FD   | 0.203           | 4.70E+05        | 145               | 14.3            | -71               |
| L1   | 2.64E+04        | 2.35E+05        | 165               | 7.58E+04        | 99                |
| L3   | 2.64E+04        | 2.33E+05        | 163               | 7.58E+04        | 99                |
| L4   | 9.94E+04        | 2.66E+05        | 154               | 5.70E+04        | 107               |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -1.21E+05       | 2.42E+05        | -163              | 4.11E+04        | -91               |

Table G–1990. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.43E+05         | 2.40E+05          | -2.37E+05         | 2.34E+05          |
| A2   | -2.43E+05         | 2.40E+05          | -2.37E+05         | 2.34E+05          |
| FD   | -4.69E+05         | 4.69E+05          | -4.58E+05         | 4.58E+05          |
| L1   | -2.76E+05         | 2.44E+05          | -2.72E+05         | 2.41E+05          |
| L3   | -2.74E+05         | 2.47E+05          | -2.69E+05         | 2.44E+05          |
| L4   | -2.09E+05         | 7.84E+05          | -1.83E+05         | 3.88E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -4.13E+05         | 1.60E+05          | -3.43E+05         | 1.52E+05          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from NFA and NSHIPMO.

Figure G-996. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

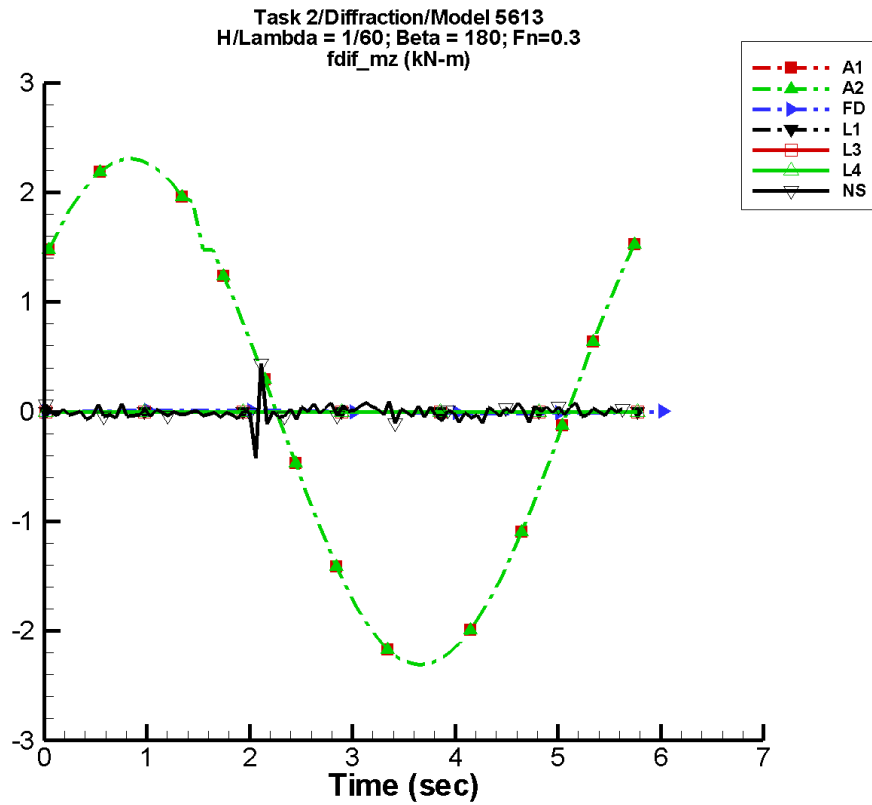
Table G–1991. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | 347.            | 3.62E+05        | 162               | 3.37E+03        | 103               |
| A2   | 347.            | 3.62E+05        | 162               | 3.37E+03        | 103               |
| FD   | 0.340           | 7.04E+05        | 145               | 21.5            | -71               |
| L1   | 5.93E+04        | 3.52E+05        | 165               | 1.71E+05        | 99                |
| L3   | 5.93E+04        | 3.50E+05        | 163               | 1.71E+05        | 99                |
| L4   | 1.98E+05        | 4.75E+05        | 147               | 1.27E+05        | 92                |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–1992. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 135^\circ$ ,  $F_n = 0.3$ , and period = 6.48 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -3.65E+05         | 3.60E+05          | -3.56E+05         | 3.51E+05          |
| A2   | -3.65E+05         | 3.60E+05          | -3.56E+05         | 3.51E+05          |
| FD   | -7.04E+05         | 7.04E+05          | -6.87E+05         | 6.88E+05          |
| L1   | -4.49E+05         | 4.17E+05          | -4.41E+05         | 4.11E+05          |
| L3   | -4.45E+05         | 4.23E+05          | -4.36E+05         | 4.17E+05          |
| L4   | -4.57E+05         | 7.93E+05          | -3.34E+05         | 7.72E+05          |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-997. Time history of  $M_z^{dif}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1993. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

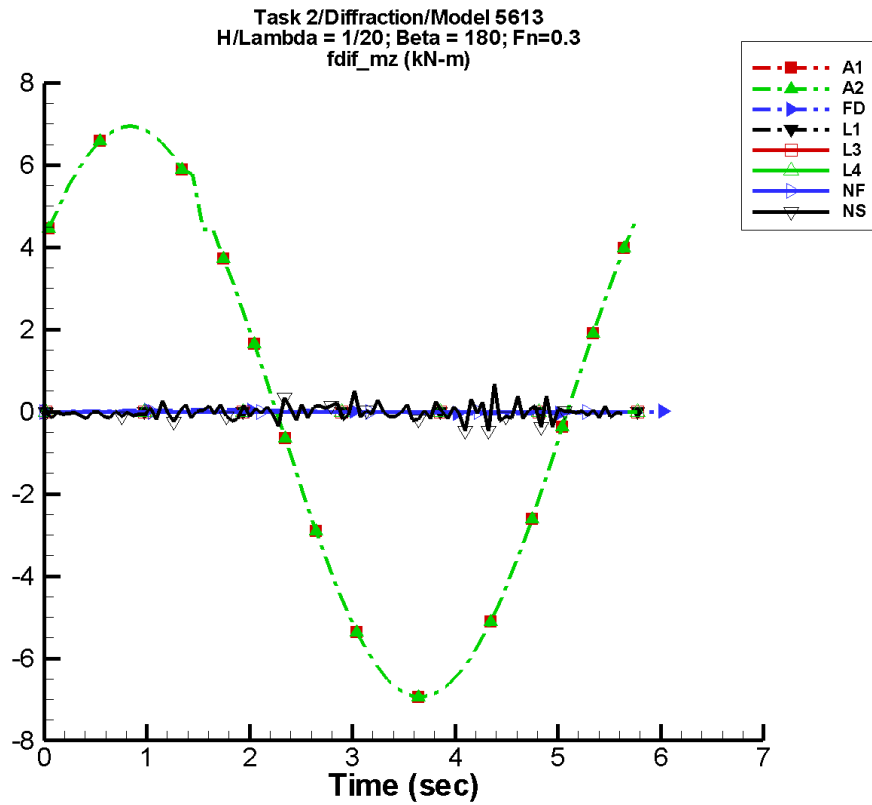
| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -1.14E-03       | 2.32            | 29                | 8.49E-03        | -55               |
| A2   | -1.14E-03       | 2.32            | 29                | 8.49E-03        | -55               |
| FD   | 1.40E-06        | 1.39E-02        | -53               | 2.41E-05        | -99               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -3.44E-03       | 4.06E-03        | 180               | 1.79E-02        | 89                |

Table G–1994. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/60$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -2.31             | 2.61              | -2.24             | 2.26              |
| A2   | -2.31             | 2.61              | -2.24             | 2.26              |
| FD   | -1.39E-02         | 1.39E-02          | -1.35E-02         | 1.35E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.423            | 0.439             | -3.93E-02         | 3.35E-02          |



TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-998. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

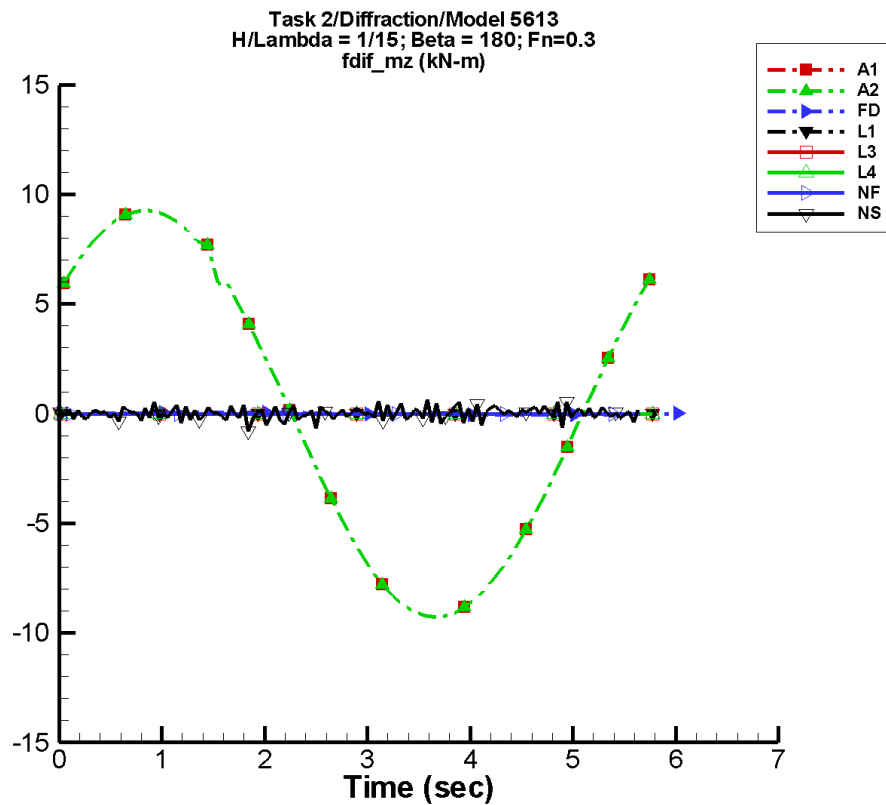
Table G–1995. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -3.42E-03       | 6.96            | 29                | 2.55E-02        | -55               |
| A2   | -3.42E-03       | 6.96            | 29                | 2.55E-02        | -55               |
| FD   | 4.20E-06        | 4.18E-02        | -53               | 7.21E-05        | -99               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | -8.25E-03       | 2.87E-02        | -90               | 1.06E-02        | 152               |

Table G–1996. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/20$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -6.94             | 7.86              | -6.73             | 6.81              |
| A2   | -6.94             | 7.86              | -6.73             | 6.81              |
| FD   | -4.18E-02         | 4.17E-02          | -4.05E-02         | 4.04E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -0.473            | 0.675             | -7.28E-02         | 9.90E-02          |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4 and NFA.

Figure G-999. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

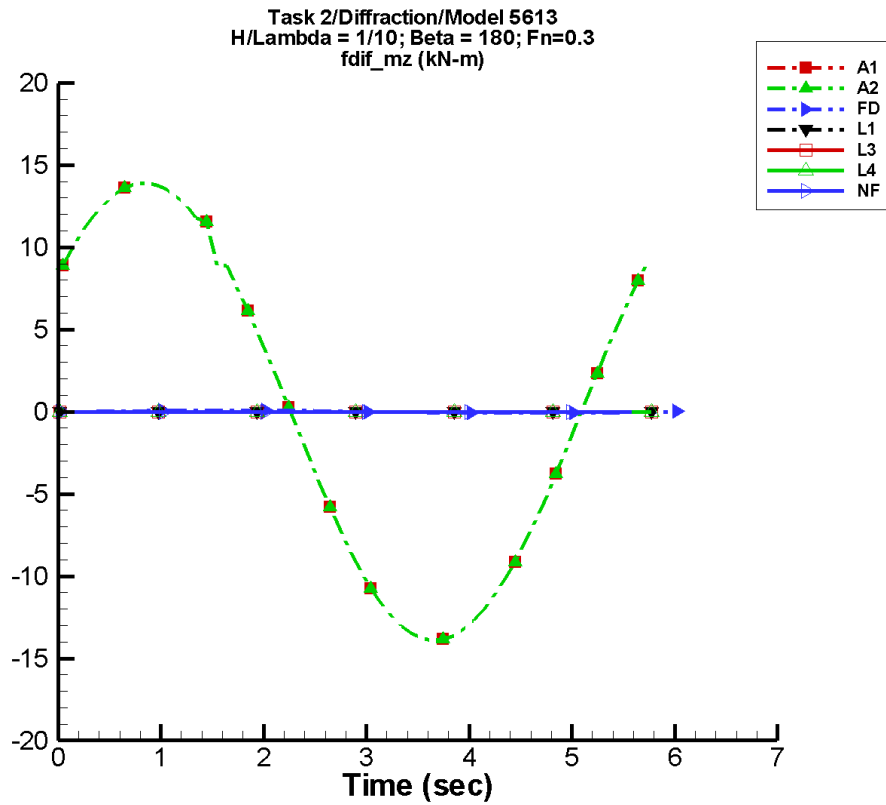
Table G–1997. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -4.57E-03       | 9.30            | 29                | 3.41E-02        | -55               |
| A2   | -4.57E-03       | 9.30            | 29                | 3.41E-02        | -55               |
| FD   | 5.61E-06        | 5.58E-02        | -53               | 9.62E-05        | -99               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | 3.89E-03        | 6.97E-02        | 176               | 1.59E-02        | -48               |

Table G–1998. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/15$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.66 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -9.27             | 10.5              | -8.99             | 9.09              |
| A2   | -9.27             | 10.5              | -8.99             | 9.09              |
| FD   | -5.57E-02         | 5.57E-02          | -5.39E-02         | 5.39E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | -1.32             | 0.631             | -0.134            | 0.127             |

TASK 2/0-DOF IN WAVES/MODEL 5613



Data identically zero, insufficient, or not available from LAMP-1, LAMP-3, LAMP-4, NFA and NSHIPMO.

Figure G-1000. Time history of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to  $L = 154$  m.

TASK 2/0-DOF IN WAVES/MODEL 5613

Table G–1999. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | $a_0$<br>(kN-m) | $a_1$<br>(kN-m) | $\Phi_1$<br>(deg) | $a_2$<br>(kN-m) | $\Phi_2$<br>(deg) |
|------|-----------------|-----------------|-------------------|-----------------|-------------------|
| A1   | -6.85E-03       | 13.9            | 29                | 5.11E-02        | -55               |
| A2   | -6.85E-03       | 13.9            | 29                | 5.11E-02        | -55               |
| FD   | 8.41E-06        | 8.37E-02        | -53               | 1.44E-04        | -99               |
| L1   | —               | —               | —                 | —               | —                 |
| L3   | —               | —               | —                 | —               | —                 |
| L4   | —               | —               | —                 | —               | —                 |
| NF   | —               | —               | —                 | —               | —                 |
| NS   | —               | —               | —                 | —               | —                 |

Table G–2000. Minimum and maximum of  $M_z^{\text{dif}}$  for one period for  $H/\lambda = 1/10$ ,  $\lambda/L = 1$ ,  $\beta = 180^\circ$ ,  $F_n = 0.3$ , and period = 5.65 sec in the case 0-DOF motion in waves of Model 5613 scaled to L = 154 m.

| Code | Unfiltered        |                   | Filtered          |                   |
|------|-------------------|-------------------|-------------------|-------------------|
|      | Minimum<br>(kN-m) | Maximum<br>(kN-m) | Minimum<br>(kN-m) | Maximum<br>(kN-m) |
| A1   | -13.9             | 15.7              | -13.5             | 13.6              |
| A2   | -13.9             | 15.7              | -13.5             | 13.6              |
| FD   | -8.36E-02         | 8.35E-02          | -8.09E-02         | 8.08E-02          |
| L1   | —                 | —                 | —                 | —                 |
| L3   | —                 | —                 | —                 | —                 |
| L4   | —                 | —                 | —                 | —                 |
| NF   | —                 | —                 | —                 | —                 |
| NS   | —                 | —                 | —                 | —                 |