

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

## **Appendix D — Time History Plots for Prescribed Roll Motion of Model 5514**

# Report Documentation Page

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# TASK 1/ROLL MOTION/MODEL 5514

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D-523.	Time history of $M_y^{\text{rad}}$ for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . .	D-1184
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D-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  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-333

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D-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  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-335

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D-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  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-341

D-202. Minimum and maximum of of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-341

D-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  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-343



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D-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  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-345

D-206. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-345

D-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  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-347

D-208. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-347

D-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  $F_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-349

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D-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  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-351

D-212. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-351

D-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  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-353

D-214. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-353

D-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  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-355

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D-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  $F_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-359

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D-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  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-361

D-222. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-361

D-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  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-363

D-224. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-363

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D-226. Minimum and maximum of  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-365

D-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  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-367

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D-288. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-427

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D-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  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-437

D-298. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-437

D-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  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-439



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- D-466. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-605
- D-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  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-607

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D-468. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-607

D-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  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-609

D-470. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-609

D-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  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-611

D-472. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-611

D-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  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-613

D-474. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-613

D-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  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-615

D-476. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-615

D-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  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-617

D-478. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-617

D-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  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-619

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- D-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  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-665
- D-526. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-665
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- D-624. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-763
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- D-626. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-765
- D-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  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-767
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- D-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  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-773
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- D-636. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-775
- D-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  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-777
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- D-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  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-783
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- D-648. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-787
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- D-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  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-797
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- D-660. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-799
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-805
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- D-668. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-807
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- D-670. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-809
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-811

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- D-672. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-811
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-813
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-815
- D-676. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-815
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-817
- D-678. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-817
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-819
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-821
- D-682. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-821
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-823



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- D-684. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-823
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-825
- D-686. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-825
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-827
- D-688. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-827
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-829
- D-690. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-829
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-831
- D-692. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-831
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-833
- D-694. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-833
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-835

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- D-696. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-835
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-837
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-839
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- D-702. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-841
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-843
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-847

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- D-708. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-847
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-849
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-851
- D-712. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-851
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- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-855
- D-716. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-855
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-857
- D-718. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-857
- D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-859

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- D-720. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-859
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-861
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- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-867
- D-728. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-867
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- D-732. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-871
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- D-742. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-881
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-883

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- D-744. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-883
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- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-889
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- D-752. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-891
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-893
- D-754. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-893
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-895

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- D-756. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-895
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-897
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- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-899
- D-760. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-899
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- D-762. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-901
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-903
- D-764. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-903
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-905
- D-766. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-905
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-907

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- D-768. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-907
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-909
- D-770. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-909
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-911
- D-772. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-911
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-913
- D-774. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-913
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-915
- D-776. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-915
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-917
- D-778. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-917
- D-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  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-919



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- D-780. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-919
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-921
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-923
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- D-786. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-925
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-927
- D-788. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-927
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-929
- D-790. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-929
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- D-792. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-931
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-933
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-935
- D-796. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-935
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-937
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-939
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-941
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- D-804. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-943
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-945
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-949
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- D-812. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-951
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-953
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-957
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- D-828. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-967
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- D-834. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-973
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- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-977
- D-838. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-977
- D-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  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-979

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- D-840. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-979
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- D-844. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-983
- D-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  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-985
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- D-848. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-987
- D-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  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-989
- D-850. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-989
- D-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  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-991

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- D-852. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-991
- D-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  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-993
- D-854. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-993
- D-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  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-995
- D-856. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-995
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- D-898. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1037
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- D-900. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1039
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- D-912. Minimum and maximum of of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1051
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1053
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- D-922. Minimum and maximum of of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1061
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1063

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- D-924. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1063
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1065
- D-926. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1065
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1067
- D-928. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1067
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1069
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- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1071
- D-932. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1071
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1073
- D-934. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1073
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m. . . . . D-1075

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- D-936. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1075
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1077
- D-938. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1077
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1079
- D-940. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1079
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1081
- D-942. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1081
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1083
- D-944. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1083
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1085
- D-946. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1085
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1087

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- D-948. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1087
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1089
- D-950. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1089
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1091
- D-952. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1091
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1093
- D-954. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1093
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1095
- D-956. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1095
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1097
- D-958. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1097
- D-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  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1099

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- D-960. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1099
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1101
- D-962. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1101
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1103
- D-964. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1103
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1105
- D-966. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1105
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1107
- D-968. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1107
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1109
- D-970. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1109
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1111



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- D-972. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1111
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1113
- D-974. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1113
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1115
- D-976. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1115
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1117
- D-978. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1117
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1119
- D-980. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1119
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1121
- D-982. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1121
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1123

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- D-984. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1123
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1125
- D-986. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1125
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1127
- D-988. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1127
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1129
- D-990. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1129
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1131
- D-992. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1131
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1133
- D-994. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1133
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1135

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- D-996. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1135
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1137
- D-998. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1137
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1139
- D-1000. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1139
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1141
- D-1002. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1141
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1143
- D-1004. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1143
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1145
- D-1006. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1145
- D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1147

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D-1008. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1147

D-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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1149

D-1010. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1149

D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1151

D-1012. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1151

D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1153

D-1014. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1153

D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1155

D-1016. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1155

D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1157

D-1018. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1157

D-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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1159

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- D-1020. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1159
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1161
- D-1022. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1161
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1163
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- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1165
- D-1026. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1165
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1167
- D-1028. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1167
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1169
- D-1030. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1169
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1171

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- D-1032. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1171
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1173
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- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1175
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- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1177
- D-1038. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1177
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1179
- D-1040. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1179
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1181
- D-1042. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1181
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1183

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- D-1044. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1183
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1185
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- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1189
- D-1050. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1189
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1191
- D-1052. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1191
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1193
- D-1054. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1193
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1195

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- D-1056. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1195
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1197
- D-1058. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1197
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- D-1060. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1199
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1201
- D-1062. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1201
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1203
- D-1064. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1203
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1205
- D-1066. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1205
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1207



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- D-1068. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1207
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1209
- D-1070. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1209
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1211
- D-1072. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1211
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1213
- D-1074. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1213
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1215
- D-1076. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1215
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1217
- D-1078. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1217
- D-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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1219

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- D-1080. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1219
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1221
- D-1082. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1221
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1223
- D-1084. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1223
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1225
- D-1086. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1225
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1227
- D-1088. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1227
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1229
- D-1090. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1229
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1231

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- D-1092. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1231
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1233
- D-1094. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1233
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1235
- D-1096. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1235
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1237
- D-1098. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1237
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1239
- D-1100. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1239
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1241
- D-1102. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1241
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1243

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- D-1104. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1243
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1245
- D-1106. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1245
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1247
- D-1108. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1247
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1249
- D-1110. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1249
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1251
- D-1112. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1251
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1253
- D-1114. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1253
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1255

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- D-1116. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1255
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1257
- D-1118. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1257
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1259
- D-1120. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1259
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1261
- D-1122. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1261
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1263
- D-1124. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1263
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1265
- D-1126. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1265
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1267

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- D-1128. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1267
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1269
- D-1130. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1269
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1271
- D-1132. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1271
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1273
- D-1134. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1273
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1275
- D-1136. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1275
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1277
- D-1138. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1277
- D-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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1279

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D-1140. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m. . . . . D-1279

**Introduction**

This appendix contains all the plots and tables for the simulations involving 1-DOF prescribed roll motion of Model 5514 scaled to the length 142 m. Each of Figures D–1 through D–570 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 roll angle is of the form  $\phi = \phi_a \sin \omega t$  for some amplitude  $\phi_a$  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 D–1 through D–1140 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. However, the plot itself was obtained from unfiltered data unless the data were already filtered by the code runner, as is the case for the results from NFA.

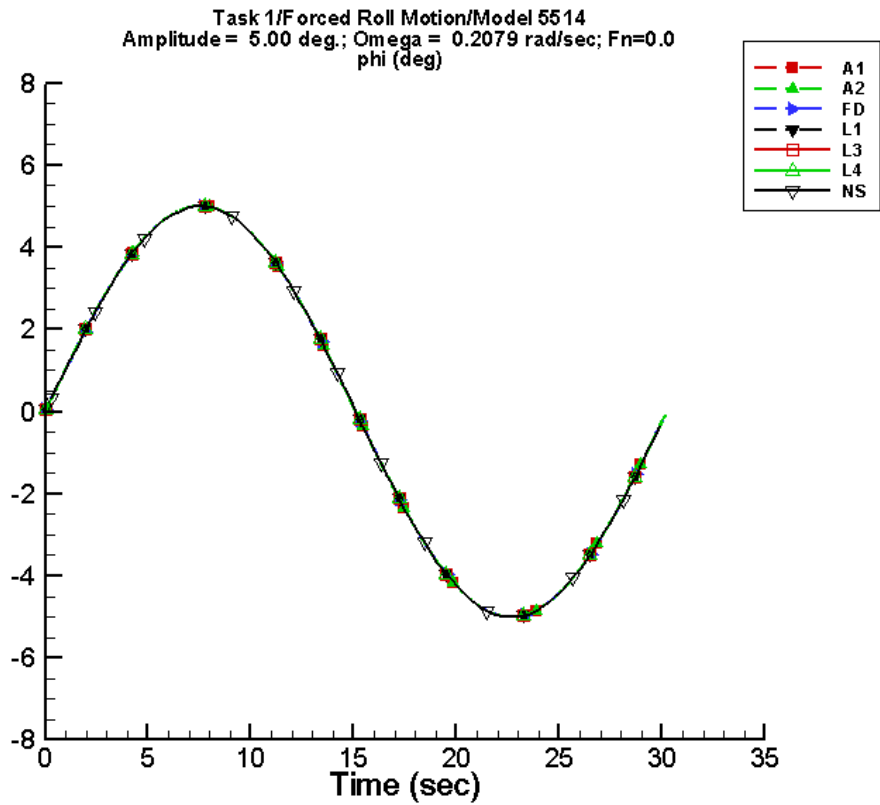
Appendix N contains plots and tables for the behavior of the minimum and the maximum of each variable plotted in this appendix versus the roll amplitude  $\phi_a$ .

The frequencies and amplitudes of the prescribed roll motions of task 1 are the same for both Models 5514 and 5613 and for both speeds corresponding to Froude numbers 0.0 and 0.3. The highest frequency for the prescribed roll motion in task 1 differs from the highest frequency for the prescribed heave and pitch motions of task 1. The frequencies and amplitudes of the prescribed roll motion are given in the main part of the report and are also here for ease of reference:

<b>Roll Motion <math>\phi = \phi_a \sin (\omega t)</math></b>					
Rotation Point about VCG					
<b>Roll Amplitudes <math>\phi_a</math></b>					
$\phi_a$ (°)	5	15	30	45	65
<b>Roll Frequencies <math>\omega</math></b>					
$\omega_1$ (rad/s)	0.2079	0.2079	0.2079	0.2079	0.2079
$\omega_2$ (rad/s)	0.3831	0.3831	0.3831	0.3831	0.3831
$\omega_3$ (rad/s)	0.672	0.672	0.672	0.672	0.672



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-1. Time history of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

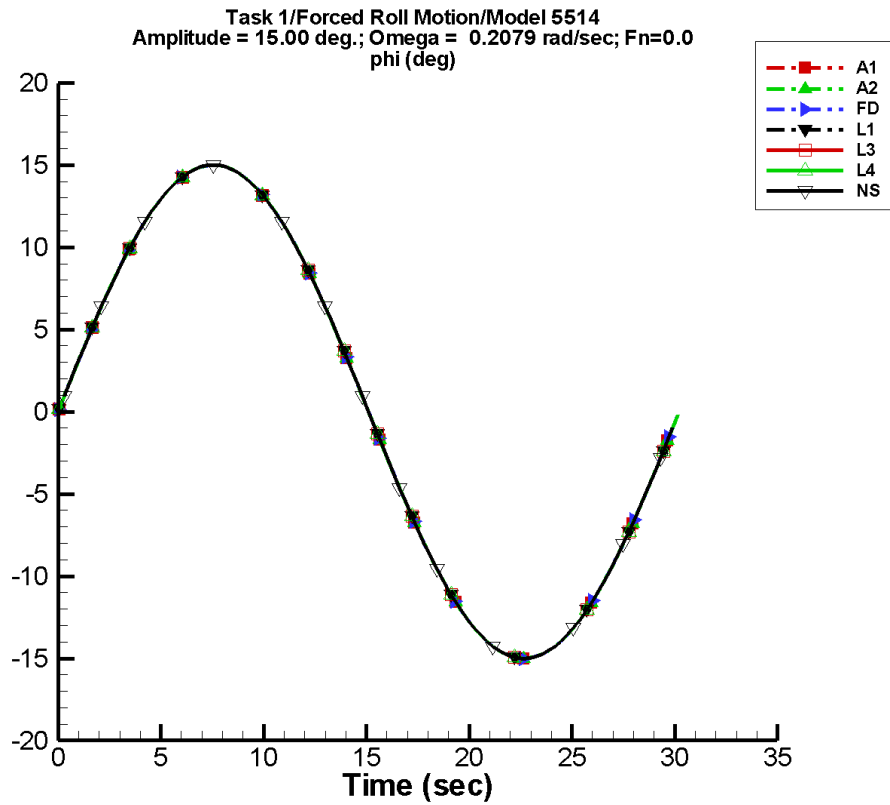
Table D–1. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-3.69E-06	5.00	0	5.18E-06	-21
A2	-3.69E-06	5.00	0	5.18E-06	-21
FD	1.60E-07	5.00	0	6.54E-07	31
L1	-5.24E-06	5.00	0	8.69E-07	-32
L3	-5.24E-06	5.00	0	8.69E-07	-32
L4	-5.24E-06	5.00	0	8.69E-07	-32
NF	—	—	—	—	—
NS	4.90E-07	5.00	0	5.45E-07	52

Table D–2. Minimum and maximum of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-5.00	5.00	-5.00	5.00
A2	-5.00	5.00	-5.00	5.00
FD	-5.00	5.00	-4.99	4.99
L1	-5.00	5.00	-5.00	5.00
L3	-5.00	5.00	-5.00	5.00
L4	-5.00	5.00	-5.00	5.00
NF	—	—	—	—
NS	-5.00	5.00	-4.95	4.95

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-2. Time history of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

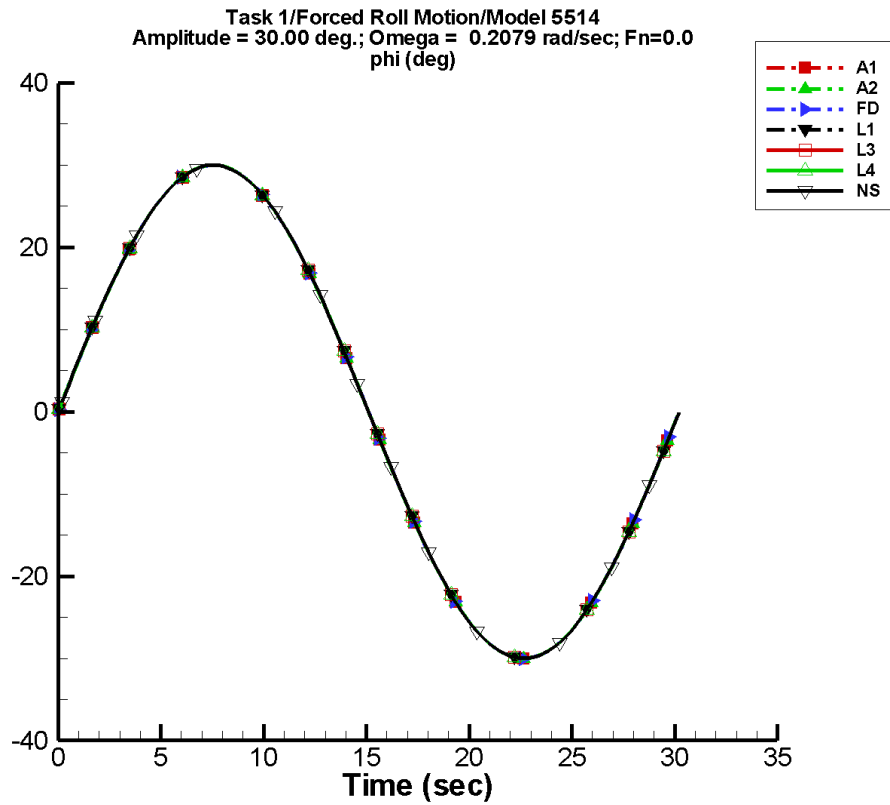
Table D–3. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-1.17E-05	15.0	0	1.42E-05	-20
A2	-1.17E-05	15.0	0	1.42E-05	-20
FD	-3.88E-07	15.0	0	2.68E-06	35
L1	6.20E-06	15.0	0	4.39E-06	-49
L3	6.20E-06	15.0	0	4.39E-06	-49
L4	6.20E-06	15.0	0	4.39E-06	-49
NF	—	—	—	—	—
NS	1.98E-06	15.0	0	9.86E-07	-14

Table D–4. Minimum and maximum of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-15.0	15.0	-15.0	15.0
A2	-15.0	15.0	-15.0	15.0
FD	-15.0	15.0	-15.0	15.0
L1	-15.0	15.0	-15.0	15.0
L3	-15.0	15.0	-15.0	15.0
L4	-15.0	15.0	-15.0	15.0
NF	—	—	—	—
NS	-15.0	15.0	-14.9	14.9

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-3. Time history of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

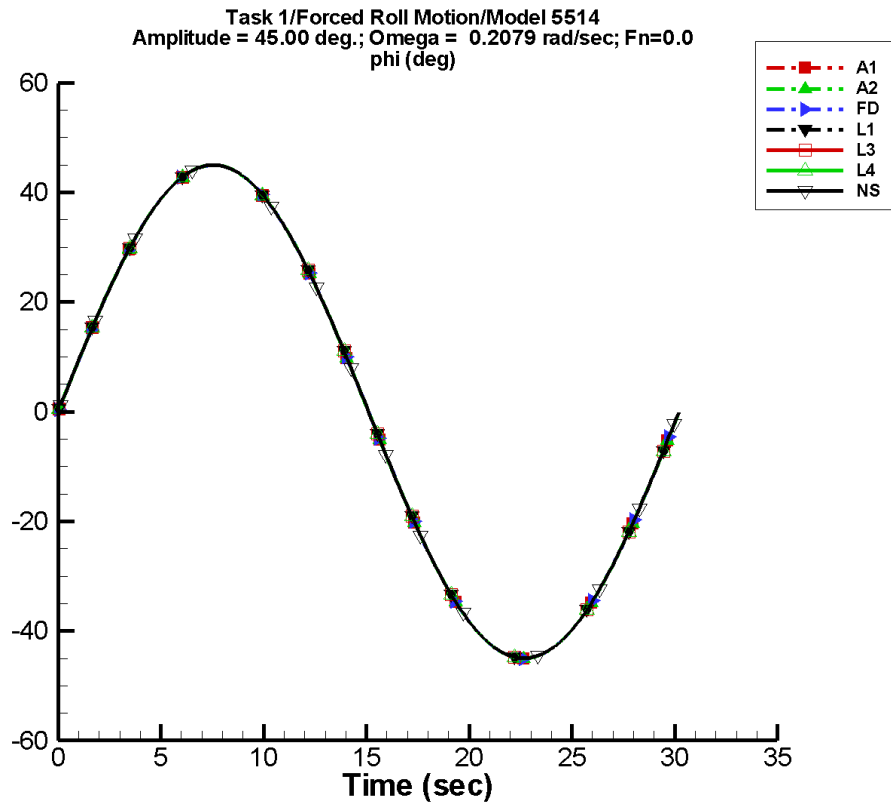
Table D-5. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-2.30E-05	30.0	0	2.74E-05	-18
A2	-2.30E-05	30.0	0	2.74E-05	-18
FD	-2.43E-06	30.0	0	4.51E-06	64
L1	3.60E-06	30.0	0	6.23E-06	2
L3	3.60E-06	30.0	0	6.23E-06	2
L4	3.60E-06	30.0	0	6.23E-06	2
NF	—	—	—	—	—
NS	1.84E-06	30.0	0	2.16E-06	133

Table D-6. Minimum and maximum of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-30.0	30.0	-30.0	30.0
A2	-30.0	30.0	-30.0	30.0
FD	-30.0	30.0	-30.0	30.0
L1	-30.0	30.0	-30.0	30.0
L3	-30.0	30.0	-30.0	30.0
L4	-30.0	30.0	-30.0	30.0
NF	—	—	—	—
NS	-30.0	30.0	-29.9	29.9

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-4. Time history of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

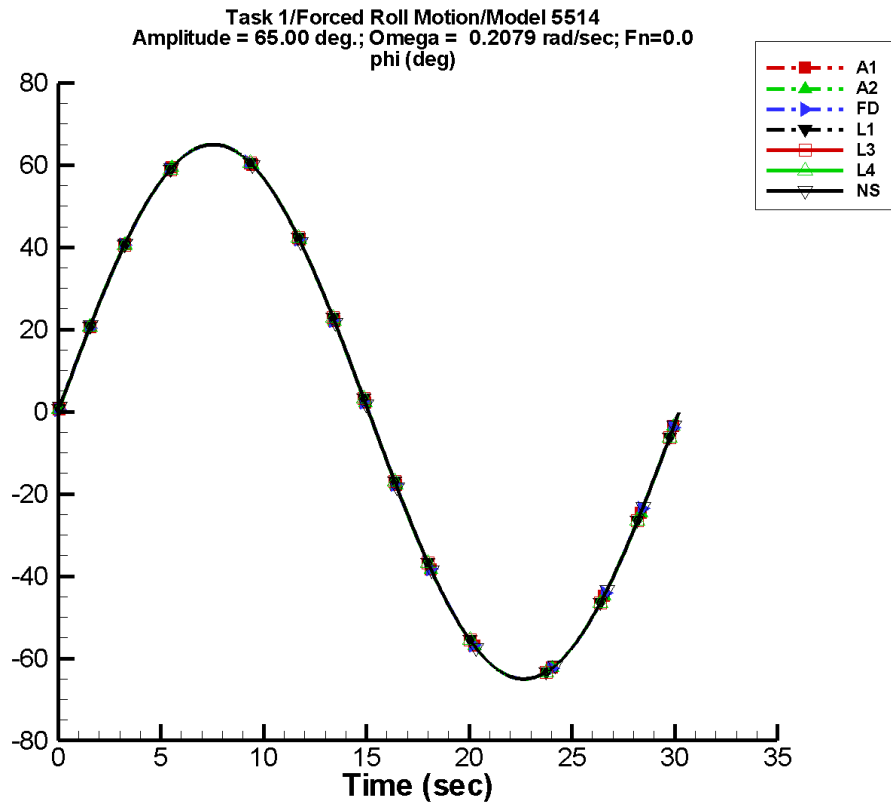
Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-3.89E-05	45.0	0	4.73E-05	-21
A2	-3.89E-05	45.0	0	4.73E-05	-21
FD	-4.26E-09	45.0	0	4.55E-06	72
L1	3.14E-05	45.0	0	4.39E-06	-96
L3	3.14E-05	45.0	0	4.39E-06	-96
L4	3.14E-05	45.0	0	4.39E-06	-96
NF	—	—	—	—	—
NS	-3.41E-06	45.0	0	1.26E-06	25

Table D-8. Minimum and maximum of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-45.0	45.0	-45.0	45.0
A2	-45.0	45.0	-45.0	45.0
FD	-45.0	45.0	-44.9	44.9
L1	-45.0	45.0	-45.0	45.0
L3	-45.0	45.0	-45.0	45.0
L4	-45.0	45.0	-45.0	45.0
NF	—	—	—	—
NS	-45.0	45.0	-44.9	44.9



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

Figure D-5. Time history of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

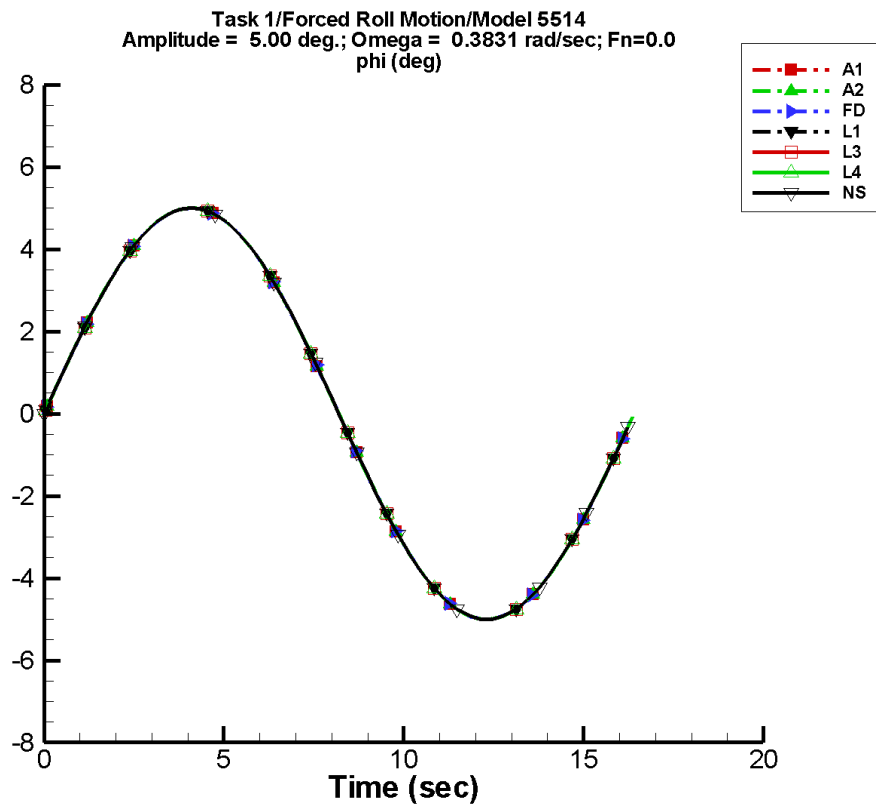
Table D–9. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-4.87E-05	65.0	0	7.22E-05	-18
A2	-4.87E-05	65.0	0	7.22E-05	-18
FD	-8.71E-06	65.0	0	1.27E-05	56
L1	-1.53E-04	65.0	0	7.15E-06	-8
L3	-1.53E-04	65.0	0	7.15E-06	-8
L4	-1.53E-04	65.0	0	7.15E-06	-8
NF	—	—	—	—	—
NS	2.47E-06	65.0	0	1.26E-05	117

Table D–10. Minimum and maximum of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-65.0	65.0	-64.9	65.0
A2	-65.0	65.0	-64.9	65.0
FD	-65.0	65.0	-64.9	64.9
L1	-65.0	65.0	-65.0	65.0
L3	-65.0	65.0	-65.0	65.0
L4	-65.0	65.0	-65.0	65.0
NF	—	—	—	—
NS	-65.0	65.0	-64.9	64.9

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-6. Time history of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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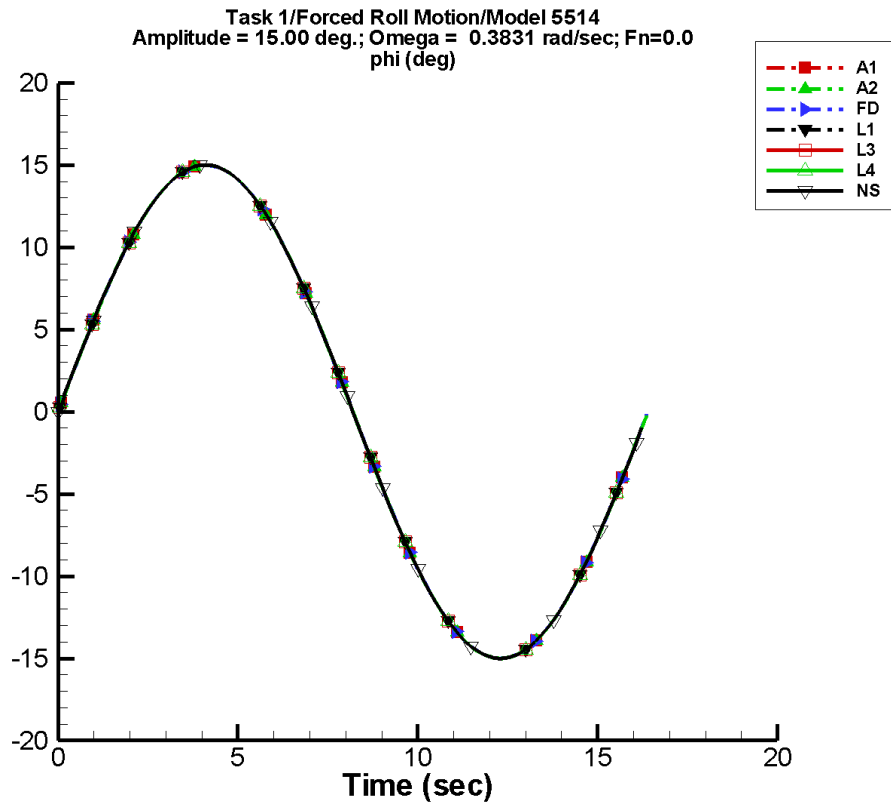
Table D–11. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-6.11E-08	5.00	0	4.98E-07	-131
A2	-6.11E-08	5.00	0	4.98E-07	-131
FD	1.50E-07	5.00	0	6.30E-07	98
L1	2.99E-05	5.00	0	1.29E-06	90
L3	2.99E-05	5.00	0	1.29E-06	90
L4	2.99E-05	5.00	0	1.29E-06	90
NF	—	—	—	—	—
NS	3.61E-08	5.00	0	5.35E-07	-26

Table D–12. Minimum and maximum of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-5.00	5.00	-4.98	5.02
A2	-5.00	5.00	-4.98	5.02
FD	-5.00	5.00	-4.98	4.98
L1	-5.00	5.00	-4.99	4.99
L3	-5.00	5.00	-4.99	4.99
L4	-5.00	5.00	-4.99	4.99
NF	—	—	—	—
NS	-5.00	5.00	-4.95	4.95

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-7. Time history of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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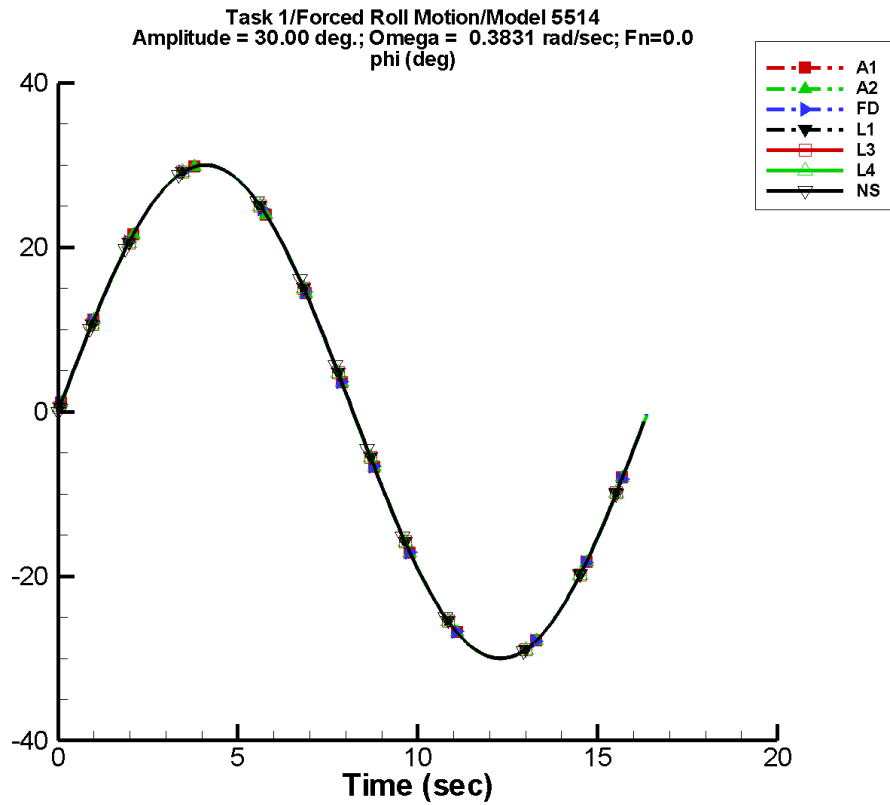
Table D–13. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	1.18E-06	15.0	0	9.67E-07	124
A2	1.18E-06	15.0	0	9.67E-07	124
FD	2.43E-06	15.0	0	4.86E-07	-20
L1	1.39E-04	15.0	0	1.17E-07	5
L3	1.39E-04	15.0	0	1.17E-07	5
L4	1.39E-04	15.0	0	1.17E-07	5
NF	—	—	—	—	—
NS	5.14E-07	15.0	0	1.79E-06	-13

Table D–14. Minimum and maximum of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-15.0	15.0	-14.9	15.0
A2	-15.0	15.0	-14.9	15.0
FD	-15.0	15.0	-14.9	14.9
L1	-15.0	15.0	-15.0	15.0
L3	-15.0	15.0	-15.0	15.0
L4	-15.0	15.0	-15.0	15.0
NF	—	—	—	—
NS	-15.0	15.0	-14.9	14.9

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-8. Time history of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

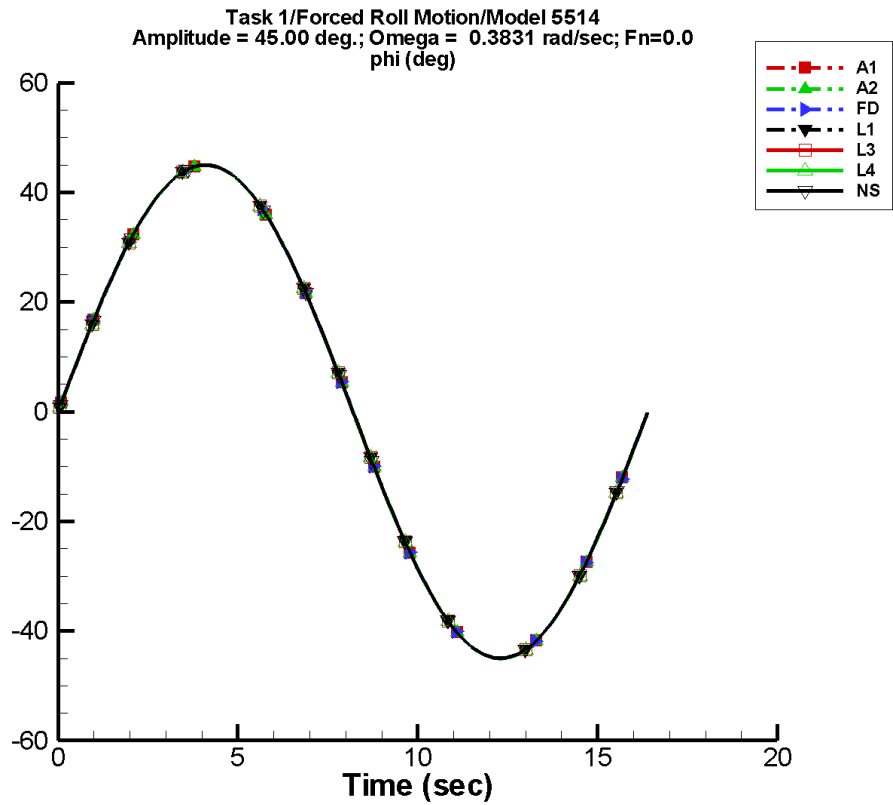
Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	1.43E-06	30.0	0	2.79E-06	99
A2	1.43E-06	30.0	0	2.79E-06	99
FD	4.46E-06	30.0	0	1.45E-06	167
L1	2.76E-04	30.0	0	5.99E-06	88
L3	2.76E-04	30.0	0	5.99E-06	88
L4	2.76E-04	30.0	0	5.99E-06	88
NF	—	—	—	—	—
NS	-1.69E-07	30.0	0	7.75E-07	-63

Table D–16. Minimum and maximum of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-30.0	30.0	-29.9	30.1
A2	-30.0	30.0	-29.9	30.1
FD	-30.0	30.0	-29.9	29.9
L1	-30.0	30.0	-30.0	30.0
L3	-30.0	30.0	-30.0	30.0
L4	-30.0	30.0	-30.0	30.0
NF	—	—	—	—
NS	-30.0	30.0	-29.9	29.9



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

Figure D-9. Time history of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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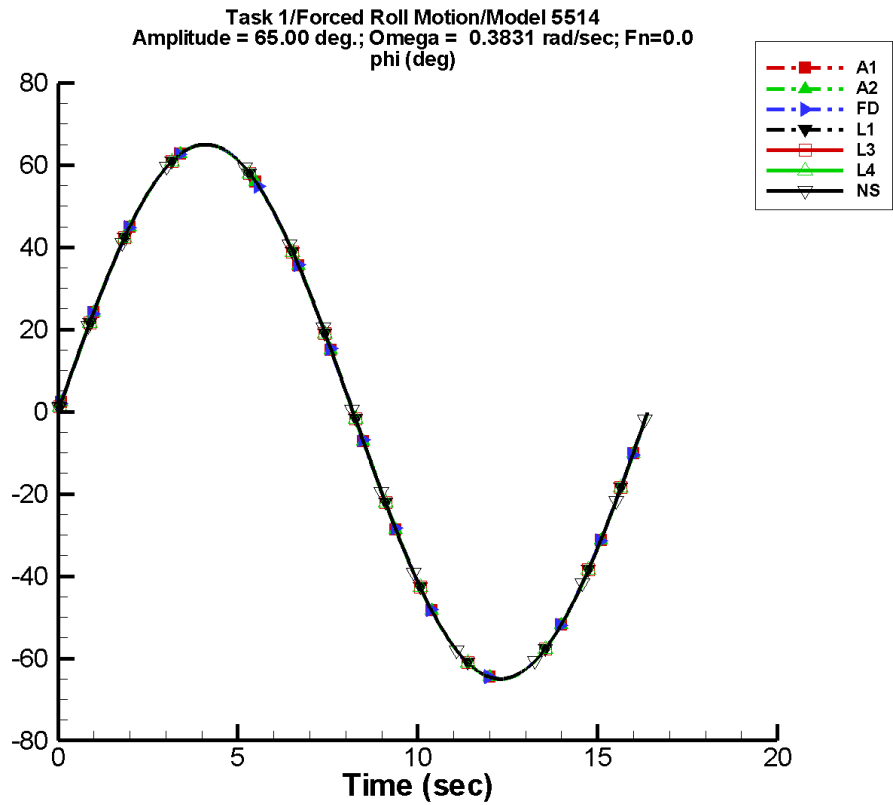
Table D–17. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-3.38E-06	45.0	0	5.87E-06	-49
A2	-3.38E-06	45.0	0	5.87E-06	-49
FD	3.83E-06	45.0	0	6.29E-06	150
L1	1.74E-04	45.0	0	4.96E-06	91
L3	1.74E-04	45.0	0	4.96E-06	91
L4	1.74E-04	45.0	0	4.96E-06	91
NF	—	—	—	—	—
NS	-4.20E-06	45.0	0	5.80E-06	35

Table D–18. Minimum and maximum of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-45.0	45.0	-44.8	45.1
A2	-45.0	45.0	-44.8	45.1
FD	-45.0	45.0	-44.8	44.8
L1	-45.0	45.0	-44.9	44.9
L3	-45.0	45.0	-44.9	44.9
L4	-45.0	45.0	-44.9	44.9
NF	—	—	—	—
NS	-45.0	45.0	-44.9	44.9

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-10. Time history of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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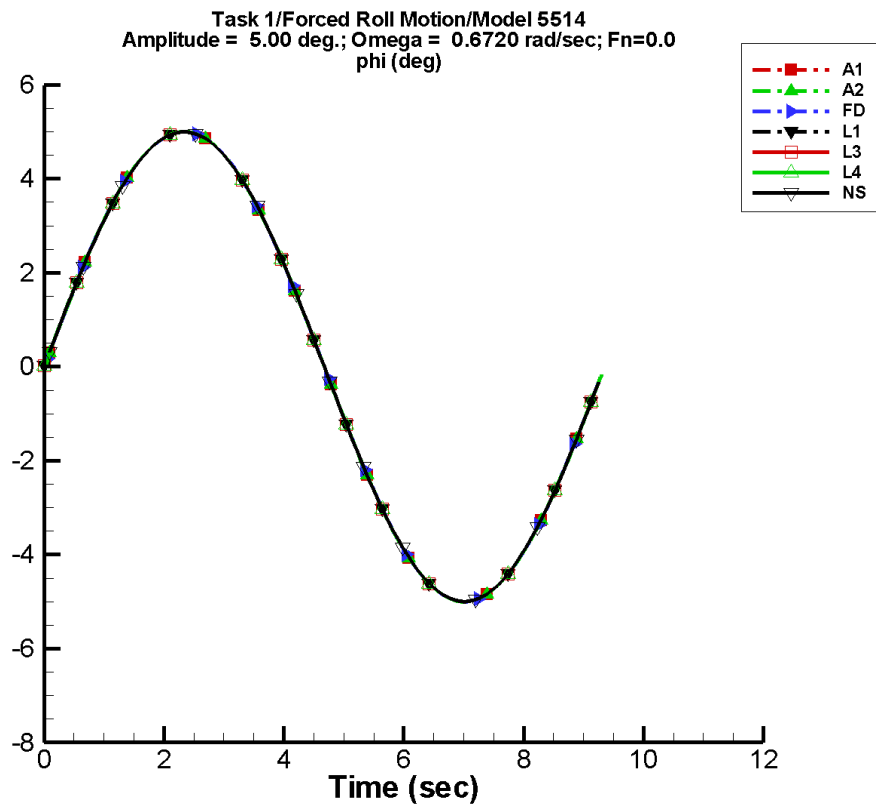
Table D–19. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	9.03E-06	65.0	0	5.40E-06	-51
A2	9.03E-06	65.0	0	5.40E-06	-51
FD	9.18E-06	65.0	0	9.68E-06	98
L1	2.76E-04	65.0	0	7.10E-06	130
L3	2.76E-04	65.0	0	7.10E-06	130
L4	2.76E-04	65.0	0	7.10E-06	130
NF	—	—	—	—	—
NS	-5.91E-06	65.0	0	1.20E-06	-156

Table D–20. Minimum and maximum of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-65.0	65.0	-64.8	65.2
A2	-65.0	65.0	-64.8	65.2
FD	-65.0	65.0	-64.8	64.8
L1	-65.0	65.0	-64.9	64.9
L3	-65.0	65.0	-64.9	64.9
L4	-65.0	65.0	-64.9	64.9
NF	—	—	—	—
NS	-65.0	65.0	-65.0	65.0

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-11. Time history of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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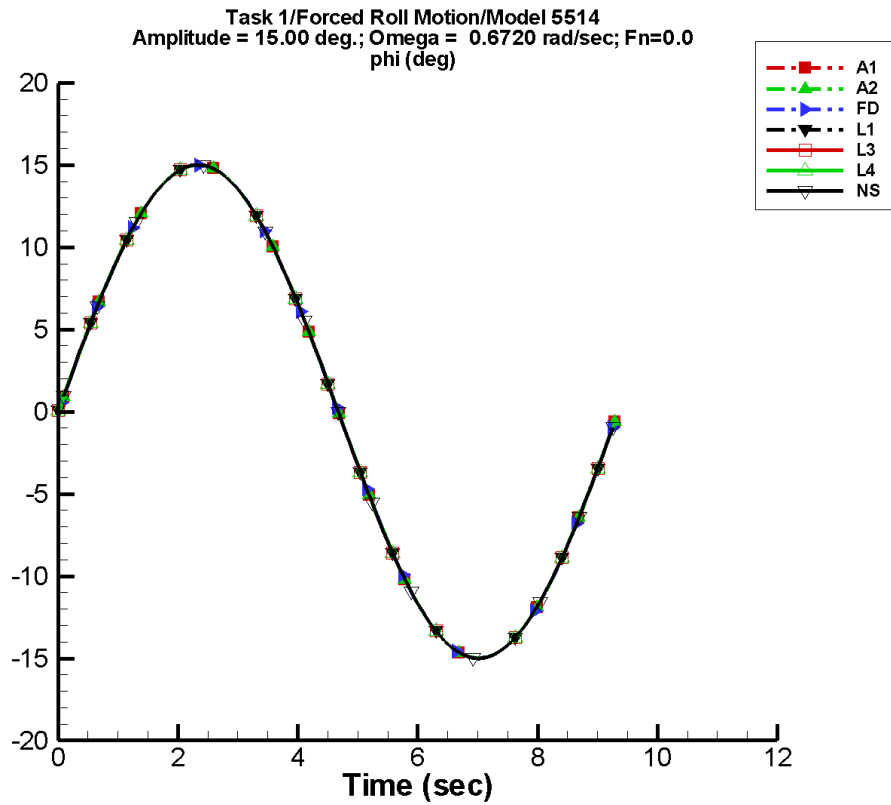
Table D–21. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-4.92E-06	5.00	0	8.21E-06	-17
A2	-4.92E-06	5.00	0	8.21E-06	-17
FD	-6.65E-06	5.00	0	1.07E-05	-143
L1	9.21E-05	5.00	0	5.79E-06	139
L3	9.21E-05	5.00	0	5.79E-06	139
L4	9.21E-05	5.00	0	5.79E-06	139
NF	—	—	—	—	—
NS	-2.79E-07	5.00	0	5.18E-07	48

Table D–22. Minimum and maximum of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-5.00	5.00	-4.94	4.94
A2	-5.00	5.00	-4.94	4.94
FD	-5.00	5.00	-4.97	4.94
L1	-5.00	5.00	-4.98	4.98
L3	-5.00	5.00	-4.98	4.98
L4	-5.00	5.00	-4.98	4.98
NF	—	—	—	—
NS	-5.00	5.00	-4.95	4.95

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-12. Time history of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

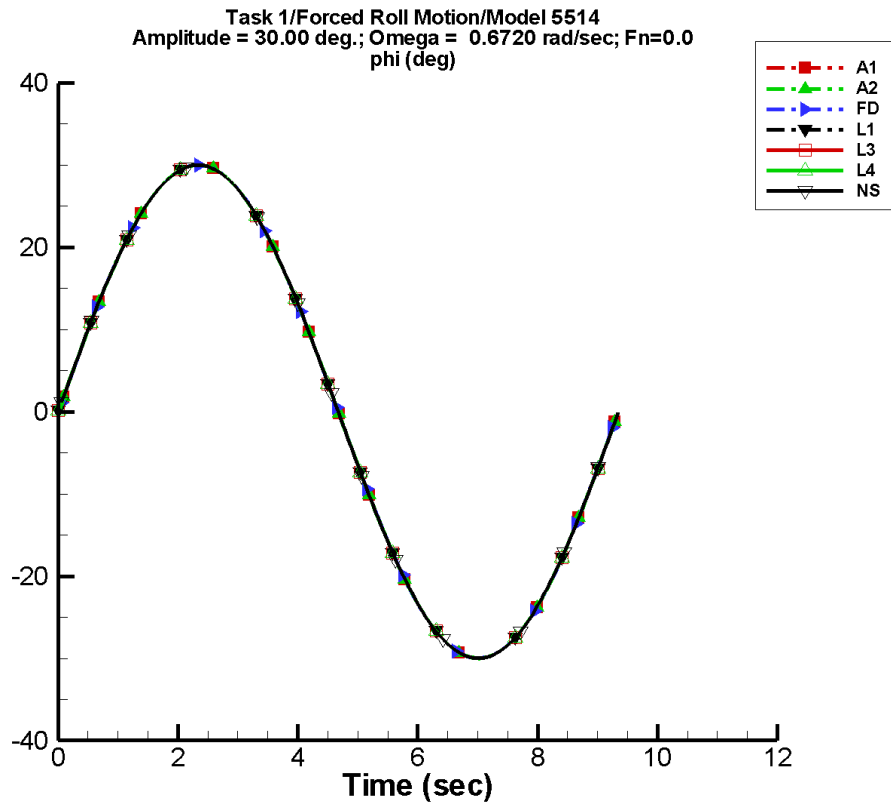
Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-1.51E-05	15.0	0	2.53E-05	-16
A2	-1.51E-05	15.0	0	2.53E-05	-16
FD	-1.95E-05	15.0	0	3.21E-05	-142
L1	2.88E-04	15.0	0	2.19E-05	126
L3	2.88E-04	15.0	0	2.19E-05	126
L4	2.88E-04	15.0	0	2.19E-05	126
NF	—	—	—	—	—
NS	-8.78E-07	15.0	0	1.34E-06	73

Table D–24. Minimum and maximum of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-15.0	15.0	-14.8	14.8
A2	-15.0	15.0	-14.8	14.8
FD	-15.0	15.0	-14.9	14.8
L1	-15.0	15.0	-14.9	14.9
L3	-15.0	15.0	-14.9	14.9
L4	-15.0	15.0	-14.9	14.9
NF	—	—	—	—
NS	-15.0	15.0	-14.9	14.9



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-13. Time history of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

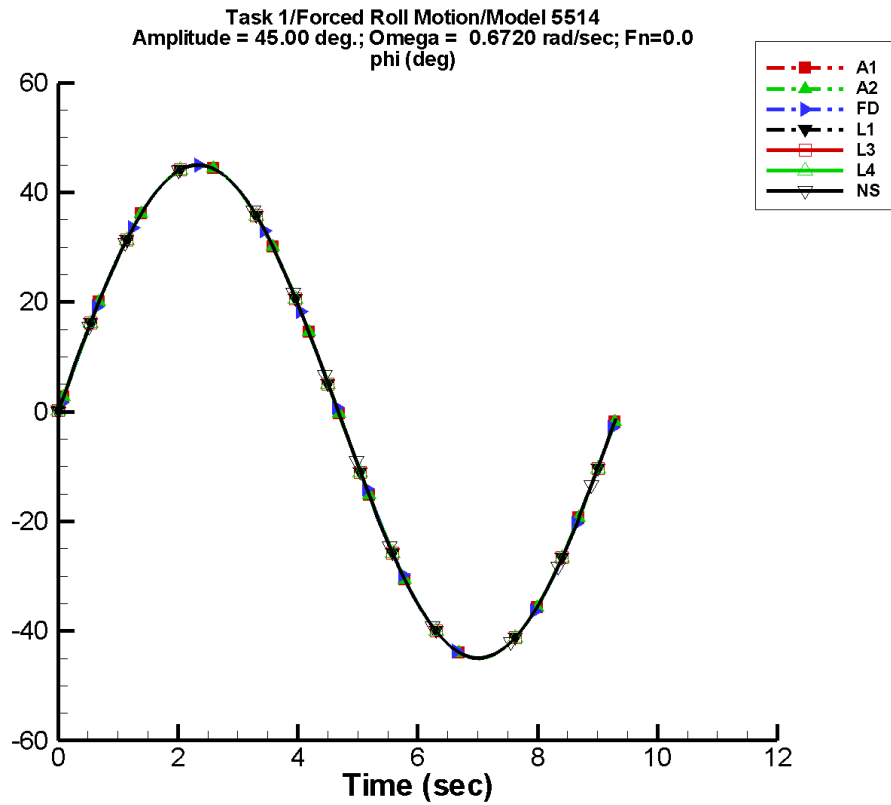
Table D–25. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-2.94E-05	30.0	0	5.17E-05	-18
A2	-2.94E-05	30.0	0	5.17E-05	-18
FD	-3.96E-05	30.0	0	6.41E-05	-142
L1	5.87E-04	30.0	0	3.90E-05	137
L3	5.87E-04	30.0	0	3.90E-05	137
L4	5.87E-04	30.0	0	3.90E-05	137
NF	—	—	—	—	—
NS	1.94E-06	30.0	0	1.03E-05	18

Table D–26. Minimum and maximum of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-30.0	30.0	-29.7	29.6
A2	-30.0	30.0	-29.7	29.6
FD	-30.0	30.0	-29.8	29.7
L1	-30.0	30.0	-29.9	29.9
L3	-30.0	30.0	-29.9	29.9
L4	-30.0	30.0	-29.9	29.9
NF	—	—	—	—
NS	-30.0	30.0	-29.9	29.9

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

Figure D-14. Time history of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

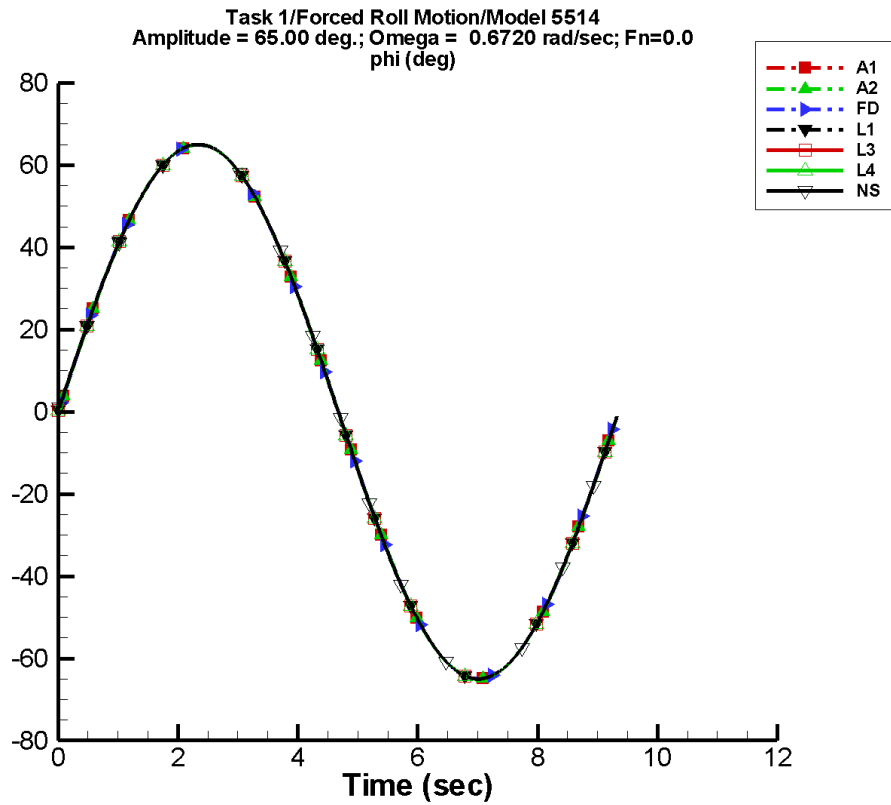
Table D–27. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-4.72E-05	45.0	0	7.50E-05	-17
A2	-4.72E-05	45.0	0	7.50E-05	-17
FD	-5.69E-05	45.0	0	9.63E-05	-142
L1	8.14E-04	45.0	0	5.39E-05	143
L3	8.14E-04	45.0	0	5.39E-05	143
L4	8.14E-04	45.0	0	5.39E-05	143
NF	—	—	—	—	—
NS	5.33E-07	45.0	0	4.98E-06	106

Table D–28. Minimum and maximum of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-45.0	45.0	-44.5	44.5
A2	-45.0	45.0	-44.5	44.5
FD	-45.0	45.0	-44.8	44.5
L1	-45.0	45.0	-44.8	44.8
L3	-45.0	45.0	-44.8	44.8
L4	-45.0	45.0	-44.8	44.8
NF	—	—	—	—
NS	-45.0	45.0	-44.9	44.9

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-15. Time history of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

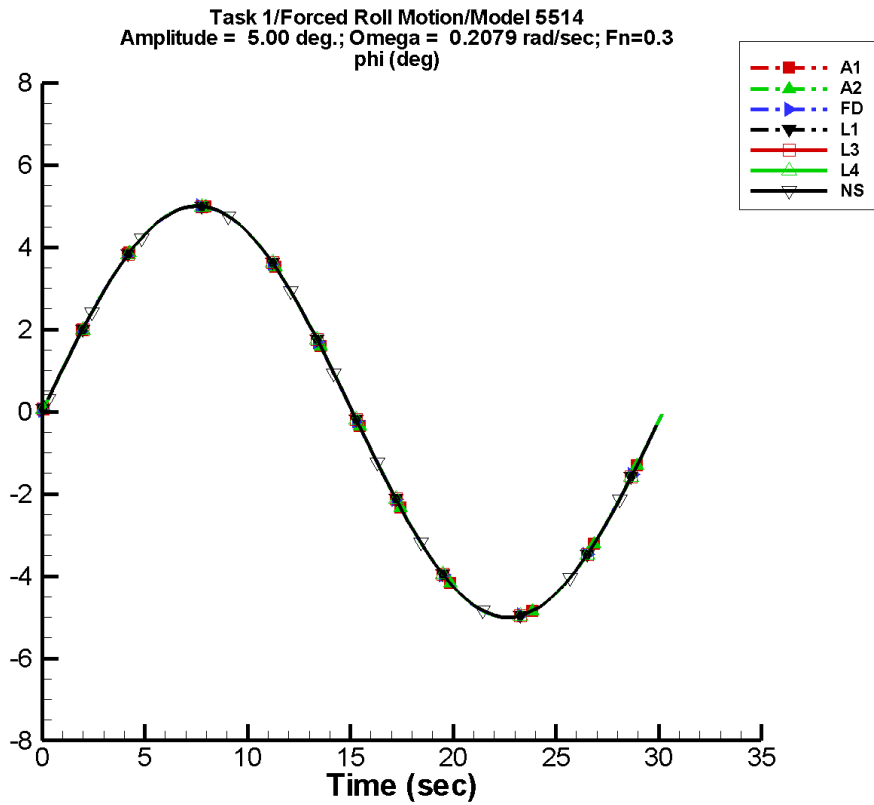
Table D–29. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-6.81E-05	65.0	0	1.09E-04	-17
A2	-6.81E-05	65.0	0	1.09E-04	-17
FD	-8.29E-05	65.0	0	1.37E-04	-144
L1	1.24E-03	65.0	0	8.25E-05	139
L3	1.24E-03	65.0	0	8.25E-05	139
L4	1.24E-03	65.0	0	8.25E-05	139
NF	—	—	—	—	—
NS	-4.64E-06	65.0	0	8.83E-06	-157

Table D–30. Minimum and maximum of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-65.0	65.0	-64.2	64.2
A2	-65.0	65.0	-64.2	64.2
FD	-65.0	65.0	-64.7	64.3
L1	-65.0	65.0	-64.7	64.7
L3	-65.0	65.0	-64.7	64.7
L4	-65.0	65.0	-64.7	64.7
NF	—	—	—	—
NS	-65.0	65.0	-65.0	65.0

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

Figure D-16. Time history of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

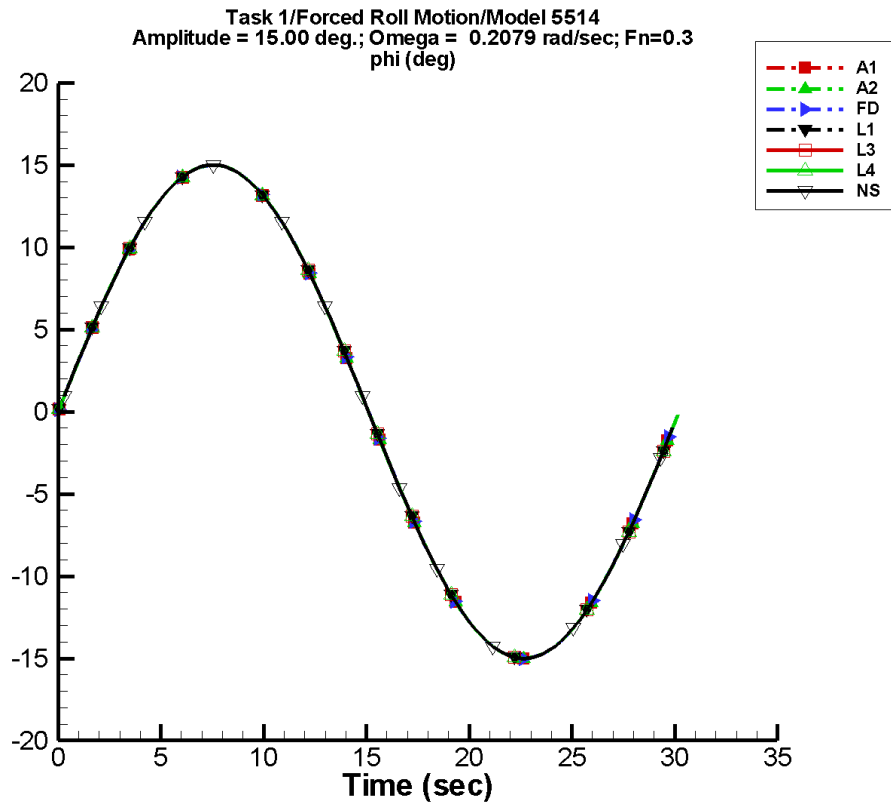
Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-3.69E-06	5.00	0	5.18E-06	-21
A2	-3.69E-06	5.00	0	5.18E-06	-21
FD	1.60E-07	5.00	0	6.54E-07	31
L1	-5.24E-06	5.00	0	8.69E-07	-32
L3	-5.24E-06	5.00	0	8.69E-07	-32
L4	-5.24E-06	5.00	0	8.69E-07	-32
NF	—	—	—	—	—
NS	4.90E-07	5.00	0	5.45E-07	52

Table D–32. Minimum and maximum of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-5.00	5.00	-5.00	5.00
A2	-5.00	5.00	-5.00	5.00
FD	-5.00	5.00	-4.99	4.99
L1	-5.00	5.00	-5.00	5.00
L3	-5.00	5.00	-5.00	5.00
L4	-5.00	5.00	-5.00	5.00
NF	—	—	—	—
NS	-5.00	5.00	-4.95	4.95



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

Figure D-17. Time history of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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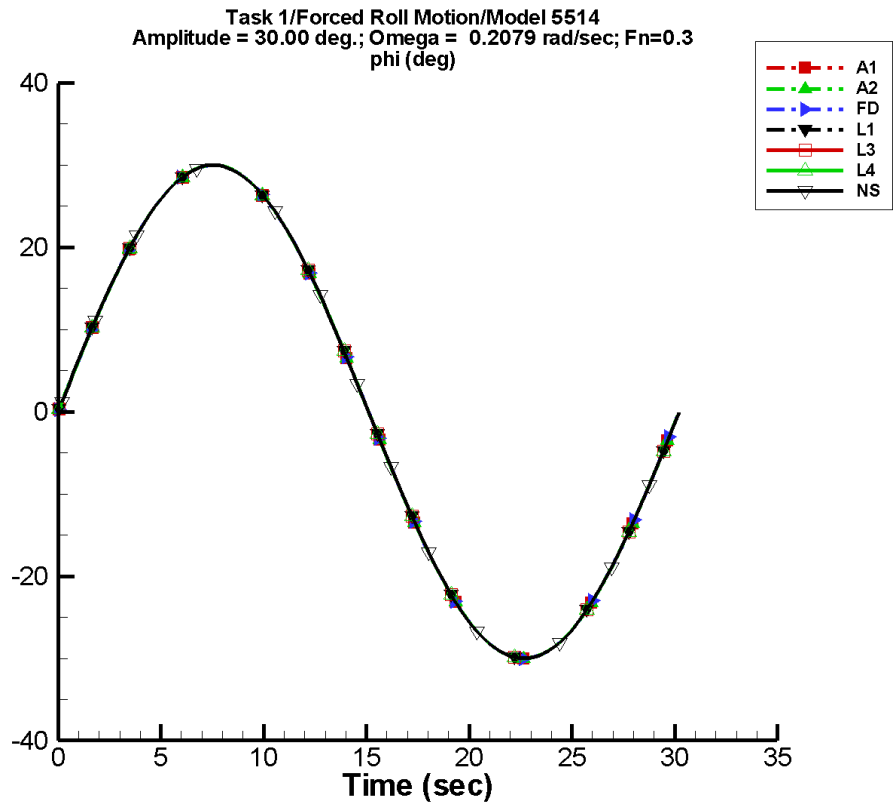
Table D–33. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-1.17E-05	15.0	0	1.42E-05	-20
A2	-1.17E-05	15.0	0	1.42E-05	-20
FD	-3.88E-07	15.0	0	2.68E-06	35
L1	6.20E-06	15.0	0	4.39E-06	-49
L3	6.20E-06	15.0	0	4.39E-06	-49
L4	6.20E-06	15.0	0	4.39E-06	-49
NF	—	—	—	—	—
NS	1.98E-06	15.0	0	9.86E-07	-14

Table D–34. Minimum and maximum of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-15.0	15.0	-15.0	15.0
A2	-15.0	15.0	-15.0	15.0
FD	-15.0	15.0	-15.0	15.0
L1	-15.0	15.0	-15.0	15.0
L3	-15.0	15.0	-15.0	15.0
L4	-15.0	15.0	-15.0	15.0
NF	—	—	—	—
NS	-15.0	15.0	-14.9	14.9

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-18. Time history of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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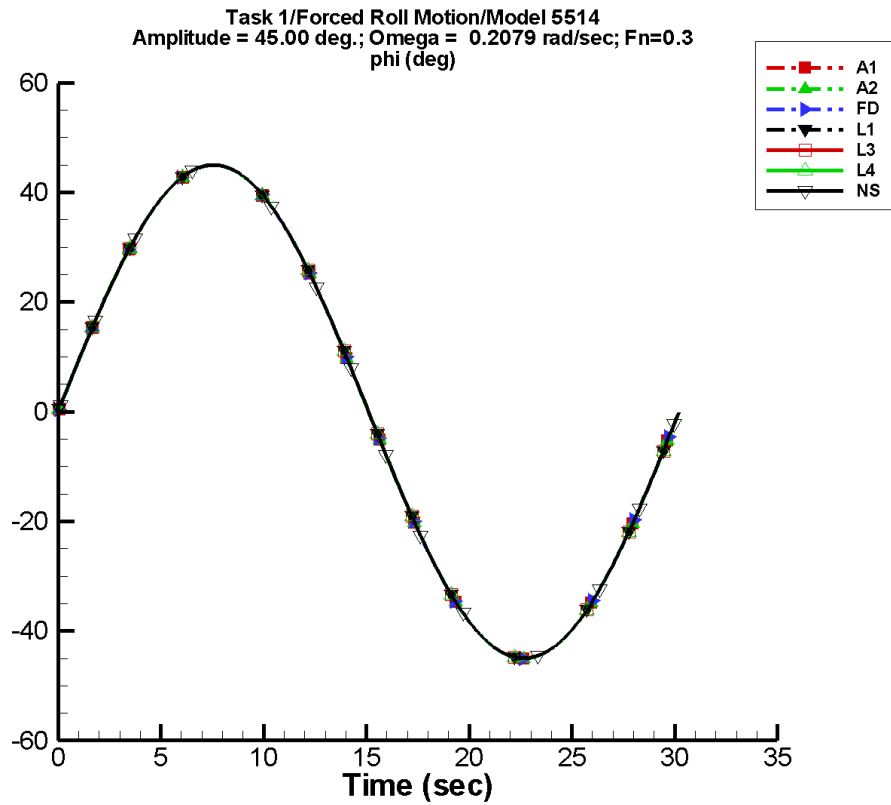
Table D–35. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-2.30E-05	30.0	0	2.74E-05	-18
A2	-2.30E-05	30.0	0	2.74E-05	-18
FD	-2.43E-06	30.0	0	4.51E-06	64
L1	3.60E-06	30.0	0	6.23E-06	2
L3	3.60E-06	30.0	0	6.23E-06	2
L4	3.60E-06	30.0	0	6.23E-06	2
NF	—	—	—	—	—
NS	1.84E-06	30.0	0	2.16E-06	133

Table D–36. Minimum and maximum of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-30.0	30.0	-30.0	30.0
A2	-30.0	30.0	-30.0	30.0
FD	-30.0	30.0	-30.0	30.0
L1	-30.0	30.0	-30.0	30.0
L3	-30.0	30.0	-30.0	30.0
L4	-30.0	30.0	-30.0	30.0
NF	—	—	—	—
NS	-30.0	30.0	-29.9	29.9

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-19. Time history of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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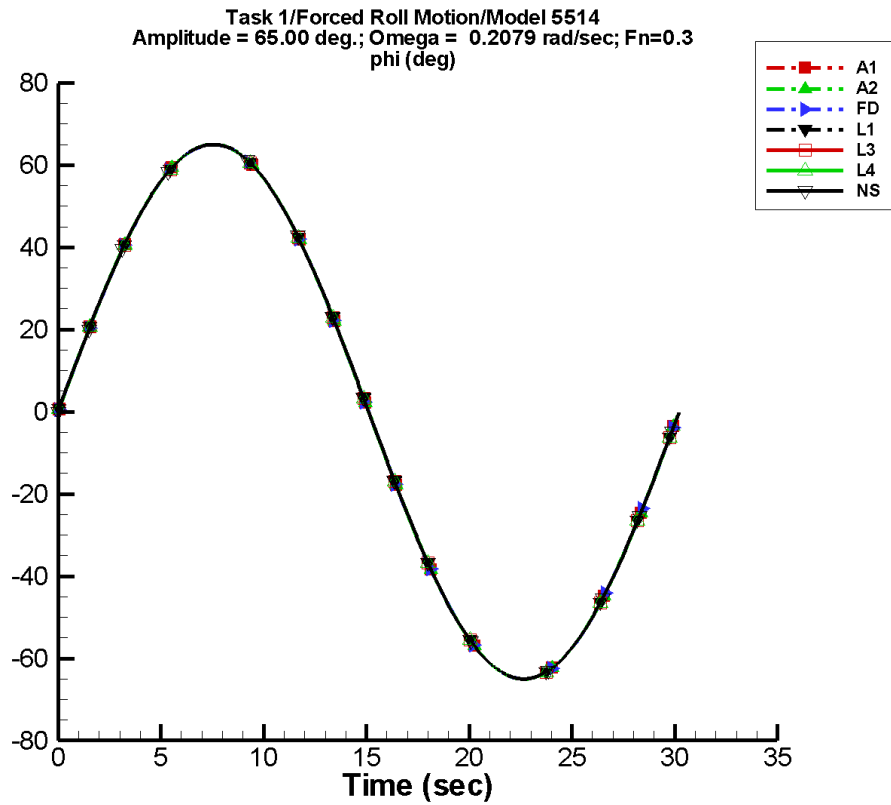
Table D–37. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-3.89E-05	45.0	0	4.73E-05	-21
A2	-3.89E-05	45.0	0	4.73E-05	-21
FD	-4.26E-09	45.0	0	4.55E-06	72
L1	3.14E-05	45.0	0	4.39E-06	-96
L3	3.14E-05	45.0	0	4.39E-06	-96
L4	3.14E-05	45.0	0	4.39E-06	-96
NF	—	—	—	—	—
NS	-3.41E-06	45.0	0	1.26E-06	25

Table D–38. Minimum and maximum of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-45.0	45.0	-45.0	45.0
A2	-45.0	45.0	-45.0	45.0
FD	-45.0	45.0	-44.9	44.9
L1	-45.0	45.0	-45.0	45.0
L3	-45.0	45.0	-45.0	45.0
L4	-45.0	45.0	-45.0	45.0
NF	—	—	—	—
NS	-45.0	45.0	-44.9	44.9

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-20. Time history of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

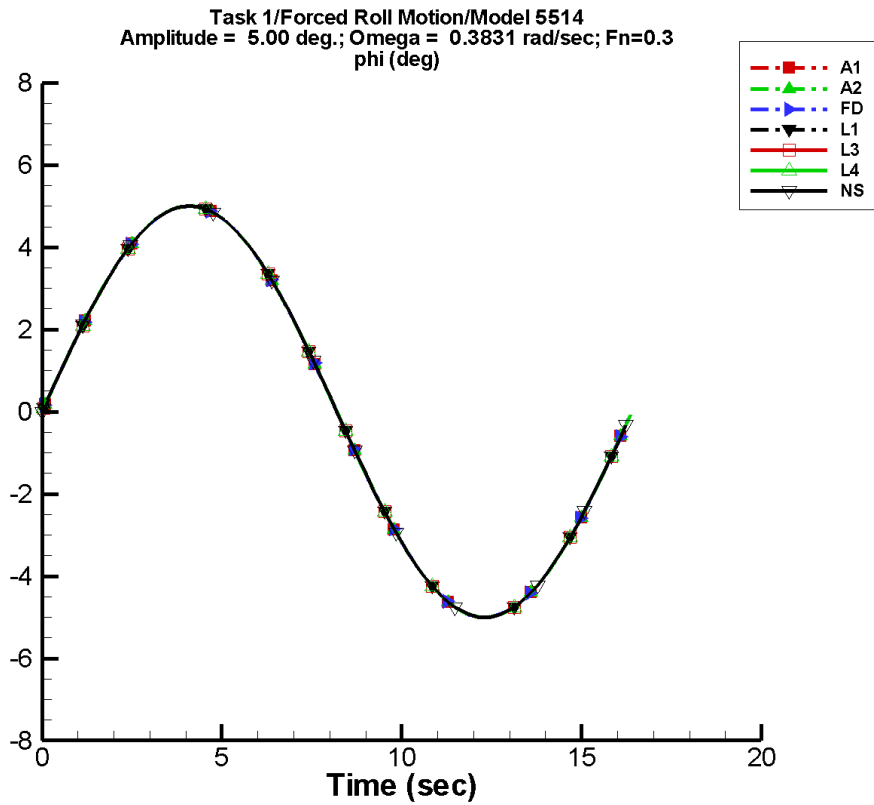
Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-4.87E-05	65.0	0	7.22E-05	-18
A2	-4.87E-05	65.0	0	7.22E-05	-18
FD	-8.71E-06	65.0	0	1.27E-05	56
L1	-1.53E-04	65.0	0	7.15E-06	-8
L3	-1.53E-04	65.0	0	7.15E-06	-8
L4	-1.53E-04	65.0	0	7.15E-06	-8
NF	—	—	—	—	—
NS	2.87E-06	65.0	0	1.46E-06	65

Table D–40. Minimum and maximum of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-65.0	65.0	-64.9	65.0
A2	-65.0	65.0	-64.9	65.0
FD	-65.0	65.0	-64.9	64.9
L1	-65.0	65.0	-65.0	65.0
L3	-65.0	65.0	-65.0	65.0
L4	-65.0	65.0	-65.0	65.0
NF	—	—	—	—
NS	-65.0	65.0	-65.0	65.0



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-21. Time history of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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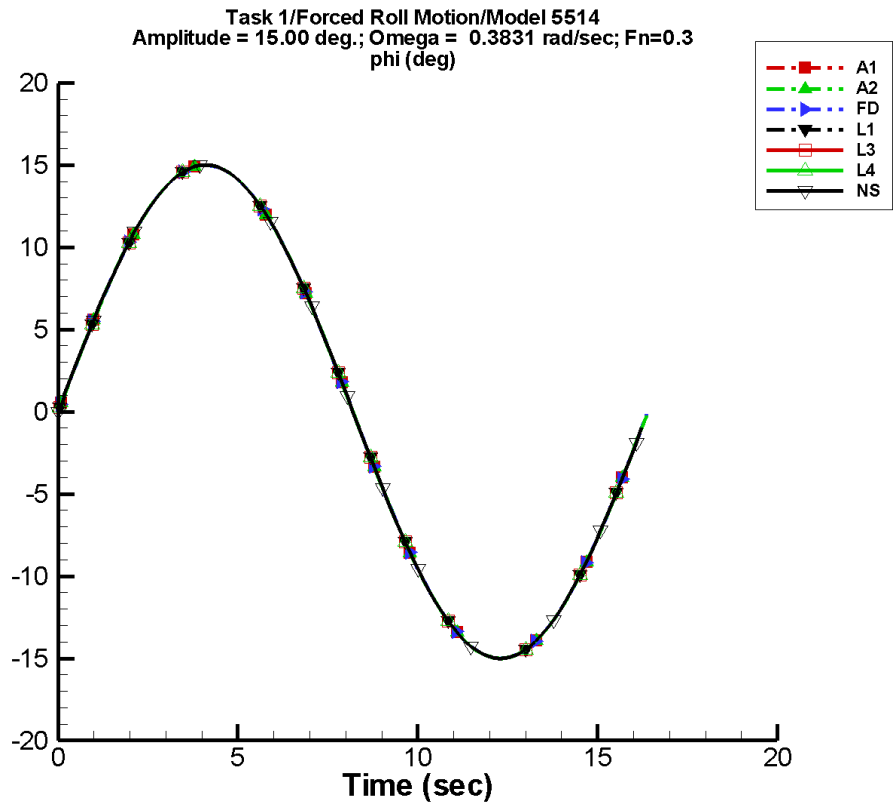
Table D-41. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-6.11E-08	5.00	0	4.98E-07	-131
A2	-6.11E-08	5.00	0	4.98E-07	-131
FD	1.50E-07	5.00	0	6.30E-07	98
L1	2.99E-05	5.00	0	1.29E-06	90
L3	2.99E-05	5.00	0	1.29E-06	90
L4	2.99E-05	5.00	0	1.29E-06	90
NF	—	—	—	—	—
NS	3.61E-08	5.00	0	5.35E-07	-26

Table D-42. Minimum and maximum of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-5.00	5.00	-4.98	5.02
A2	-5.00	5.00	-4.98	5.02
FD	-5.00	5.00	-4.98	4.98
L1	-5.00	5.00	-4.99	4.99
L3	-5.00	5.00	-4.99	4.99
L4	-5.00	5.00	-4.99	4.99
NF	—	—	—	—
NS	-5.00	5.00	-4.95	4.95

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-22. Time history of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	1.18E-06	15.0	0	9.67E-07	124
A2	1.18E-06	15.0	0	9.67E-07	124
FD	2.43E-06	15.0	0	4.86E-07	-20
L1	1.39E-04	15.0	0	1.17E-07	5
L3	1.39E-04	15.0	0	1.17E-07	5
L4	1.39E-04	15.0	0	1.17E-07	5
NF	—	—	—	—	—
NS	5.14E-07	15.0	0	1.79E-06	-13

Table D-44. Minimum and maximum of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-15.0	15.0	-14.9	15.0
A2	-15.0	15.0	-14.9	15.0
FD	-15.0	15.0	-14.9	14.9
L1	-15.0	15.0	-15.0	15.0
L3	-15.0	15.0	-15.0	15.0
L4	-15.0	15.0	-15.0	15.0
NF	—	—	—	—
NS	-15.0	15.0	-14.9	14.9

TASK 1/ROLL MOTION/MODEL 5514

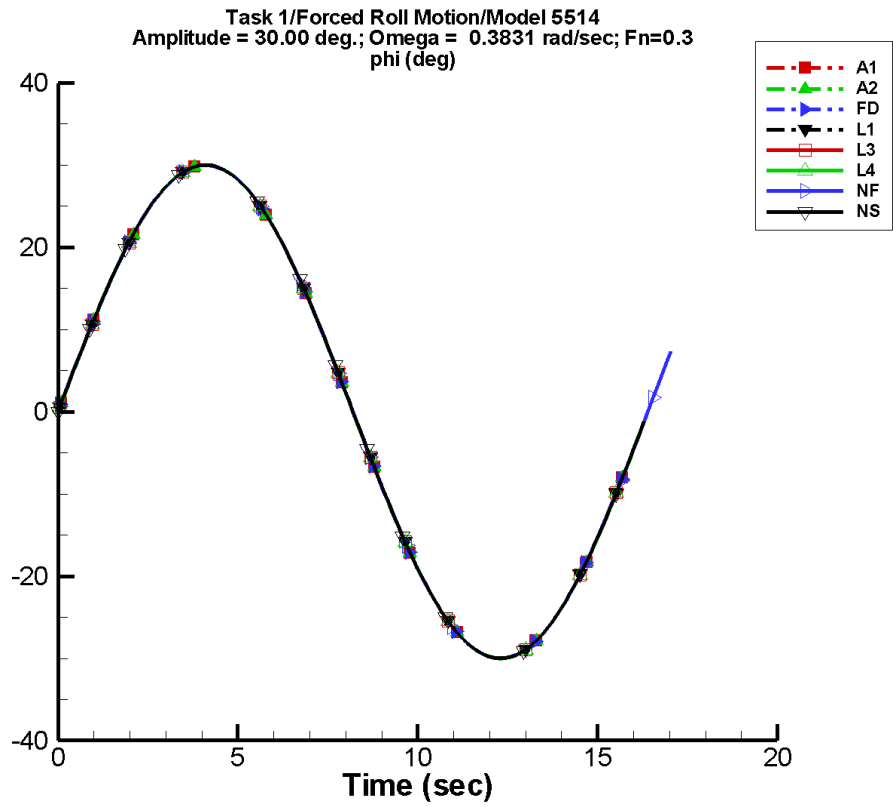


Figure D-23. Time history of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	1.43E-06	30.0	0	2.79E-06	99
A2	1.43E-06	30.0	0	2.79E-06	99
FD	4.46E-06	30.0	0	1.45E-06	167
L1	2.76E-04	30.0	0	5.99E-06	88
L3	2.76E-04	30.0	0	5.99E-06	88
L4	2.76E-04	30.0	0	5.99E-06	88
NF	0.344	29.4	38	1.60	-130
NS	-1.69E-07	30.0	0	7.75E-07	-63

Table D-46. Minimum and maximum of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-30.0	30.0	-29.9	30.1
A2	-30.0	30.0	-29.9	30.1
FD	-30.0	30.0	-29.9	29.9
L1	-30.0	30.0	-30.0	30.0
L3	-30.0	30.0	-30.0	30.0
L4	-30.0	30.0	-30.0	30.0
NF	-30.0	30.0	-29.8	29.8
NS	-30.0	30.0	-29.9	29.9

TASK 1/ROLL MOTION/MODEL 5514

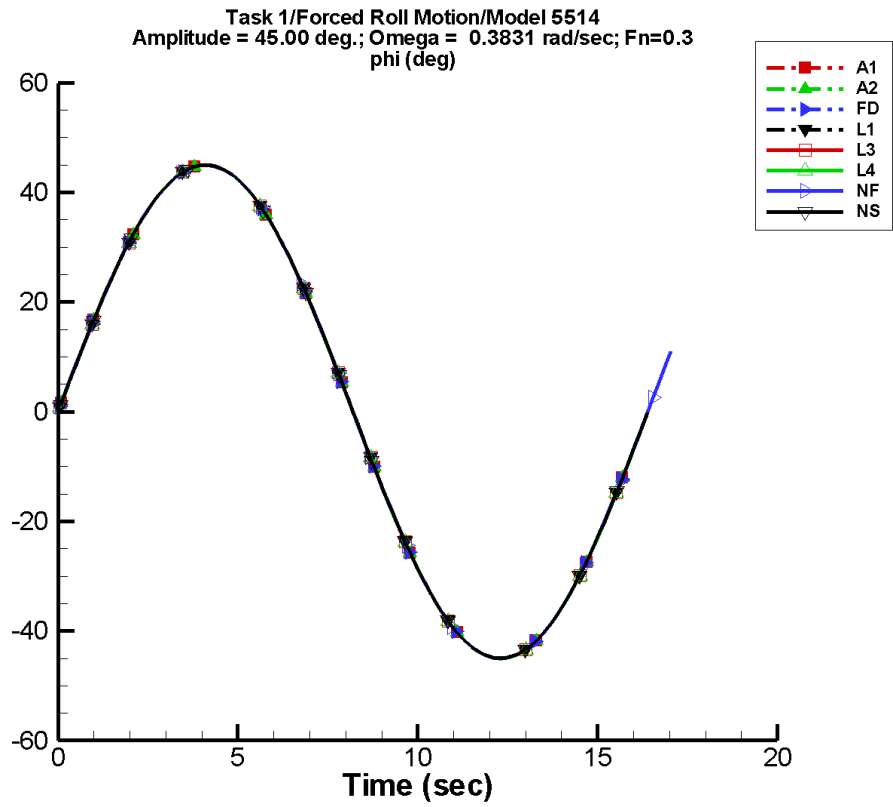


Figure D-24. Time history of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-3.38E-06	45.0	0	5.87E-06	-49
A2	-3.38E-06	45.0	0	5.87E-06	-49
FD	3.83E-06	45.0	0	6.29E-06	150
L1	1.74E-04	45.0	0	4.96E-06	91
L3	1.74E-04	45.0	0	4.96E-06	91
L4	1.74E-04	45.0	0	4.96E-06	91
NF	0.516	44.2	38	2.39	-130
NS	-4.20E-06	45.0	0	5.80E-06	35

Table D-48. Minimum and maximum of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-45.0	45.0	-44.8	45.1
A2	-45.0	45.0	-44.8	45.1
FD	-45.0	45.0	-44.8	44.8
L1	-45.0	45.0	-44.9	44.9
L3	-45.0	45.0	-44.9	44.9
L4	-45.0	45.0	-44.9	44.9
NF	-45.0	45.0	-44.7	44.7
NS	-45.0	45.0	-44.9	44.9



TASK 1/ROLL MOTION/MODEL 5514

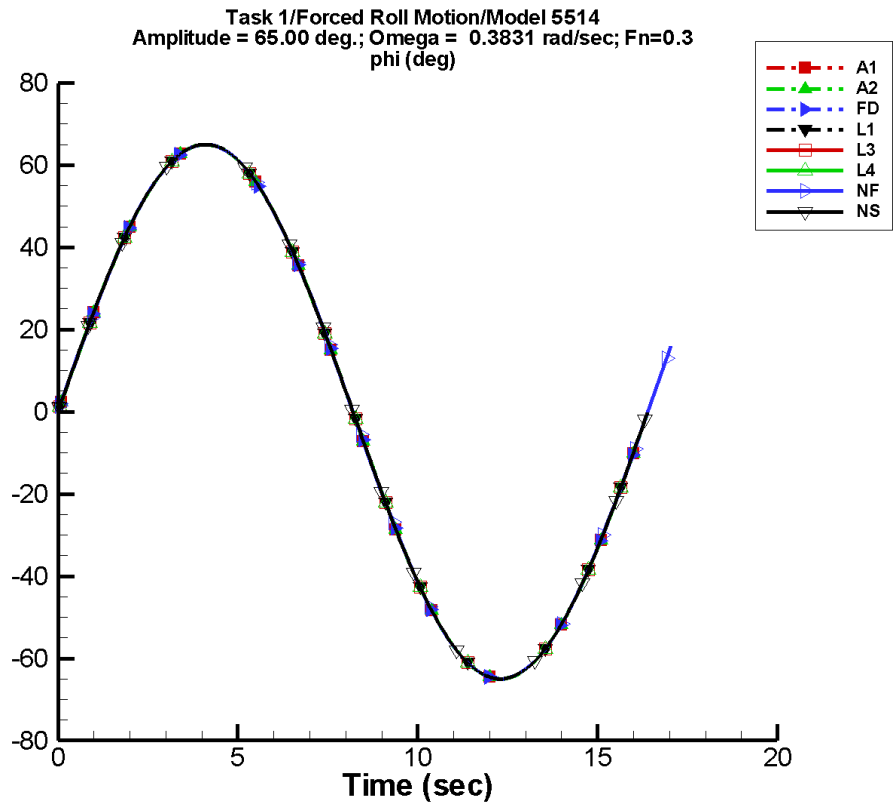


Figure D-25. Time history of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

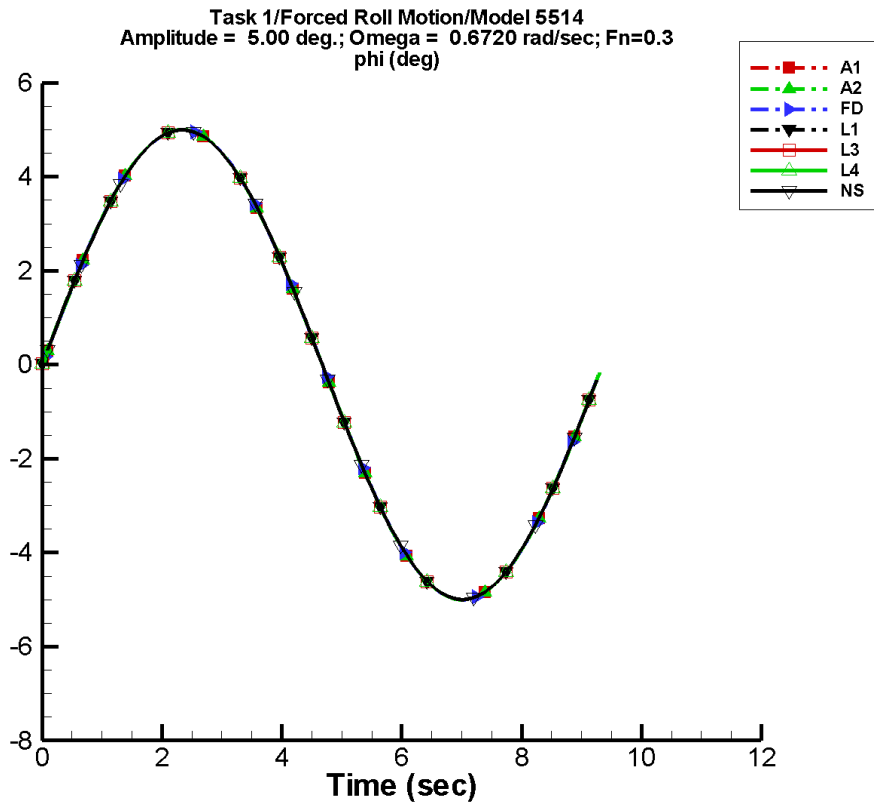
Table D-49. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	9.03E-06	65.0	0	5.40E-06	-51
A2	9.03E-06	65.0	0	5.40E-06	-51
FD	9.18E-06	65.0	0	9.68E-06	98
L1	2.76E-04	65.0	0	7.10E-06	130
L3	2.76E-04	65.0	0	7.10E-06	130
L4	2.76E-04	65.0	0	7.10E-06	130
NF	0.746	63.8	38	3.47	-130
NS	-5.91E-06	65.0	0	1.20E-06	-156

Table D-50. Minimum and maximum of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-65.0	65.0	-64.8	65.2
A2	-65.0	65.0	-64.8	65.2
FD	-65.0	65.0	-64.8	64.8
L1	-65.0	65.0	-64.9	64.9
L3	-65.0	65.0	-64.9	64.9
L4	-65.0	65.0	-64.9	64.9
NF	-65.0	65.0	-64.6	64.6
NS	-65.0	65.0	-65.0	65.0

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-26. Time history of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

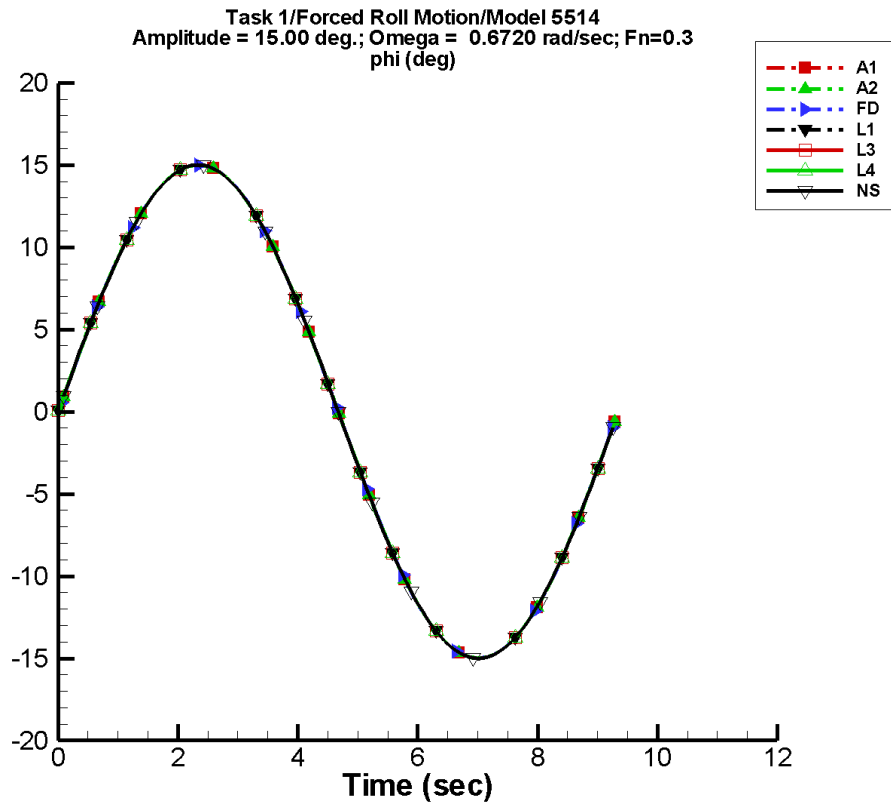
Table D–51. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-4.92E-06	5.00	0	8.21E-06	-17
A2	-4.92E-06	5.00	0	8.21E-06	-17
FD	-6.65E-06	5.00	0	1.07E-05	-143
L1	9.21E-05	5.00	0	5.79E-06	139
L3	9.21E-05	5.00	0	5.79E-06	139
L4	9.21E-05	5.00	0	5.79E-06	139
NF	—	—	—	—	—
NS	-2.79E-07	5.00	0	5.18E-07	48

Table D–52. Minimum and maximum of  $\phi$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-5.00	5.00	-4.94	4.94
A2	-5.00	5.00	-4.94	4.94
FD	-5.00	5.00	-4.97	4.94
L1	-5.00	5.00	-4.98	4.98
L3	-5.00	5.00	-4.98	4.98
L4	-5.00	5.00	-4.98	4.98
NF	—	—	—	—
NS	-5.00	5.00	-4.95	4.95

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-27. Time history of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-1.51E-05	15.0	0	2.53E-05	-16
A2	-1.51E-05	15.0	0	2.53E-05	-16
FD	-1.95E-05	15.0	0	3.21E-05	-142
L1	2.88E-04	15.0	0	2.19E-05	126
L3	2.88E-04	15.0	0	2.19E-05	126
L4	2.88E-04	15.0	0	2.19E-05	126
NF	—	—	—	—	—
NS	-8.78E-07	15.0	0	1.34E-06	73

Table D-54. Minimum and maximum of  $\phi$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-15.0	15.0	-14.8	14.8
A2	-15.0	15.0	-14.8	14.8
FD	-15.0	15.0	-14.9	14.8
L1	-15.0	15.0	-14.9	14.9
L3	-15.0	15.0	-14.9	14.9
L4	-15.0	15.0	-14.9	14.9
NF	—	—	—	—
NS	-15.0	15.0	-14.9	14.9

TASK 1/ROLL MOTION/MODEL 5514

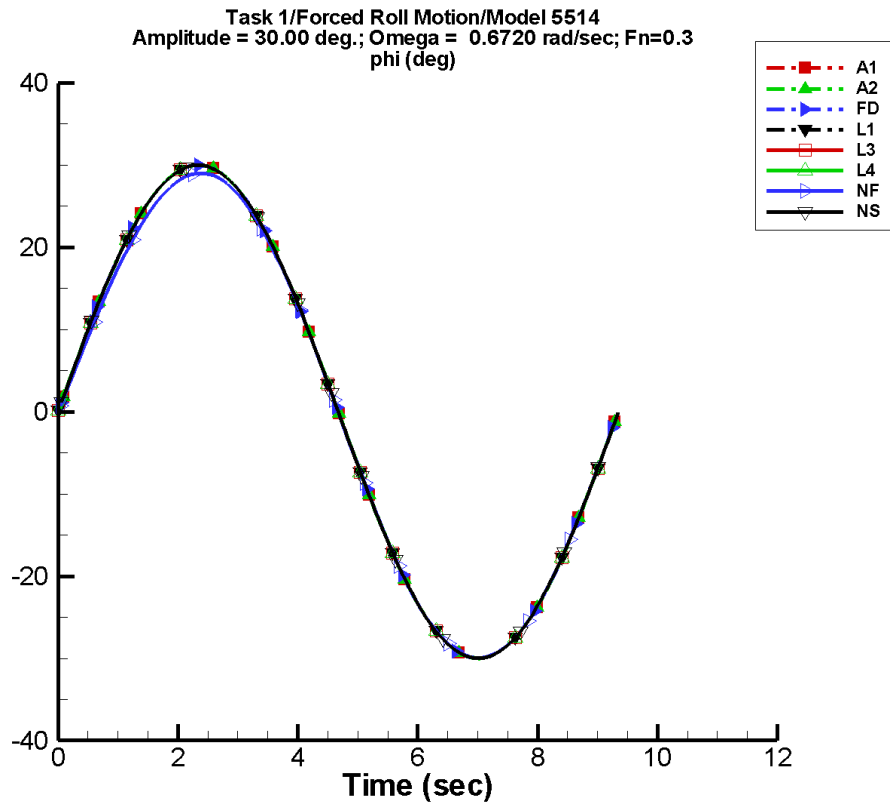


Figure D-28. Time history of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-2.94E-05	30.0	0	5.17E-05	-18
A2	-2.94E-05	30.0	0	5.17E-05	-18
FD	-3.96E-05	30.0	0	6.41E-05	-142
L1	5.87E-04	30.0	0	3.90E-05	137
L3	5.87E-04	30.0	0	3.90E-05	137
L4	5.87E-04	30.0	0	3.90E-05	137
NF	0.753	29.6	-49	0.886	88
NS	1.94E-06	30.0	0	1.03E-05	18

Table D-56. Minimum and maximum of  $\phi$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-30.0	30.0	-29.7	29.6
A2	-30.0	30.0	-29.7	29.6
FD	-30.0	30.0	-29.8	29.7
L1	-30.0	30.0	-29.9	29.9
L3	-30.0	30.0	-29.9	29.9
L4	-30.0	30.0	-29.9	29.9
NF	-30.0	30.0	-29.8	29.9
NS	-30.0	30.0	-29.9	29.9



TASK 1/ROLL MOTION/MODEL 5514

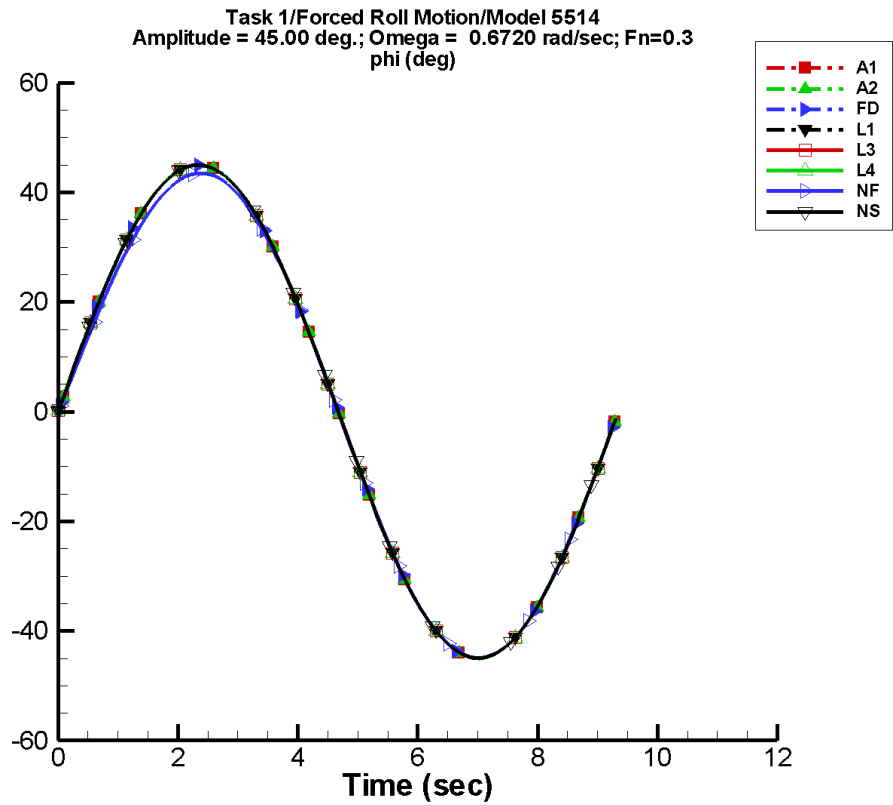


Figure D-29. Time history of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-4.72E-05	45.0	0	7.50E-05	-17
A2	-4.72E-05	45.0	0	7.50E-05	-17
FD	-5.69E-05	45.0	0	9.63E-05	-142
L1	8.14E-04	45.0	0	5.39E-05	143
L3	8.14E-04	45.0	0	5.39E-05	143
L4	8.14E-04	45.0	0	5.39E-05	143
NF	1.13	44.4	-49	1.33	88
NS	5.33E-07	45.0	0	4.98E-06	106

Table D–58. Minimum and maximum of  $\phi$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-45.0	45.0	-44.5	44.5
A2	-45.0	45.0	-44.5	44.5
FD	-45.0	45.0	-44.8	44.5
L1	-45.0	45.0	-44.8	44.8
L3	-45.0	45.0	-44.8	44.8
L4	-45.0	45.0	-44.8	44.8
NF	-44.9	45.0	-44.7	44.8
NS	-45.0	45.0	-44.9	44.9

TASK 1/ROLL MOTION/MODEL 5514

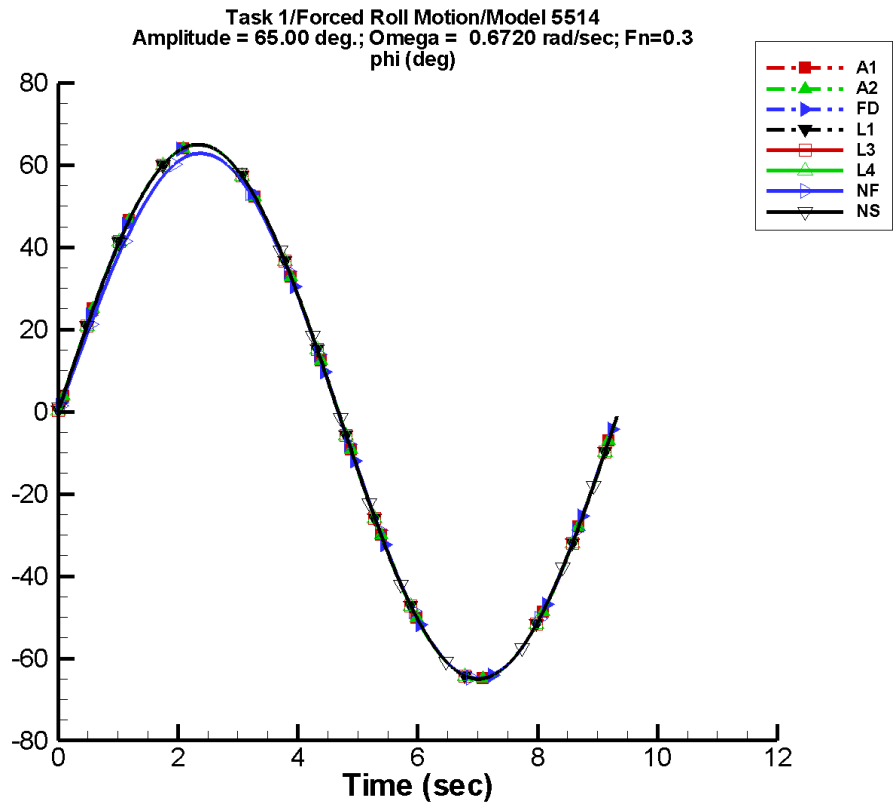


Figure D-30. Time history of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

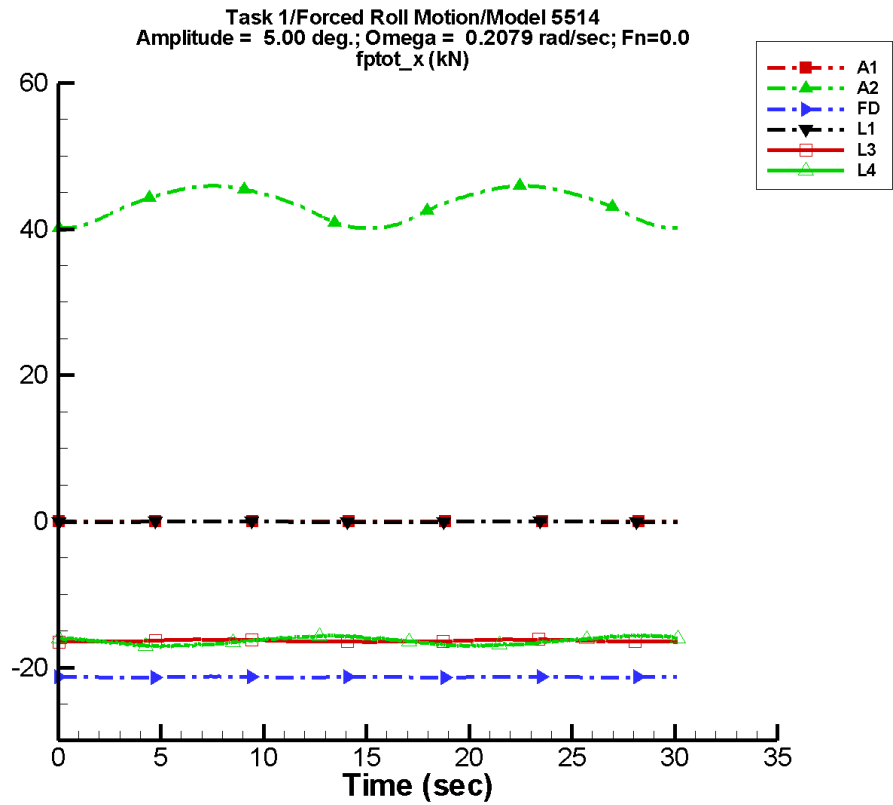
Table D–59. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (deg)	$a_1$ (deg)	$\Phi_1$ (deg)	$a_2$ (deg)	$\Phi_2$ (deg)
A1	-6.81E-05	65.0	0	1.09E-04	-17
A2	-6.81E-05	65.0	0	1.09E-04	-17
FD	-8.29E-05	65.0	0	1.37E-04	-144
L1	1.24E-03	65.0	0	8.25E-05	139
L3	1.24E-03	65.0	0	8.25E-05	139
L4	1.24E-03	65.0	0	8.25E-05	139
NF	1.63	64.2	-49	1.92	88
NS	-4.64E-06	65.0	0	8.83E-06	-157

Table D–60. Minimum and maximum of  $\phi$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (deg)	Maximum (deg)	Minimum (deg)	Maximum (deg)
A1	-65.0	65.0	-64.2	64.2
A2	-65.0	65.0	-64.2	64.2
FD	-65.0	65.0	-64.7	64.3
L1	-65.0	65.0	-64.7	64.7
L3	-65.0	65.0	-64.7	64.7
L4	-65.0	65.0	-64.7	64.7
NF	-64.9	65.0	-64.6	64.7
NS	-65.0	65.0	-65.0	65.0

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-31. Time history of  $F_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

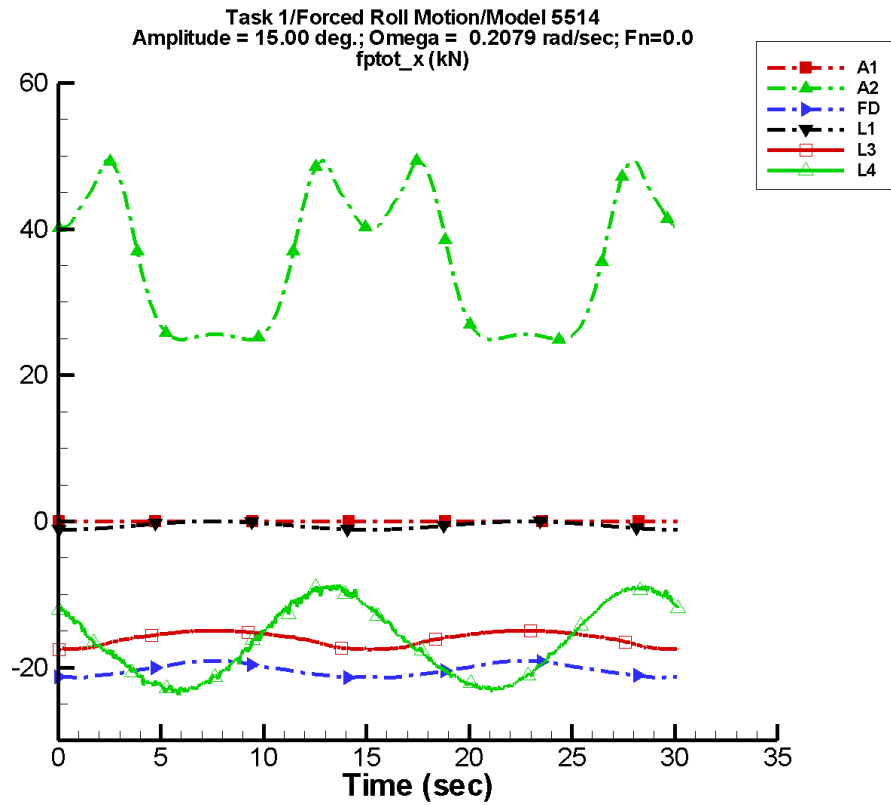
Table D–61. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.89E-05	1.58E-03	0	1.55E-05	44
A2	43.3	6.55E-03	12	2.86	-90
FD	-21.3	1.25E-03	-169	2.19E-02	-105
L1	-6.37E-02	3.59E-05	177	6.38E-02	-91
L3	-16.3	1.98E-03	119	0.140	-91
L4	-16.4	7.66E-03	146	0.656	139
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–62. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-9.40E-03	9.46E-03	-2.30E-03	2.32E-03
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	-0.128	4.39E-05	-0.127	-5.54E-05
L3	-16.5	-16.1	-16.5	-16.2
L4	-17.2	-15.6	-17.1	-15.7
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-32. Time history of  $F_x^{p\text{tot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

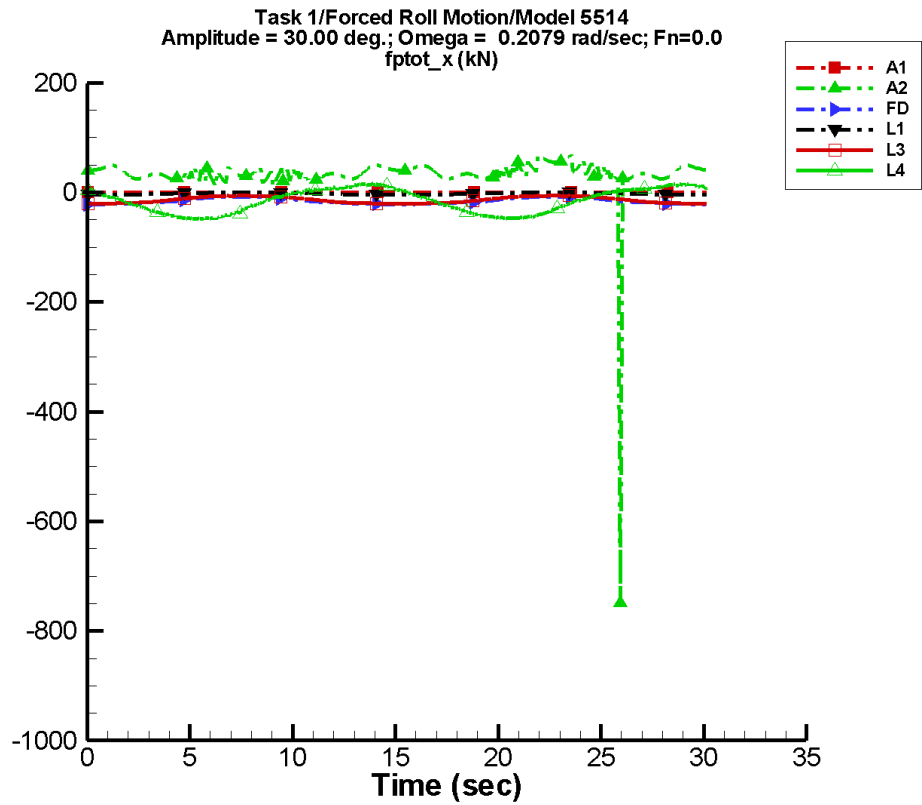
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-5.67E-05	4.73E-03	0	4.64E-05	44
A2	35.6	7.13E-02	-56	11.7	87
FD	-20.3	3.06E-03	-170	1.12	-91
L1	-0.574	1.16E-04	173	0.574	-91
L3	-16.1	1.47E-02	-61	1.26	-91
L4	-16.3	8.59E-02	-119	6.79	133
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–64. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.82E-02	2.84E-02	-6.89E-03	6.95E-03
A2	24.9	49.4	24.9	48.9
FD	-21.4	-19.1	-21.4	-19.1
L1	-1.15	1.76E-04	-1.15	-7.28E-04
L3	-17.6	-15.0	-17.5	-15.0
L4	-23.8	-8.72	-23.2	-9.03
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-33. Time history of  $F_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

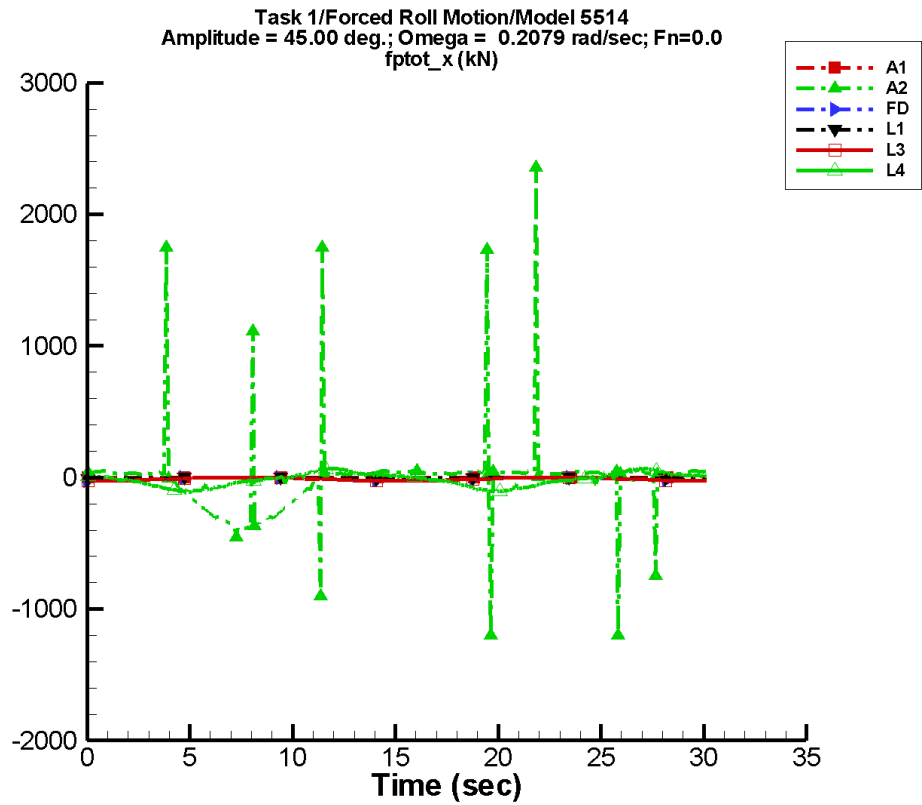
Table D–65. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.13E-04	9.47E-03	0	9.27E-05	44
A2	33.7	3.43	-123	5.04	23
FD	-15.6	2.05E-02	-171	6.73	-91
L1	-2.29	2.53E-04	168	2.30	-91
L3	-13.9	6.00E-02	118	7.83	-91
L4	-15.1	0.198	134	29.9	142
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–66. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-5.64E-02	5.67E-02	-1.38E-02	1.39E-02
A2	-748.	69.2	-77.4	58.6
FD	-21.4	-7.97	-21.3	-8.00
L1	-4.59	4.89E-04	-4.59	-3.13E-03
L3	-21.0	-5.97	-20.9	-5.97
L4	-48.9	16.9	-47.7	14.5
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-34. Time history of  $F_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

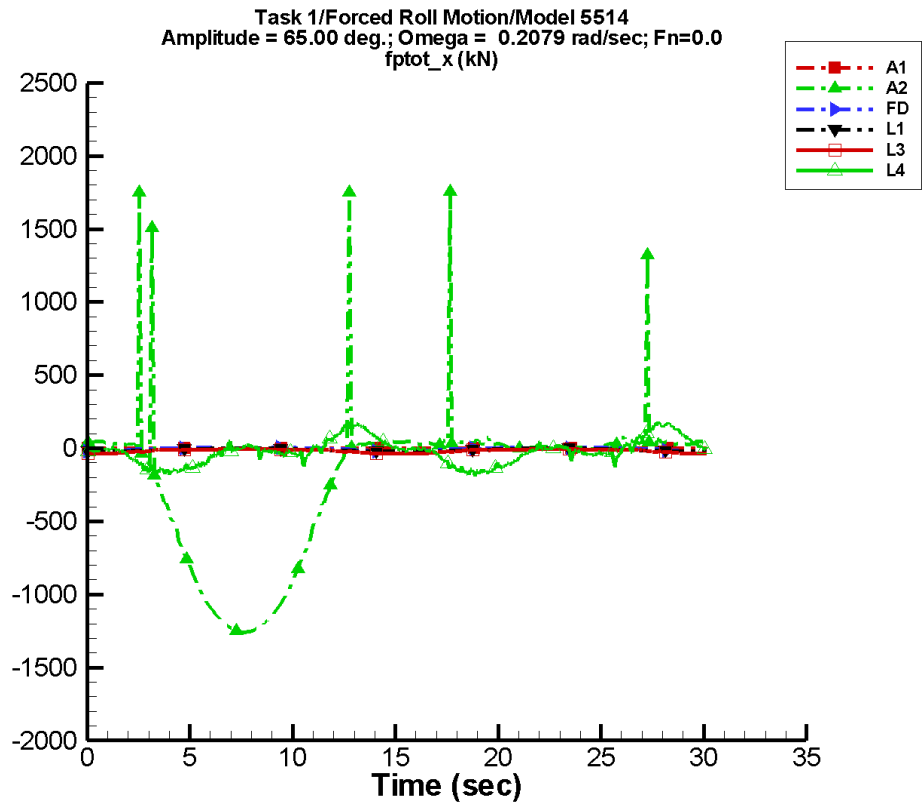
Table D–67. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.70E-04	1.42E-02	0	1.39E-04	44
A2	-16.4	119.	-177	96.3	70
FD	-9.65	2.29E-02	15	11.2	-89
L1	-5.16	4.19E-04	163	5.16	-91
L3	-12.7	3.66E-02	-24	13.6	-91
L4	-16.4	0.255	30	66.7	151
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–68. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.46E-02	8.51E-02	-2.07E-02	2.09E-02
A2	-1.20E+03	2.36E+03	-391.	349.
FD	-21.4	0.541	-21.4	0.514
L1	-10.3	9.52E-04	-10.3	-7.21E-03
L3	-26.7	-0.206	-26.6	-0.385
L4	-111.	70.0	-104.	67.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-35. Time history of  $F_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

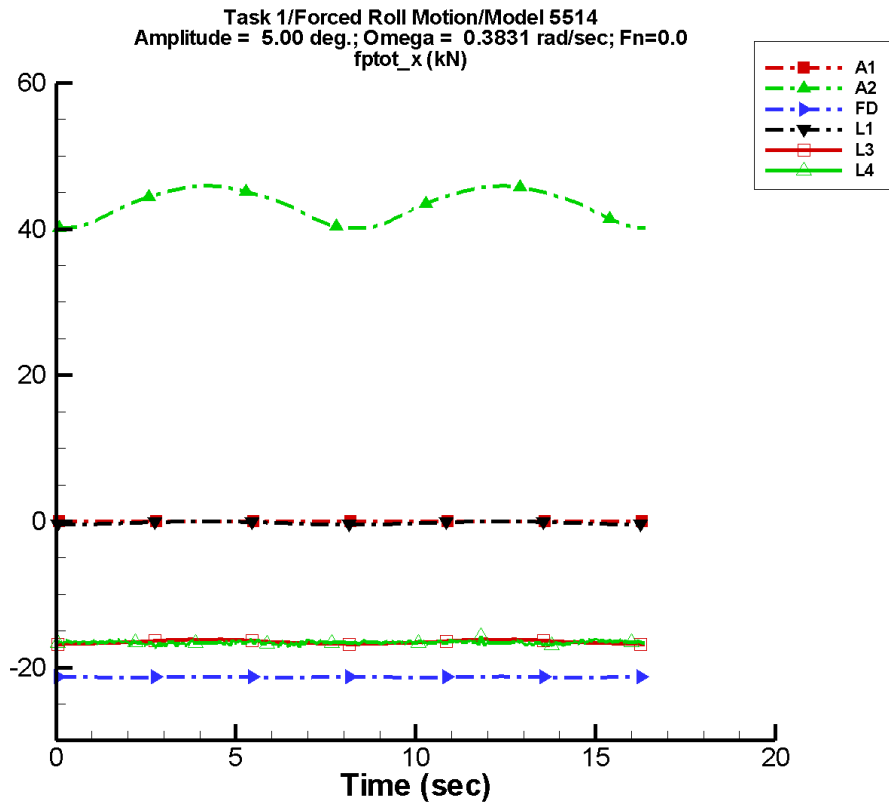
Table D–69. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.46E-04	2.05E-02	0	2.01E-04	44
A2	-212.	475.	177	402.	84
FD	-5.09	0.114	5	11.8	-88
L1	-10.8	6.77E-04	159	10.8	-91
L3	-18.0	0.379	-60	14.5	-91
L4	-22.1	2.18	-152	92.7	156
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–70. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.122	0.123	-2.98E-02	3.01E-02
A2	-1.26E+03	1.76E+03	-1.26E+03	263.
FD	-21.4	4.06	-21.3	3.87
L1	-21.6	1.76E-03	-21.5	-1.52E-02
L3	-38.0	-6.20	-37.9	-6.29
L4	-193.	184.	-164.	161.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-36. Time history of  $F_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

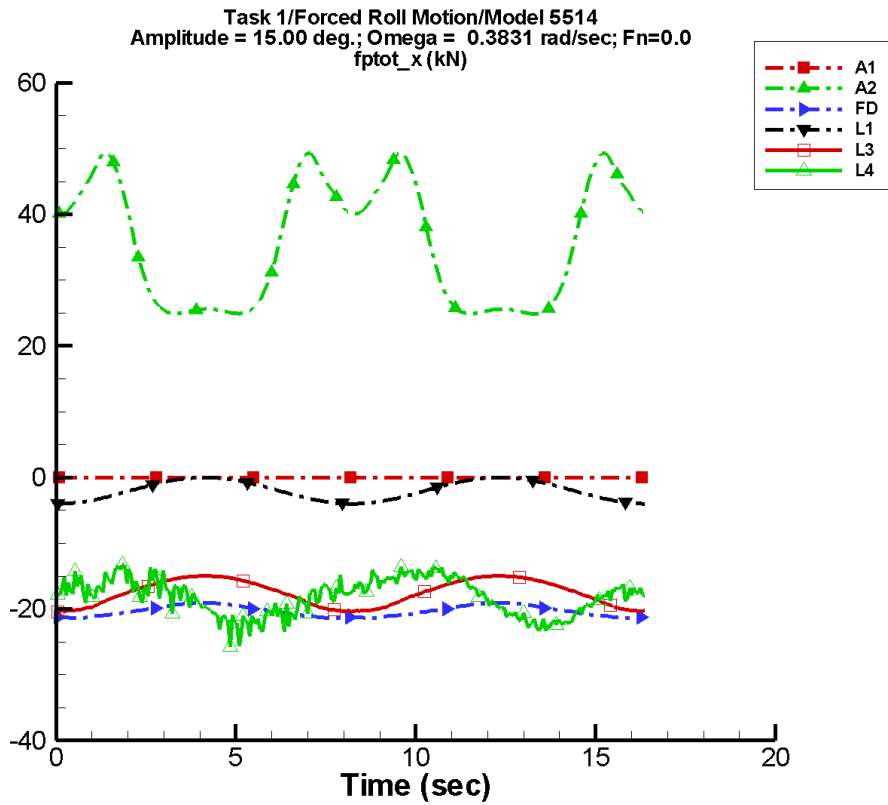
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-7.56E-05	6.83E-03	-6	1.42E-04	-26
A2	43.3	1.21E-02	1	2.86	-94
FD	-21.3	3.24E-03	117	2.62E-02	-93
L1	-0.222	1.54E-04	171	0.222	-92
L3	-16.5	1.59E-03	-159	0.295	-92
L4	-16.6	3.70E-02	152	5.03E-02	80
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-72. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.53E-02	1.14E-02	-8.49E-03	7.50E-03
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	-0.444	2.69E-04	-0.444	-9.19E-04
L3	-16.9	-16.2	-16.8	-16.2
L4	-17.3	-15.7	-16.9	-16.3
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-37. Time history of  $F_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

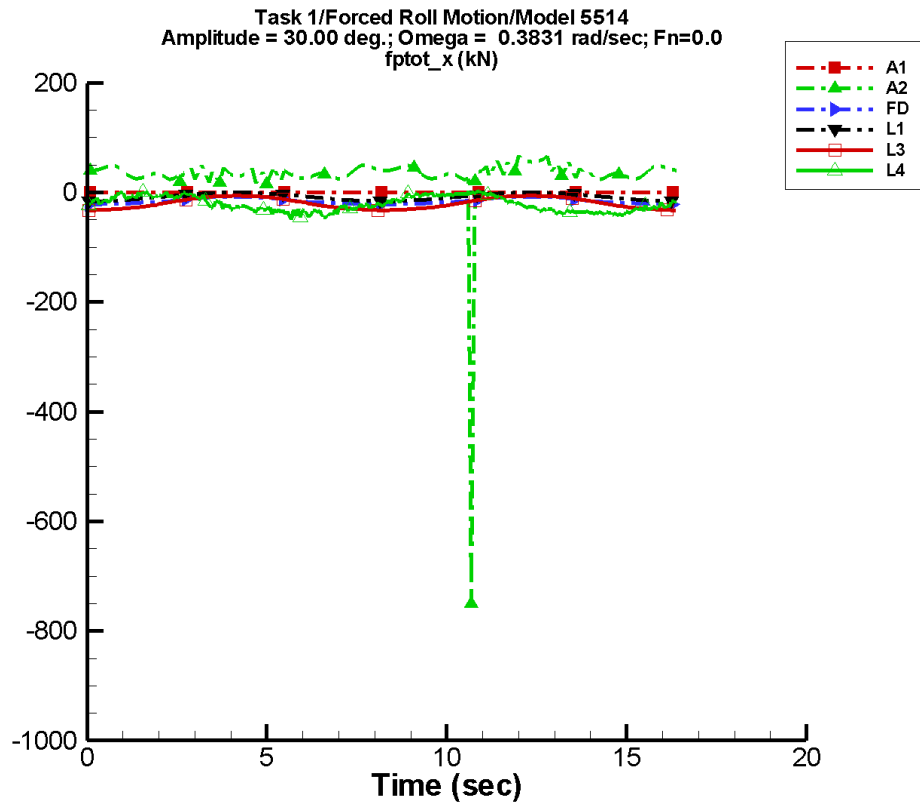
Table D-73. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.27E-04	2.05E-02	-6	4.26E-04	-26
A2	35.6	9.49E-02	-45	11.7	85
FD	-20.3	5.42E-03	123	1.13	-90
L1	-2.00	4.02E-04	179	2.00	-92
L3	-17.5	7.70E-03	11	2.71	-92
L4	-18.2	0.414	-137	3.34	25
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-74. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E-02	3.42E-02	-2.55E-02	2.25E-02
A2	24.9	49.4	25.0	47.9
FD	-21.4	-19.1	-21.3	-19.1
L1	-4.00	1.44E-03	-4.00	-9.24E-03
L3	-20.4	-15.0	-20.4	-15.0
L4	-25.7	-13.3	-22.7	-14.1
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-38. Time history of  $F_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

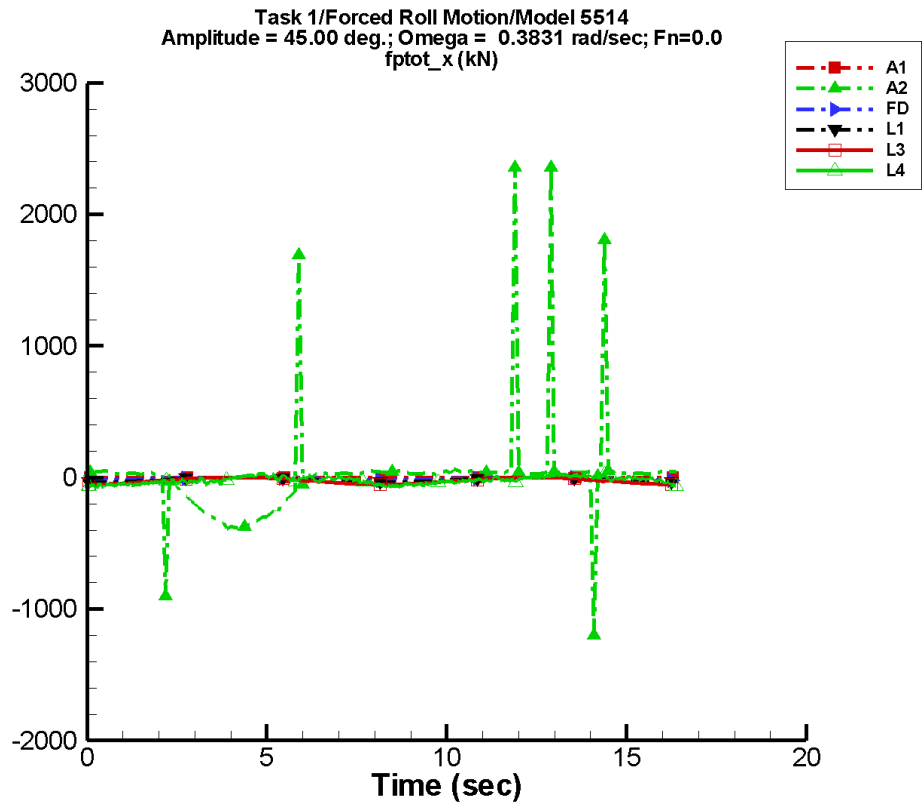
Table D-75. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-4.53E-04	4.10E-02	-6	8.52E-04	-26
A2	32.3	6.84	65	8.86	161
FD	-15.6	6.56E-02	122	6.81	-90
L1	-7.99	6.42E-04	-165	7.99	-92
L3	-19.5	4.00E-02	-174	13.4	-92
L4	-21.1	1.04	-130	17.9	8
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-76. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-9.20E-02	6.84E-02	-5.09E-02	4.50E-02
A2	-750.	67.2	-73.5	58.1
FD	-21.4	-7.97	-21.3	-8.09
L1	-16.0	4.75E-03	-16.0	-3.79E-02
L3	-32.4	-5.97	-32.4	-6.08
L4	-49.8	2.41	-39.9	-0.745
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-39. Time history of  $F_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

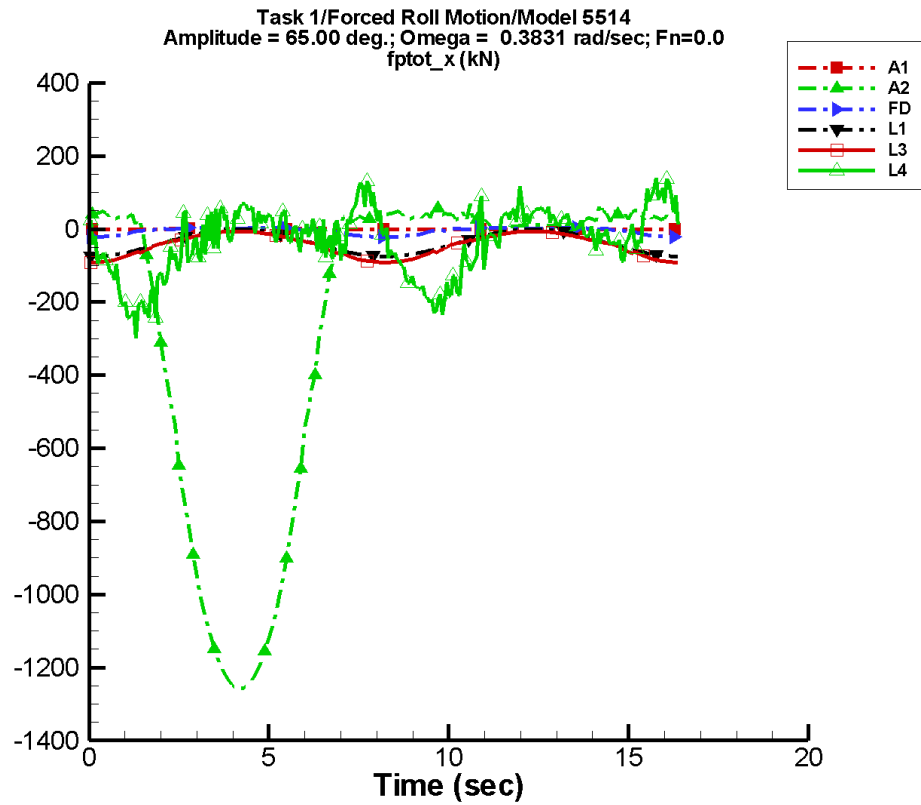
Table D-77. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-6.80E-04	6.14E-02	-6	1.28E-03	-26
A2	12.0	173.	178	65.6	103
FD	-9.60	0.109	-60	11.1	-90
L1	-18.0	7.90E-04	-142	18.0	-92
L3	-25.5	8.86E-02	-15	26.5	-92
L4	-22.0	3.37	-174	31.3	-132
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-78. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.138	0.103	-7.64E-02	6.75E-02
A2	-1.20E+03	2.36E+03	-373.	332.
FD	-21.4	0.539	-21.3	0.472
L1	-36.0	9.96E-03	-36.0	-8.60E-02
L3	-52.4	-0.389	-52.4	-0.472
L4	-81.7	29.9	-68.7	18.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-40. Time history of  $F_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

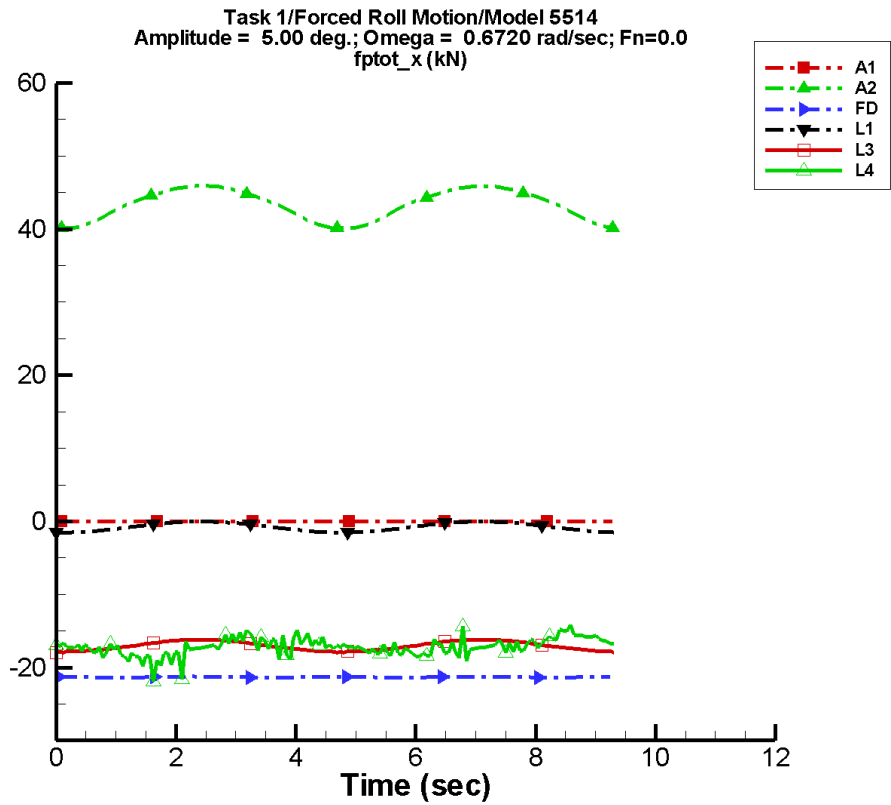
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-9.82E-04	8.87E-02	-6	1.85E-03	-26
A2	-234.	478.	176	384.	83
FD	-5.02	0.207	-61	11.5	-89
L1	-37.5	1.29E-03	-108	37.5	-92
L3	-44.8	0.258	-16	41.9	-91
L4	-36.5	11.5	-146	87.7	-155
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-80. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.199	0.148	-0.110	9.75E-02
A2	-1.26E+03	70.2	-1.25E+03	47.9
FD	-21.4	4.05	-21.2	3.38
L1	-75.1	1.99E-02	-75.1	-0.180
L3	-91.5	-6.34	-91.5	-6.45
L4	-300.	140.	-234.	109.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-41. Time history of  $F_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

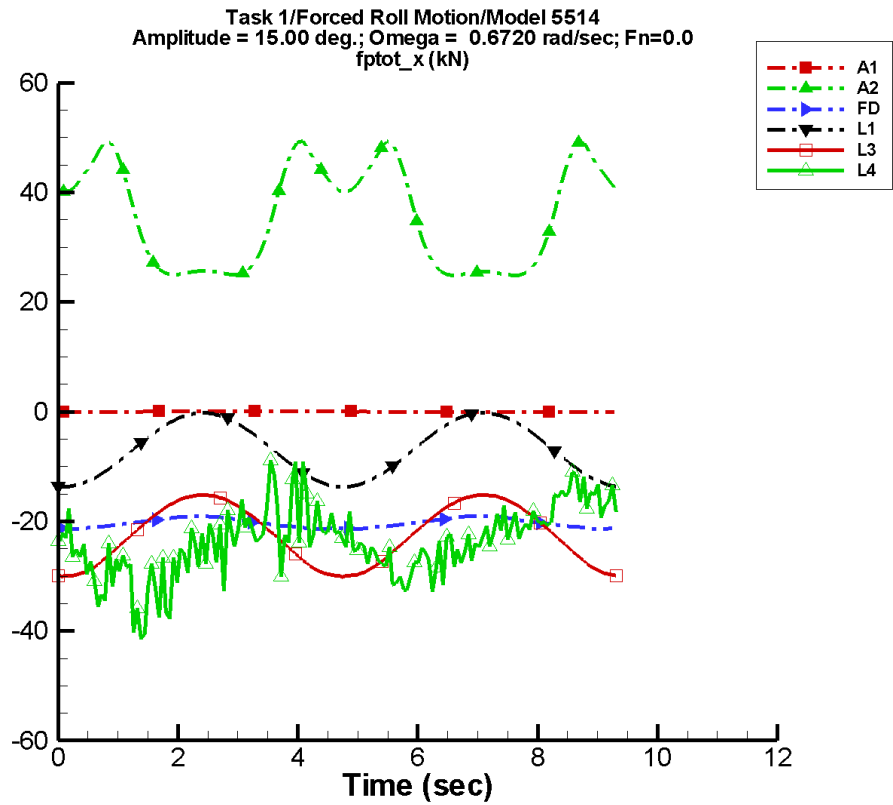
Table D–81. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.85E-04	2.55E-02	-31	7.13E-04	-106
A2	43.3	4.49E-02	-21	2.88	-97
FD	-21.3	4.63E-03	147	2.49E-02	-103
L1	-0.774	3.17E-04	153	0.750	-96
L3	-17.0	2.78E-03	-169	0.820	-96
L4	-17.1	0.246	162	1.08	157
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–82. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.69E-02	2.86E-02	-2.65E-02	2.80E-02
A2	40.2	45.9	40.2	45.8
FD	-21.4	-21.2	-21.4	-21.2
L1	-1.52	-2.42E-02	-1.52	-3.64E-02
L3	-17.9	-16.2	-17.9	-16.2
L4	-21.9	-14.1	-19.2	-15.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-42. Time history of  $F_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

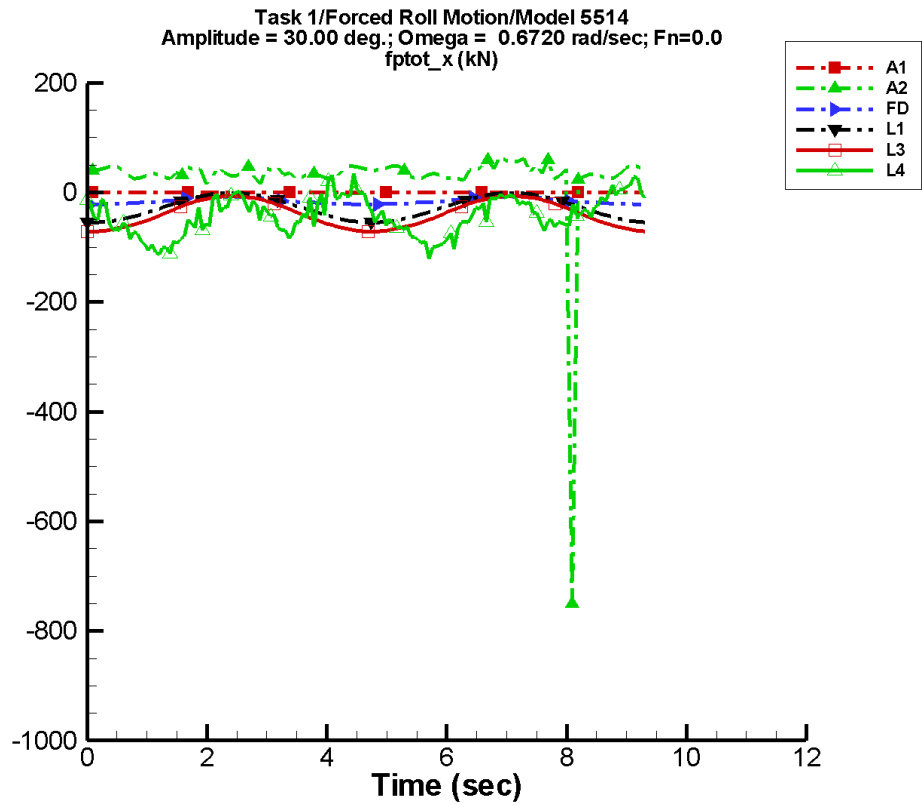
Table D–83. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.54E-04	7.64E-02	-31	2.14E-03	-106
A2	35.6	0.161	-52	11.7	81
FD	-20.3	1.00E-02	152	1.13	-91
L1	-6.97	5.33E-04	173	6.75	-96
L3	-22.5	1.35E-02	-2	7.46	-96
L4	-23.8	1.86	180	7.26	161
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–84. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.07E-02	8.58E-02	-7.94E-02	8.39E-02
A2	24.8	49.4	25.0	46.0
FD	-21.4	-19.1	-21.3	-19.1
L1	-13.7	-0.219	-13.7	-0.329
L3	-30.1	-15.2	-30.1	-15.3
L4	-42.4	-8.82	-35.0	-14.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-43. Time history of  $F_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

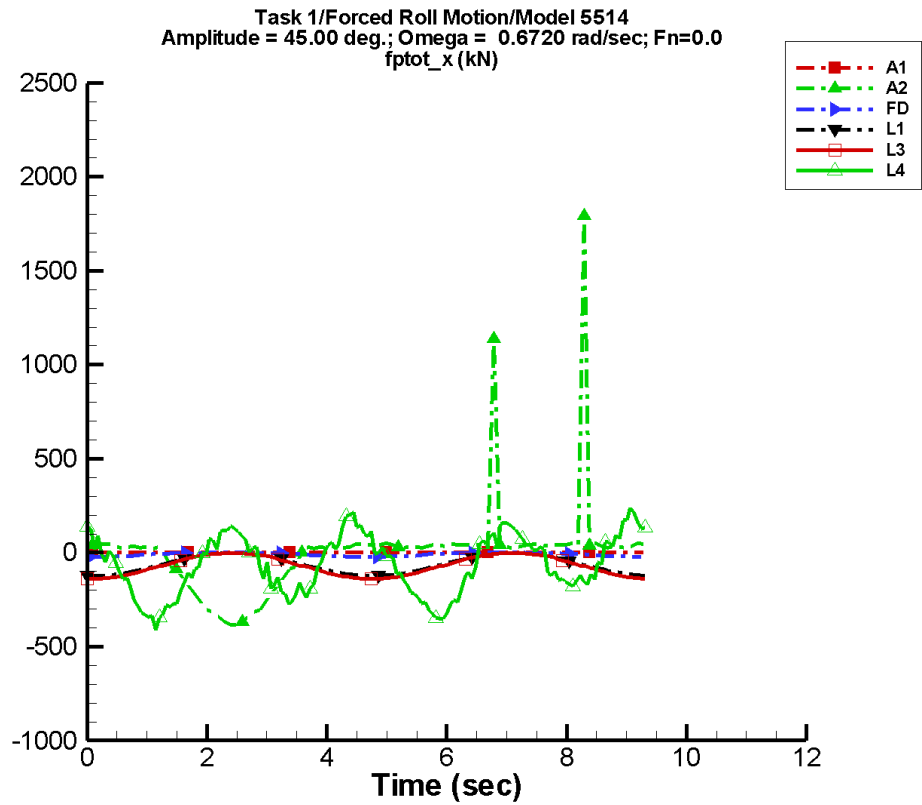
Table D–85. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.11E-03	0.153	-31	4.28E-03	-106
A2	28.5	12.8	-56	15.1	12
FD	-15.5	7.12E-02	150	6.78	-91
L1	-27.9	9.94E-04	-101	27.0	-96
L3	-39.4	5.02E-02	-177	32.4	-96
L4	-44.1	6.34	-168	30.7	170
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–86. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.161	0.172	-0.159	0.168
A2	-750.	66.3	-71.8	62.7
FD	-21.4	-7.97	-21.3	-8.19
L1	-54.9	-0.876	-54.9	-1.32
L3	-71.3	-6.86	-71.3	-7.36
L4	-121.	34.0	-104.	11.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-44. Time history of  $F_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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 at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

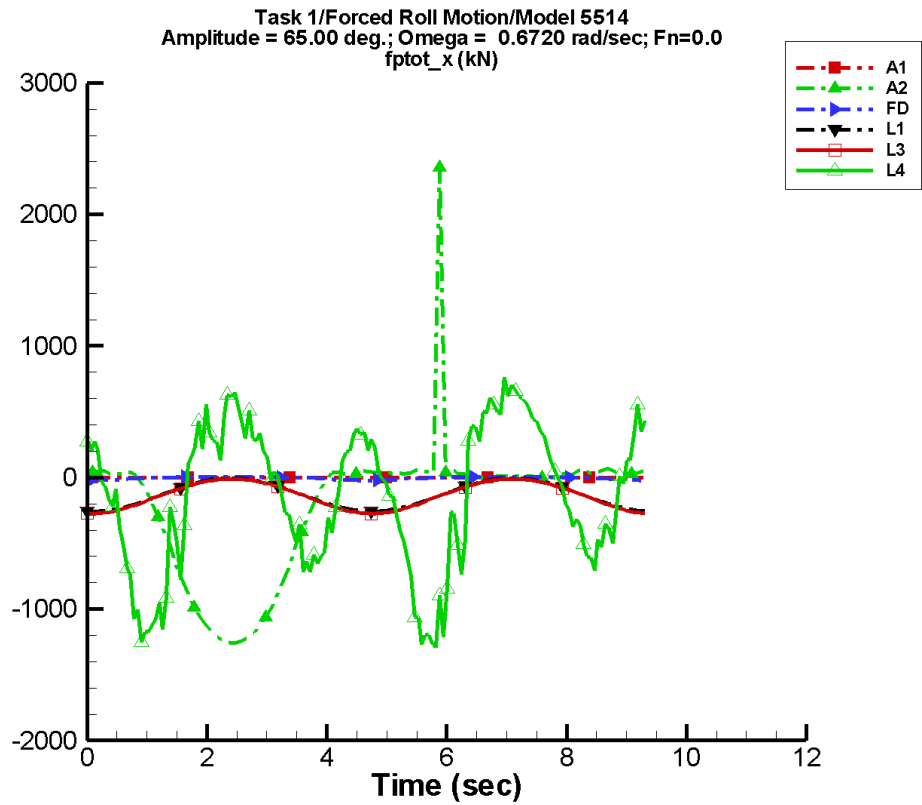
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.66E-03	0.229	-31	6.41E-03	-106
A2	5.47	168.	166	79.8	93
FD	-9.68	7.96E-02	-31	11.2	-89
L1	-62.7	3.28E-03	-73	60.7	-96
L3	-70.2	4.73E-02	-130	69.3	-96
L4	-70.8	31.2	177	97.5	169
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–88. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.242	0.257	-0.238	0.252
A2	-383.	1.79E+03	-353.	279.
FD	-21.4	0.538	-21.2	0.365
L1	-123.	-1.97	-123.	-2.97
L3	-140.	-2.37	-140.	-3.39
L4	-412.	239.	-343.	164.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-45. Time history of  $F_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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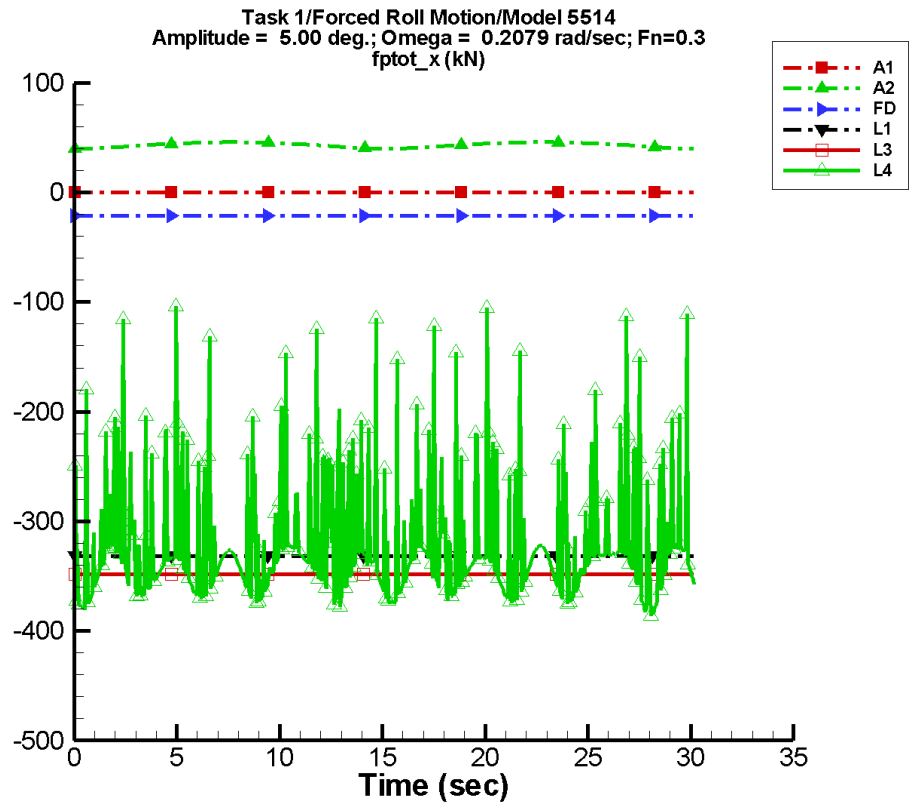
Table D–89. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	2.40E-03	0.331	-31	9.27E-03	-106
A2	-203.	501.	179	379.	72
FD	-5.22	0.352	-29	11.6	-88
L1	-131.	8.67E-03	-64	127.	-96
L3	-138.	0.331	-1	131.	-96
L4	-155.	91.6	179	379.	-142
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–90. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.350	0.372	-0.344	0.363
A2	-1.26E+03	2.36E+03	-1.22E+03	349.
FD	-21.4	4.06	-20.8	2.74
L1	-258.	-4.12	-258.	-6.20
L3	-274.	-10.5	-274.	-12.5
L4	-1.31E+03	760.	-1.15E+03	620.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-46. Time history of  $F_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

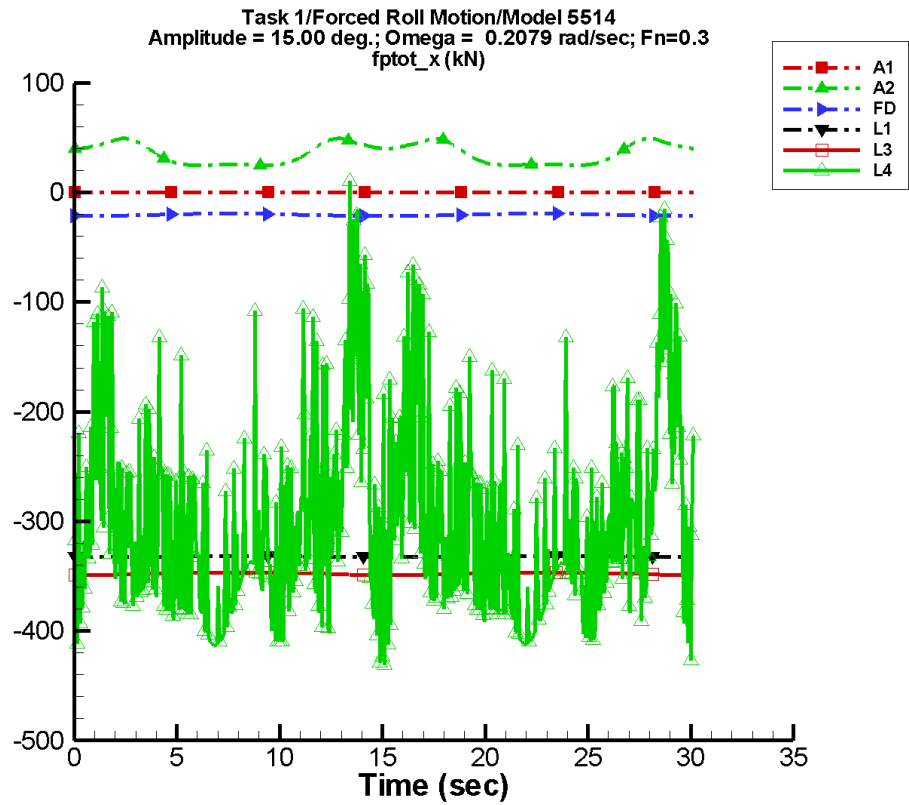
Table D–91. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.51E-05	7.76E-03	-167	9.30E-05	94
A2	43.3	2.20E-03	-137	2.86	-92
FD	-21.3	1.22E-03	-168	2.19E-02	-105
L1	-332.	1.21E-02	-158	5.32E-02	-106
L3	-348.	8.11E-03	-159	0.128	-97
L4	-321.	1.90	-64	4.40	102
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–92. Minimum and maximum of of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.10E-02	2.07E-02	-1.03E-02	1.02E-02
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	-332.	-332.	-332.	-332.
L3	-348.	-348.	-348.	-348.
L4	-388.	-102.	-377.	-276.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-47. Time history of  $F_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

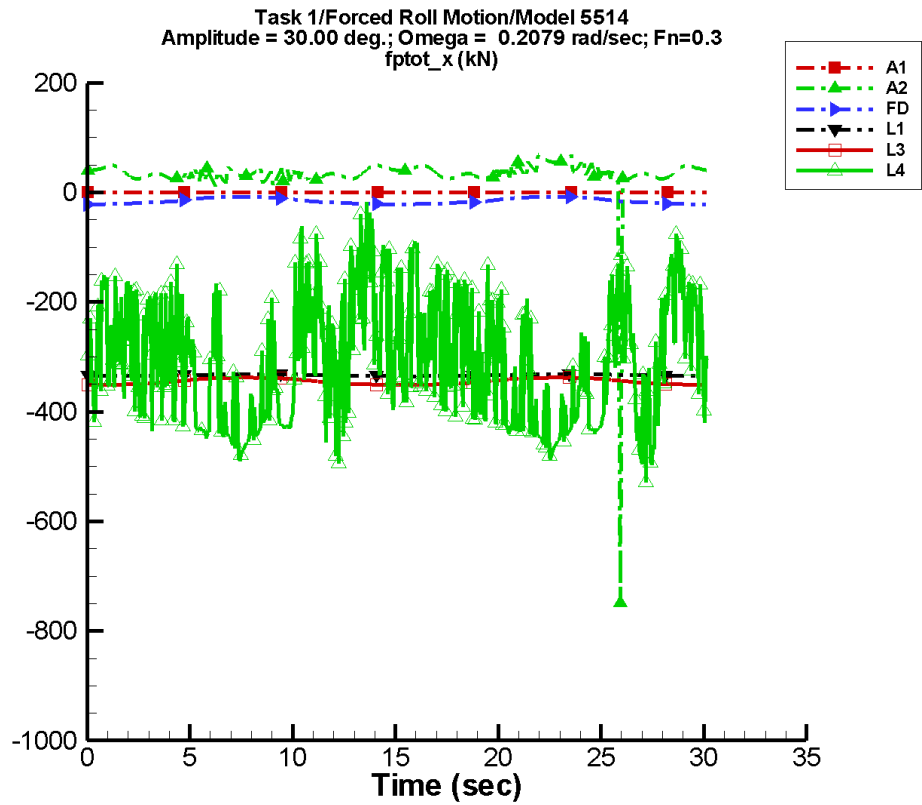
Table D-93. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-4.52E-05	2.33E-02	-167	2.79E-04	94
A2	35.6	6.53E-02	-79	11.7	87
FD	-20.3	3.08E-03	-169	1.12	-91
L1	-332.	1.23E-02	-155	0.432	-106
L3	-348.	1.83E-02	-88	1.10	-97
L4	-300.	3.29	-50	55.6	96
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-94. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.29E-02	6.21E-02	-3.09E-02	3.07E-02
A2	24.8	49.4	24.9	48.9
FD	-21.4	-19.1	-21.4	-19.1
L1	-333.	-332.	-333.	-332.
L3	-349.	-347.	-349.	-347.
L4	-433.	10.6	-408.	-94.3
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-48. Time history of  $F_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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 at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

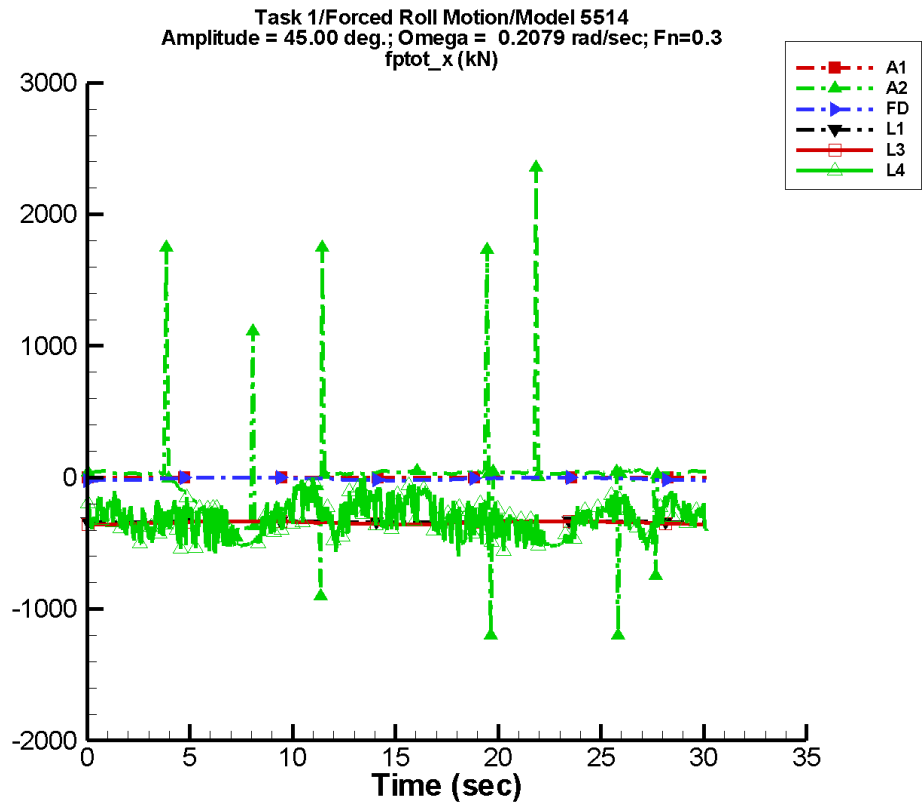
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-9.04E-05	4.65E-02	-167	5.58E-04	94
A2	33.7	3.47	-124	5.04	23
FD	-15.6	2.05E-02	-170	6.73	-91
L1	-333.	1.33E-02	-150	1.71	-106
L3	-345.	5.85E-02	128	7.19	-95
L4	-309.	18.3	-71	80.4	93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-96. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.126	0.124	-6.17E-02	6.13E-02
A2	-748.	69.2	-77.3	58.7
FD	-21.4	-7.97	-21.3	-8.00
L1	-335.	-332.	-335.	-332.
L3	-352.	-338.	-351.	-338.
L4	-529.	-17.7	-460.	-71.3
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-49. Time history of  $F_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

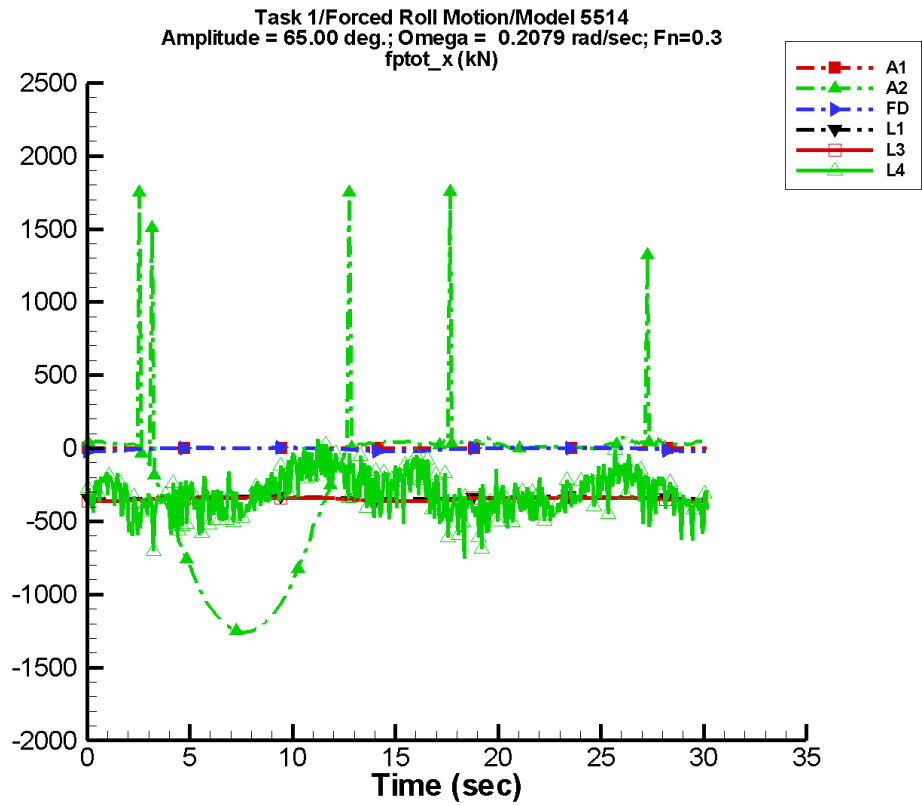
Table D–97. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.36E-04	6.98E-02	-167	8.37E-04	94
A2	-16.4	119.	-177	96.3	70
FD	-9.65	2.29E-02	15	11.2	-89
L1	-335.	1.42E-02	-147	3.83	-106
L3	-343.	3.42E-02	-42	12.2	-96
L4	-313.	23.6	-51	89.9	117
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–98. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.189	0.186	-9.26E-02	9.20E-02
A2	-1.20E+03	2.36E+03	-391.	350.
FD	-21.4	0.541	-21.4	0.514
L1	-339.	-331.	-339.	-332.
L3	-356.	-331.	-356.	-332.
L4	-597.	11.8	-517.	-58.1
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-50. Time history of  $F_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

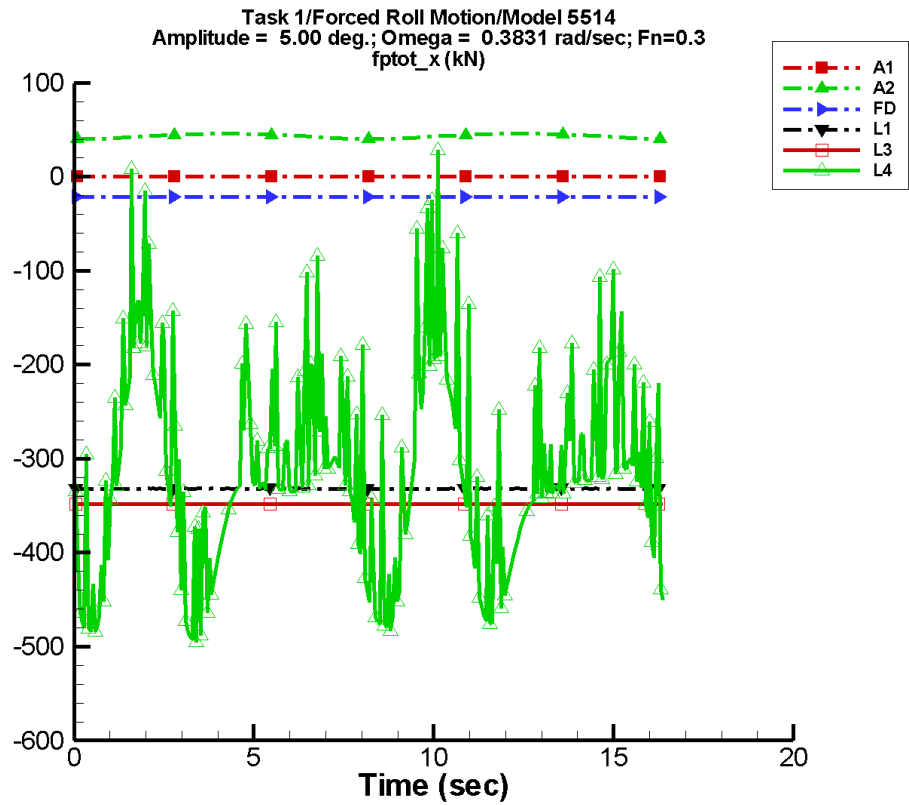
Table D–99. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.96E-04	0.101	-167	1.21E-03	94
A2	-212.	475.	177	402.	84
FD	-5.09	0.114	5	11.8	-88
L1	-339.	1.51E-02	-142	7.99	-106
L3	-347.	0.383	-62	11.7	-102
L4	-304.	46.5	-62	108.	163
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–100. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.272	0.269	-0.134	0.133
A2	-1.26E+03	1.76E+03	-1.26E+03	263.
FD	-21.4	4.06	-21.3	3.87
L1	-347.	-331.	-347.	-331.
L3	-364.	-337.	-363.	-337.
L4	-761.	129.	-482.	-33.1
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-51. Time history of  $F_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

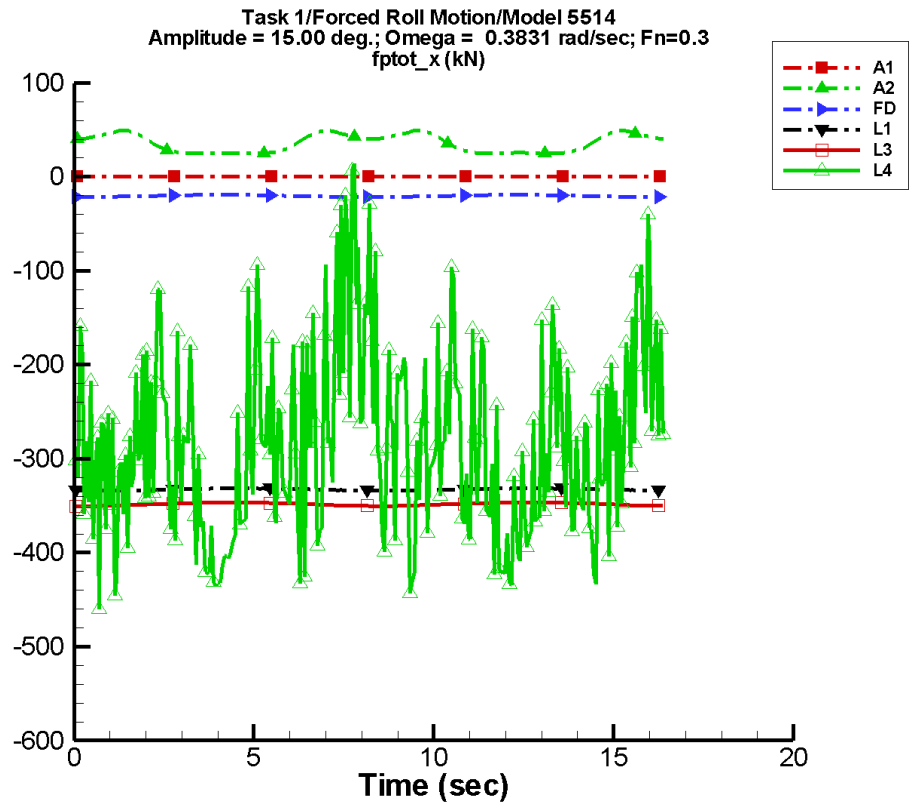
Table D–101. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.41E-04	7.57E-03	-173	1.41E-03	152
A2	43.3	2.24E-03	-176	2.86	-94
FD	-21.3	3.24E-03	116	2.61E-02	-93
L1	-332.	1.97E-03	124	0.131	-110
L3	-348.	4.40E-03	156	0.201	-104
L4	-309.	10.8	-5	11.1	4
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–102. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.00E-02	1.70E-02	-9.10E-03	7.50E-03
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	-332.	-332.	-332.	-332.
L3	-348.	-348.	-348.	-348.
L4	-495.	39.9	-455.	-104.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-52. Time history of  $F_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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 at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

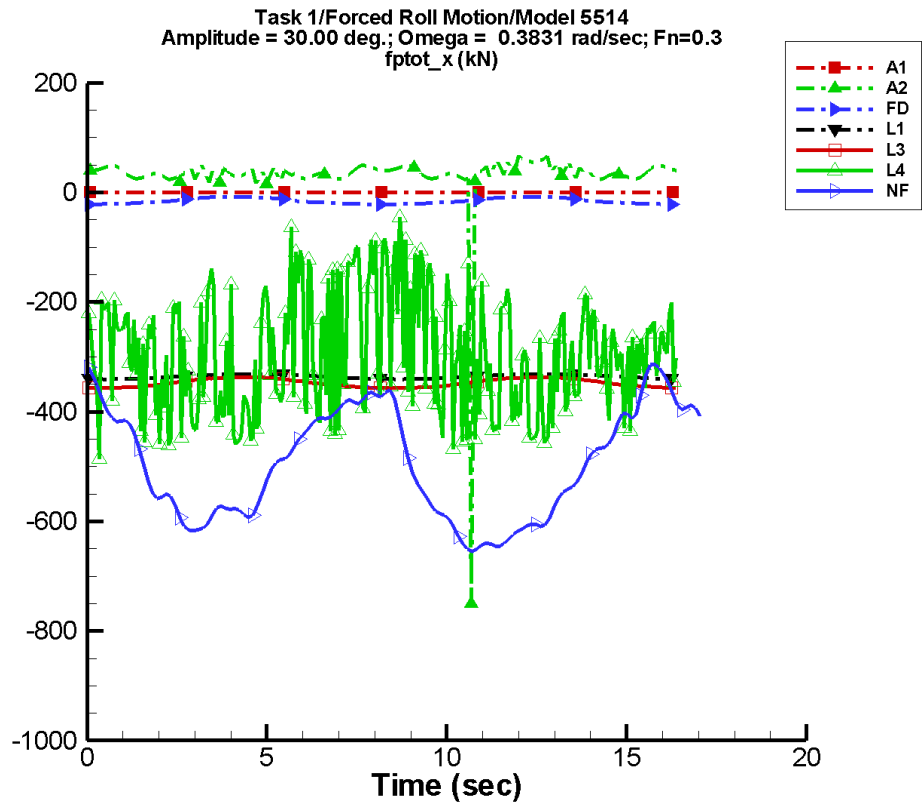
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	4.22E-04	2.27E-02	-173	4.23E-03	152
A2	35.6	7.20E-02	-70	11.7	85
FD	-20.3	5.38E-03	123	1.13	-90
L1	-333.	8.40E-04	-157	1.18	-110
L3	-348.	5.65E-03	22	1.87	-103
L4	-286.	21.4	-89	52.1	105
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–104. Minimum and maximum of of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-5.98E-02	5.09E-02	-2.73E-02	2.25E-02
A2	24.9	49.4	25.0	47.9
FD	-21.4	-19.1	-21.3	-19.1
L1	-334.	-331.	-334.	-332.
L3	-350.	-347.	-350.	-347.
L4	-460.	14.1	-420.	-99.8
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-53. Time history of  $F_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

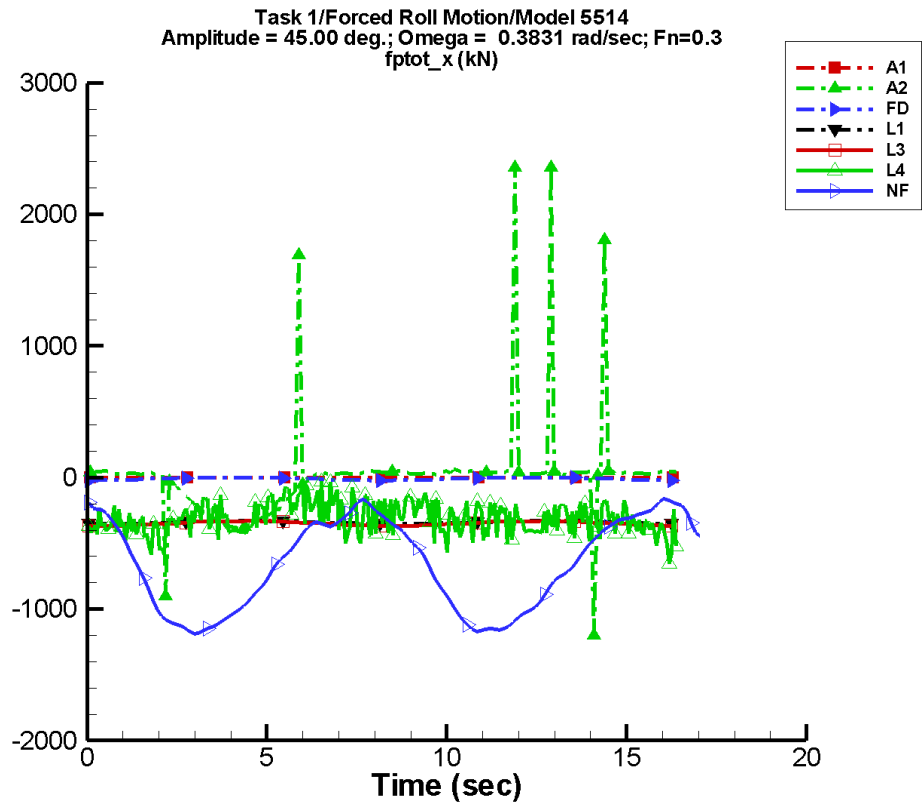
Table D–105. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.44E-04	4.54E-02	-173	8.46E-03	152
A2	32.3	6.80	65	8.87	161
FD	-15.6	6.56E-02	122	6.81	-90
L1	-336.	2.85E-03	-123	4.73	-110
L3	-348.	4.34E-02	-173	10.1	-101
L4	-293.	35.8	-87	56.1	96
NF	-499.	30.4	90	129.	-164
NS	—	—	—	—	—

Table D–106. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.120	0.102	-5.46E-02	4.50E-02
A2	-750.	67.3	-73.4	58.2
FD	-21.4	-7.97	-21.3	-8.09
L1	-341.	-331.	-341.	-331.
L3	-357.	-337.	-357.	-337.
L4	-486.	-45.6	-421.	-163.
NF	-655.	-313.	-647.	-338.
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-54. Time history of  $F_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

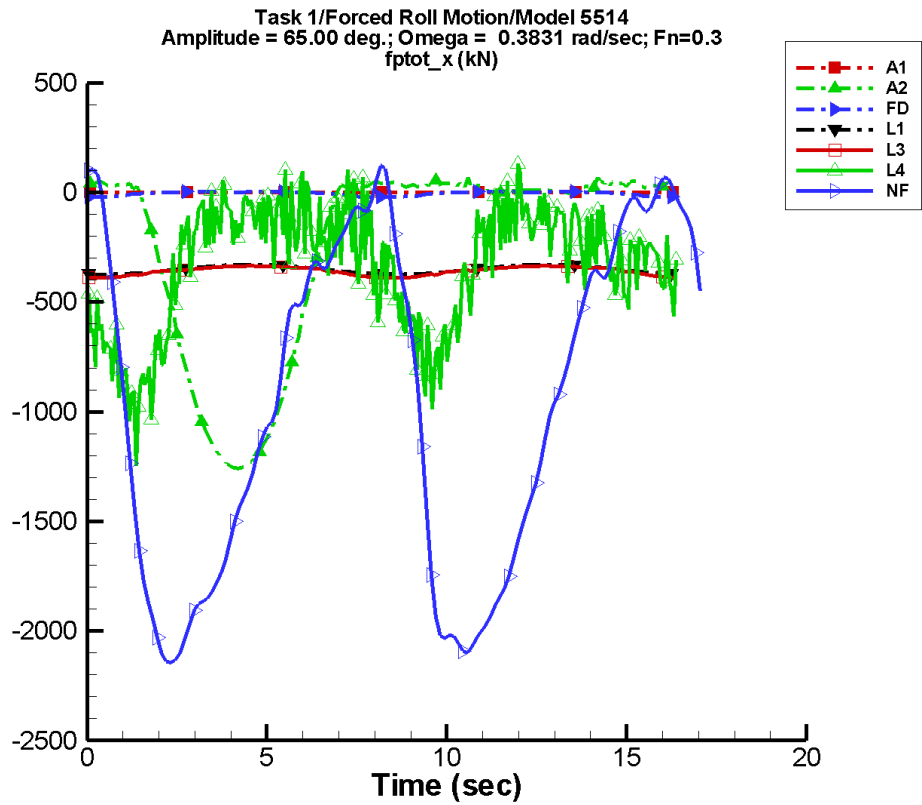
Table D–107. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.27E-03	6.81E-02	-173	1.27E-02	152
A2	12.0	173.	178	65.6	103
FD	-9.60	0.109	-60	11.1	-90
L1	-341.	5.38E-03	-111	10.6	-110
L3	-349.	8.53E-02	-17	19.0	-102
L4	-314.	70.1	-79	45.0	-168
NF	-660.	49.2	146	467.	-162
NS	—	—	—	—	—

Table D–108. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.179	0.153	-8.19E-02	6.75E-02
A2	-1.20E+03	2.36E+03	-373.	332.
FD	-21.4	0.538	-21.3	0.472
L1	-352.	-330.	-352.	-330.
L3	-368.	-330.	-368.	-331.
L4	-660.	-28.8	-575.	-157.
NF	-1.19E+03	-164.	-1.16E+03	-205.
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-55. Time history of  $F_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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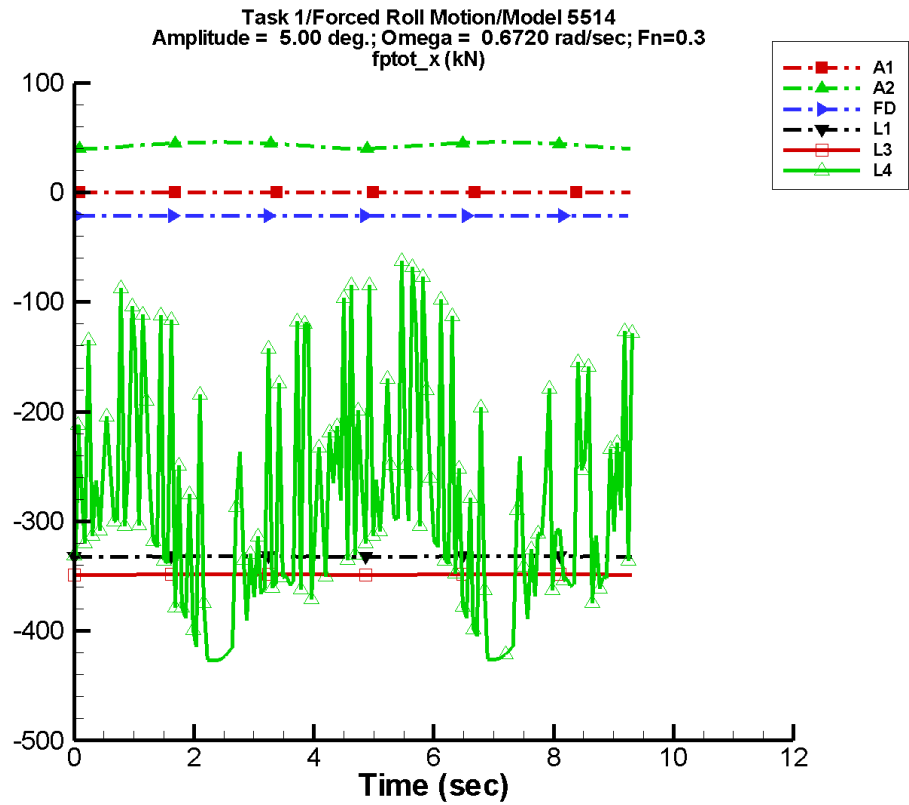
Table D–109. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.83E-03	9.84E-02	-173	1.83E-02	152
A2	-234.	478.	176	384.	83
FD	-5.02	0.207	-61	11.5	-89
L1	-351.	8.97E-03	-108	22.2	-110
L3	-359.	0.254	-18	26.3	-107
L4	-341.	100.	-94	312.	-137
NF	-971.	127.	178	1.02E+03	-147
NS	—	—	—	—	—

Table D–110. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.259	0.221	-0.118	9.74E-02
A2	-1.26E+03	70.3	-1.25E+03	47.9
FD	-21.4	4.05	-21.2	3.38
L1	-373.	-329.	-373.	-329.
L3	-389.	-335.	-389.	-335.
L4	-1.25E+03	131.	-1.02E+03	-61.4
NF	-2.17E+03	125.	-2.08E+03	81.5
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-56. Time history of  $F_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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 at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

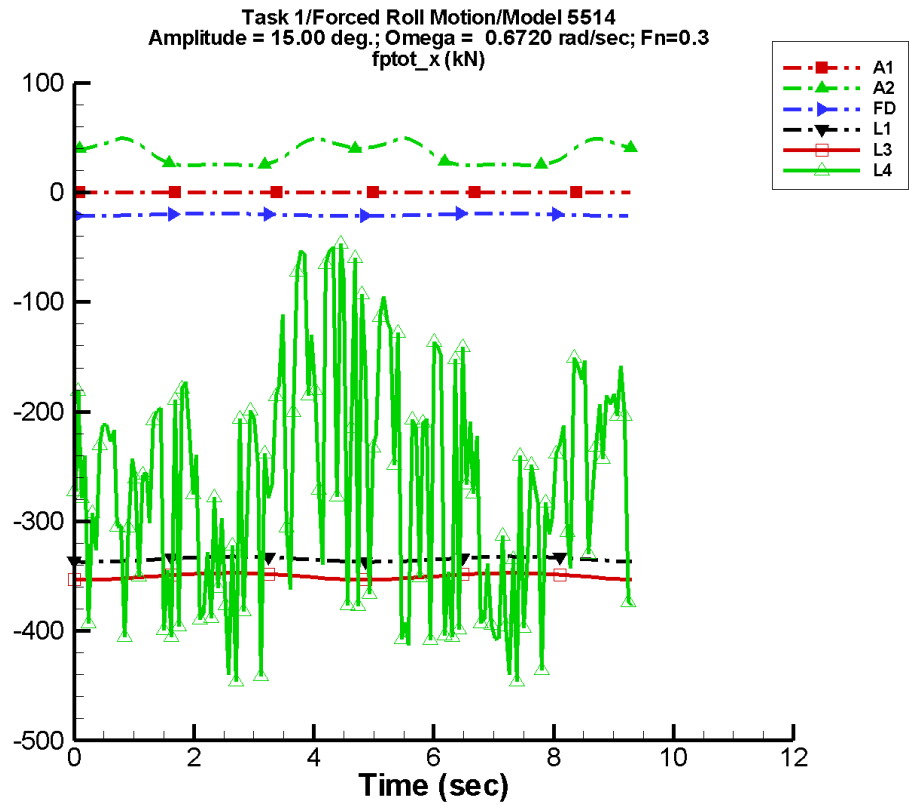
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.65E-05	1.73E-02	140	3.73E-04	78
A2	43.3	1.03E-02	50	2.88	-97
FD	-21.3	4.68E-03	147	2.49E-02	-103
L1	-332.	2.80E-03	173	0.266	-112
L3	-348.	5.26E-03	-176	0.335	-109
L4	-288.	8.56	-81	68.2	59
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–112. Minimum and maximum of of  $F_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.59E-02	1.96E-02	-1.76E-02	1.73E-02
A2	40.2	45.9	40.2	45.8
FD	-21.4	-21.2	-21.4	-21.2
L1	-332.	-332.	-332.	-332.
L3	-349.	-348.	-349.	-348.
L4	-427.	-62.6	-404.	-192.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-57. Time history of  $F_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

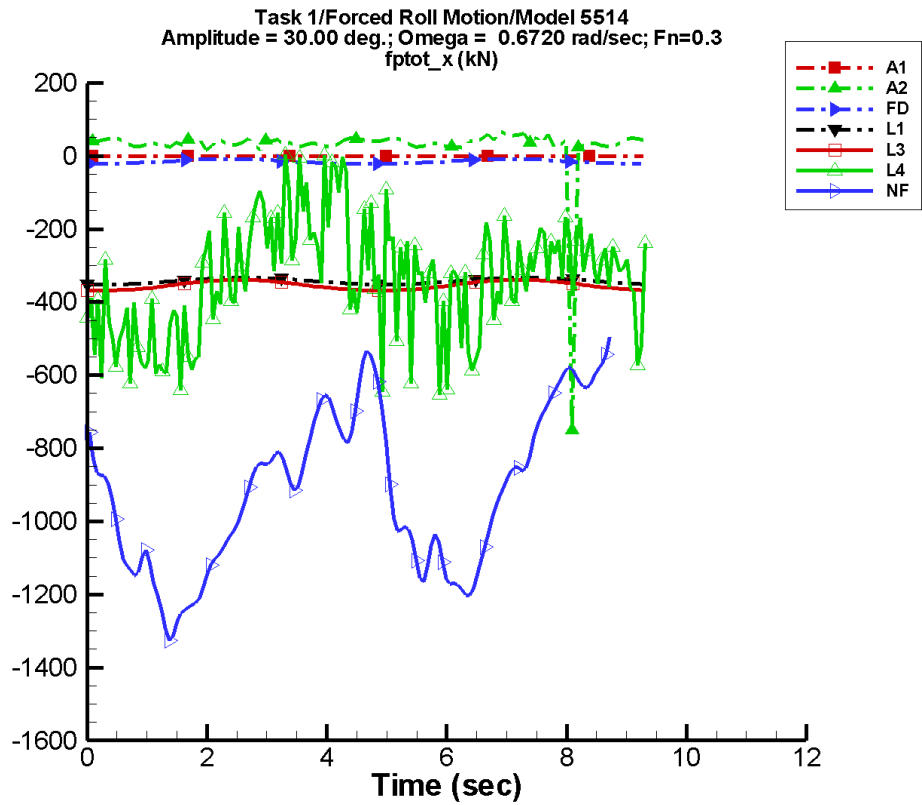
Table D–113. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-7.96E-05	5.20E-02	140	1.12E-03	78
A2	35.6	5.56E-02	-97	11.7	81
FD	-20.3	1.00E-02	152	1.13	-91
L1	-334.	5.17E-03	-151	2.39	-112
L3	-350.	9.62E-03	-13	3.07	-108
L4	-263.	34.0	-73	58.8	105
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–114. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.78E-02	5.87E-02	-5.29E-02	5.17E-02
A2	24.9	49.4	25.0	46.0
FD	-21.4	-19.1	-21.3	-19.1
L1	-337.	-332.	-337.	-332.
L3	-353.	-347.	-353.	-347.
L4	-446.	-47.1	-388.	-153.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-58. Time history of  $F_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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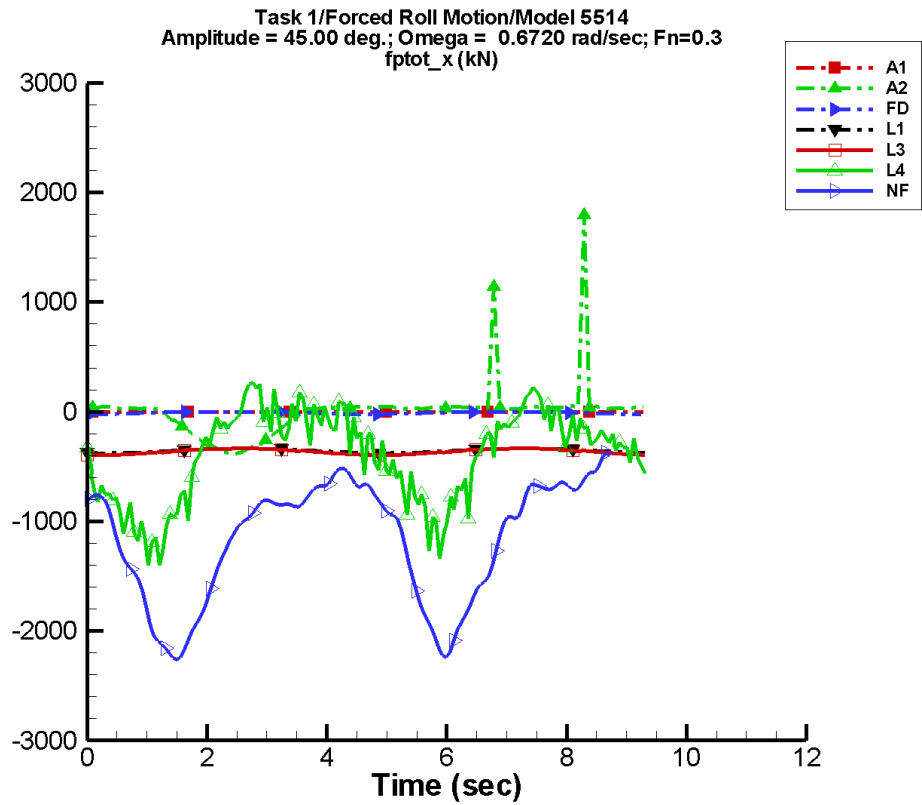
Table D–115. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.59E-04	0.104	140	2.24E-03	78
A2	28.5	12.6	-57	15.1	12
FD	-15.5	7.11E-02	150	6.78	-91
L1	-343.	1.00E-02	-140	9.56	-112
L3	-354.	5.75E-02	-174	14.9	-106
L4	-333.	77.5	-88	136.	-179
NF	-744.	39.7	-86	274.	62
NS	—	—	—	—	—

Table D–116. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.156	0.117	-0.106	0.103
A2	-749.	66.5	-71.5	62.9
FD	-21.4	-7.97	-21.3	-8.18
L1	-352.	-333.	-352.	-333.
L3	-369.	-339.	-369.	-339.
L4	-660.	3.91	-571.	-122.
NF	-1.20E+03	-310.	-1.18E+03	-394.
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-59. Time history of  $F_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

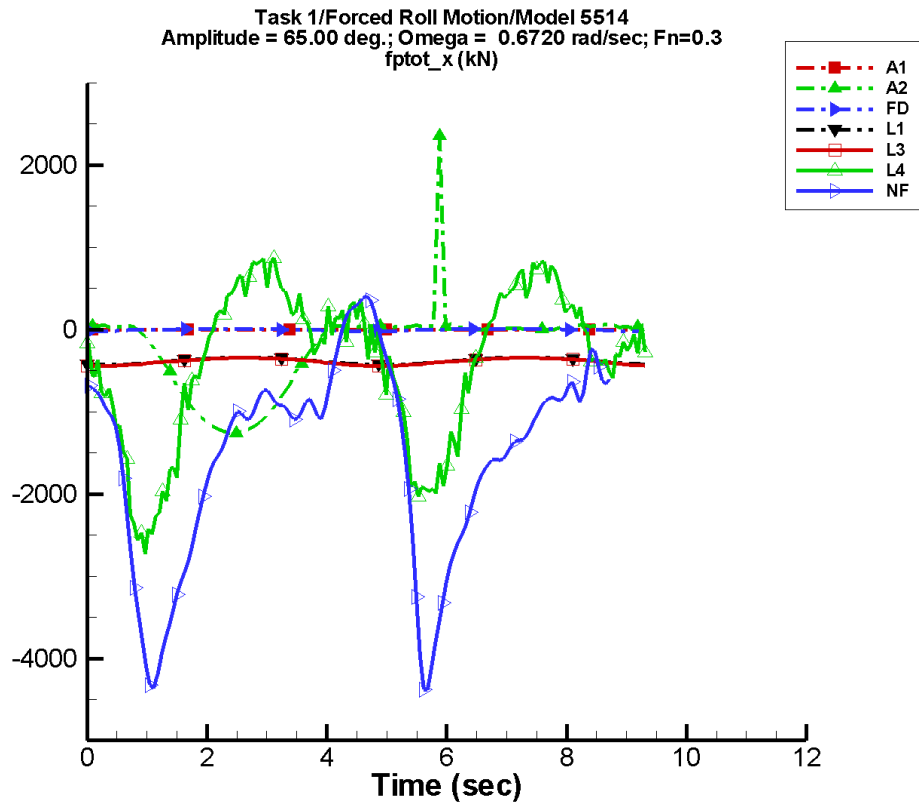
Table D–117. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.39E-04	0.156	140	3.36E-03	78
A2	5.47	169.	166	79.8	93
FD	-9.68	7.96E-02	-31	11.2	-89
L1	-356.	1.56E-02	-136	21.5	-112
L3	-364.	5.78E-02	-135	29.8	-107
L4	-402.	124.	-100	518.	-162
NF	-927.	48.3	-23	707.	57
NS	—	—	—	—	—

Table D–118. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.233	0.176	-0.159	0.155
A2	-383.	1.79E+03	-353.	279.
FD	-21.4	0.537	-21.2	0.365
L1	-378.	-335.	-378.	-335.
L3	-394.	-335.	-394.	-335.
L4	-1.49E+03	269.	-1.23E+03	138.
NF	-2.24E+03	-155.	-2.11E+03	-238.
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-60. Time history of  $F_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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 at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

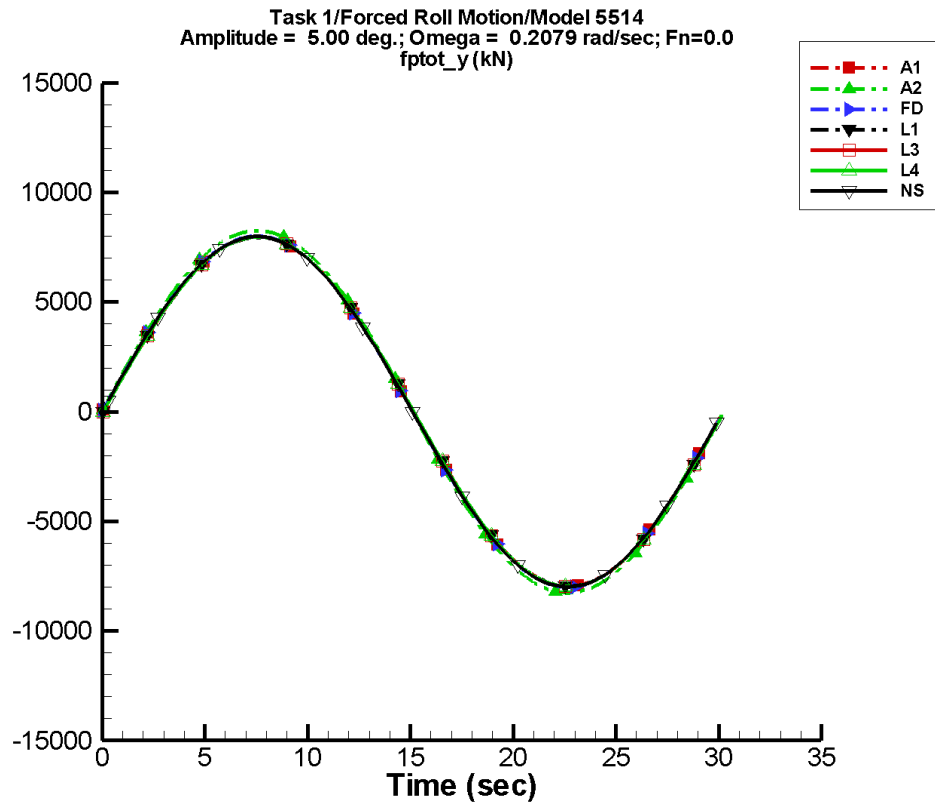
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-3.45E-04	0.225	140	4.85E-03	78
A2	-203.	502.	179	379.	72
FD	-5.22	0.352	-29	11.6	-88
L1	-383.	2.23E-02	-135	44.9	-112
L3	-390.	0.314	-2	49.0	-110
L4	-398.	222.	-117	1.14E+03	-160
NF	-1.33E+03	102.	-158	1.24E+03	61
NS	—	—	—	—	—

Table D–120. Minimum and maximum of  $F_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.337	0.254	-0.229	0.224
A2	-1.26E+03	2.36E+03	-1.22E+03	349.
FD	-21.4	4.06	-20.8	2.74
L1	-428.	-338.	-427.	-339.
L3	-444.	-344.	-444.	-345.
L4	-2.73E+03	873.	-2.43E+03	744.
NF	-4.38E+03	360.	-3.81E+03	197.
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-61. Time history of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

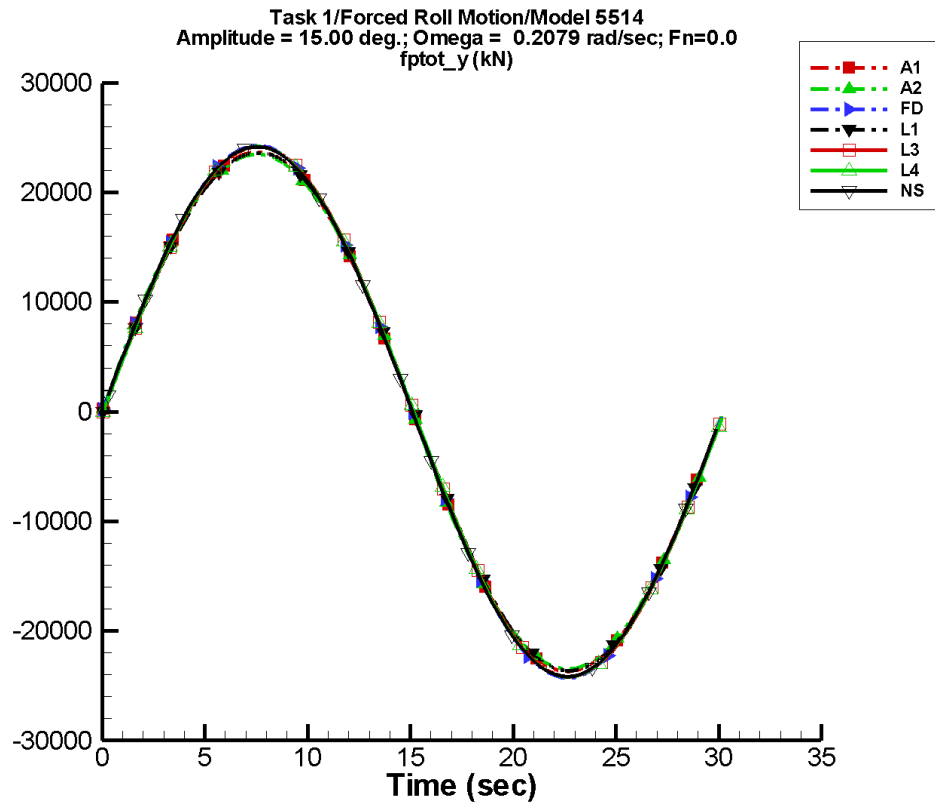
Table D–121. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.100	7.98E+03	0	0.393	61
A2	1.31	8.29E+03	0	6.91	64
FD	-5.73E-03	8.01E+03	0	4.07E-02	160
L1	0.151	7.96E+03	-1	0.612	86
L3	-0.142	7.97E+03	-1	0.528	-92
L4	-0.248	7.97E+03	-1	0.925	-51
NF	—	—	—	—	—
NS	3.73E-03	7.99E+03	0	1.70E-03	-164

Table D–122. Minimum and maximum of of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.97E+03	7.97E+03	-7.97E+03	7.98E+03
A2	-8.26E+03	8.26E+03	-8.25E+03	8.26E+03
FD	-8.01E+03	8.01E+03	-8.00E+03	8.00E+03
L1	-7.95E+03	7.95E+03	-7.95E+03	7.95E+03
L3	-7.97E+03	7.97E+03	-7.97E+03	7.97E+03
L4	-7.97E+03	7.97E+03	-7.97E+03	7.97E+03
NF	—	—	—	—
NS	-7.99E+03	7.99E+03	-7.91E+03	7.91E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-62. Time history of  $F_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

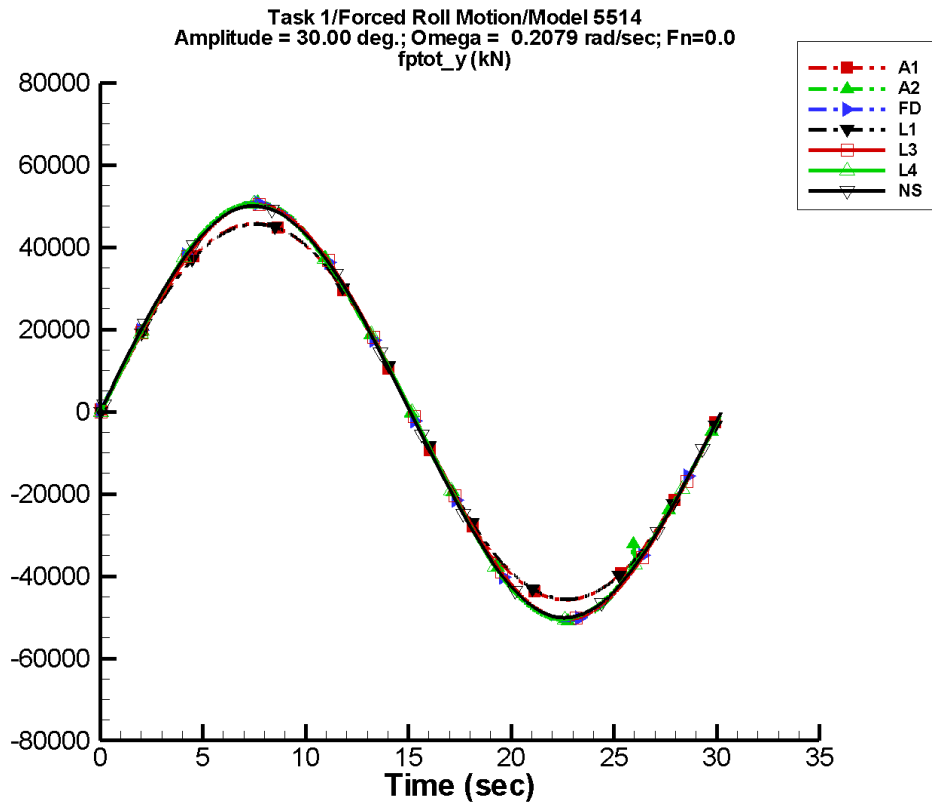
Table D–123. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.82	2.37E+04	0	10.6	59
A2	10.4	2.36E+04	0	50.8	67
FD	-2.14	2.42E+04	0	10.8	-124
L1	4.16	2.37E+04	-1	16.4	87
L3	-4.33	2.41E+04	-1	17.1	-93
L4	-7.33	2.41E+04	-1	27.1	-59
NF	—	—	—	—	—
NS	8.39E-02	2.41E+04	0	5.77E-02	-110

Table D–124. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.37E+04	2.37E+04	-2.36E+04	2.37E+04
A2	-2.35E+04	2.35E+04	-2.35E+04	2.35E+04
FD	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
L1	-2.36E+04	2.36E+04	-2.36E+04	2.36E+04
L3	-2.42E+04	2.42E+04	-2.42E+04	2.42E+04
L4	-2.42E+04	2.42E+04	-2.42E+04	2.42E+04
NF	—	—	—	—
NS	-2.42E+04	2.42E+04	-2.39E+04	2.39E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-63. Time history of  $F_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

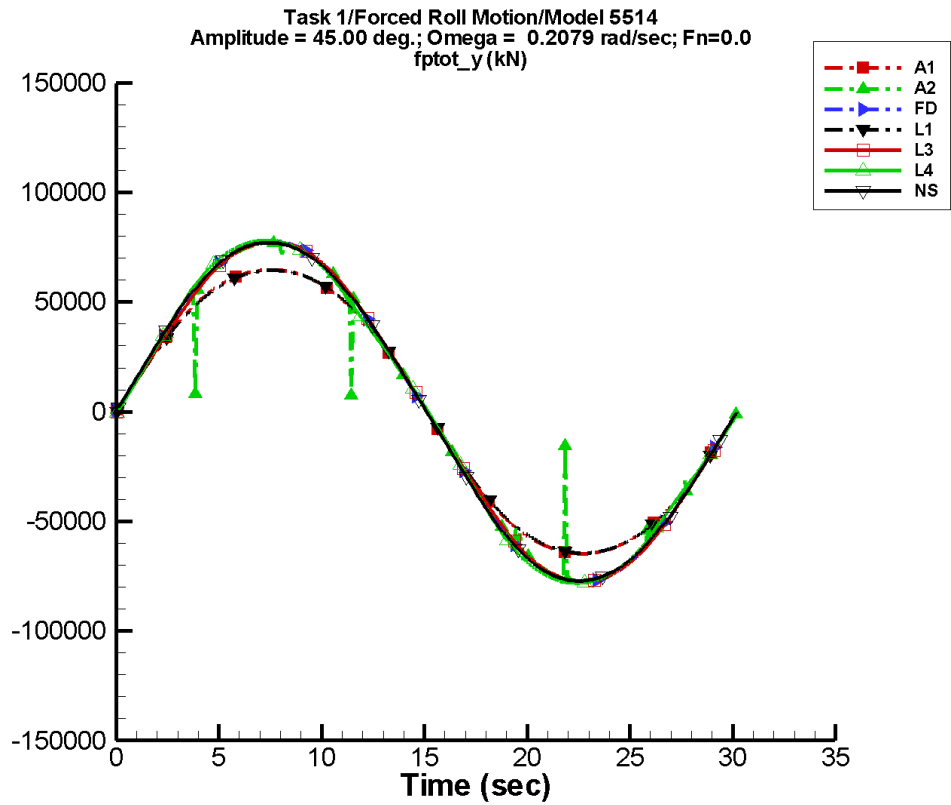
Table D–125. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	13.8	4.63E+04	0	84.2	59
A2	-1.07	4.99E+04	0	202.	-135
FD	-21.1	5.00E+04	0	107.	-123
L1	32.8	4.62E+04	-1	129.	87
L3	-42.2	4.97E+04	-1	167.	-93
L4	-70.2	4.98E+04	0	257.	-59
NF	—	—	—	—	—
NS	0.808	4.97E+04	0	0.610	-108

Table D–126. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.58E+04	4.58E+04	-4.57E+04	4.58E+04
A2	-5.09E+04	5.09E+04	-5.09E+04	5.10E+04
FD	-5.08E+04	5.08E+04	-5.07E+04	5.07E+04
L1	-4.56E+04	4.56E+04	-4.56E+04	4.56E+04
L3	-5.04E+04	5.04E+04	-5.04E+04	5.04E+04
L4	-5.06E+04	5.06E+04	-5.05E+04	5.05E+04
NF	—	—	—	—
NS	-5.01E+04	5.01E+04	-4.99E+04	4.99E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-64. Time history of  $F_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

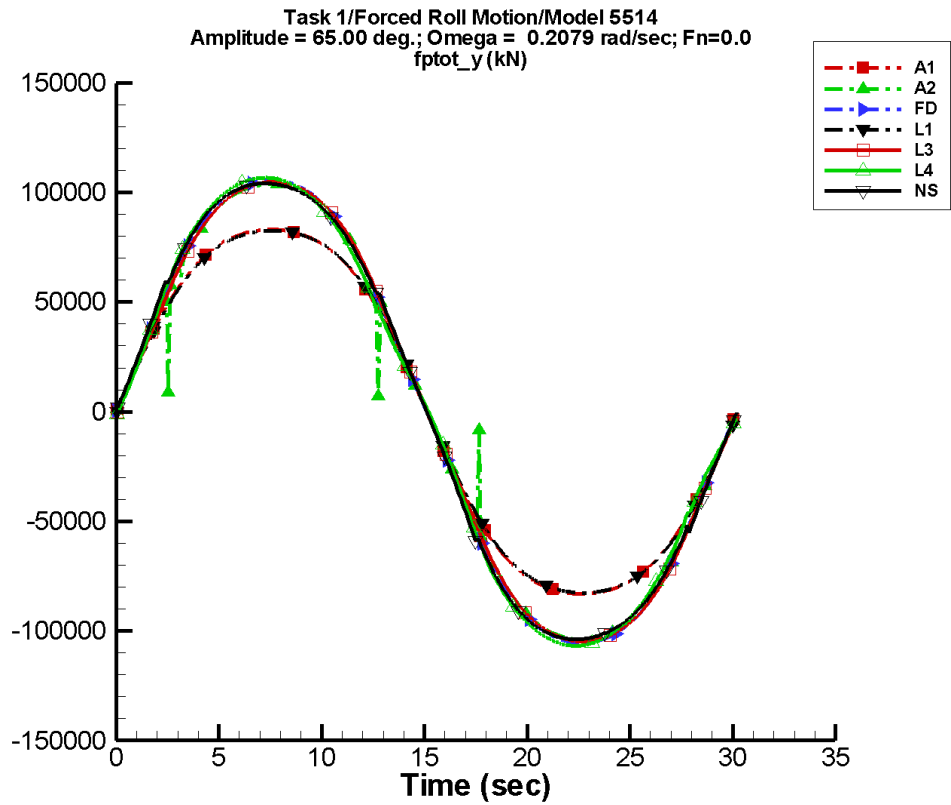
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	45.2	6.65E+04	0	278.	59
A2	0.147	7.57E+04	0	563.	-72
FD	-42.4	7.74E+04	0	204.	-112
L1	108.	6.63E+04	-1	427.	87
L3	-80.8	7.69E+04	-1	309.	-94
L4	-199.	7.73E+04	1	710.	-57
NF	—	—	—	—	—
NS	2.89	7.71E+04	0	1.95	-111

Table D–128. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.47E+04	6.47E+04	-6.47E+04	6.48E+04
A2	-7.71E+04	7.74E+04	-7.77E+04	7.71E+04
FD	-7.80E+04	7.80E+04	-7.79E+04	7.79E+04
L1	-6.45E+04	6.45E+04	-6.45E+04	6.45E+04
L3	-7.75E+04	7.75E+04	-7.75E+04	7.75E+04
L4	-7.81E+04	7.81E+04	-7.81E+04	7.81E+04
NF	—	—	—	—
NS	-7.72E+04	7.71E+04	-7.70E+04	7.70E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-65. Time history of  $F_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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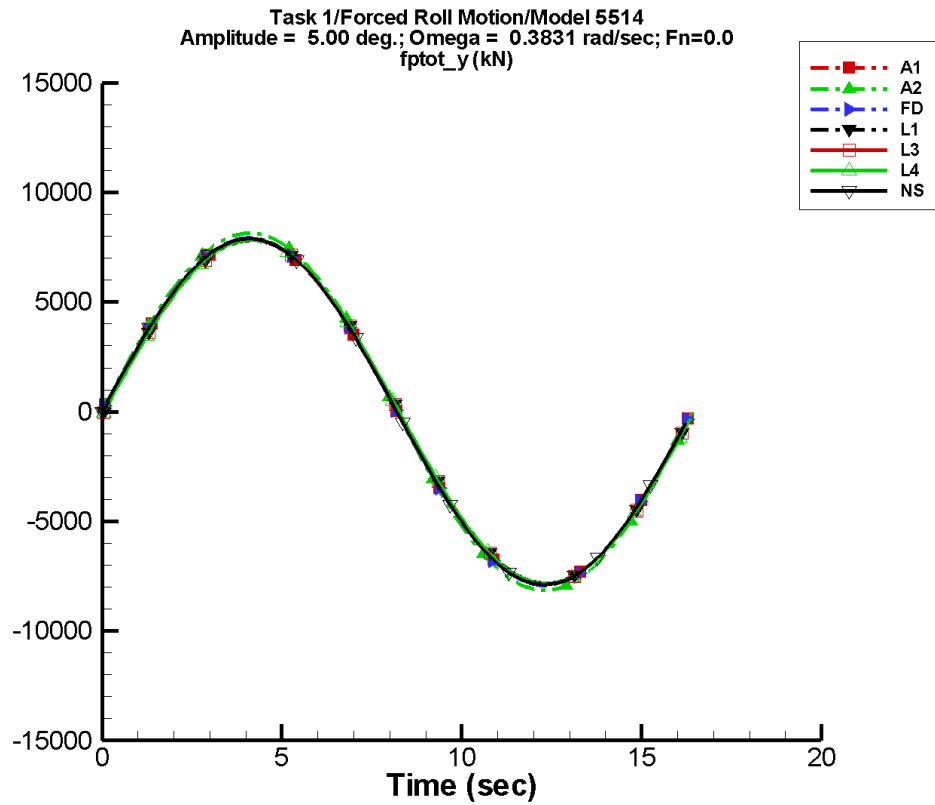
Table D–129. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	131.	8.80E+04	0	807.	59
A2	-94.4	1.07E+05	0	486.	4
FD	18.4	1.09E+05	0	221.	25
L1	314.	8.77E+04	-1	1.24E+03	87
L3	81.8	1.08E+05	-1	354.	90
L4	-130.	1.08E+05	1	546.	-28
NF	—	—	—	—	—
NS	97.4	1.08E+05	1	98.1	-85

Table D–130. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.31E+04	8.31E+04	-8.31E+04	8.32E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05
FD	-1.06E+05	1.06E+05	-1.05E+05	1.05E+05
L1	-8.26E+04	8.26E+04	-8.26E+04	8.26E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05
NF	—	—	—	—
NS	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05

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

Figure D-66. Time history of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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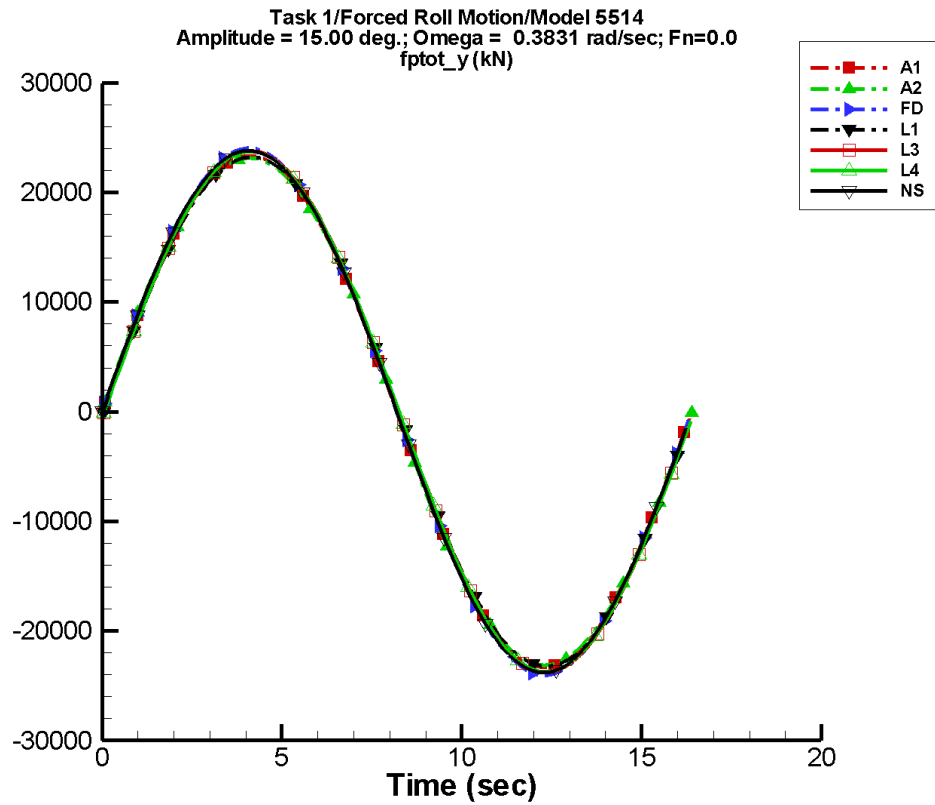
Table D–131. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.205	7.86E+03	0	0.194	126
A2	1.35	8.17E+03	0	6.62	61
FD	-2.49E-02	7.92E+03	0	7.06E-02	-65
L1	0.198	7.82E+03	-1	0.266	34
L3	-9.04E-02	7.84E+03	-1	0.272	-154
L4	-0.104	7.84E+03	-1	0.687	-16
NF	—	—	—	—	—
NS	-5.66E-03	7.89E+03	0	1.71E-02	-20

Table D–132. Minimum and maximum of of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.85E+03	7.86E+03	-7.82E+03	7.88E+03
A2	-8.14E+03	8.15E+03	-8.11E+03	8.17E+03
FD	-7.92E+03	7.92E+03	-7.89E+03	7.89E+03
L1	-7.82E+03	7.82E+03	-7.81E+03	7.81E+03
L3	-7.84E+03	7.84E+03	-7.83E+03	7.83E+03
L4	-7.84E+03	7.84E+03	-7.83E+03	7.83E+03
NF	—	—	—	—
NS	-7.89E+03	7.89E+03	-7.81E+03	7.81E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-67. Time history of  $F_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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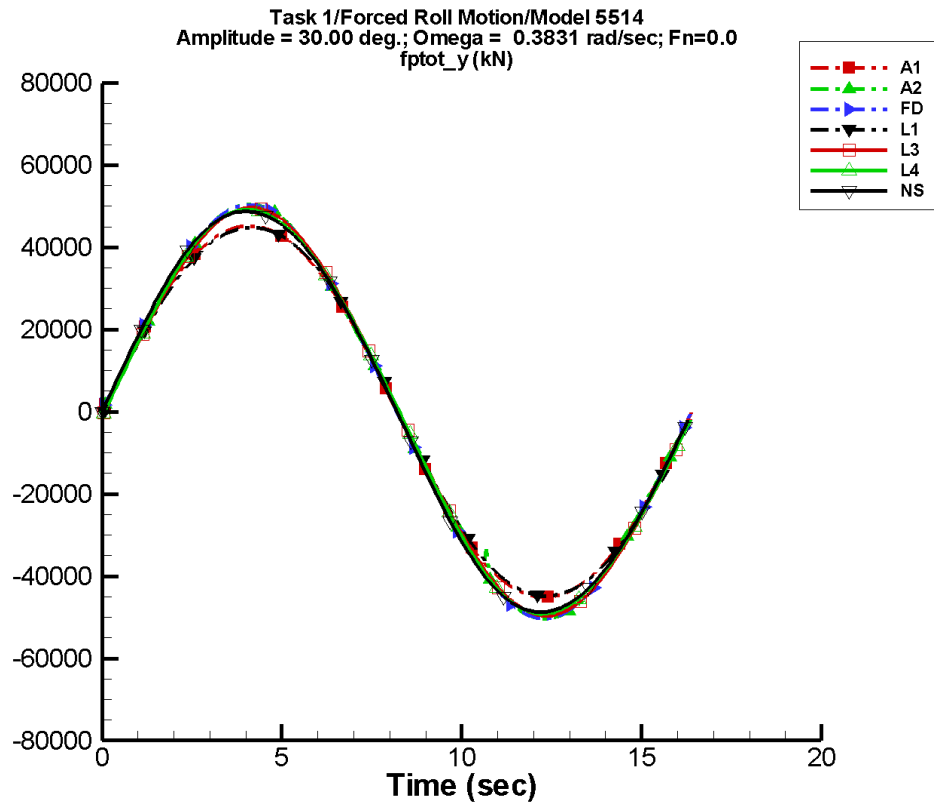
Table D–133. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.80	2.34E+04	0	9.99	64
A2	10.2	2.33E+04	0	50.7	66
FD	-2.23	2.40E+04	0	15.2	-104
L1	4.26	2.33E+04	-1	7.60	29
L3	-3.95	2.37E+04	-1	8.02	-153
L4	-4.64	2.37E+04	-1	8.89	-89
NF	—	—	—	—	—
NS	-9.76E-02	2.38E+04	0	3.14E-02	78

Table D–134. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.33E+04	2.33E+04	-2.32E+04	2.34E+04
A2	-2.31E+04	2.32E+04	-2.30E+04	2.32E+04
FD	-2.40E+04	2.40E+04	-2.39E+04	2.39E+04
L1	-2.32E+04	2.32E+04	-2.32E+04	2.32E+04
L3	-2.38E+04	2.38E+04	-2.37E+04	2.37E+04
L4	-2.37E+04	2.37E+04	-2.37E+04	2.37E+04
NF	—	—	—	—
NS	-2.38E+04	2.38E+04	-2.36E+04	2.36E+04

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-68. Time history of  $F_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

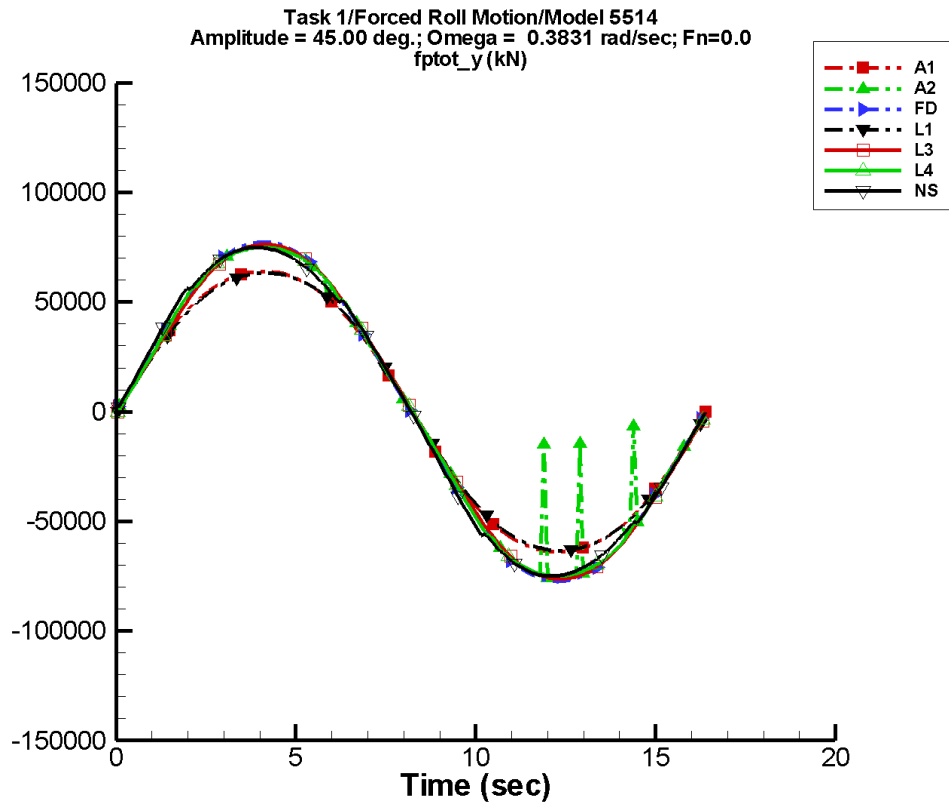
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	11.5	4.56E+04	0	84.7	61
A2	17.8	4.92E+04	0	168.	-107
FD	-22.0	4.96E+04	0	150.	-104
L1	32.3	4.54E+04	-1	60.5	29
L3	-40.4	4.89E+04	-1	78.2	-153
L4	-48.2	4.87E+04	-1	85.0	-110
NF	—	—	—	—	—
NS	-0.832	4.88E+04	0	0.694	130

Table D–136. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.51E+04	4.52E+04	-4.50E+04	4.53E+04
A2	-5.03E+04	5.03E+04	-5.01E+04	5.05E+04
FD	-5.03E+04	5.03E+04	-5.01E+04	5.01E+04
L1	-4.48E+04	4.48E+04	-4.48E+04	4.48E+04
L3	-4.96E+04	4.96E+04	-4.96E+04	4.96E+04
L4	-4.92E+04	4.92E+04	-4.91E+04	4.91E+04
NF	—	—	—	—
NS	-4.87E+04	4.87E+04	-4.86E+04	4.86E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-69. Time history of  $F_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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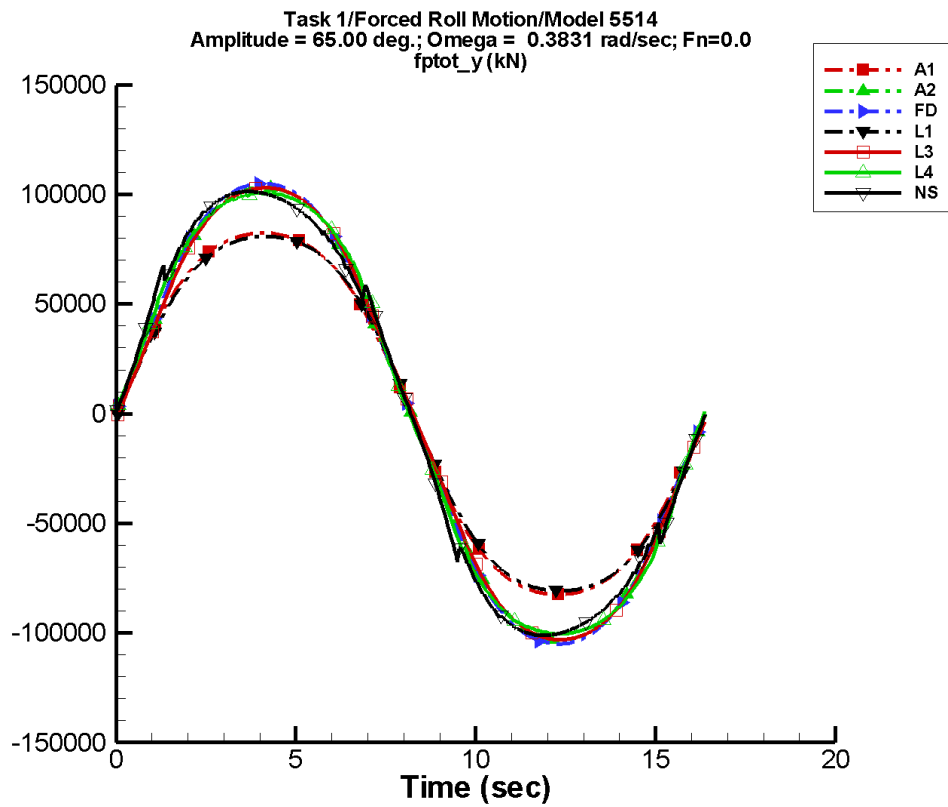
Table D–137. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	36.6	6.56E+04	0	284.	61
A2	1.00E+03	7.39E+04	0	1.60E+03	-114
FD	-34.2	7.68E+04	0	267.	-108
L1	106.	6.52E+04	-1	200.	29
L3	-85.0	7.56E+04	-1	164.	-145
L4	-55.9	7.55E+04	-1	199.	-91
NF	—	—	—	—	—
NS	-2.66	7.56E+04	1	2.40	138

Table D–138. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.40E+04	6.40E+04	-6.38E+04	6.42E+04
A2	-7.63E+04	7.64E+04	-7.12E+04	7.66E+04
FD	-7.74E+04	7.74E+04	-7.71E+04	7.71E+04
L1	-6.33E+04	6.33E+04	-6.32E+04	6.32E+04
L3	-7.63E+04	7.63E+04	-7.62E+04	7.62E+04
L4	-7.49E+04	7.49E+04	-7.48E+04	7.48E+04
NF	—	—	—	—
NS	-7.50E+04	7.50E+04	-7.49E+04	7.49E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-70. Time history of  $F_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

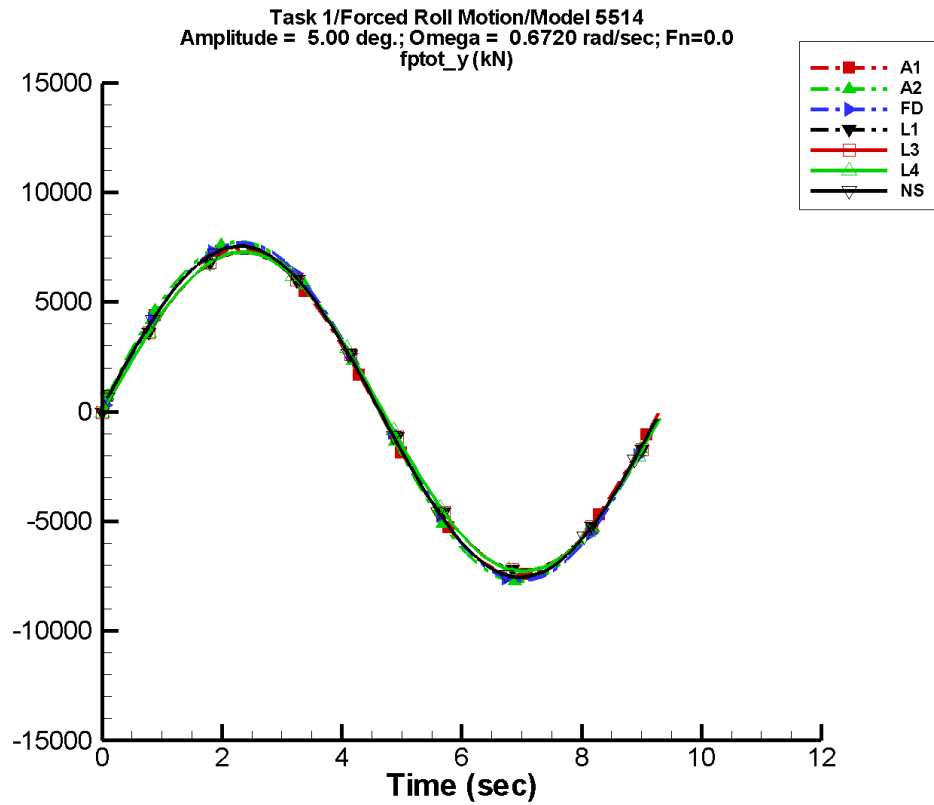
Table D–139. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	105.	8.71E+04	0	826.	61
A2	-25.9	1.06E+05	0	279.	47
FD	43.7	1.08E+05	0	280.	84
L1	306.	8.62E+04	-1	582.	29
L3	62.3	1.06E+05	-1	169.	-14
L4	299.	1.07E+05	0	646.	11
NF	—	—	—	—	—
NS	68.5	1.06E+05	2	47.8	-70

Table D–140. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.24E+04	8.25E+04	-8.23E+04	8.28E+04
A2	-1.03E+05	1.03E+05	-1.03E+05	1.03E+05
FD	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L1	-8.09E+04	8.09E+04	-8.08E+04	8.08E+04
L3	-1.03E+05	1.03E+05	-1.03E+05	1.03E+05
L4	-1.01E+05	1.01E+05	-1.00E+05	1.00E+05
NF	—	—	—	—
NS	-1.01E+05	1.01E+05	-1.01E+05	1.01E+05

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-71. Time history of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

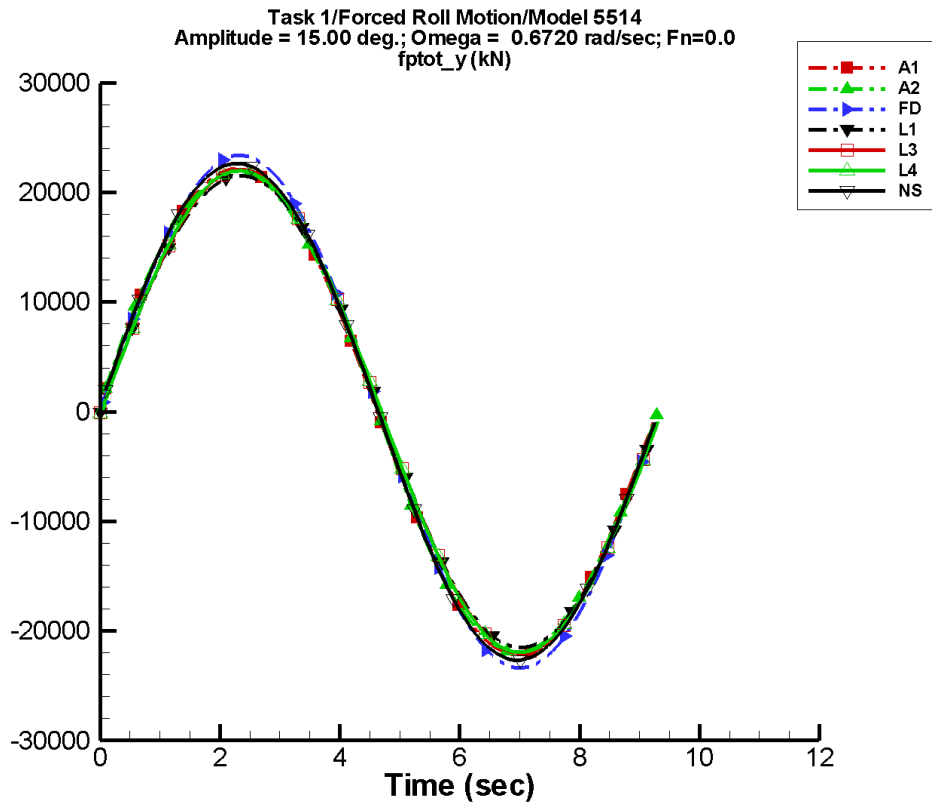
Table D–141. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-0.138	7.46E+03	2	1.16	57
A2	1.95	7.77E+03	2	5.95	44
FD	-6.30E-02	7.70E+03	0	7.49E-02	-6
L1	0.316	7.26E+03	-1	0.285	26
L3	2.59E-02	7.27E+03	-1	0.265	-152
L4	-4.61E-02	7.29E+03	-1	3.52	17
NF	—	—	—	—	—
NS	0.273	7.55E+03	1	0.294	-21

Table D–142. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.45E+03	7.45E+03	-7.37E+03	7.37E+03
A2	-7.74E+03	7.74E+03	-7.65E+03	7.65E+03
FD	-7.70E+03	7.70E+03	-7.66E+03	7.61E+03
L1	-7.26E+03	7.26E+03	-7.23E+03	7.23E+03
L3	-7.27E+03	7.27E+03	-7.24E+03	7.24E+03
L4	-7.27E+03	7.27E+03	-7.24E+03	7.25E+03
NF	—	—	—	—
NS	-7.54E+03	7.55E+03	-7.47E+03	7.47E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-72. Time history of  $F_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

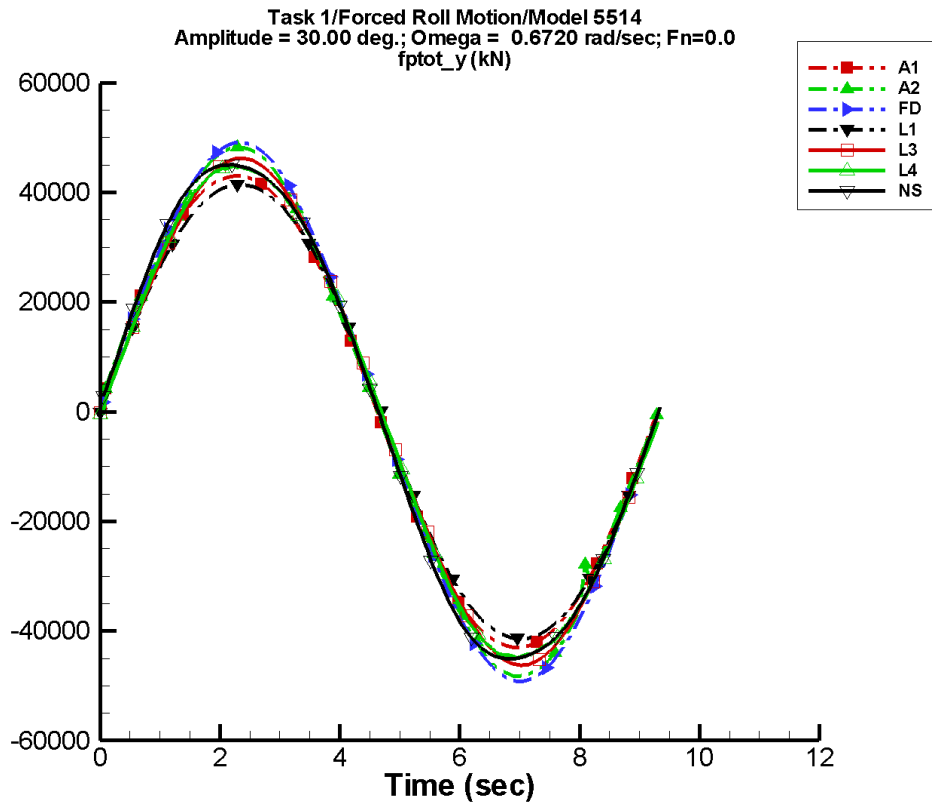
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.91	2.22E+04	2	9.34	54
A2	13.6	2.21E+04	2	43.0	55
FD	-6.22	2.33E+04	0	11.5	-34
L1	4.65	2.16E+04	0	7.85	25
L3	-3.83	2.20E+04	-1	8.25	-157
L4	3.75	2.20E+04	-1	23.3	-40
NF	—	—	—	—	—
NS	0.490	2.27E+04	1	0.786	-4

Table D–144. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.22E+04	2.22E+04	-2.19E+04	2.19E+04
A2	-2.20E+04	2.20E+04	-2.17E+04	2.17E+04
FD	-2.34E+04	2.34E+04	-2.33E+04	2.31E+04
L1	-2.15E+04	2.15E+04	-2.14E+04	2.14E+04
L3	-2.21E+04	2.21E+04	-2.20E+04	2.20E+04
L4	-2.19E+04	2.20E+04	-2.19E+04	2.19E+04
NF	—	—	—	—
NS	-2.27E+04	2.27E+04	-2.24E+04	2.24E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-73. Time history of  $F_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

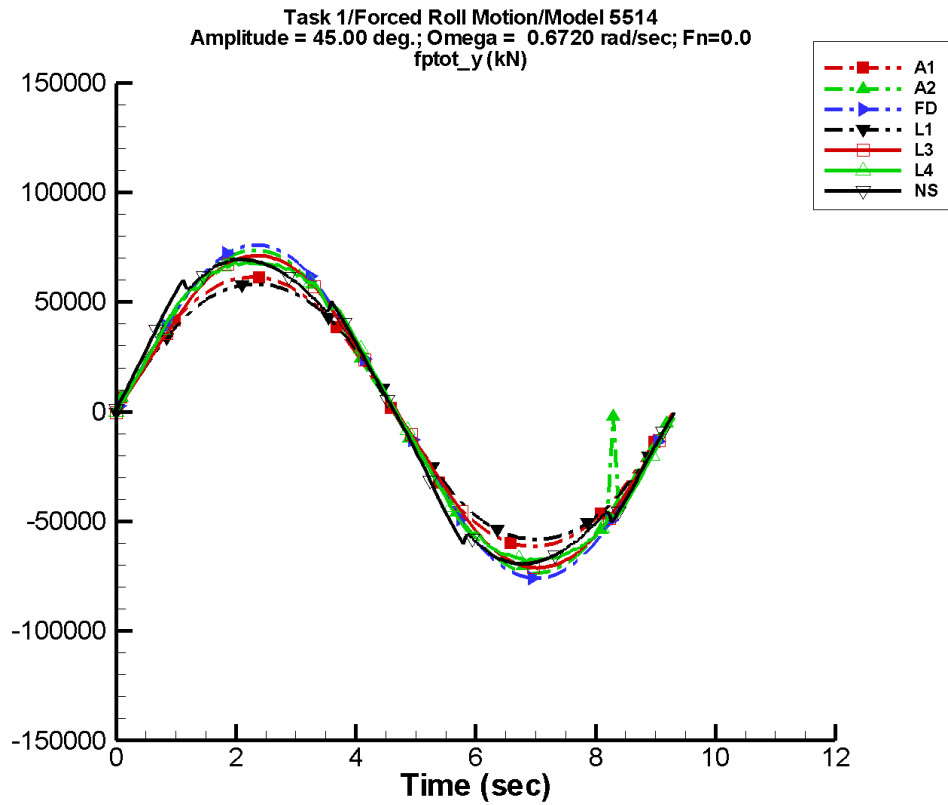
Table D–145. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	19.3	4.35E+04	2	57.7	53
A2	8.67	4.69E+04	2	268.	-165
FD	-59.8	4.84E+04	0	112.	-34
L1	33.8	4.20E+04	0	62.1	25
L3	-41.3	4.55E+04	-1	80.5	-157
L4	-19.2	4.50E+04	0	114.	-52
NF	—	—	—	—	—
NS	-1.92	4.62E+04	2	2.77	56

Table D–146. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.30E+04	4.30E+04	-4.26E+04	4.26E+04
A2	-4.82E+04	4.82E+04	-4.77E+04	4.76E+04
FD	-4.92E+04	4.92E+04	-4.88E+04	4.85E+04
L1	-4.14E+04	4.14E+04	-4.13E+04	4.13E+04
L3	-4.62E+04	4.63E+04	-4.60E+04	4.60E+04
L4	-4.49E+04	4.48E+04	-4.45E+04	4.45E+04
NF	—	—	—	—
NS	-4.51E+04	4.51E+04	-4.50E+04	4.50E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-74. Time history of  $F_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

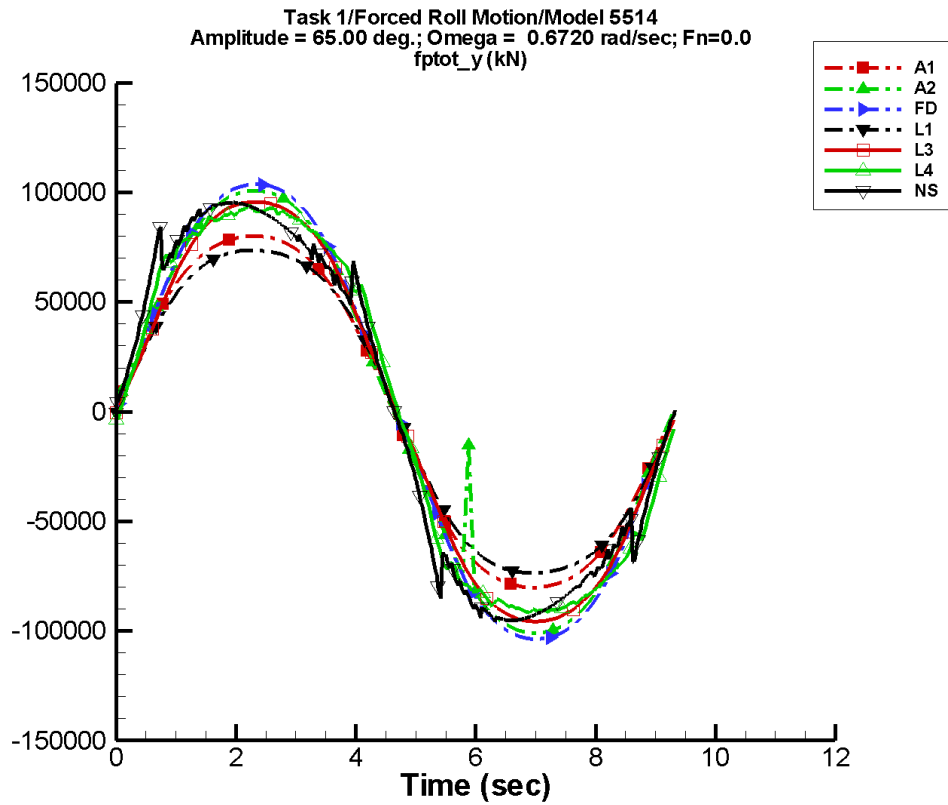
Table D–147. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	66.5	6.29E+04	2	182.	53
A2	430.	7.22E+04	2	1.02E+03	-172
FD	-104.	7.53E+04	0	213.	-46
L1	110.	6.01E+04	0	206.	25
L3	-72.2	7.05E+04	-1	157.	-137
L4	197.	7.07E+04	0	420.	-35
NF	—	—	—	—	—
NS	-9.64	7.13E+04	3	6.96	53

Table D–148. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.14E+04	6.14E+04	-6.08E+04	6.08E+04
A2	-7.37E+04	7.37E+04	-7.25E+04	7.28E+04
FD	-7.60E+04	7.60E+04	-7.56E+04	7.51E+04
L1	-5.82E+04	5.82E+04	-5.80E+04	5.80E+04
L3	-7.12E+04	7.12E+04	-7.09E+04	7.09E+04
L4	-6.82E+04	6.81E+04	-6.74E+04	6.76E+04
NF	—	—	—	—
NS	-6.95E+04	6.95E+04	-6.94E+04	6.94E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-75. Time history of  $F_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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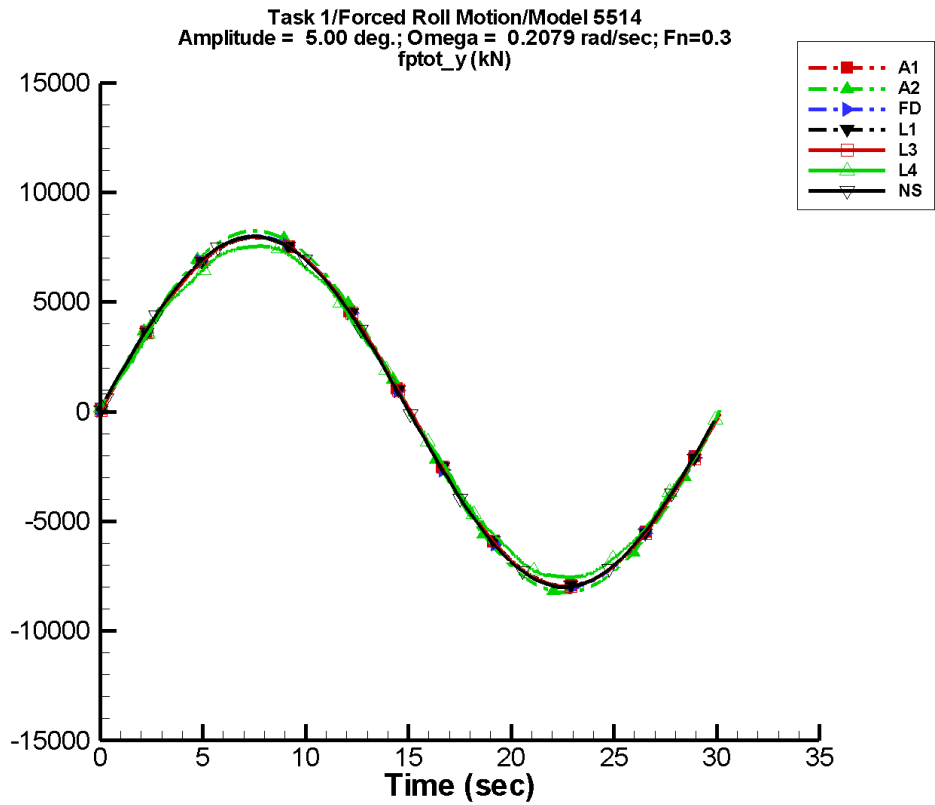
Table D–149. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	197.	8.45E+04	2	519.	53
A2	641.	1.02E+05	1	1.34E+03	-2
FD	80.6	1.06E+05	0	181.	-171
L1	315.	7.89E+04	0	595.	26
L3	97.8	9.89E+04	-1	248.	-22
L4	801.	1.02E+05	0	1.32E+03	-1
NF	—	—	—	—	—
NS	25.5	1.01E+05	4	47.8	-9

Table D–150. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+04	8.02E+04	-7.97E+04	7.97E+04
A2	-1.01E+05	1.01E+05	-1.01E+05	1.00E+05
FD	-1.04E+05	1.04E+05	-1.04E+05	1.03E+05
L1	-7.36E+04	7.36E+04	-7.34E+04	7.34E+04
L3	-9.57E+04	9.57E+04	-9.55E+04	9.55E+04
L4	-9.15E+04	9.45E+04	-9.09E+04	9.22E+04
NF	—	—	—	—
NS	-9.61E+04	9.55E+04	-9.53E+04	9.55E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-76. Time history of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

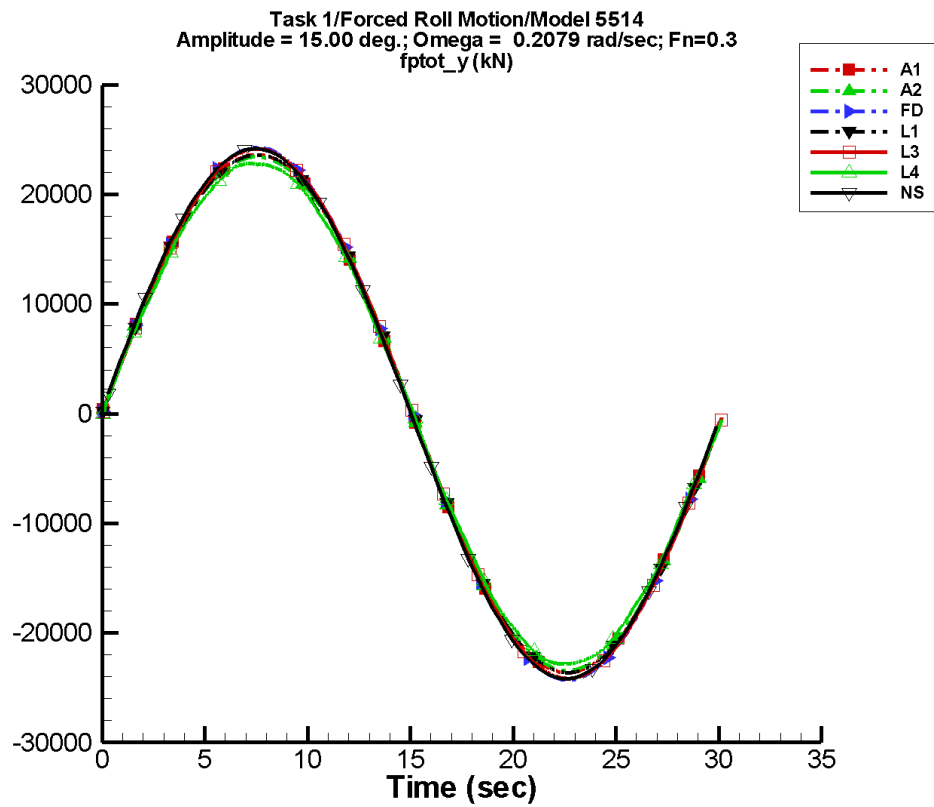
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.108	7.96E+03	0	0.379	70
A2	1.35	8.27E+03	0	6.71	62
FD	-5.82E-03	8.01E+03	0	4.08E-02	160
L1	0.119	7.95E+03	0	0.609	87
L3	-0.187	7.97E+03	0	0.531	-93
L4	-4.88	7.57E+03	0	2.10	136
NF	—	—	—	—	—
NS	4.93E-03	7.99E+03	1	2.50E-03	171

Table D–152. Minimum and maximum of of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.96E+03	7.96E+03	-7.95E+03	7.96E+03
A2	-8.25E+03	8.24E+03	-8.24E+03	8.25E+03
FD	-8.01E+03	8.01E+03	-8.00E+03	8.00E+03
L1	-7.95E+03	7.95E+03	-7.95E+03	7.95E+03
L3	-7.97E+03	7.97E+03	-7.97E+03	7.97E+03
L4	-7.54E+03	7.55E+03	-7.54E+03	7.55E+03
NF	—	—	—	—
NS	-7.99E+03	7.99E+03	-7.91E+03	7.91E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-77. Time history of  $F_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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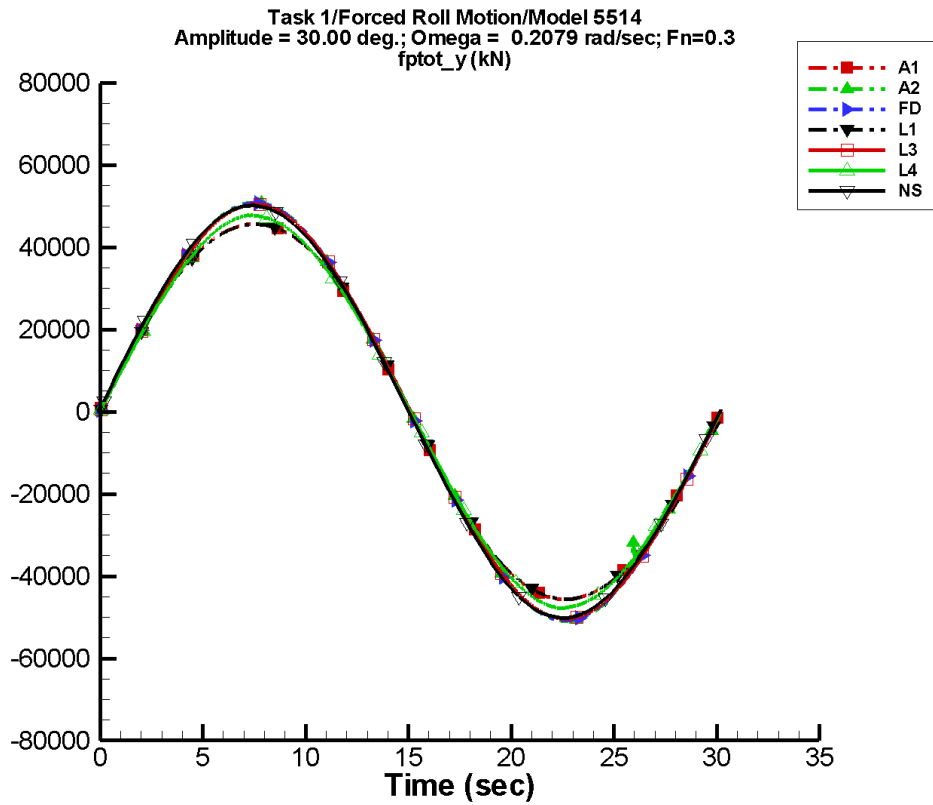
Table D–153. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.83	2.37E+04	0	10.6	61
A2	10.4	2.36E+04	0	50.8	67
FD	-2.14	2.42E+04	0	10.8	-124
L1	4.12	2.37E+04	0	16.4	87
L3	-4.38	2.41E+04	0	17.1	-93
L4	-12.7	2.29E+04	0	12.3	-51
NF	—	—	—	—	—
NS	6.05E-02	2.41E+04	1	5.02E-02	-140

Table D–154. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.36E+04	2.36E+04	-2.36E+04	2.36E+04
A2	-2.34E+04	2.34E+04	-2.34E+04	2.34E+04
FD	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
L1	-2.36E+04	2.36E+04	-2.36E+04	2.36E+04
L3	-2.42E+04	2.42E+04	-2.41E+04	2.41E+04
L4	-2.28E+04	2.28E+04	-2.28E+04	2.28E+04
NF	—	—	—	—
NS	-2.42E+04	2.42E+04	-2.39E+04	2.39E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-78. Time history of  $F_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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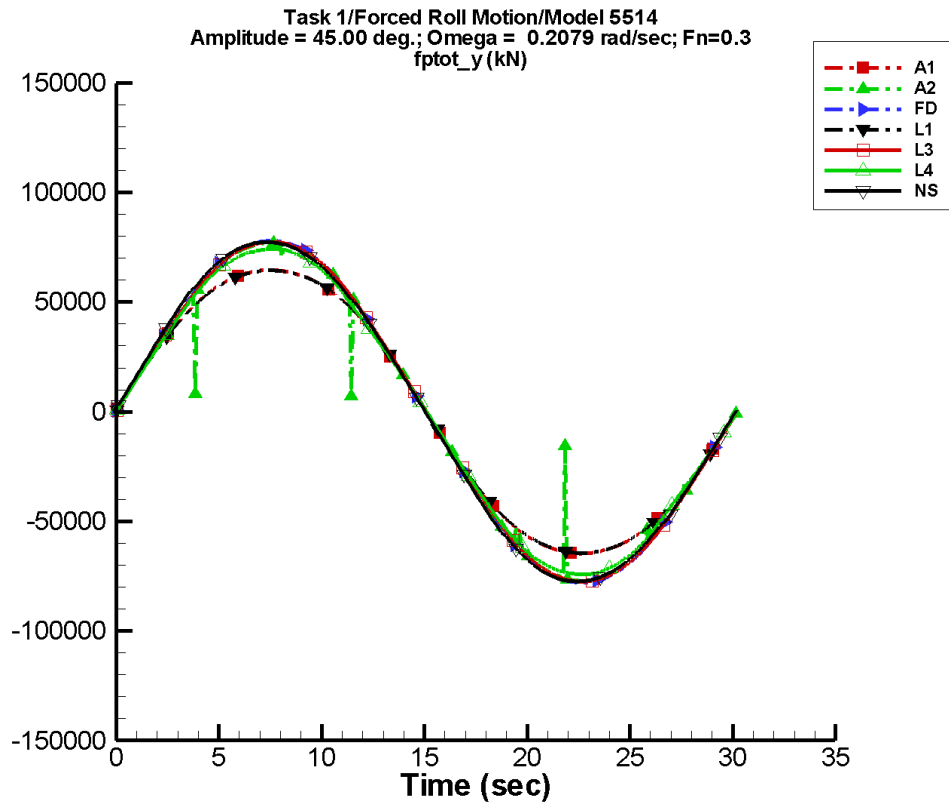
Table D–155. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	13.7	4.62E+04	0	83.9	60
A2	-1.16	4.98E+04	0	203.	-136
FD	-21.1	5.00E+04	0	107.	-123
L1	32.7	4.61E+04	0	129.	87
L3	-42.3	4.97E+04	0	167.	-93
L4	-50.9	4.71E+04	0	144.	-70
NF	—	—	—	—	—
NS	0.692	4.97E+04	1	0.611	-129

Table D–156. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.57E+04	4.57E+04	-4.56E+04	4.57E+04
A2	-5.09E+04	5.09E+04	-5.08E+04	5.09E+04
FD	-5.08E+04	5.08E+04	-5.07E+04	5.07E+04
L1	-4.56E+04	4.56E+04	-4.56E+04	4.56E+04
L3	-5.04E+04	5.04E+04	-5.04E+04	5.04E+04
L4	-4.79E+04	4.78E+04	-4.78E+04	4.77E+04
NF	—	—	—	—
NS	-5.02E+04	5.02E+04	-5.00E+04	5.00E+04

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

Figure D-79. Time history of  $F_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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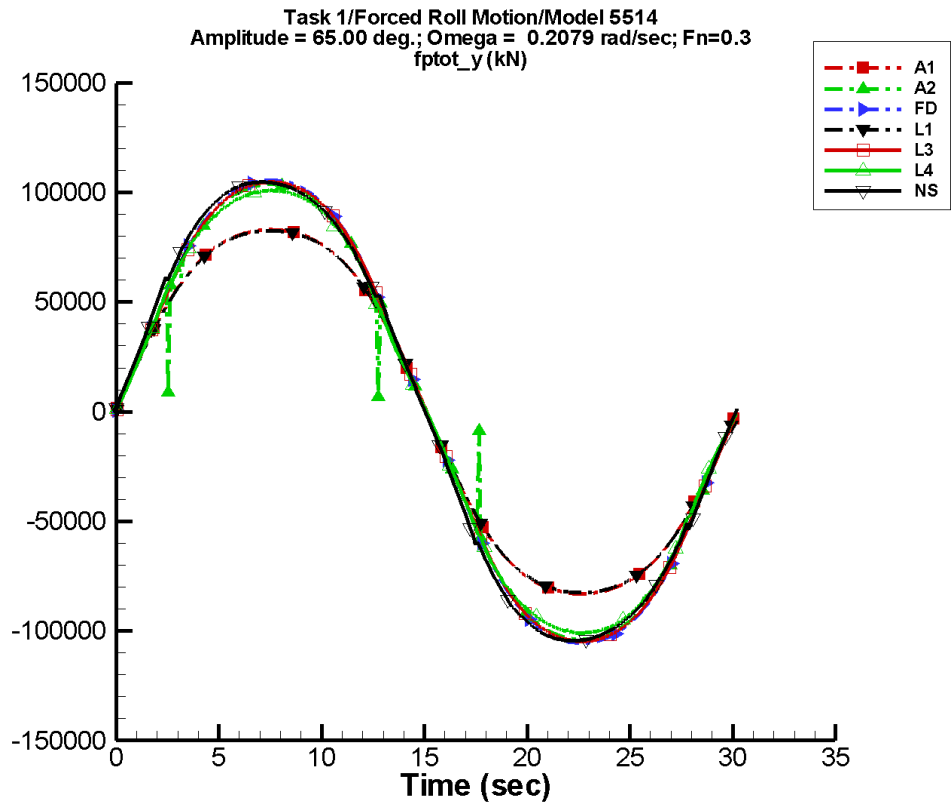
Table D–157. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	44.7	6.63E+04	0	278.	60
A2	-0.358	7.56E+04	0	560.	-72
FD	-42.4	7.74E+04	0	204.	-112
L1	108.	6.62E+04	0	427.	87
L3	-80.9	7.68E+04	0	309.	-94
L4	-109.	7.36E+04	1	395.	-78
NF	—	—	—	—	—
NS	2.41	7.72E+04	1	1.98	-134

Table D–158. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.47E+04	6.47E+04	-6.46E+04	6.47E+04
A2	-7.70E+04	7.74E+04	-7.76E+04	7.70E+04
FD	-7.80E+04	7.80E+04	-7.79E+04	7.79E+04
L1	-6.45E+04	6.45E+04	-6.44E+04	6.44E+04
L3	-7.74E+04	7.74E+04	-7.74E+04	7.74E+04
L4	-7.43E+04	7.43E+04	-7.42E+04	7.42E+04
NF	—	—	—	—
NS	-7.74E+04	7.74E+04	-7.73E+04	7.73E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-80. Time history of  $F_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

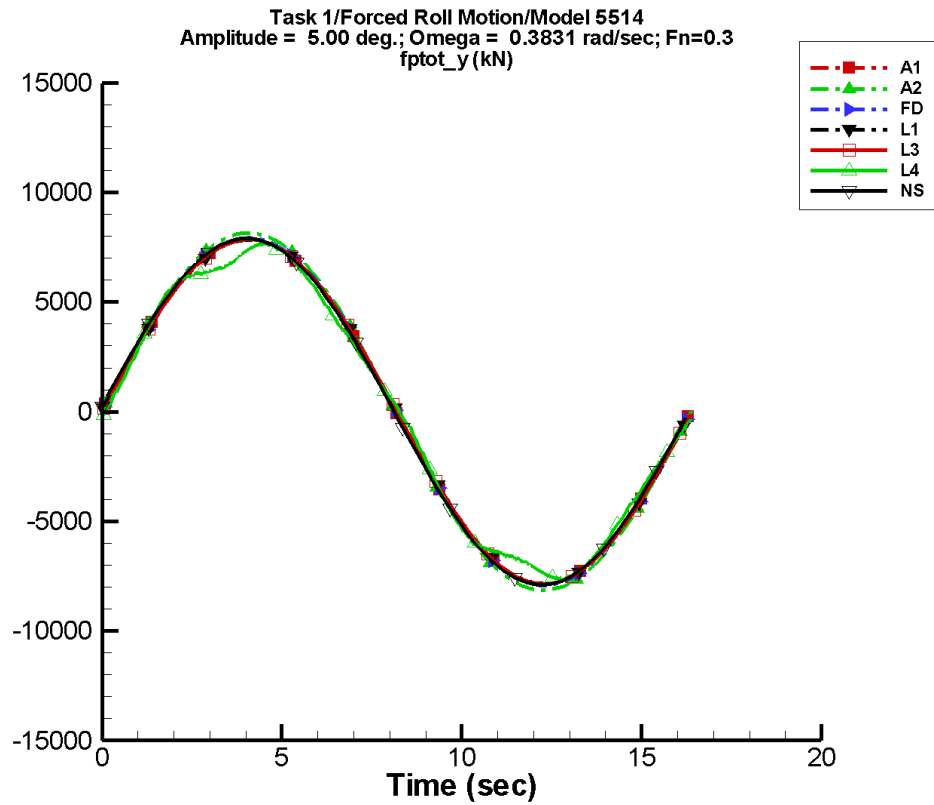
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	129.	8.79E+04	1	806.	60
A2	-96.1	1.07E+05	0	479.	4
FD	18.4	1.09E+05	0	221.	25
L1	314.	8.76E+04	0	1.24E+03	87
L3	81.7	1.08E+05	0	354.	90
L4	92.5	1.04E+05	1	352.	95
NF	—	—	—	—	—
NS	78.7	1.09E+05	2	69.4	-92

Table D–160. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.30E+04	8.30E+04	-8.30E+04	8.32E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05
FD	-1.06E+05	1.06E+05	-1.05E+05	1.05E+05
L1	-8.25E+04	8.25E+04	-8.25E+04	8.25E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.01E+05	1.01E+05	-1.01E+05	1.01E+05
NF	—	—	—	—
NS	-1.04E+05	1.05E+05	-1.04E+05	1.05E+05



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-81. Time history of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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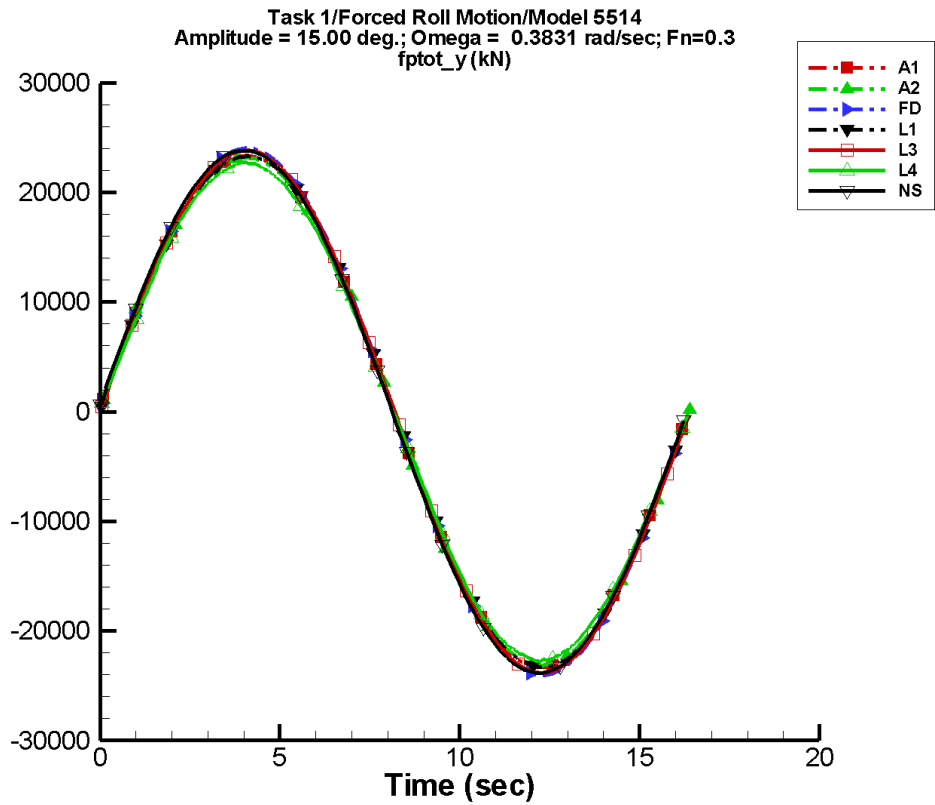
Table D–161. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.310	7.86E+03	1	0.171	125
A2	1.45	8.18E+03	1	6.61	61
FD	-2.47E-02	7.92E+03	0	7.10E-02	-65
L1	0.169	7.85E+03	0	0.286	28
L3	-0.137	7.86E+03	0	0.250	-147
L4	0.537	7.49E+03	1	41.8	-24
NF	—	—	—	—	—
NS	-1.38E-02	7.89E+03	2	2.77E-02	-53

Table D–162. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.85E+03	7.86E+03	-7.82E+03	7.89E+03
A2	-8.14E+03	8.15E+03	-8.11E+03	8.17E+03
FD	-7.92E+03	7.92E+03	-7.89E+03	7.89E+03
L1	-7.84E+03	7.84E+03	-7.83E+03	7.83E+03
L3	-7.86E+03	7.86E+03	-7.85E+03	7.85E+03
L4	-7.67E+03	7.65E+03	-7.59E+03	7.62E+03
NF	—	—	—	—
NS	-7.89E+03	7.89E+03	-7.81E+03	7.81E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-82. Time history of  $F_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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 at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	2.08	2.34E+04	1	10.2	65
A2	10.4	2.33E+04	1	50.9	66
FD	-2.23	2.40E+04	0	15.2	-104
L1	4.22	2.34E+04	0	7.67	28
L3	-4.00	2.38E+04	0	7.96	-152
L4	-15.8	2.26E+04	1	13.4	-103
NF	—	—	—	—	—
NS	-0.199	2.38E+04	2	4.19E-02	59

Table D–164. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.33E+04	2.33E+04	-2.32E+04	2.34E+04
A2	-2.31E+04	2.32E+04	-2.30E+04	2.32E+04
FD	-2.40E+04	2.40E+04	-2.39E+04	2.39E+04
L1	-2.33E+04	2.33E+04	-2.33E+04	2.33E+04
L3	-2.38E+04	2.38E+04	-2.38E+04	2.38E+04
L4	-2.28E+04	2.27E+04	-2.27E+04	2.27E+04
NF	—	—	—	—
NS	-2.38E+04	2.38E+04	-2.36E+04	2.36E+04

TASK 1/ROLL MOTION/MODEL 5514

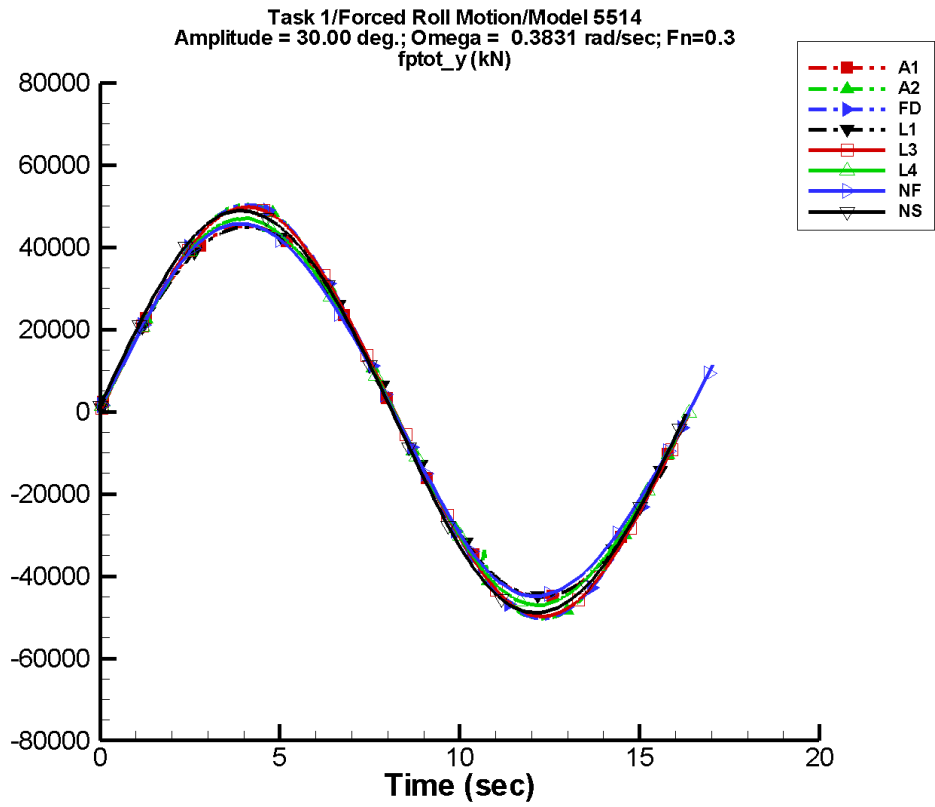


Figure D-83. Time history of  $F_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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 at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	11.8	4.56E+04	1	86.4	63
A2	18.0	4.93E+04	0	165.	-108
FD	-22.0	4.96E+04	0	150.	-104
L1	32.2	4.55E+04	0	60.6	28
L3	-40.5	4.90E+04	0	78.0	-153
L4	-37.3	4.65E+04	1	43.9	-110
NF	745.	4.43E+04	39	2.27E+03	-120
NS	-1.64	4.89E+04	2	0.984	110

Table D-166. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.51E+04	4.52E+04	-4.50E+04	4.53E+04
A2	-5.03E+04	5.04E+04	-5.01E+04	5.05E+04
FD	-5.03E+04	5.03E+04	-5.01E+04	5.01E+04
L1	-4.50E+04	4.50E+04	-4.49E+04	4.49E+04
L3	-4.98E+04	4.98E+04	-4.97E+04	4.97E+04
L4	-4.71E+04	4.71E+04	-4.70E+04	4.69E+04
NF	-4.49E+04	4.57E+04	-4.46E+04	4.54E+04
NS	-4.89E+04	4.89E+04	-4.87E+04	4.87E+04

TASK 1/ROLL MOTION/MODEL 5514

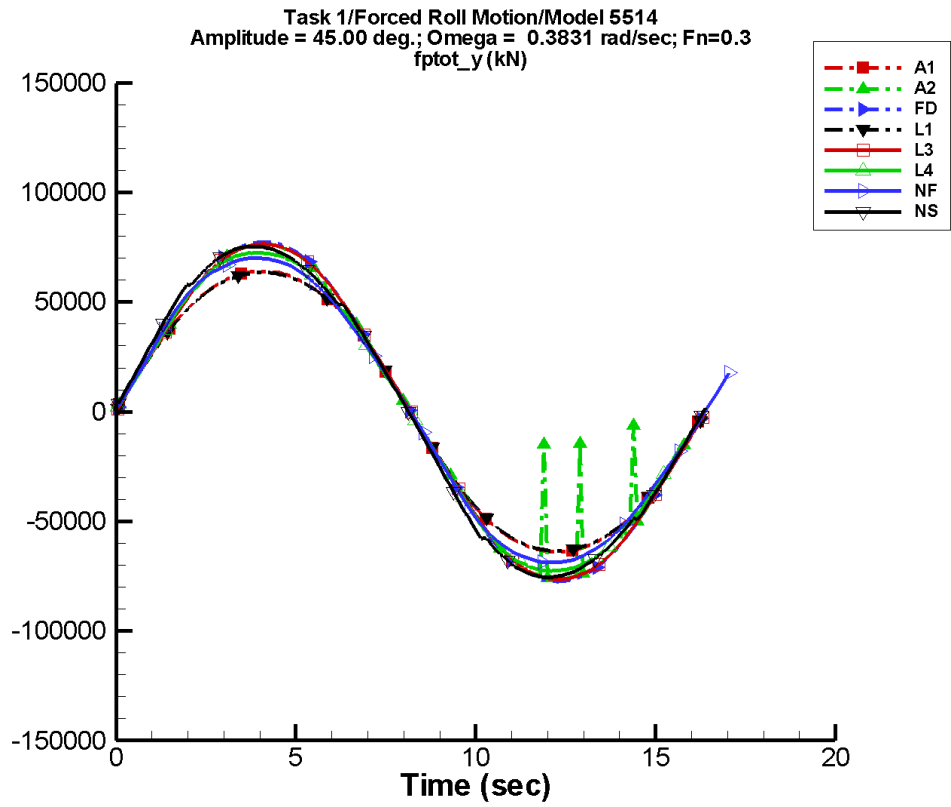


Figure D-84. Time history of  $F_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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 at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	36.1	6.56E+04	1	290.	63
A2	1.00E+03	7.39E+04	1	1.59E+03	-114
FD	-34.2	7.68E+04	0	267.	-108
L1	106.	6.54E+04	0	201.	29
L3	-85.1	7.58E+04	0	164.	-145
L4	-52.3	7.28E+04	1	194.	-104
NF	1.18E+03	6.91E+04	39	3.40E+03	-121
NS	-5.85	7.58E+04	3	3.91	111

Table D–168. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.40E+04	6.40E+04	-6.38E+04	6.42E+04
A2	-7.63E+04	7.64E+04	-7.12E+04	7.66E+04
FD	-7.74E+04	7.74E+04	-7.71E+04	7.71E+04
L1	-6.35E+04	6.35E+04	-6.34E+04	6.34E+04
L3	-7.65E+04	7.65E+04	-7.64E+04	7.64E+04
L4	-7.26E+04	7.25E+04	-7.25E+04	7.24E+04
NF	-6.88E+04	7.01E+04	-6.85E+04	6.97E+04
NS	-7.55E+04	7.55E+04	-7.54E+04	7.54E+04



TASK 1/ROLL MOTION/MODEL 5514

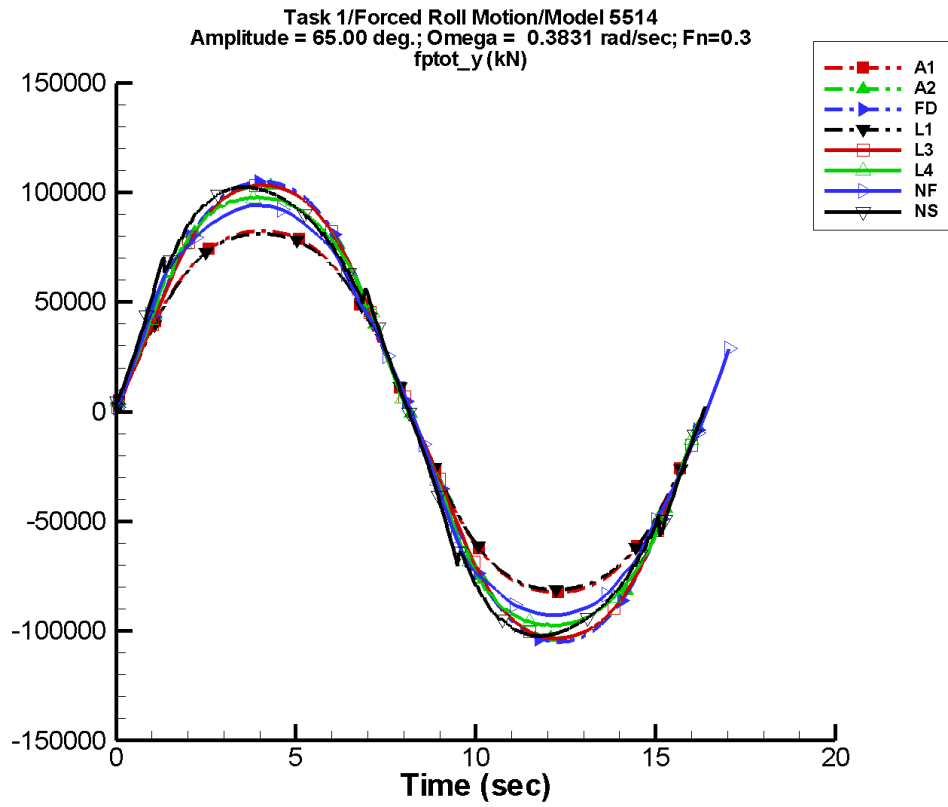


Figure D-85. Time history of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

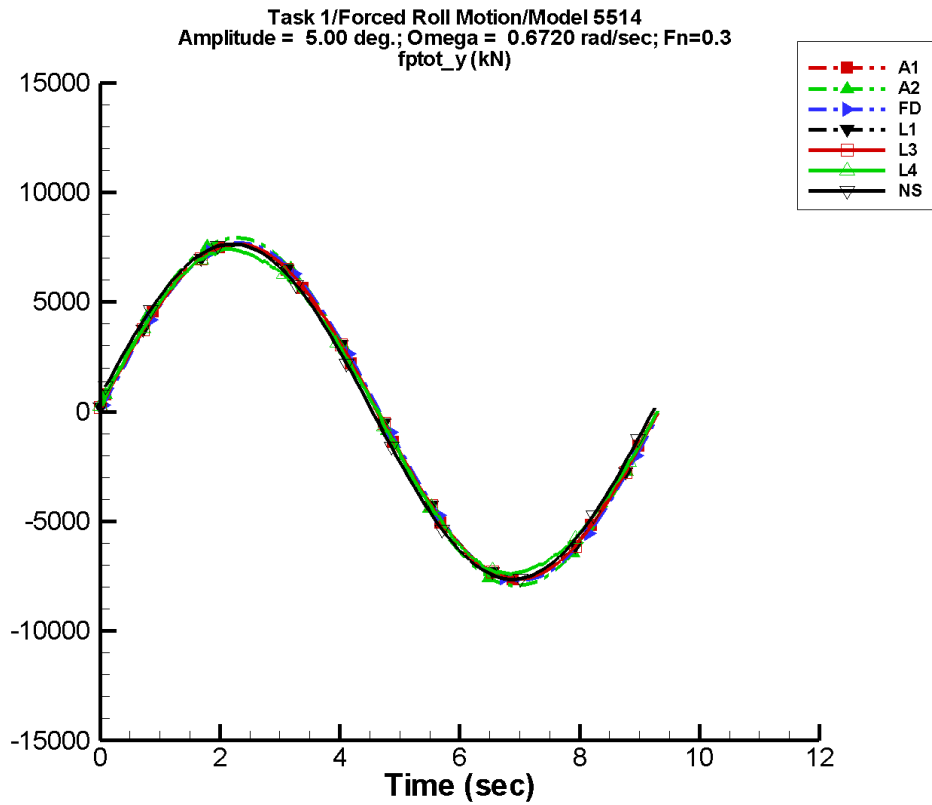
Table D–169. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	102.	8.71E+04	1	844.	63
A2	-28.5	1.06E+05	0	291.	53
FD	43.7	1.08E+05	0	280.	84
L1	306.	8.65E+04	1	582.	29
L3	62.2	1.07E+05	0	169.	-14
L4	295.	1.03E+05	2	528.	2
NF	1.59E+03	9.70E+04	40	4.39E+03	-132
NS	58.1	1.07E+05	3	37.1	-77

Table D–170. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.24E+04	8.25E+04	-8.23E+04	8.28E+04
A2	-1.03E+05	1.03E+05	-1.03E+05	1.04E+05
FD	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L1	-8.12E+04	8.12E+04	-8.11E+04	8.11E+04
L3	-1.03E+05	1.03E+05	-1.03E+05	1.03E+05
L4	-9.77E+04	9.78E+04	-9.74E+04	9.76E+04
NF	-9.28E+04	9.42E+04	-9.23E+04	9.38E+04
NS	-1.02E+05	1.03E+05	-1.02E+05	1.02E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-86. Time history of  $F_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

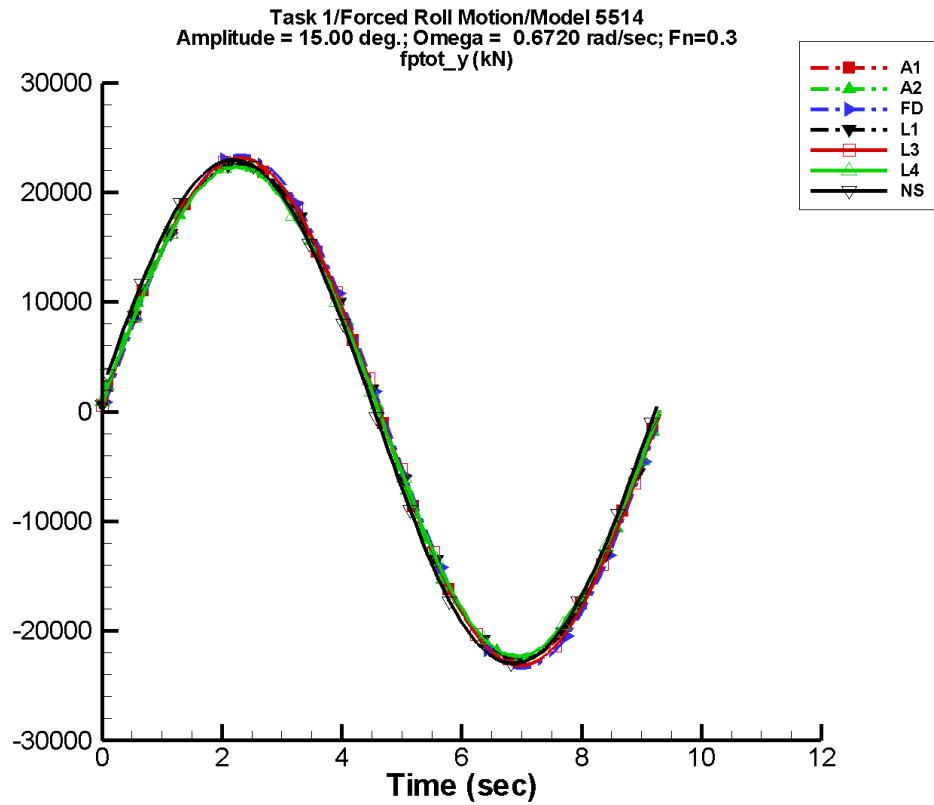
Table D–171. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.844	7.66E+03	2	2.36	91
A2	2.93	7.97E+03	2	6.61	57
FD	-6.32E-02	7.70E+03	0	7.46E-02	-6
L1	0.275	7.62E+03	1	0.291	26
L3	-3.21E-02	7.63E+03	1	0.261	-153
L4	4.12	7.40E+03	3	19.5	-10
NF	—	—	—	—	—
NS	0.294	7.65E+03	5	0.323	-22

Table D–172. Minimum and maximum of of  $F_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.65E+03	7.65E+03	-7.56E+03	7.56E+03
A2	-7.94E+03	7.93E+03	-7.85E+03	7.84E+03
FD	-7.70E+03	7.70E+03	-7.66E+03	7.61E+03
L1	-7.62E+03	7.62E+03	-7.58E+03	7.58E+03
L3	-7.63E+03	7.63E+03	-7.60E+03	7.60E+03
L4	-7.40E+03	7.42E+03	-7.35E+03	7.36E+03
NF	—	—	—	—
NS	-7.64E+03	7.64E+03	-7.57E+03	7.57E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-87. Time history of  $F_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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 at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.08	2.28E+04	2	12.8	72
A2	16.7	2.27E+04	2	46.0	61
FD	-6.22	2.33E+04	0	11.5	-34
L1	4.58	2.27E+04	1	7.87	25
L3	-3.93	2.31E+04	1	8.25	-157
L4	10.3	2.22E+04	2	37.1	-3
NF	—	—	—	—	—
NS	0.481	2.30E+04	5	0.845	-5

Table D–174. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.27E+04	2.27E+04	-2.25E+04	2.25E+04
A2	-2.25E+04	2.25E+04	-2.23E+04	2.23E+04
FD	-2.34E+04	2.34E+04	-2.33E+04	2.31E+04
L1	-2.26E+04	2.26E+04	-2.25E+04	2.25E+04
L3	-2.32E+04	2.32E+04	-2.31E+04	2.31E+04
L4	-2.23E+04	2.23E+04	-2.22E+04	2.22E+04
NF	—	—	—	—
NS	-2.30E+04	2.30E+04	-2.27E+04	2.27E+04

TASK 1/ROLL MOTION/MODEL 5514

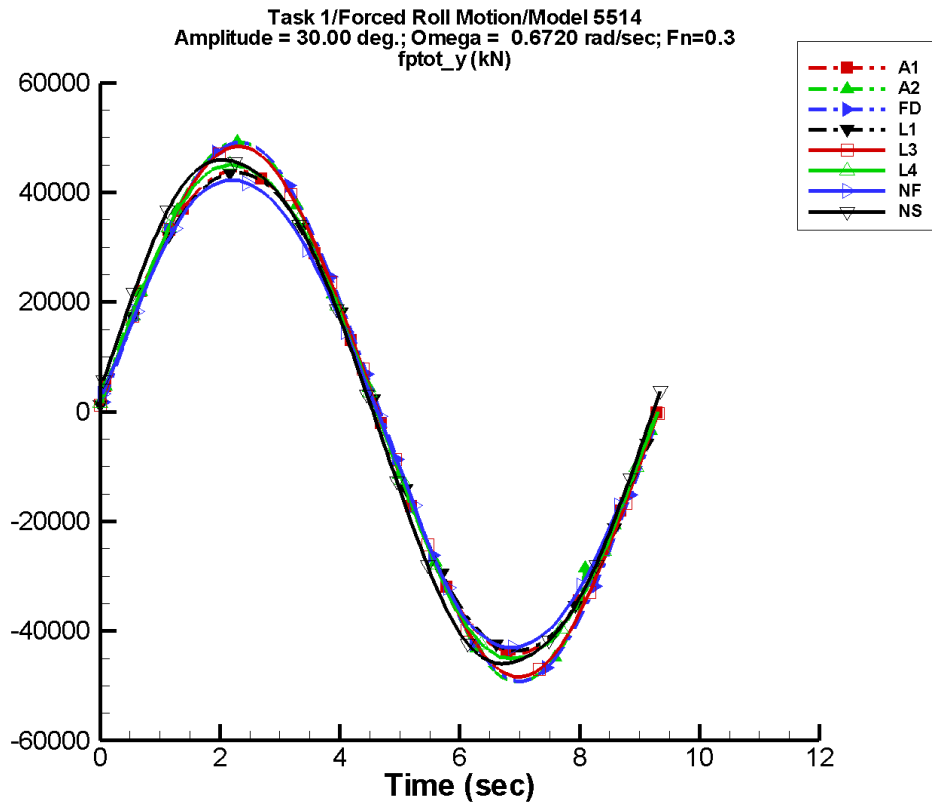


Figure D-88. Time history of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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 at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	27.0	4.46E+04	2	67.6	60
A2	16.4	4.80E+04	2	266.	-168
FD	-59.9	4.84E+04	0	112.	-34
L1	33.6	4.42E+04	2	62.2	25
L3	-41.4	4.77E+04	1	80.5	-157
L4	3.33	4.54E+04	2	138.	-23
NF	1.19E+03	4.32E+04	-47	1.54E+03	87
NS	-2.39	4.68E+04	6	3.40	52

Table D-176. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.41E+04	4.40E+04	-4.36E+04	4.36E+04
A2	-4.93E+04	4.92E+04	-4.87E+04	4.86E+04
FD	-4.92E+04	4.92E+04	-4.88E+04	4.85E+04
L1	-4.36E+04	4.36E+04	-4.34E+04	4.34E+04
L3	-4.84E+04	4.84E+04	-4.82E+04	4.82E+04
L4	-4.50E+04	4.51E+04	-4.49E+04	4.48E+04
NF	-4.39E+04	4.36E+04	-4.37E+04	4.33E+04
NS	-4.60E+04	4.60E+04	-4.58E+04	4.58E+04



TASK 1/ROLL MOTION/MODEL 5514

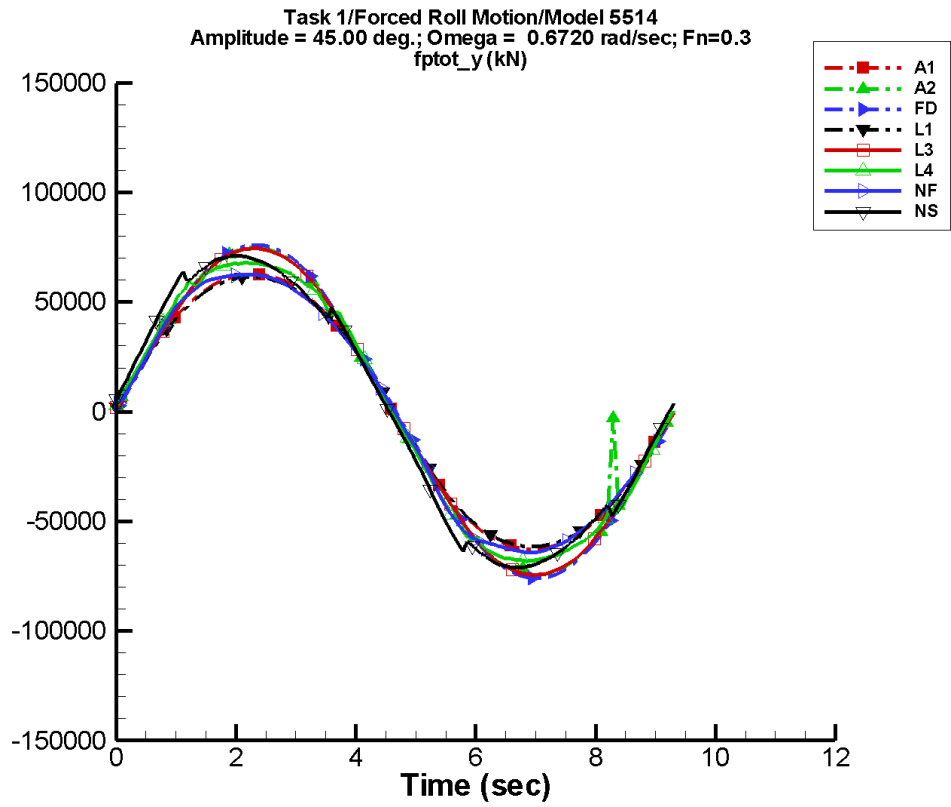


Figure D-89. Time history of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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 at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	81.5	6.43E+04	2	205.	56
A2	445.	7.37E+04	2	1.02E+03	-173
FD	-104.	7.53E+04	0	213.	-46
L1	109.	6.33E+04	2	206.	25
L3	-72.4	7.38E+04	1	157.	-137
L4	143.	7.10E+04	3	403.	-14
NF	1.65E+03	6.65E+04	-46	2.48E+03	89
NS	-10.6	7.24E+04	6	9.09	49

Table D–178. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.27E+04	6.27E+04	-6.21E+04	6.21E+04
A2	-7.50E+04	7.49E+04	-7.38E+04	7.41E+04
FD	-7.60E+04	7.60E+04	-7.56E+04	7.51E+04
L1	-6.15E+04	6.15E+04	-6.13E+04	6.13E+04
L3	-7.44E+04	7.44E+04	-7.41E+04	7.41E+04
L4	-6.84E+04	6.81E+04	-6.78E+04	6.77E+04
NF	-6.47E+04	6.47E+04	-6.45E+04	6.44E+04
NS	-7.12E+04	7.12E+04	-7.10E+04	7.10E+04

TASK 1/ROLL MOTION/MODEL 5514

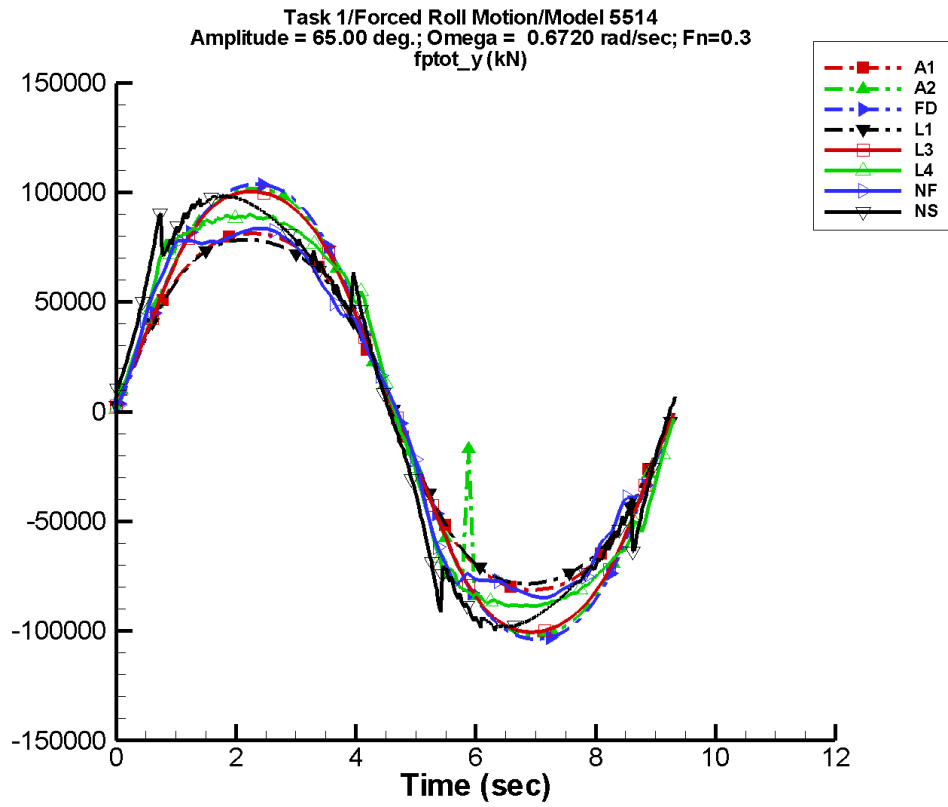


Figure D-90. Time history of  $F_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

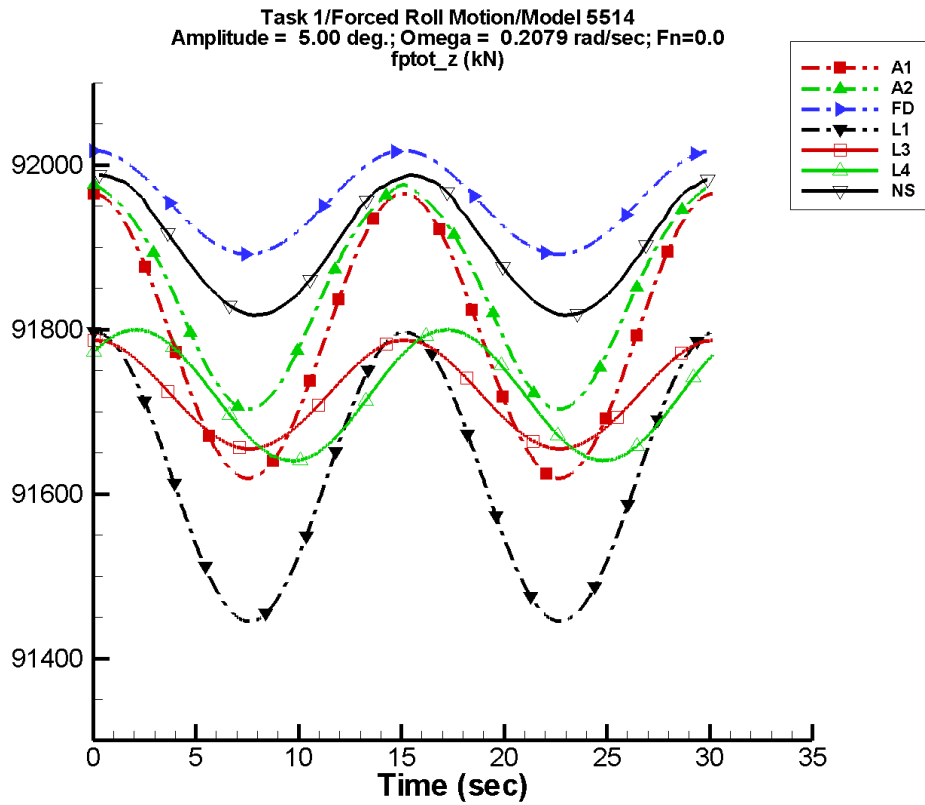
Table D–179. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	227.	8.59E+04	3	577.	55
A2	671.	1.04E+05	1	1.36E+03	0
FD	80.6	1.06E+05	0	181.	-171
L1	315.	8.37E+04	2	595.	26
L3	97.6	1.04E+05	1	248.	-22
L4	784.	9.95E+04	3	1.47E+03	10
NF	2.25E+03	9.03E+04	-44	3.15E+03	101
NS	19.1	1.03E+05	8	38.1	-2

Table D–180. Minimum and maximum of  $F_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.13E+04	8.13E+04	-8.08E+04	8.08E+04
A2	-1.02E+05	1.02E+05	-1.02E+05	1.01E+05
FD	-1.04E+05	1.04E+05	-1.04E+05	1.03E+05
L1	-7.85E+04	7.85E+04	-7.83E+04	7.83E+04
L3	-1.00E+05	1.00E+05	-1.00E+05	1.00E+05
L4	-8.87E+04	9.02E+04	-8.85E+04	8.91E+04
NF	-8.48E+04	8.55E+04	-8.41E+04	8.51E+04
NS	-1.00E+05	9.87E+04	-9.81E+04	9.83E+04

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

Figure D-91. Time history of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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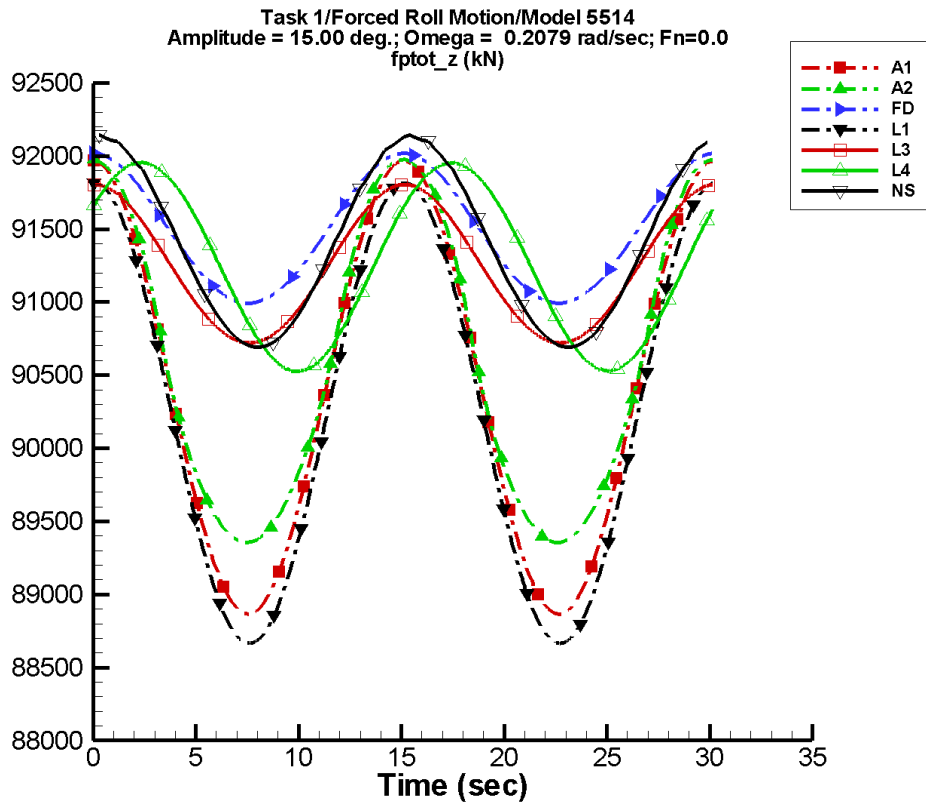
Table D–181. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	2.53E-02	96	173.	90
A2	9.18E+04	5.28E-02	41	133.	90
FD	9.20E+04	2.65E-02	-107	63.0	90
L1	9.16E+04	5.94E-02	-15	176.	89
L3	9.17E+04	3.01E-02	105	65.9	89
L4	9.17E+04	6.67E-02	-156	79.5	39
NF	—	—	—	—	—
NS	9.19E+04	6.09E-02	-9	85.5	81

Table D–182. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.16E+04	9.18E+04	9.16E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

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

Figure D-92. Time history of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

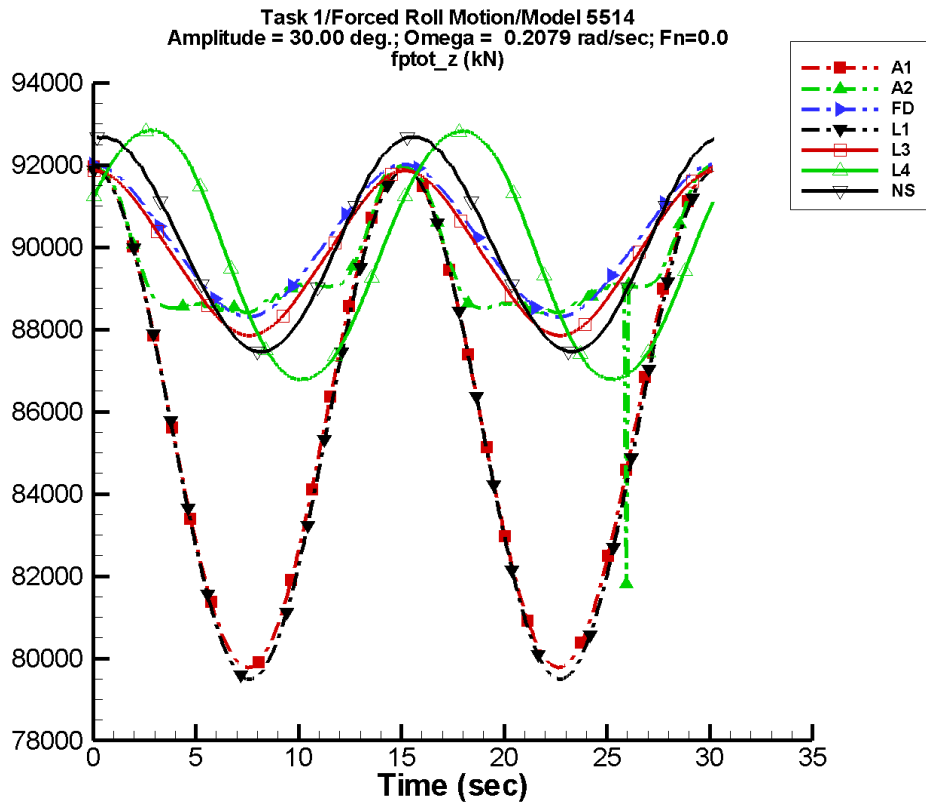
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	6.95E-02	-165	1.55E+03	90
A2	9.06E+04	1.69	-159	1.36E+03	91
FD	9.15E+04	0.299	-172	511.	90
L1	9.02E+04	0.135	111	1.57E+03	89
L3	9.13E+04	0.851	120	539.	89
L4	9.12E+04	0.767	-163	712.	34
NF	—	—	—	—	—
NS	9.14E+04	0.623	-13	723.	80

Table D–184. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.89E+04	9.20E+04	8.89E+04	9.20E+04
A2	8.94E+04	9.20E+04	8.94E+04	9.20E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.05E+04	9.20E+04	9.05E+04	9.20E+04
NF	—	—	—	—
NS	9.07E+04	9.21E+04	9.07E+04	9.21E+04



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

Figure D-93. Time history of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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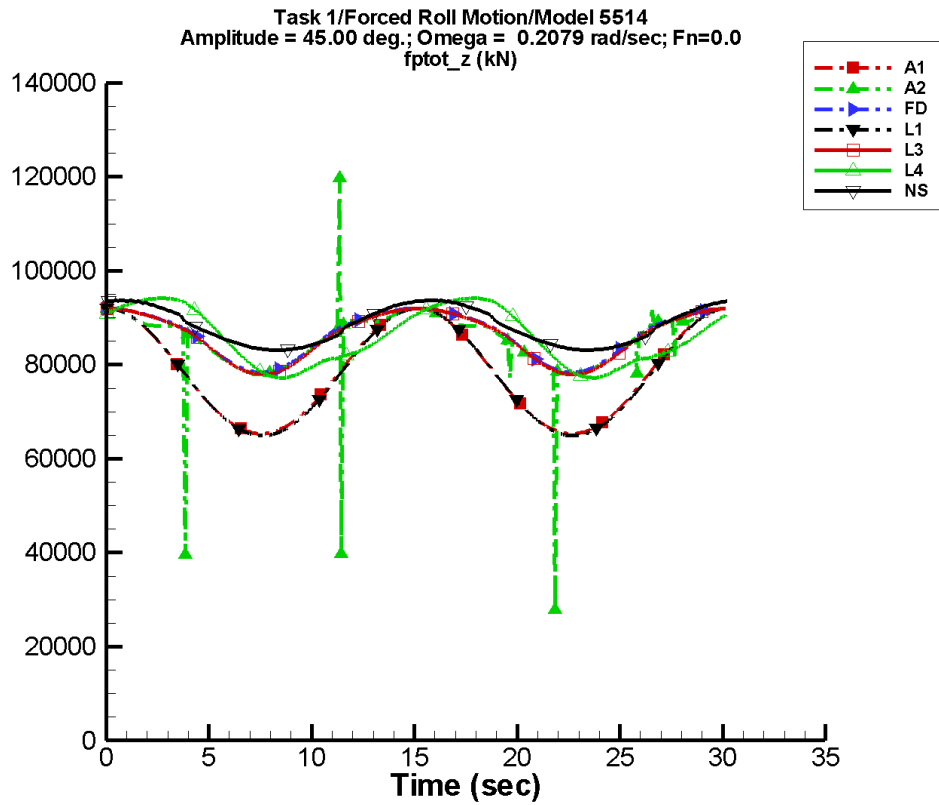
Table D–185. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	0.573	-166	6.10E+03	90
A2	8.95E+04	33.7	-50	1.45E+03	99
FD	9.01E+04	0.321	93	1.81E+03	90
L1	8.56E+04	2.58	119	6.19E+03	89
L3	8.98E+04	2.38	113	1.96E+03	89
L4	8.98E+04	6.97	-79	3.07E+03	26
NF	—	—	—	—	—
NS	9.01E+04	2.94	-14	2.61E+03	77

Table D–186. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.98E+04	9.20E+04	7.98E+04	9.20E+04
A2	8.18E+04	9.20E+04	8.81E+04	9.20E+04
FD	8.83E+04	9.20E+04	8.83E+04	9.20E+04
L1	7.95E+04	9.19E+04	7.95E+04	9.19E+04
L3	8.79E+04	9.19E+04	8.79E+04	9.19E+04
L4	8.68E+04	9.29E+04	8.68E+04	9.28E+04
NF	—	—	—	—
NS	8.74E+04	9.27E+04	8.75E+04	9.27E+04

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

Figure D-94. Time history of  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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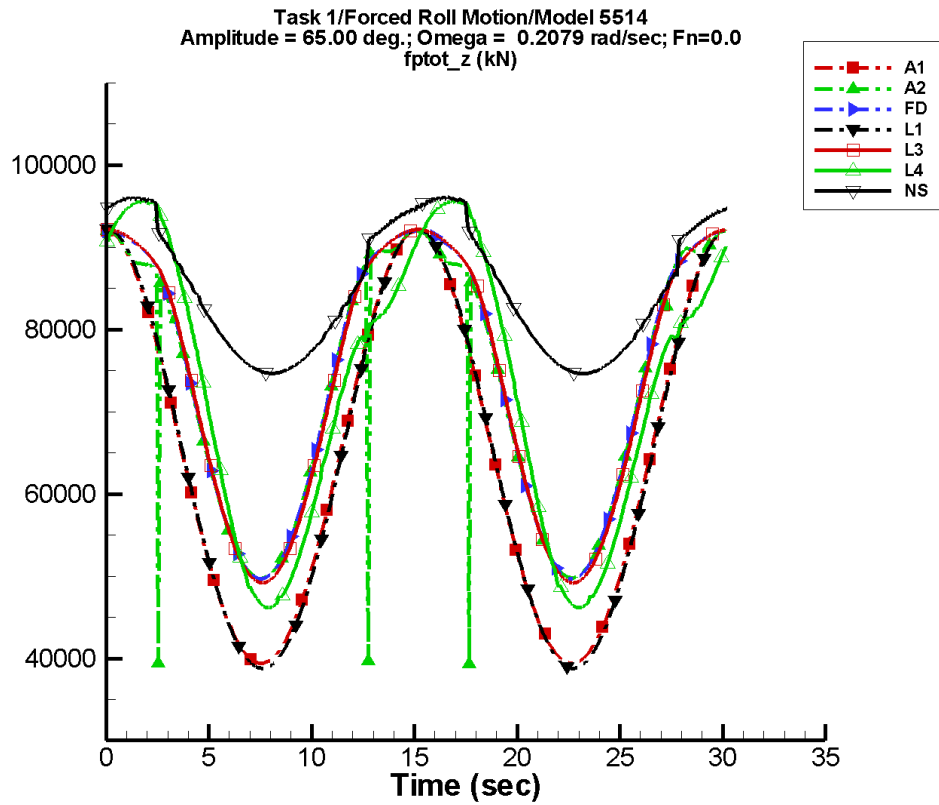
Table D–187. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.85E+04	2.54	-164	1.33E+04	90
A2	8.54E+04	269.	0	6.54E+03	94
FD	8.63E+04	29.9	11	6.55E+03	89
L1	7.83E+04	12.9	120	1.35E+04	89
L3	8.61E+04	77.7	-59	6.86E+03	89
L4	8.59E+04	66.4	-47	8.11E+03	45
NF	—	—	—	—	—
NS	8.84E+04	7.20	-13	5.42E+03	75

Table D–188. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.53E+04	9.20E+04	6.54E+04	9.20E+04
A2	2.78E+04	1.20E+05	7.20E+04	9.20E+04
FD	7.84E+04	9.20E+04	7.84E+04	9.20E+04
L1	6.49E+04	9.20E+04	6.49E+04	9.20E+04
L3	7.79E+04	9.20E+04	7.79E+04	9.20E+04
L4	7.72E+04	9.42E+04	7.72E+04	9.42E+04
NF	—	—	—	—
NS	8.31E+04	9.38E+04	8.31E+04	9.37E+04

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

Figure D-95. Time history of  $F_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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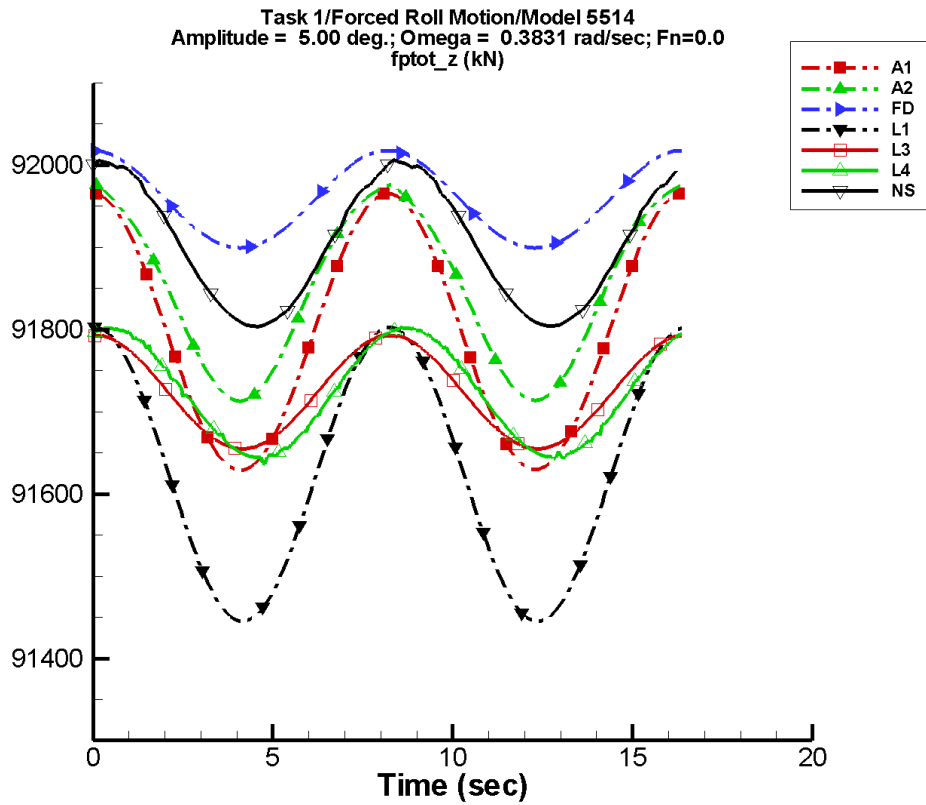
Table D–189. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.49E+04	10.1	-163	2.63E+04	90
A2	7.32E+04	391.	95	2.08E+04	91
FD	7.39E+04	68.5	3	2.17E+04	89
L1	6.47E+04	54.2	119	2.66E+04	89
L3	7.38E+04	271.	-61	2.23E+04	89
L4	7.32E+04	259.	-46	2.37E+04	72
NF	—	—	—	—	—
NS	8.50E+04	45.7	4	1.08E+04	76

Table D–190. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.94E+04	9.20E+04	3.95E+04	9.20E+04
A2	3.93E+04	9.20E+04	4.99E+04	9.19E+04
FD	4.97E+04	9.20E+04	4.98E+04	9.21E+04
L1	3.88E+04	9.22E+04	3.88E+04	9.21E+04
L3	4.92E+04	9.22E+04	4.92E+04	9.21E+04
L4	4.61E+04	9.57E+04	4.62E+04	9.55E+04
NF	—	—	—	—
NS	7.45E+04	9.62E+04	7.46E+04	9.60E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-96. Time history of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

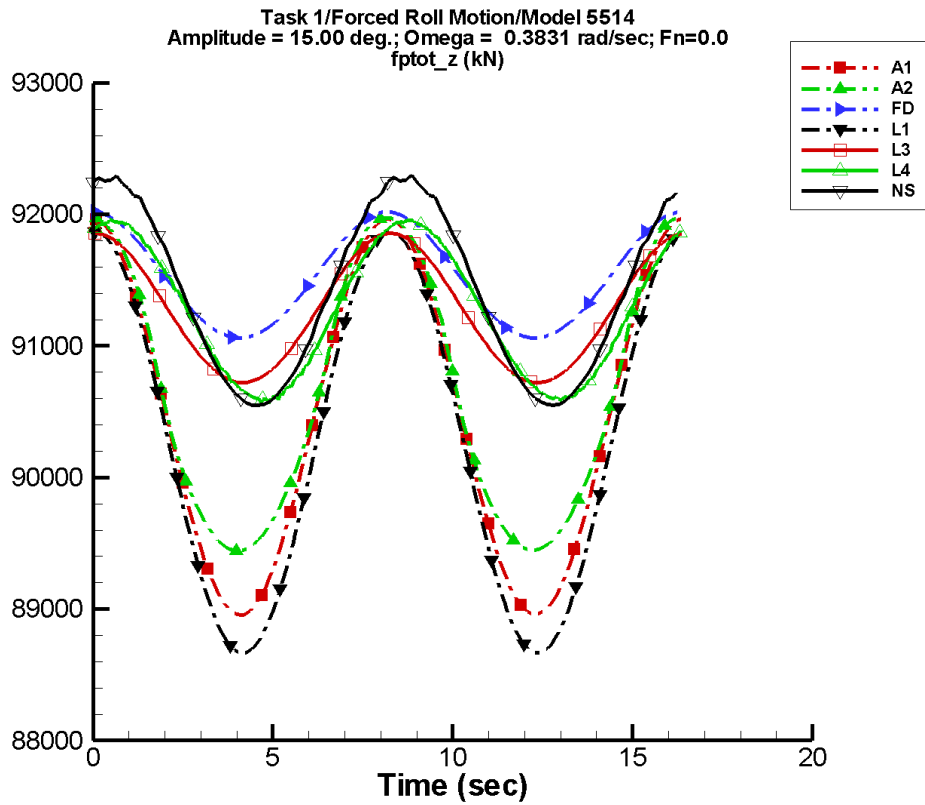
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	2.69E-02	133	168.	90
A2	9.18E+04	5.68E-02	48	128.	91
FD	9.20E+04	2.82E-02	155	59.1	91
L1	9.16E+04	2.01E-02	-177	179.	87
L3	9.17E+04	8.97E-03	125	68.8	87
L4	9.17E+04	0.647	-156	78.6	67
NF	—	—	—	—	—
NS	9.19E+04	7.32E-02	-137	99.9	73

Table D–192. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.16E+04	9.18E+04	9.16E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-97. Time history of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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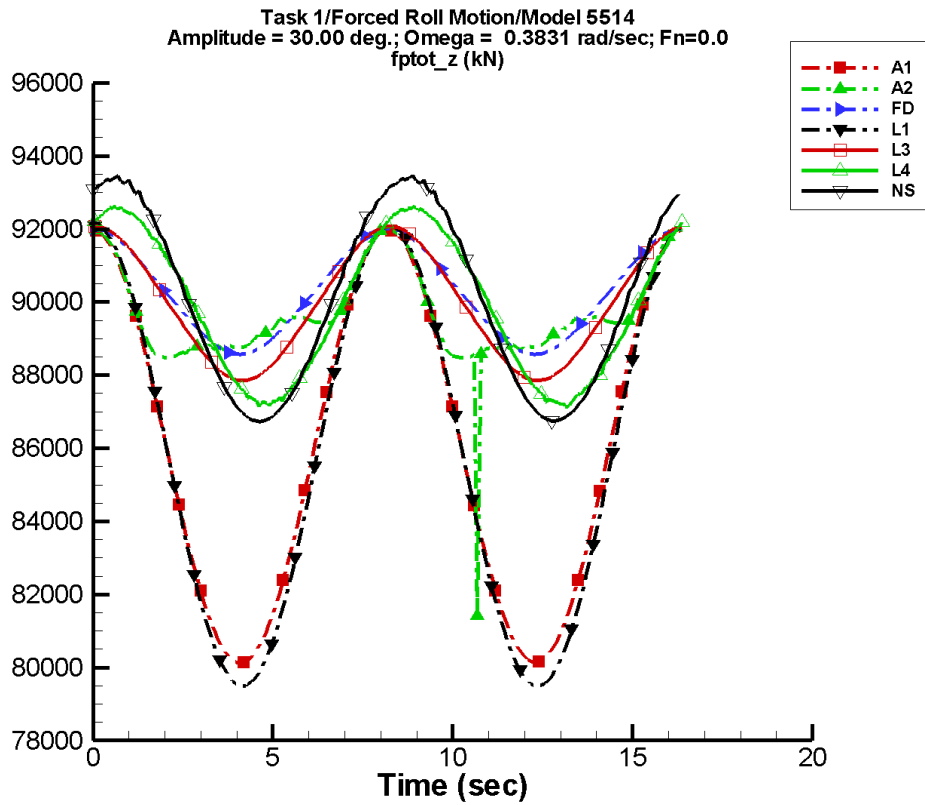
Table D–193. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.05E+04	0.198	154	1.50E+03	90
A2	9.06E+04	0.999	-141	1.31E+03	91
FD	9.15E+04	0.591	118	476.	91
L1	9.03E+04	0.135	166	1.60E+03	87
L3	9.13E+04	0.545	166	567.	87
L4	9.13E+04	4.93	-144	677.	64
NF	—	—	—	—	—
NS	9.14E+04	0.829	-144	867.	70

Table D–194. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.90E+04	9.20E+04	8.90E+04	9.20E+04
A2	8.94E+04	9.20E+04	8.94E+04	9.20E+04
FD	9.11E+04	9.20E+04	9.11E+04	9.20E+04
L1	8.87E+04	9.19E+04	8.87E+04	9.19E+04
L3	9.07E+04	9.19E+04	9.07E+04	9.19E+04
L4	9.06E+04	9.20E+04	9.06E+04	9.19E+04
NF	—	—	—	—
NS	9.05E+04	9.23E+04	9.06E+04	9.23E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-98. Time history of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

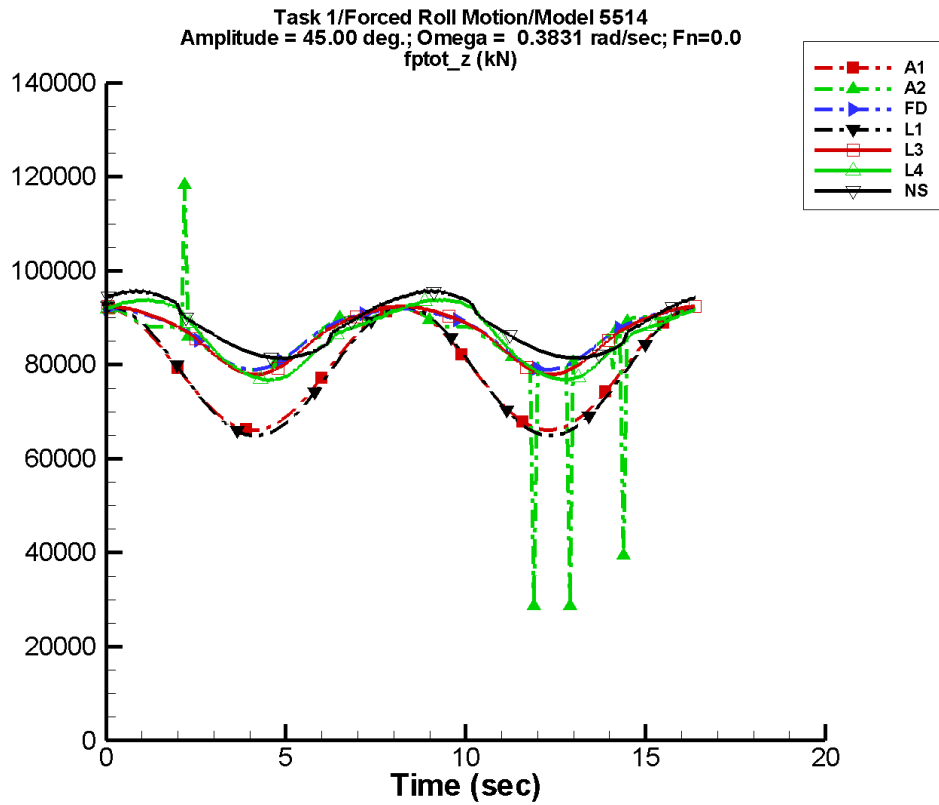
Table D–195. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.60E+04	0.709	171	5.92E+03	90
A2	8.97E+04	88.7	42	1.38E+03	112
FD	9.03E+04	0.426	-44	1.68E+03	91
L1	8.58E+04	1.71	164	6.29E+03	87
L3	8.99E+04	2.46	-163	2.07E+03	87
L4	8.99E+04	19.1	-101	2.65E+03	58
NF	—	—	—	—	—
NS	9.01E+04	3.73	-142	3.33E+03	66

Table D–196. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.01E+04	9.20E+04	8.01E+04	9.19E+04
A2	8.14E+04	9.20E+04	8.76E+04	9.19E+04
FD	8.86E+04	9.20E+04	8.86E+04	9.20E+04
L1	7.95E+04	9.21E+04	7.95E+04	9.21E+04
L3	8.79E+04	9.21E+04	8.79E+04	9.21E+04
L4	8.71E+04	9.26E+04	8.72E+04	9.26E+04
NF	—	—	—	—
NS	8.67E+04	9.35E+04	8.68E+04	9.34E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-99. Time history of  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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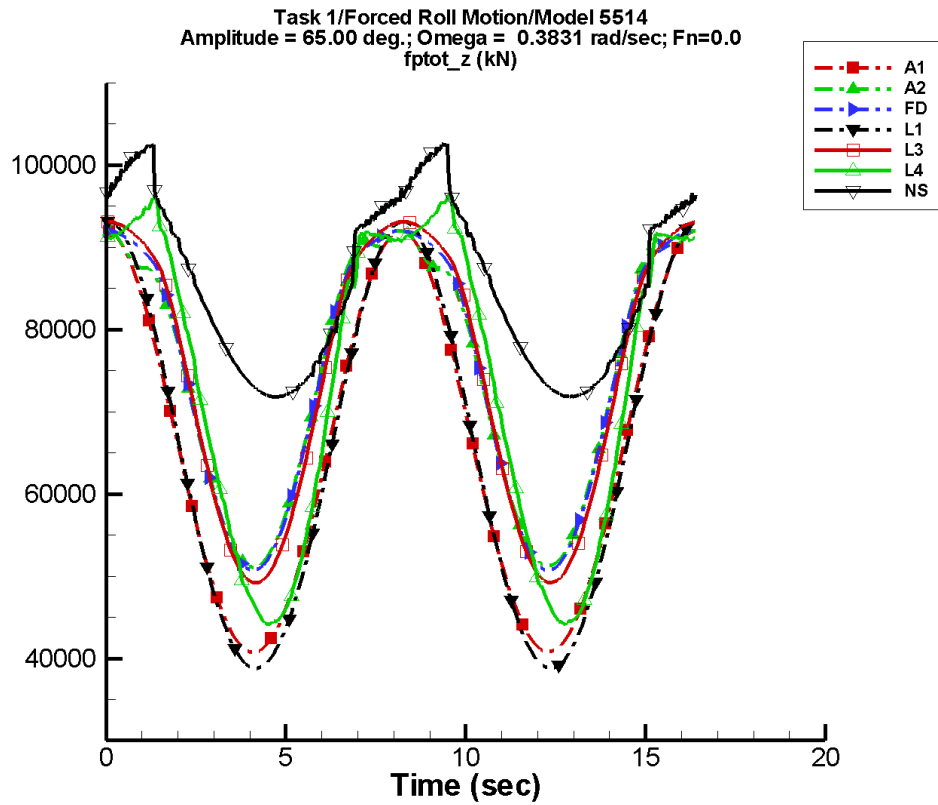
Table D–197. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.89E+04	1.60	-158	1.30E+04	90
A2	8.53E+04	1.87E+03	-14	6.98E+03	87
FD	8.67E+04	70.5	-59	6.36E+03	90
L1	7.85E+04	7.85	163	1.38E+04	87
L3	8.63E+04	45.1	-27	6.95E+03	87
L4	8.61E+04	71.3	-13	8.11E+03	65
NF	—	—	—	—	—
NS	8.85E+04	8.91	-137	7.19E+03	63

Table D–198. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.60E+04	9.20E+04	6.60E+04	9.19E+04
A2	2.86E+04	1.18E+05	7.32E+04	9.19E+04
FD	7.89E+04	9.20E+04	7.91E+04	9.20E+04
L1	6.49E+04	9.24E+04	6.50E+04	9.25E+04
L3	7.79E+04	9.24E+04	7.80E+04	9.24E+04
L4	7.66E+04	9.39E+04	7.68E+04	9.37E+04
NF	—	—	—	—
NS	8.14E+04	9.59E+04	8.14E+04	9.57E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-100. Time history of  $F_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

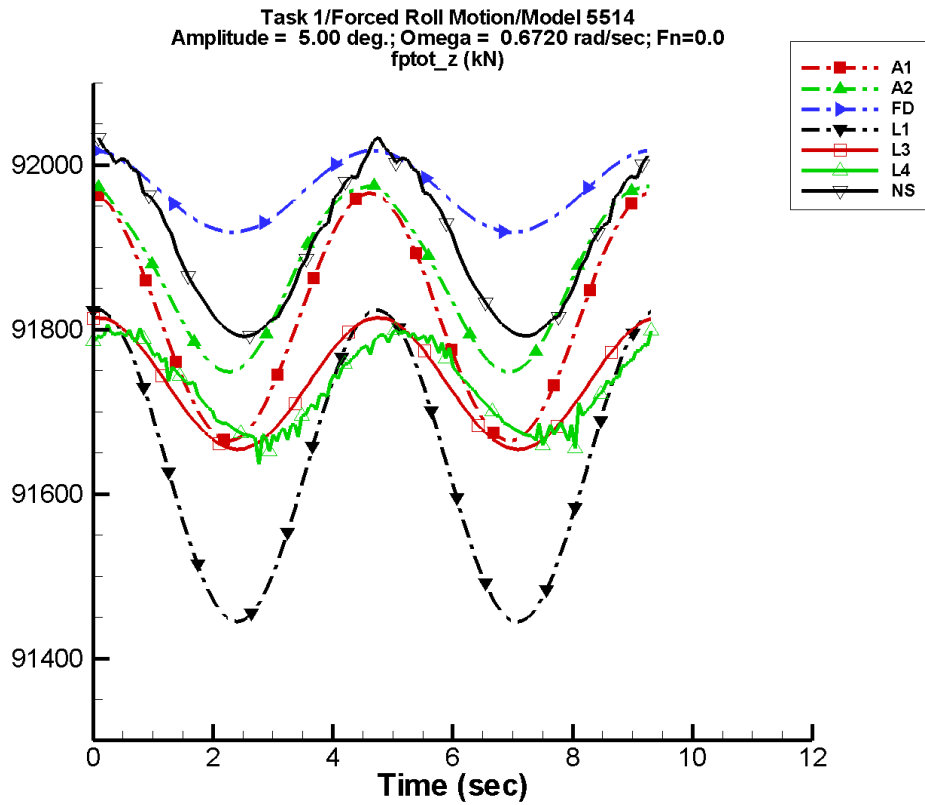
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.57E+04	5.09	-121	2.56E+04	90
A2	7.43E+04	18.9	-4	2.06E+04	91
FD	7.45E+04	140.	-61	2.14E+04	90
L1	6.52E+04	32.9	162	2.72E+04	87
L3	7.42E+04	171.	-9	2.23E+04	87
L4	7.32E+04	400.	-75	2.51E+04	73
NF	—	—	—	—	—
NS	8.53E+04	9.74	45	1.43E+04	65

Table D–200. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	4.07E+04	9.20E+04	4.07E+04	9.18E+04
A2	5.11E+04	9.20E+04	5.11E+04	9.17E+04
FD	5.07E+04	9.20E+04	5.11E+04	9.19E+04
L1	3.88E+04	9.31E+04	3.89E+04	9.32E+04
L3	4.92E+04	9.31E+04	4.93E+04	9.32E+04
L4	4.41E+04	9.64E+04	4.44E+04	9.52E+04
NF	—	—	—	—
NS	7.18E+04	1.03E+05	7.18E+04	1.02E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-101. Time history of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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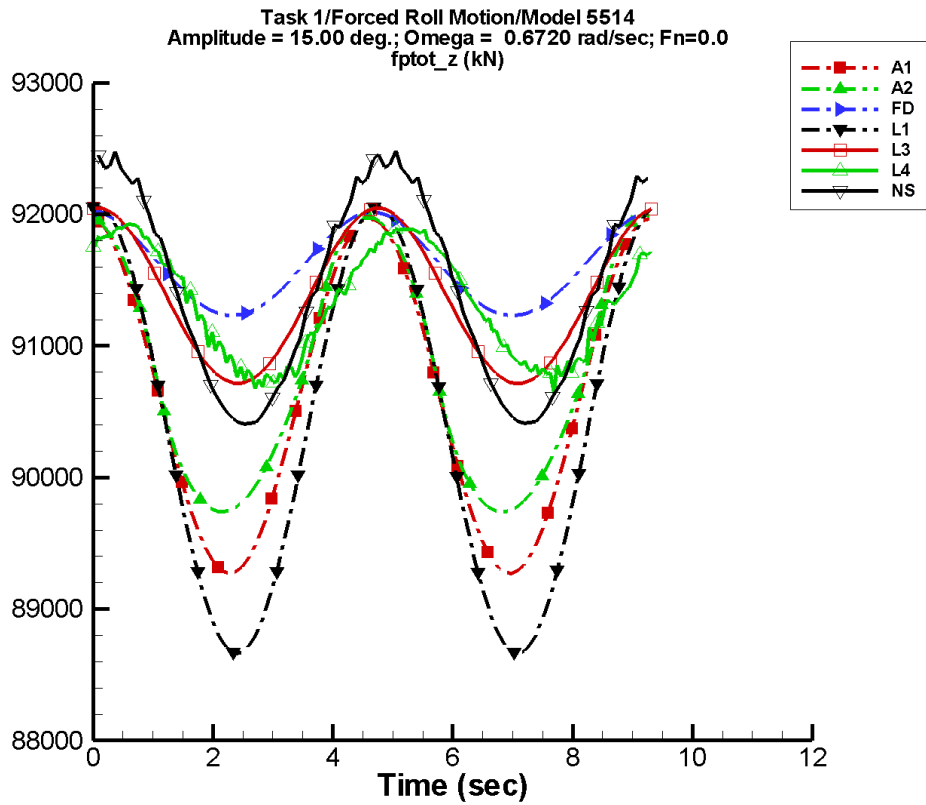
Table D–201. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	7.99E-02	7	151.	94
A2	9.19E+04	0.568	1	112.	99
FD	9.20E+04	7.43E-02	155	49.6	91
L1	9.16E+04	1.34E-02	47	190.	85
L3	9.17E+04	3.76E-02	175	79.9	84
L4	9.17E+04	2.58	169	65.2	57
NF	—	—	—	—	—
NS	9.19E+04	0.330	-166	114.	76

Table D–202. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.17E+04	9.20E+04	9.17E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.18E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.16E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-102. Time history of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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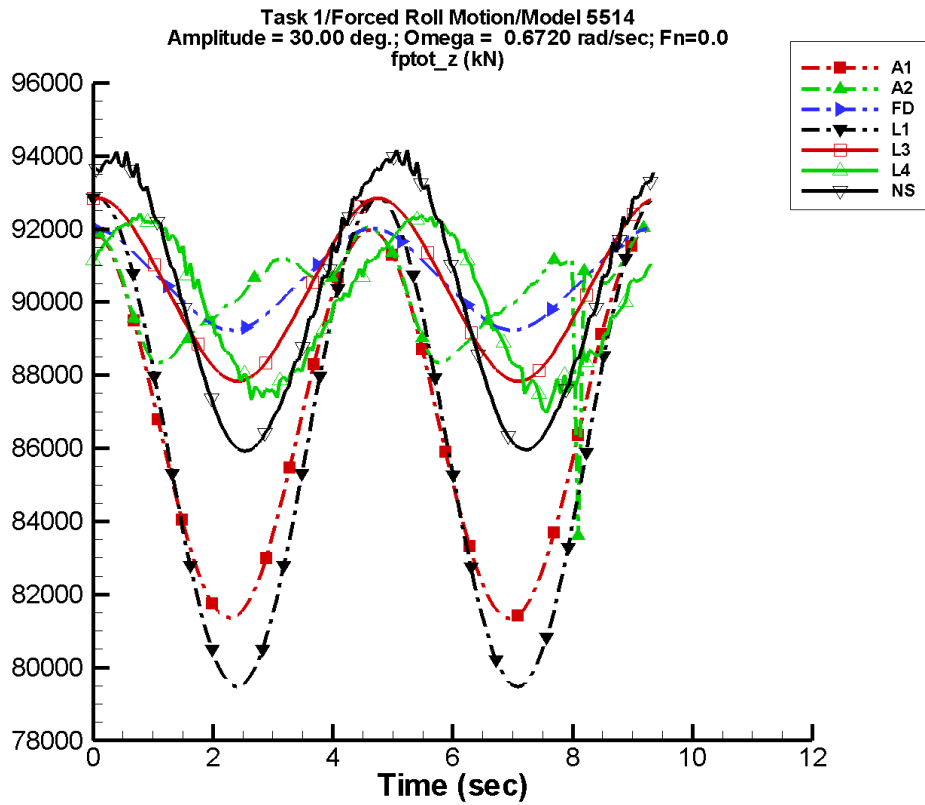
Table D–203. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.06E+04	0.503	-8	1.35E+03	94
A2	9.08E+04	7.29	-176	1.17E+03	97
FD	9.16E+04	0.851	151	391.	91
L1	9.04E+04	0.259	-180	1.70E+03	85
L3	9.14E+04	0.809	180	666.	84
L4	9.13E+04	18.8	168	570.	50
NF	—	—	—	—	—
NS	9.14E+04	3.17	-168	1.01E+03	73

Table D–204. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.93E+04	9.20E+04	8.93E+04	9.19E+04
A2	8.97E+04	9.20E+04	8.98E+04	9.19E+04
FD	9.12E+04	9.20E+04	9.12E+04	9.20E+04
L1	8.87E+04	9.21E+04	8.87E+04	9.21E+04
L3	9.07E+04	9.20E+04	9.07E+04	9.20E+04
L4	9.06E+04	9.19E+04	9.07E+04	9.19E+04
NF	—	—	—	—
NS	9.04E+04	9.25E+04	9.04E+04	9.24E+04

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-103. Time history of  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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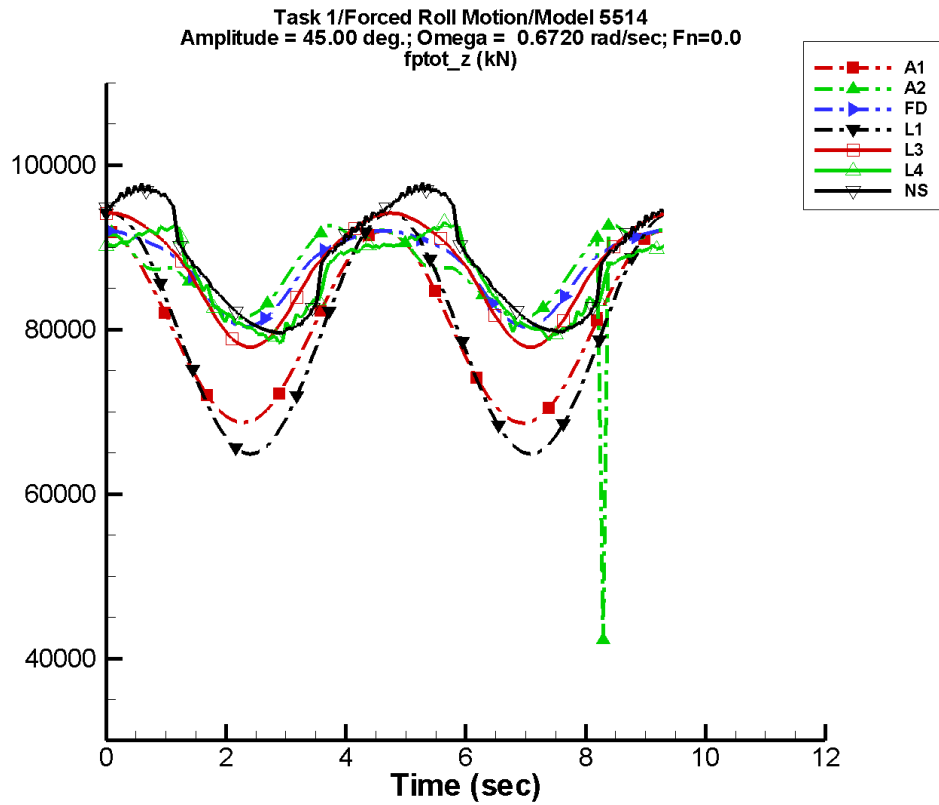
Table D–205. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.66E+04	1.04	-43	5.32E+03	94
A2	9.02E+04	122.	-51	1.24E+03	143
FD	9.06E+04	0.728	-24	1.35E+03	92
L1	8.61E+04	2.90	180	6.69E+03	85
L3	9.03E+04	0.835	177	2.46E+03	84
L4	9.00E+04	68.4	-52	2.36E+03	37
NF	—	—	—	—	—
NS	9.01E+04	15.1	-170	3.97E+03	69

Table D–206. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.13E+04	9.20E+04	8.16E+04	9.17E+04
A2	8.36E+04	9.20E+04	8.86E+04	9.18E+04
FD	8.92E+04	9.20E+04	8.93E+04	9.20E+04
L1	7.95E+04	9.29E+04	7.96E+04	9.28E+04
L3	8.78E+04	9.28E+04	8.79E+04	9.28E+04
L4	8.70E+04	9.24E+04	8.74E+04	9.23E+04
NF	—	—	—	—
NS	8.59E+04	9.42E+04	8.60E+04	9.39E+04

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

Figure D-104. Time history of  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

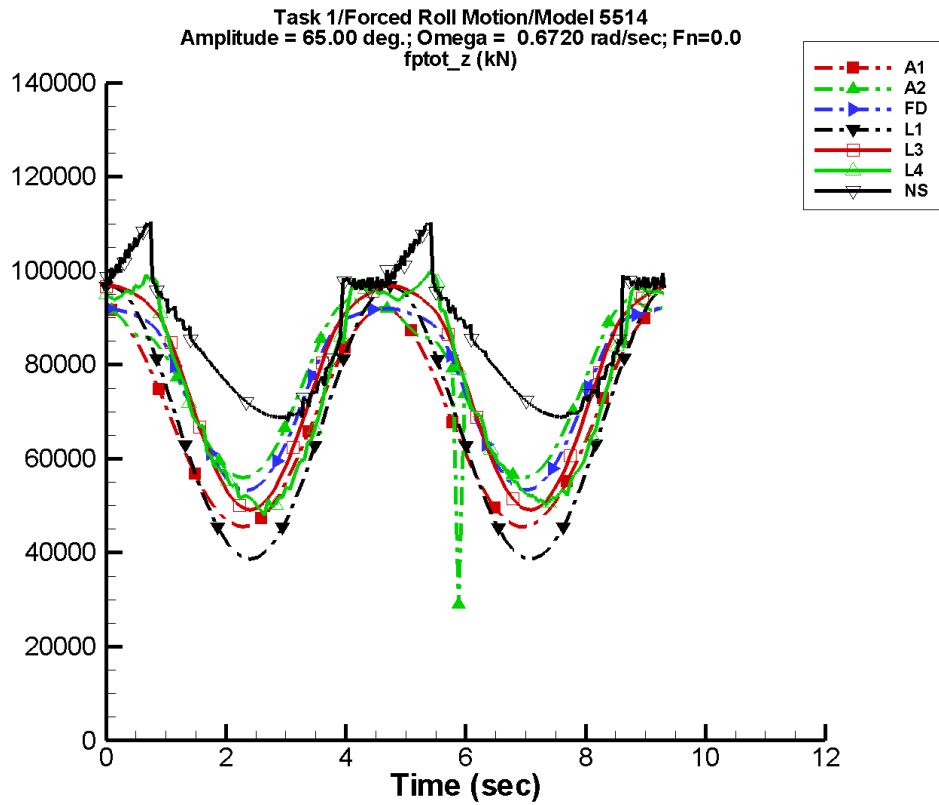
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.02E+04	4.11	-128	1.17E+04	94
A2	8.70E+04	1.08E+03	-44	4.63E+03	102
FD	8.73E+04	98.1	-29	5.64E+03	90
L1	7.93E+04	13.1	179	1.47E+04	85
L3	8.71E+04	86.3	1	7.81E+03	83
L4	8.64E+04	153.	-110	6.19E+03	61
NF	—	—	—	—	—
NS	8.85E+04	34.1	-171	8.68E+03	63

Table D–208. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.86E+04	9.20E+04	6.91E+04	9.14E+04
A2	4.23E+04	9.27E+04	8.14E+04	9.22E+04
FD	8.03E+04	9.20E+04	8.07E+04	9.19E+04
L1	6.49E+04	9.42E+04	6.51E+04	9.42E+04
L3	7.79E+04	9.42E+04	7.81E+04	9.42E+04
L4	7.84E+04	9.31E+04	7.91E+04	9.25E+04
NF	—	—	—	—
NS	7.95E+04	9.79E+04	7.97E+04	9.73E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-105. Time history of  $F_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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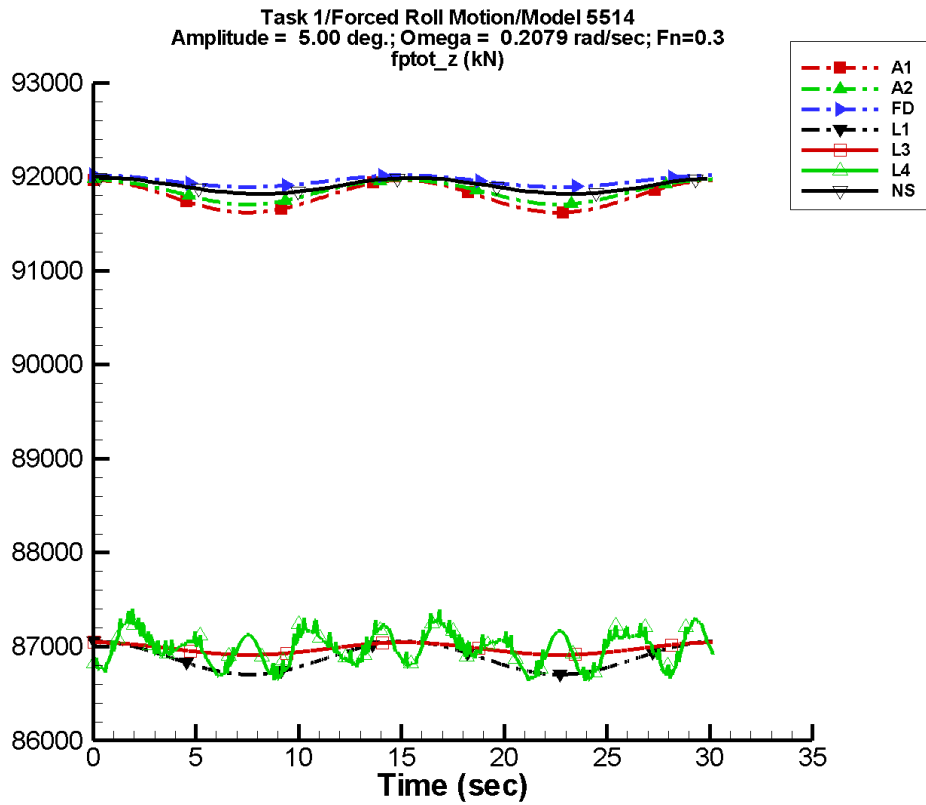
Table D–209. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.82E+04	25.0	-149	2.33E+04	94
A2	7.65E+04	1.24E+03	35	1.84E+04	102
FD	7.58E+04	219.	-30	2.00E+04	90
L1	6.70E+04	53.2	179	2.91E+04	85
L3	7.60E+04	226.	0	2.42E+04	84
L4	7.50E+04	612.	-130	2.49E+04	75
NF	—	—	—	—	—
NS	8.57E+04	70.9	150	1.74E+04	63

Table D–210. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	4.55E+04	9.20E+04	4.65E+04	9.09E+04
A2	2.90E+04	9.43E+04	5.71E+04	9.29E+04
FD	5.33E+04	9.20E+04	5.43E+04	9.20E+04
L1	3.87E+04	9.68E+04	3.91E+04	9.67E+04
L3	4.91E+04	9.67E+04	4.96E+04	9.68E+04
L4	4.80E+04	1.00E+05	5.00E+04	9.75E+04
NF	—	—	—	—
NS	6.81E+04	1.11E+05	6.88E+04	1.09E+05

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

Figure D-106. Time history of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

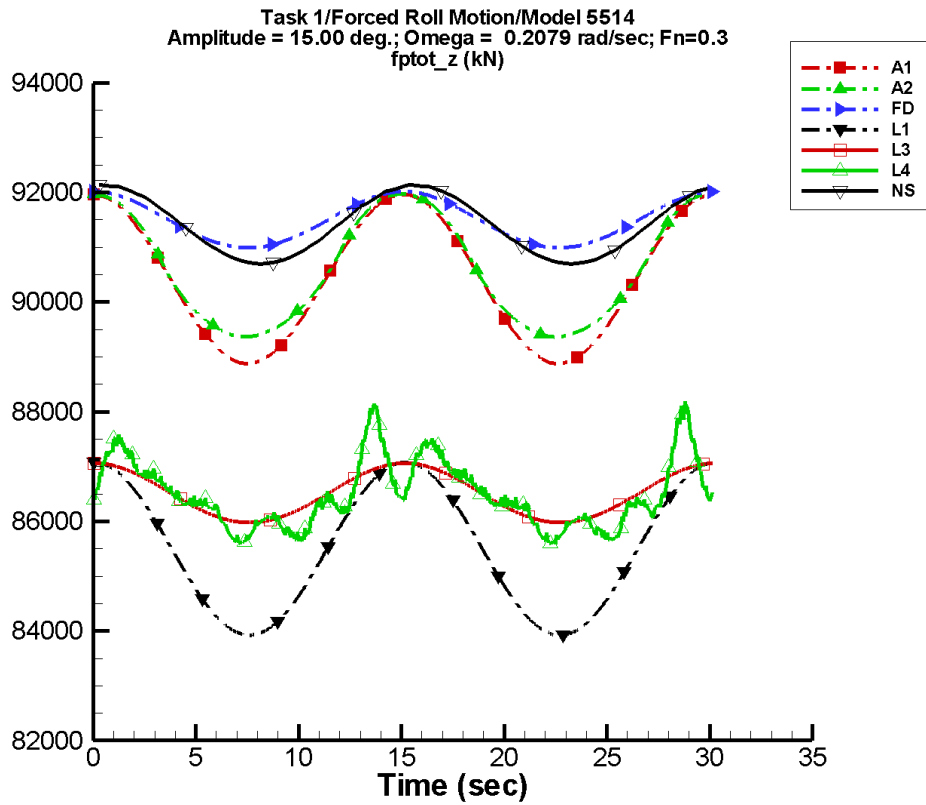
Table D–211. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	6.47E-02	34	172.	90
A2	9.18E+04	0.190	21	133.	91
FD	9.20E+04	2.66E-02	-107	63.0	90
L1	8.69E+04	8.25E-02	-169	176.	89
L3	8.70E+04	0.101	161	65.9	89
L4	8.70E+04	1.89	56	69.5	79
NF	—	—	—	—	—
NS	9.19E+04	9.53E-02	-16	85.1	78

Table D–212. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	8.67E+04	8.71E+04	8.67E+04	8.71E+04
L3	8.69E+04	8.70E+04	8.69E+04	8.70E+04
L4	8.66E+04	8.74E+04	8.67E+04	8.73E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-107. Time history of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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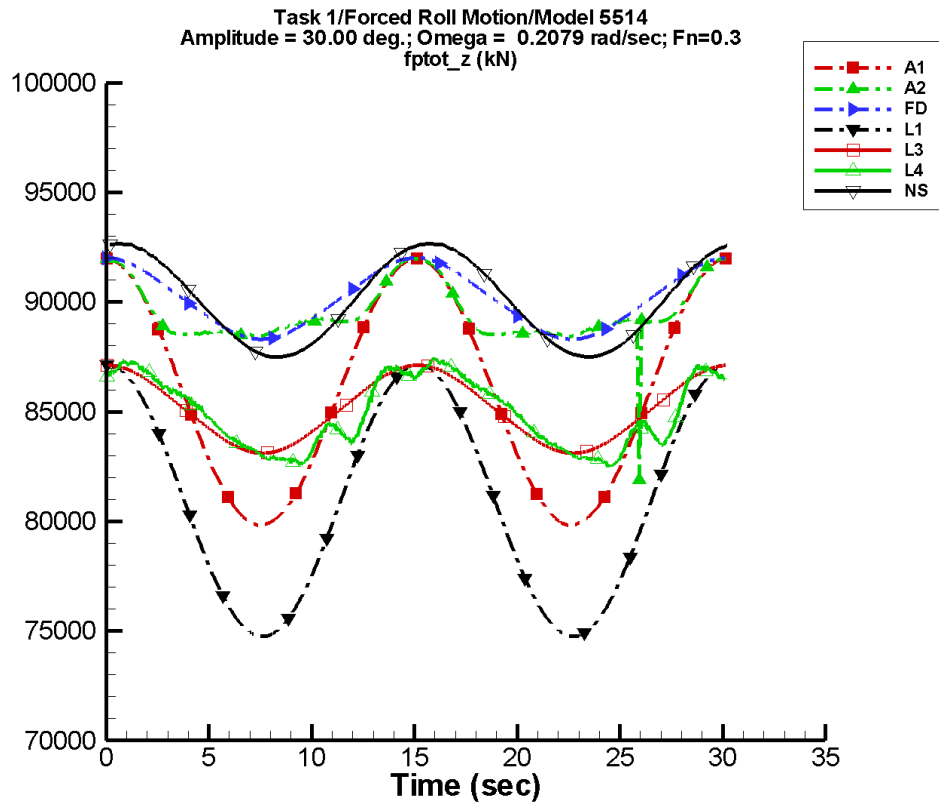
Table D–213. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	0.146	44	1.54E+03	90
A2	9.06E+04	1.48	-161	1.35E+03	91
FD	9.15E+04	0.299	-172	511.	90
L1	8.55E+04	0.167	127	1.57E+03	89
L3	8.65E+04	0.858	125	540.	89
L4	8.65E+04	7.41	-83	713.	77
NF	—	—	—	—	—
NS	9.14E+04	0.528	-34	716.	76

Table D–214. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.89E+04	9.20E+04	8.89E+04	9.20E+04
A2	8.94E+04	9.20E+04	8.94E+04	9.20E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.39E+04	8.71E+04	8.39E+04	8.71E+04
L3	8.60E+04	8.71E+04	8.60E+04	8.71E+04
L4	8.56E+04	8.82E+04	8.56E+04	8.80E+04
NF	—	—	—	—
NS	9.07E+04	9.21E+04	9.07E+04	9.21E+04

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

Figure D-108. Time history of  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

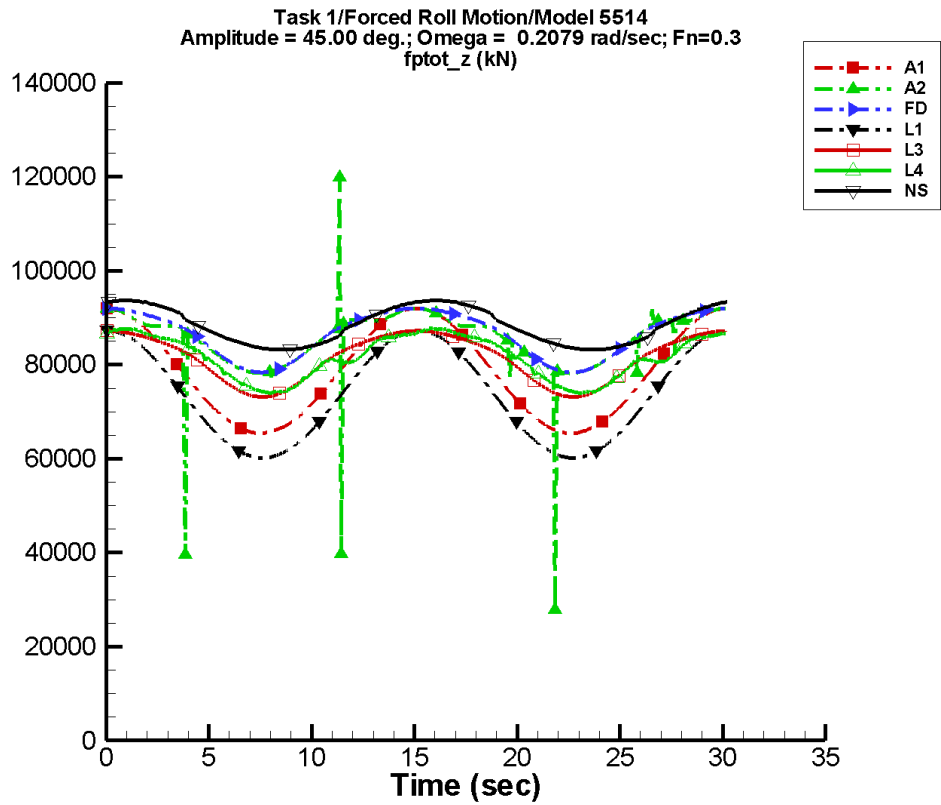
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.59E+04	0.229	160	6.07E+03	90
A2	8.95E+04	33.8	-49	1.43E+03	101
FD	9.01E+04	0.321	93	1.81E+03	90
L1	8.09E+04	2.60	121	6.19E+03	89
L3	8.51E+04	2.37	114	1.96E+03	89
L4	8.49E+04	19.6	-105	2.13E+03	67
NF	—	—	—	—	—
NS	9.01E+04	2.84	-31	2.59E+03	73

Table D–216. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.98E+04	9.20E+04	7.98E+04	9.20E+04
A2	8.19E+04	9.20E+04	8.82E+04	9.20E+04
FD	8.83E+04	9.20E+04	8.83E+04	9.20E+04
L1	7.47E+04	8.71E+04	7.48E+04	8.71E+04
L3	8.31E+04	8.71E+04	8.31E+04	8.71E+04
L4	8.25E+04	8.75E+04	8.26E+04	8.73E+04
NF	—	—	—	—
NS	8.75E+04	9.27E+04	8.75E+04	9.26E+04



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

Figure D-109. Time history of  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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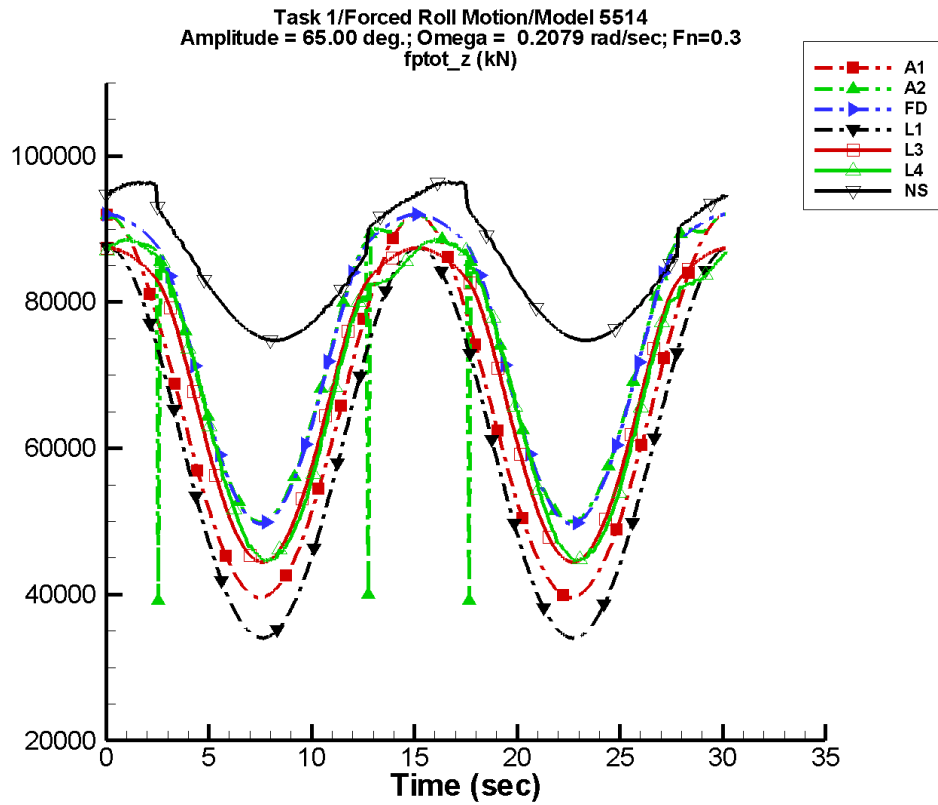
Table D–217. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.85E+04	1.90	-165	1.33E+04	90
A2	8.55E+04	269.	0	6.49E+03	95
FD	8.63E+04	29.9	11	6.55E+03	89
L1	7.35E+04	12.9	120	1.35E+04	89
L3	8.13E+04	77.7	-59	6.86E+03	89
L4	8.17E+04	48.4	-70	6.29E+03	74
NF	—	—	—	—	—
NS	8.84E+04	6.86	-29	5.37E+03	70

Table D–218. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.54E+04	9.20E+04	6.54E+04	9.20E+04
A2	2.79E+04	1.20E+05	7.21E+04	9.20E+04
FD	7.84E+04	9.20E+04	7.84E+04	9.20E+04
L1	6.02E+04	8.72E+04	6.02E+04	8.72E+04
L3	7.32E+04	8.72E+04	7.32E+04	8.72E+04
L4	7.40E+04	8.78E+04	7.40E+04	8.77E+04
NF	—	—	—	—
NS	8.32E+04	9.38E+04	8.32E+04	9.37E+04

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

Figure D-110. Time history of  $F_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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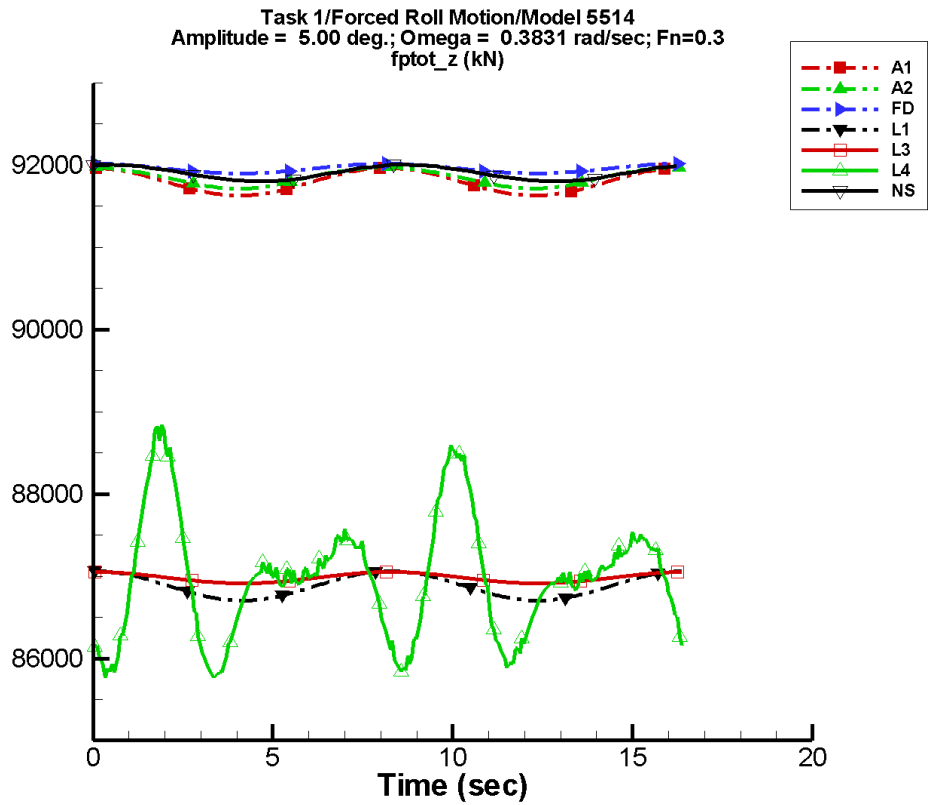
Table D–219. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.51E+04	9.01	-160	2.62E+04	91
A2	7.33E+04	391.	95	2.07E+04	91
FD	7.39E+04	68.5	3	2.17E+04	89
L1	6.00E+04	54.2	119	2.66E+04	89
L3	6.91E+04	271.	-61	2.23E+04	89
L4	6.98E+04	352.	-70	2.22E+04	81
NF	—	—	—	—	—
NS	8.51E+04	32.4	-4	1.08E+04	73

Table D–220. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.95E+04	9.20E+04	3.96E+04	9.20E+04
A2	3.91E+04	9.20E+04	5.00E+04	9.19E+04
FD	4.97E+04	9.20E+04	4.98E+04	9.21E+04
L1	3.40E+04	8.74E+04	3.41E+04	8.74E+04
L3	4.44E+04	8.74E+04	4.45E+04	8.74E+04
L4	4.46E+04	8.86E+04	4.47E+04	8.85E+04
NF	—	—	—	—
NS	7.47E+04	9.66E+04	7.47E+04	9.64E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-111. Time history of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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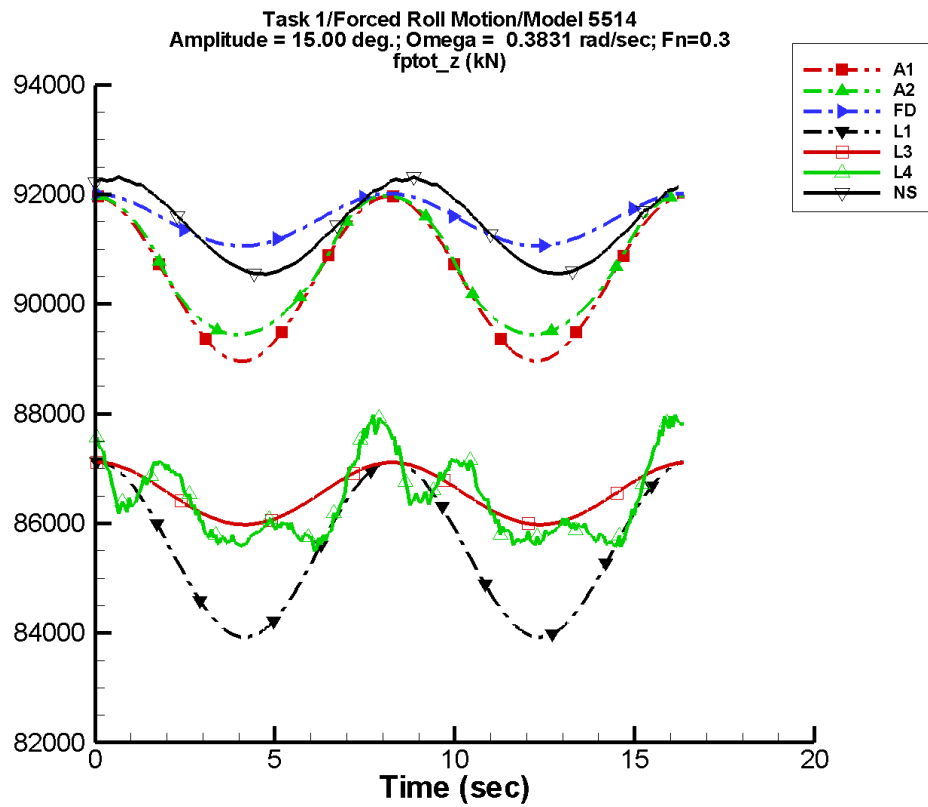
Table D–221. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	3.03E-02	8	168.	91
A2	9.18E+04	8.94E-02	6	129.	93
FD	9.20E+04	2.96E-02	151	59.1	91
L1	8.69E+04	3.87E-02	82	179.	87
L3	8.70E+04	4.48E-02	111	68.7	87
L4	8.70E+04	72.5	-13	184.	6
NF	—	—	—	—	—
NS	9.19E+04	9.37E-02	-156	101.	68

Table D–222. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	8.67E+04	8.71E+04	8.67E+04	8.71E+04
L3	8.69E+04	8.71E+04	8.69E+04	8.71E+04
L4	8.57E+04	8.89E+04	8.58E+04	8.87E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

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

Figure D-112. Time history of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.05E+04	9.60E-02	-146	1.51E+03	91
A2	9.06E+04	1.05	-131	1.31E+03	93
FD	9.15E+04	0.594	118	476.	91
L1	8.55E+04	0.144	151	1.60E+03	87
L3	8.65E+04	0.574	161	565.	87
L4	8.64E+04	52.4	-101	742.	72
NF	—	—	—	—	—
NS	9.14E+04	1.34	-162	870.	66

Table D–224. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.90E+04	9.20E+04	8.89E+04	9.20E+04
A2	8.94E+04	9.20E+04	8.94E+04	9.20E+04
FD	9.11E+04	9.20E+04	9.11E+04	9.20E+04
L1	8.39E+04	8.71E+04	8.39E+04	8.71E+04
L3	8.60E+04	8.71E+04	8.60E+04	8.71E+04
L4	8.55E+04	8.80E+04	8.56E+04	8.79E+04
NF	—	—	—	—
NS	9.05E+04	9.23E+04	9.06E+04	9.23E+04



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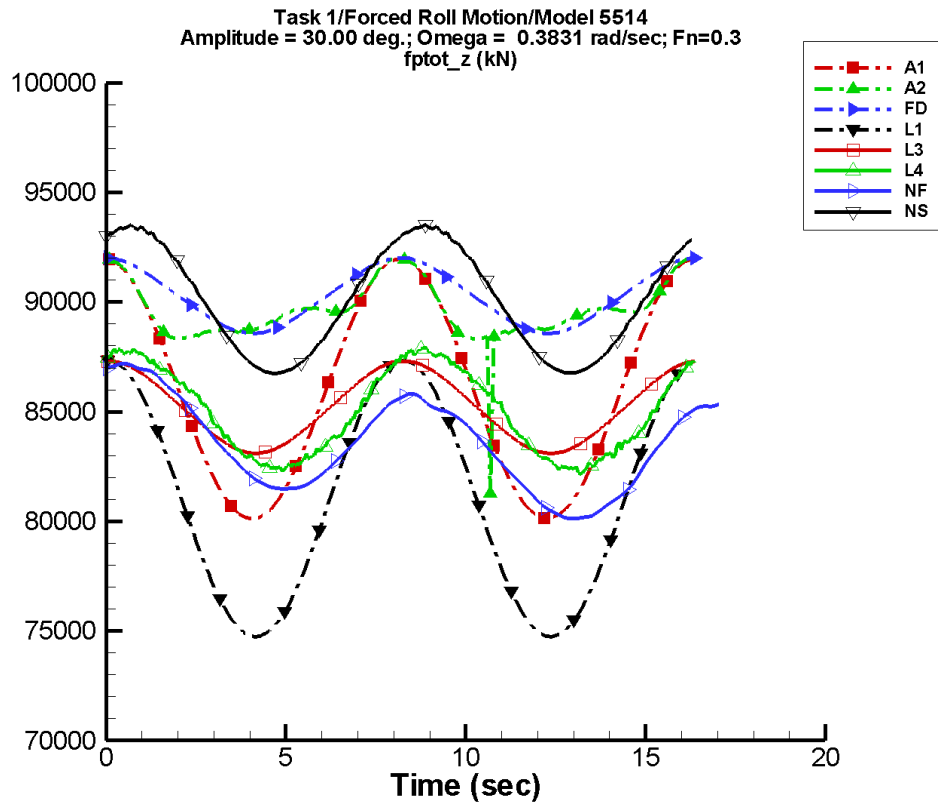


Figure D-113. Time history of  $F_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.60E+04	0.736	-150	5.92E+03	91
A2	8.97E+04	88.4	41	1.44E+03	117
FD	9.03E+04	0.425	-44	1.68E+03	91
L1	8.10E+04	1.72	162	6.29E+03	87
L3	8.52E+04	2.46	-164	2.06E+03	87
L4	8.50E+04	35.6	-78	2.68E+03	57
NF	8.34E+04	949.	54	2.52E+03	128
NS	9.01E+04	5.91	-161	3.33E+03	62

Table D–226. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.01E+04	9.20E+04	8.01E+04	9.19E+04
A2	8.13E+04	9.20E+04	8.75E+04	9.19E+04
FD	8.86E+04	9.20E+04	8.86E+04	9.20E+04
L1	7.47E+04	8.73E+04	7.48E+04	8.73E+04
L3	8.31E+04	8.73E+04	8.31E+04	8.73E+04
L4	8.22E+04	8.80E+04	8.23E+04	8.78E+04
NF	8.01E+04	8.72E+04	8.02E+04	8.71E+04
NS	8.68E+04	9.36E+04	8.68E+04	9.34E+04

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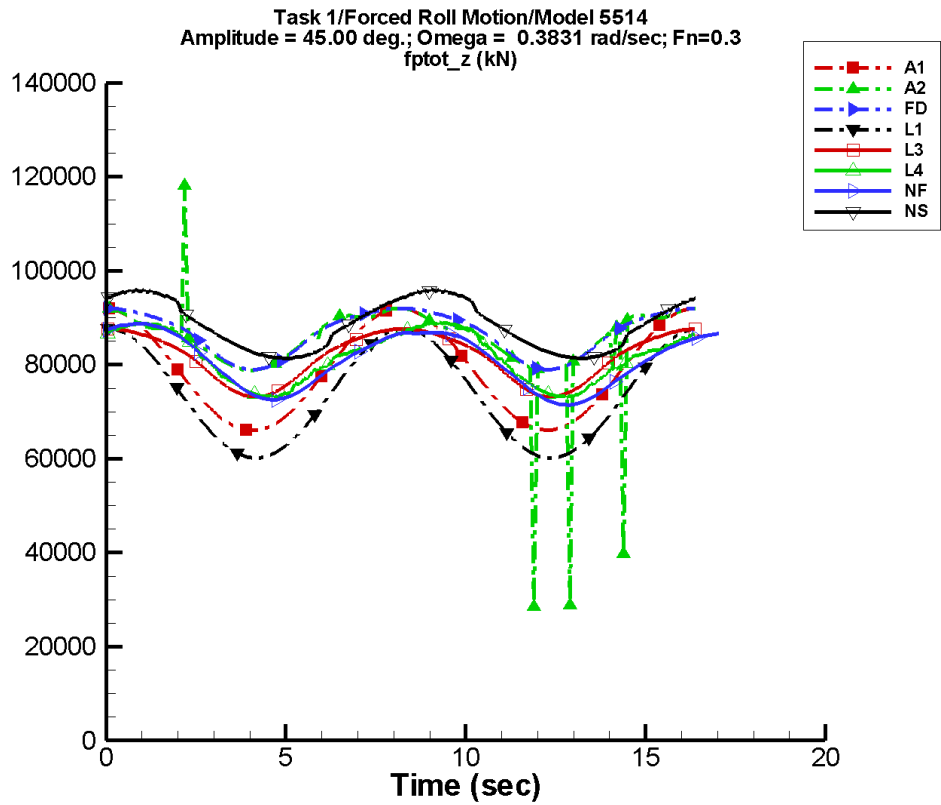


Figure D-114. Time history of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.88E+04	2.25	-126	1.30E+04	91
A2	8.52E+04	1.87E+03	-14	6.97E+03	89
FD	8.67E+04	70.5	-59	6.36E+03	90
L1	7.37E+04	7.90	162	1.38E+04	87
L3	8.15E+04	45.1	-27	6.94E+03	87
L4	8.16E+04	71.0	-30	7.28E+03	63
NF	8.07E+04	1.10E+03	67	7.36E+03	135
NS	8.85E+04	14.5	-159	7.23E+03	59

Table D–228. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.60E+04	9.20E+04	6.60E+04	9.18E+04
A2	2.85E+04	1.18E+05	7.31E+04	9.19E+04
FD	7.89E+04	9.20E+04	7.91E+04	9.20E+04
L1	6.01E+04	8.77E+04	6.02E+04	8.77E+04
L3	7.31E+04	8.76E+04	7.32E+04	8.77E+04
L4	7.30E+04	8.90E+04	7.32E+04	8.88E+04
NF	7.15E+04	8.87E+04	7.17E+04	8.85E+04
NS	8.13E+04	9.61E+04	8.14E+04	9.59E+04

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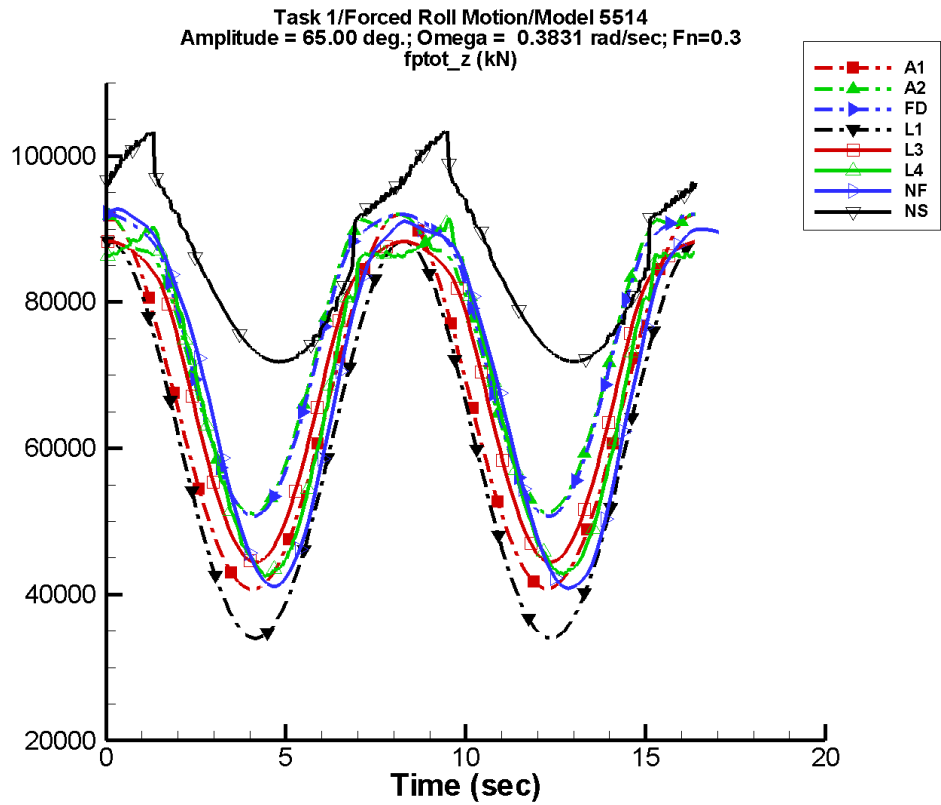


Figure D-115. Time history of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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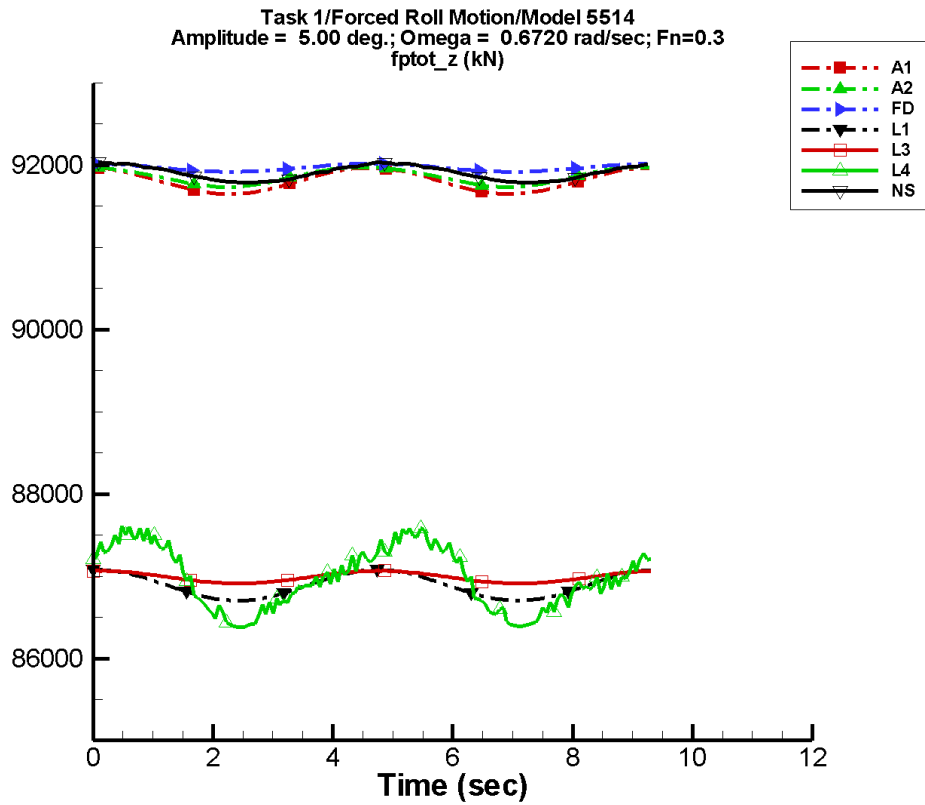
Table D–229. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.57E+04	8.08	-100	2.56E+04	92
A2	7.43E+04	20.7	-14	2.06E+04	93
FD	7.45E+04	140.	-61	2.14E+04	90
L1	6.04E+04	33.0	162	2.72E+04	87
L3	6.94E+04	171.	-9	2.23E+04	86
L4	6.95E+04	339.	-84	2.34E+04	74
NF	6.97E+04	1.74E+03	103	2.46E+04	142
NS	8.55E+04	11.9	160	1.44E+04	62

Table D–230. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	4.07E+04	9.20E+04	4.06E+04	9.17E+04
A2	5.11E+04	9.20E+04	5.10E+04	9.16E+04
FD	5.07E+04	9.20E+04	5.11E+04	9.19E+04
L1	3.40E+04	8.83E+04	3.41E+04	8.83E+04
L3	4.44E+04	8.83E+04	4.46E+04	8.83E+04
L4	4.24E+04	9.15E+04	4.29E+04	9.02E+04
NF	4.08E+04	9.28E+04	4.15E+04	9.24E+04
NS	7.18E+04	1.03E+05	7.18E+04	1.03E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-116. Time history of  $F_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

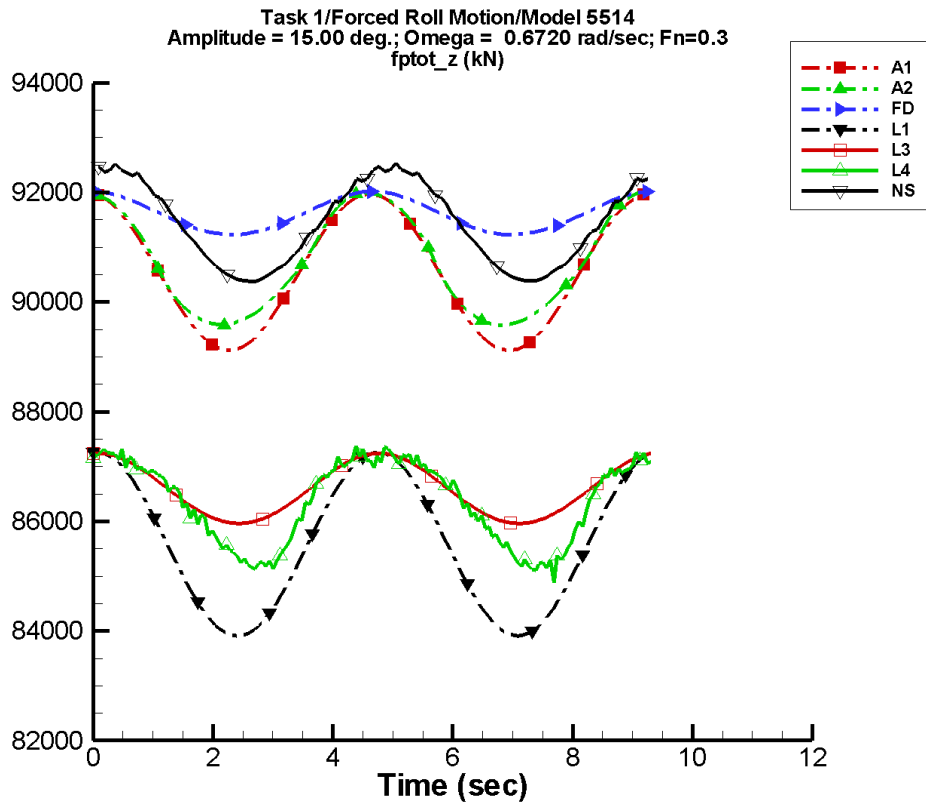
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	0.121	-24	159.	95
A2	9.19E+04	0.590	-4	121.	99
FD	9.20E+04	7.35E-02	156	49.6	91
L1	8.69E+04	1.29E-02	85	187.	84
L3	8.70E+04	6.70E-02	178	76.9	83
L4	8.70E+04	16.9	12	493.	57
NF	—	—	—	—	—
NS	9.19E+04	0.362	-171	118.	70

Table D–232. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.17E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	8.67E+04	8.71E+04	8.67E+04	8.71E+04
L3	8.69E+04	8.71E+04	8.69E+04	8.71E+04
L4	8.64E+04	8.76E+04	8.64E+04	8.75E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-117. Time history of  $F_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.05E+04	0.768	18	1.43E+03	95
A2	9.07E+04	7.05	-178	1.25E+03	97
FD	9.16E+04	0.852	151	391.	91
L1	8.56E+04	0.254	175	1.67E+03	84
L3	8.66E+04	0.824	179	640.	83
L4	8.64E+04	35.9	-56	999.	70
NF	—	—	—	—	—
NS	9.14E+04	3.68	-175	1.04E+03	69

Table D–234. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.91E+04	9.20E+04	8.92E+04	9.19E+04
A2	8.96E+04	9.20E+04	8.96E+04	9.19E+04
FD	9.12E+04	9.20E+04	9.12E+04	9.20E+04
L1	8.39E+04	8.73E+04	8.39E+04	8.73E+04
L3	8.60E+04	8.72E+04	8.60E+04	8.72E+04
L4	8.49E+04	8.74E+04	8.52E+04	8.72E+04
NF	—	—	—	—
NS	9.04E+04	9.25E+04	9.04E+04	9.24E+04

TASK 1/ROLL MOTION/MODEL 5514

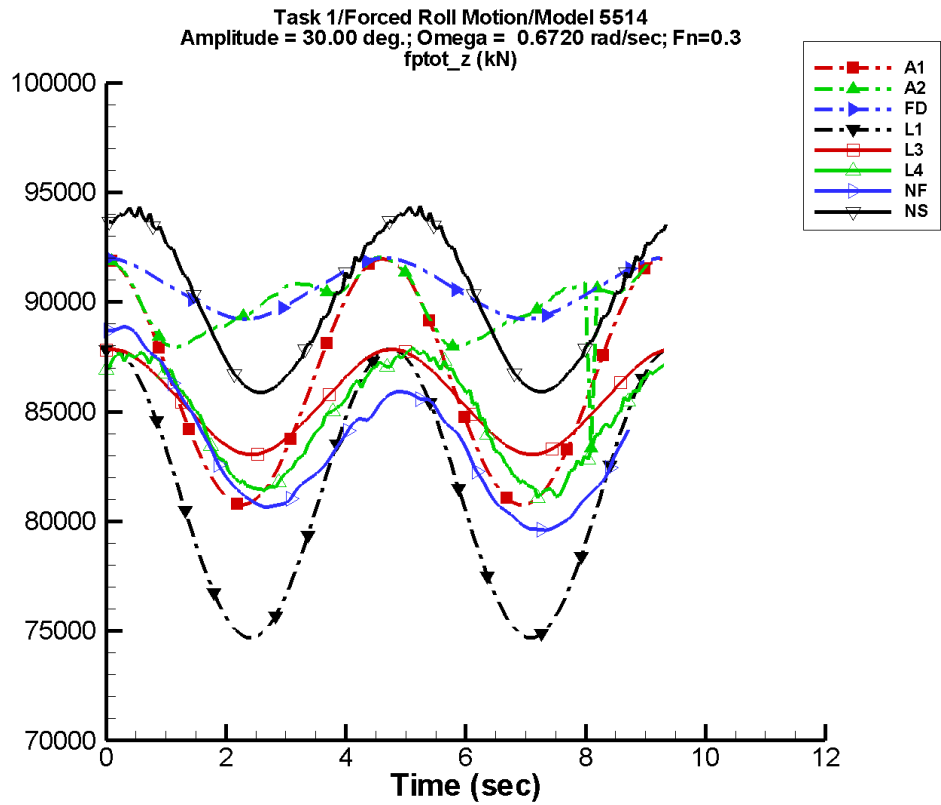


Figure D-118. Time history of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.63E+04	1.81	35	5.62E+03	95
A2	8.99E+04	122.	-50	1.49E+03	136
FD	9.06E+04	0.730	-24	1.35E+03	92
L1	8.12E+04	2.87	179	6.58E+03	84
L3	8.54E+04	0.860	174	2.36E+03	83
L4	8.48E+04	112.	-58	3.10E+03	64
NF	8.34E+04	89.5	-155	3.00E+03	-35
NS	9.01E+04	17.1	-176	4.06E+03	65

Table D–236. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.07E+04	9.20E+04	8.10E+04	9.17E+04
A2	8.33E+04	9.21E+04	8.82E+04	9.18E+04
FD	8.92E+04	9.20E+04	8.93E+04	9.20E+04
L1	7.47E+04	8.79E+04	7.48E+04	8.79E+04
L3	8.30E+04	8.78E+04	8.31E+04	8.78E+04
L4	8.11E+04	8.79E+04	8.13E+04	8.77E+04
NF	7.96E+04	8.73E+04	7.96E+04	8.72E+04
NS	8.59E+04	9.44E+04	8.59E+04	9.41E+04

TASK 1/ROLL MOTION/MODEL 5514

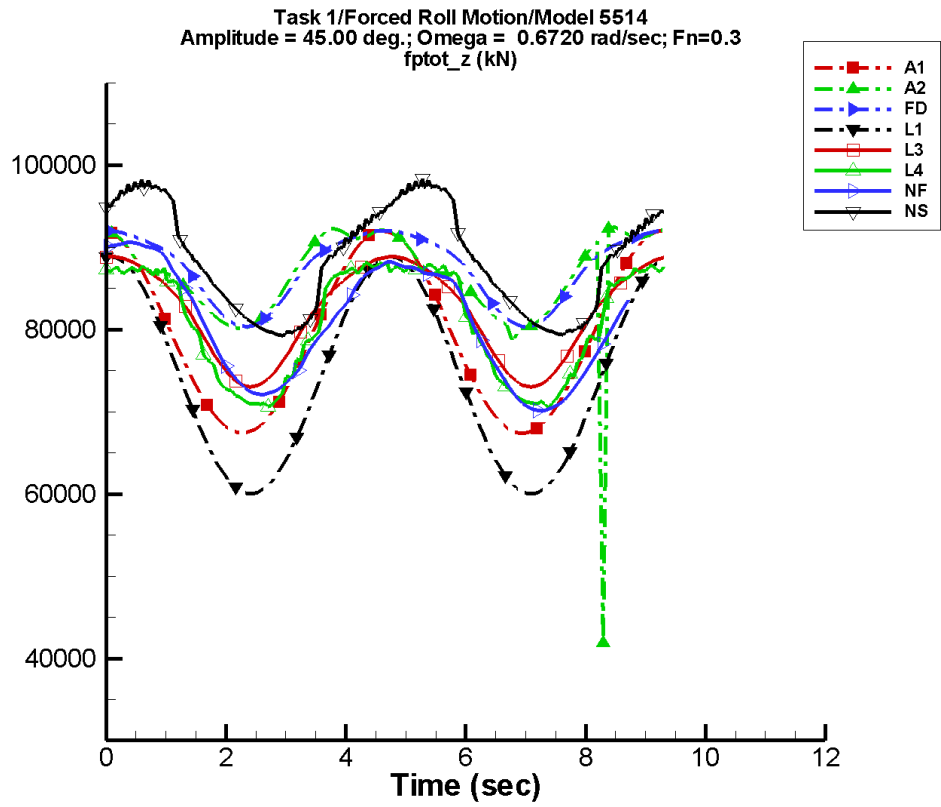


Figure D-119. Time history of  $F_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.95E+04	1.79	151	1.23E+04	95
A2	8.64E+04	1.08E+03	-44	5.28E+03	102
FD	8.73E+04	98.1	-29	5.64E+03	90
L1	7.43E+04	13.1	179	1.44E+04	84
L3	8.21E+04	86.3	1	7.58E+03	83
L4	8.09E+04	297.	-63	8.78E+03	78
NF	8.07E+04	584.	94	8.83E+03	-33
NS	8.86E+04	36.9	-175	8.90E+03	59

Table D–238. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.74E+04	9.20E+04	6.79E+04	9.14E+04
A2	4.19E+04	9.24E+04	8.01E+04	9.22E+04
FD	8.03E+04	9.20E+04	8.07E+04	9.19E+04
L1	6.00E+04	8.89E+04	6.02E+04	8.89E+04
L3	7.30E+04	8.88E+04	7.32E+04	8.89E+04
L4	7.04E+04	8.82E+04	7.09E+04	8.77E+04
NF	7.01E+04	9.03E+04	7.03E+04	9.02E+04
NS	7.92E+04	9.84E+04	7.94E+04	9.77E+04

TASK 1/ROLL MOTION/MODEL 5514

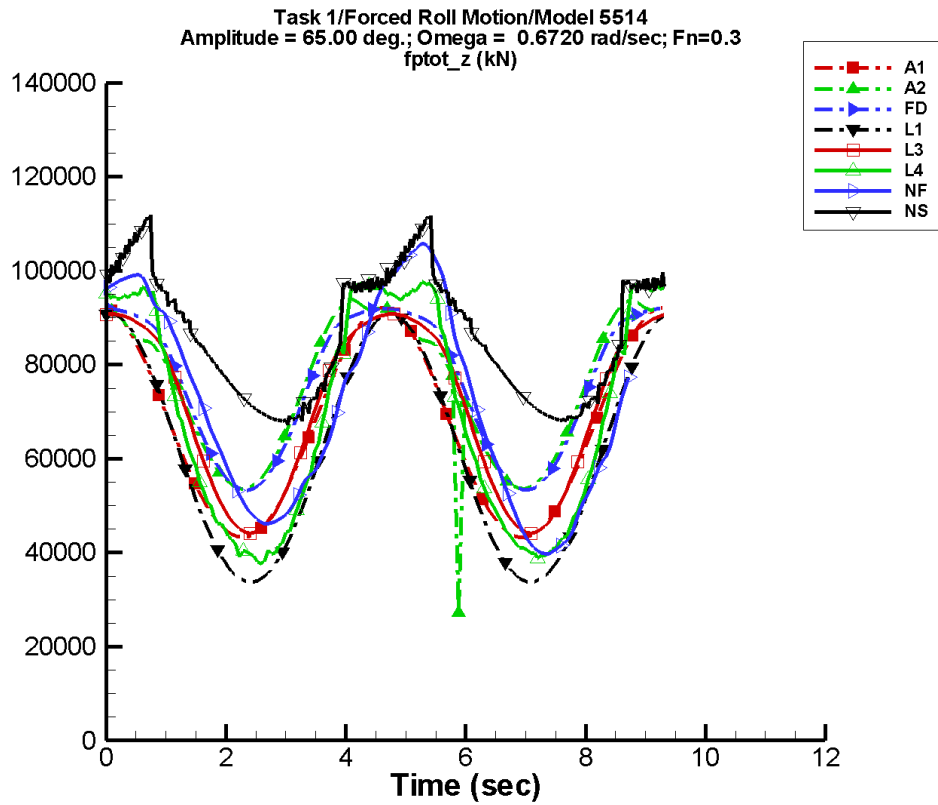


Figure D-120. Time history of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

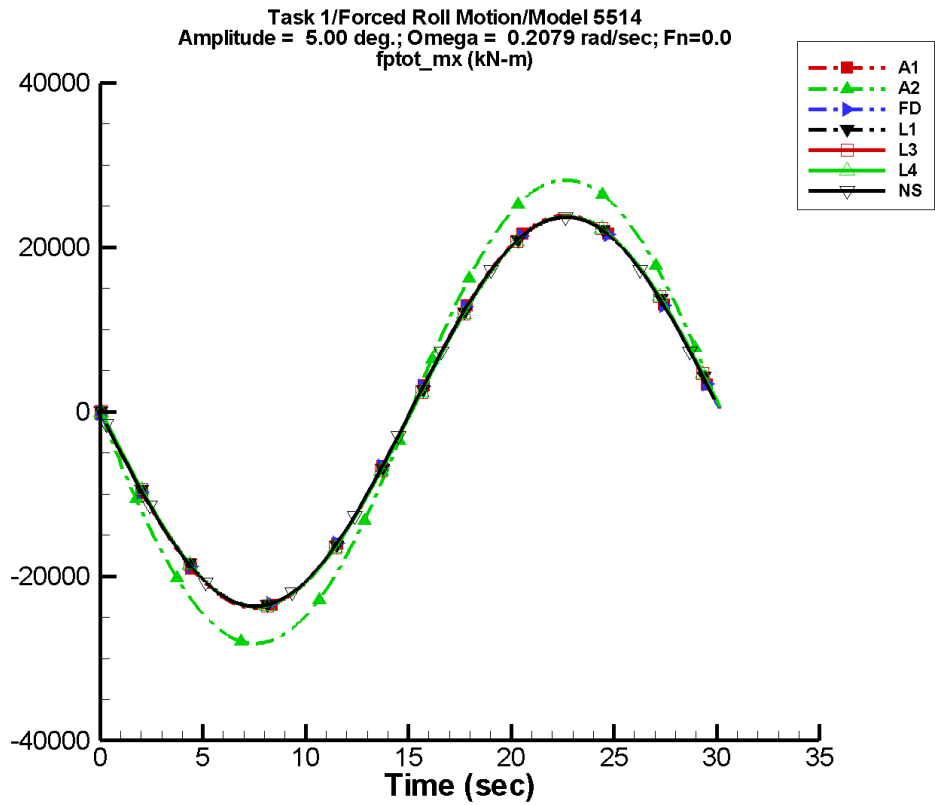
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.70E+04	22.6	-167	2.45E+04	95
A2	7.53E+04	1.25E+03	36	1.96E+04	102
FD	7.58E+04	219.	-30	2.00E+04	90
L1	6.15E+04	53.2	179	2.86E+04	84
L3	7.06E+04	226.	0	2.37E+04	83
L4	6.89E+04	700.	-125	3.12E+04	81
NF	7.27E+04	2.38E+03	75	3.15E+04	-42
NS	8.60E+04	81.5	161	1.81E+04	59

Table D–240. Minimum and maximum of  $F_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	4.32E+04	9.21E+04	4.42E+04	9.08E+04
A2	2.72E+04	9.41E+04	5.48E+04	9.28E+04
FD	5.33E+04	9.20E+04	5.43E+04	9.20E+04
L1	3.37E+04	9.08E+04	3.42E+04	9.08E+04
L3	4.41E+04	9.08E+04	4.46E+04	9.09E+04
L4	3.77E+04	9.77E+04	3.90E+04	9.69E+04
NF	3.97E+04	1.08E+05	4.03E+04	1.06E+05
NS	6.72E+04	1.12E+05	6.81E+04	1.10E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-121. Time history of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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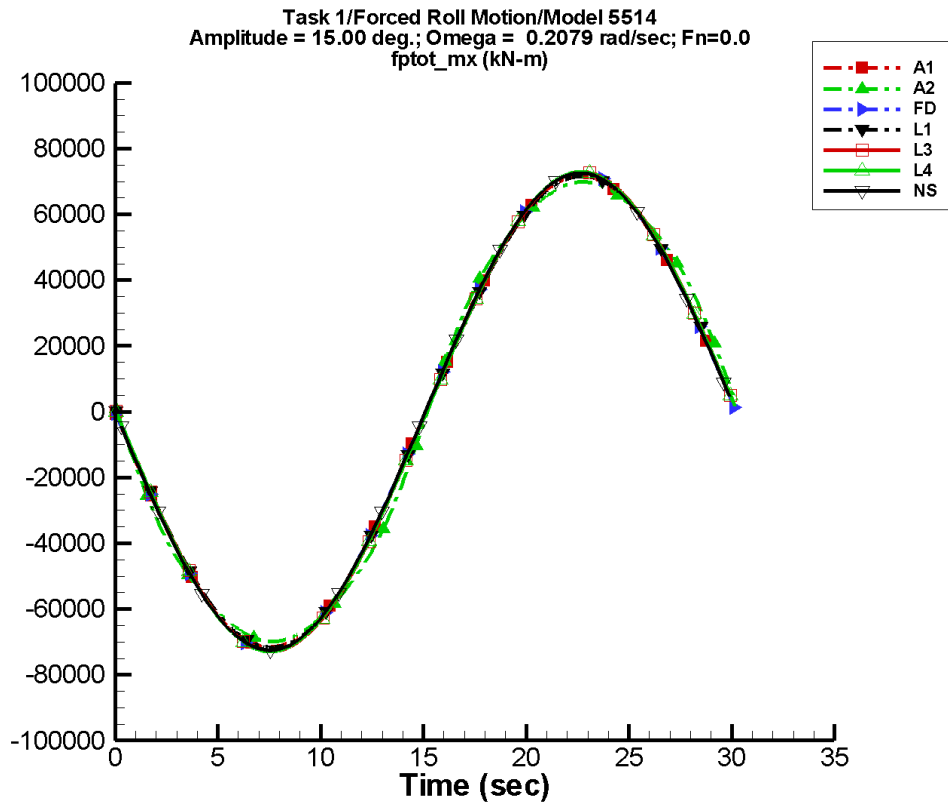
Table D–241. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.355	2.39E+04	180	0.201	16
A2	-12.2	2.85E+04	-180	63.6	-116
FD	0.256	2.37E+04	-180	1.14	54
L1	0.432	2.36E+04	179	1.61	88
L3	1.65	2.37E+04	179	6.13	86
L4	1.82	2.37E+04	179	6.21	92
NF	—	—	—	—	—
NS	-1.09E-02	2.37E+04	-180	8.72E-03	3

Table D–242. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.39E+04	2.39E+04	-2.39E+04	2.38E+04
A2	-2.82E+04	2.82E+04	-2.82E+04	2.82E+04
FD	-2.37E+04	2.37E+04	-2.36E+04	2.36E+04
L1	-2.37E+04	2.36E+04	-2.36E+04	2.36E+04
L3	-2.37E+04	2.37E+04	-2.37E+04	2.37E+04
L4	-2.37E+04	2.37E+04	-2.37E+04	2.37E+04
NF	—	—	—	—
NS	-2.37E+04	2.37E+04	-2.34E+04	2.34E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-122. Time history of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

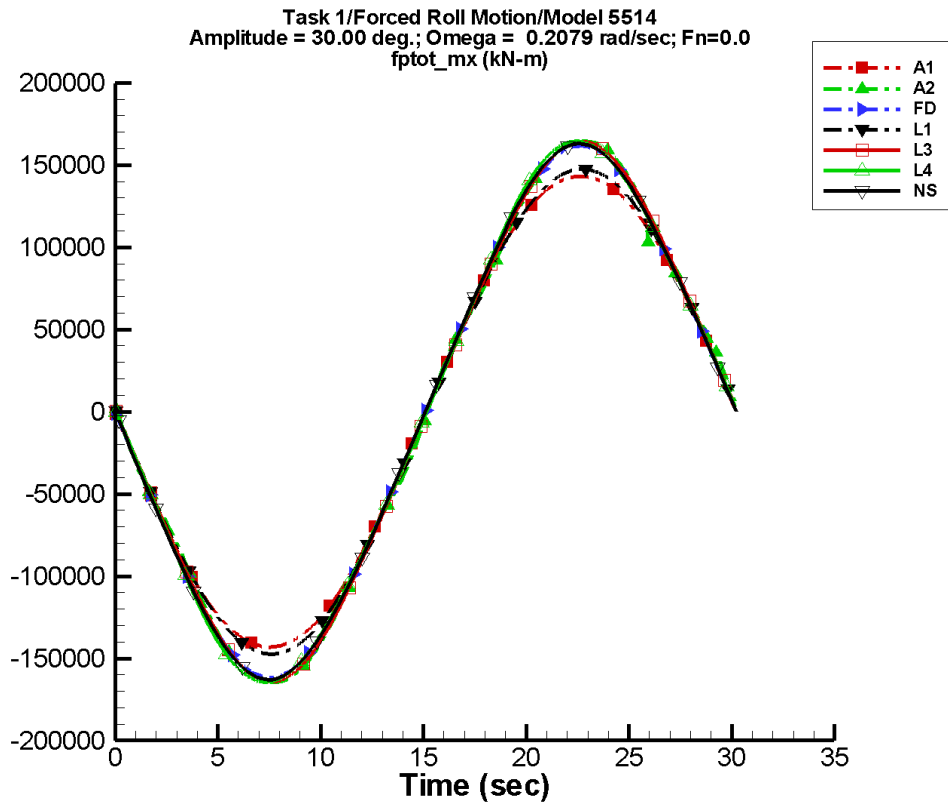
Table D–243. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.07	7.16E+04	180	0.604	17
A2	-118.	7.21E+04	179	587.	-116
FD	13.9	7.21E+04	180	70.6	56
L1	10.9	7.14E+04	179	42.9	87
L3	28.1	7.24E+04	179	110.	87
L4	35.4	7.25E+04	179	132.	104
NF	—	—	—	—	—
NS	-0.275	7.21E+04	-180	0.206	65

Table D–244. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.16E+04	7.16E+04	-7.16E+04	7.15E+04
A2	-6.99E+04	6.99E+04	-6.98E+04	6.98E+04
FD	-7.27E+04	7.27E+04	-7.26E+04	7.26E+04
L1	-7.16E+04	7.16E+04	-7.16E+04	7.16E+04
L3	-7.29E+04	7.29E+04	-7.29E+04	7.29E+04
L4	-7.29E+04	7.29E+04	-7.29E+04	7.29E+04
NF	—	—	—	—
NS	-7.25E+04	7.25E+04	-7.18E+04	7.18E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-123. Time history of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

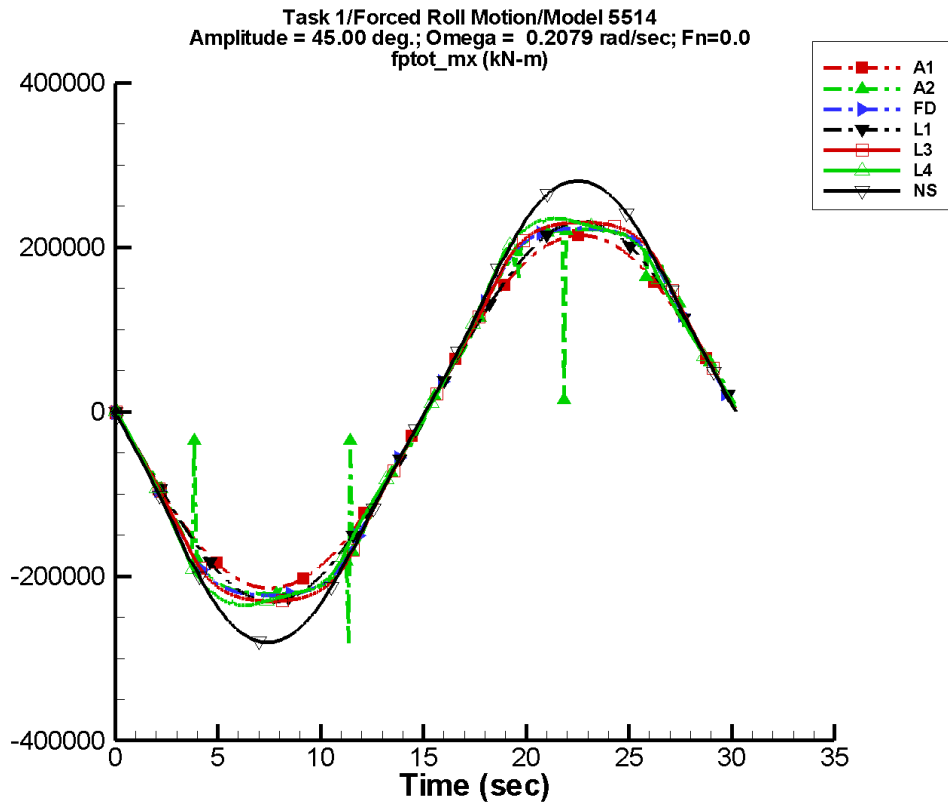
Table D–245. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.12	1.43E+05	180	1.21	16
A2	23.6	1.58E+05	179	1.03E+03	41
FD	156.	1.56E+05	180	798.	57
L1	86.0	1.46E+05	179	339.	87
L3	365.	1.58E+05	179	1.44E+03	87
L4	457.	1.58E+05	-180	1.68E+03	105
NF	—	—	—	—	—
NS	-3.14	1.57E+05	-180	2.76	75

Table D–246. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.43E+05	1.43E+05	-1.43E+05	1.43E+05
A2	-1.65E+05	1.65E+05	-1.65E+05	1.64E+05
FD	-1.62E+05	1.62E+05	-1.61E+05	1.61E+05
L1	-1.47E+05	1.47E+05	-1.47E+05	1.47E+05
L3	-1.64E+05	1.64E+05	-1.64E+05	1.64E+05
L4	-1.64E+05	1.65E+05	-1.64E+05	1.64E+05
NF	—	—	—	—
NS	-1.63E+05	1.63E+05	-1.62E+05	1.62E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-124. Time history of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

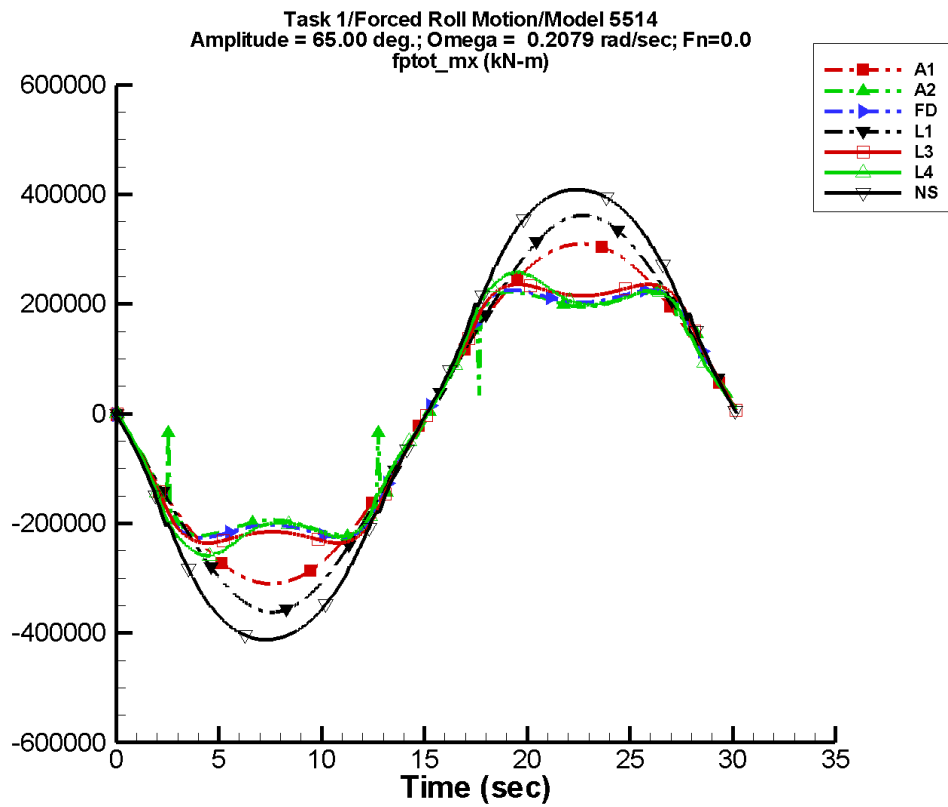
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.20	2.15E+05	180	1.76	17
A2	-650.	2.31E+05	179	1.46E+03	120
FD	34.7	2.34E+05	-180	555.	155
L1	284.	2.27E+05	179	1.12E+03	87
L3	86.7	2.40E+05	179	180.	66
L4	444.	2.40E+05	-179	1.88E+03	145
NF	—	—	—	—	—
NS	-12.5	2.69E+05	-179	10.1	74

Table D–248. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.15E+05	2.15E+05	-2.15E+05	2.15E+05
A2	-2.81E+05	2.22E+05	-2.22E+05	2.24E+05
FD	-2.23E+05	2.23E+05	-2.23E+05	2.23E+05
L1	-2.31E+05	2.31E+05	-2.31E+05	2.31E+05
L3	-2.30E+05	2.30E+05	-2.30E+05	2.30E+05
L4	-2.36E+05	2.35E+05	-2.35E+05	2.35E+05
NF	—	—	—	—
NS	-2.81E+05	2.81E+05	-2.80E+05	2.80E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-125. Time history of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

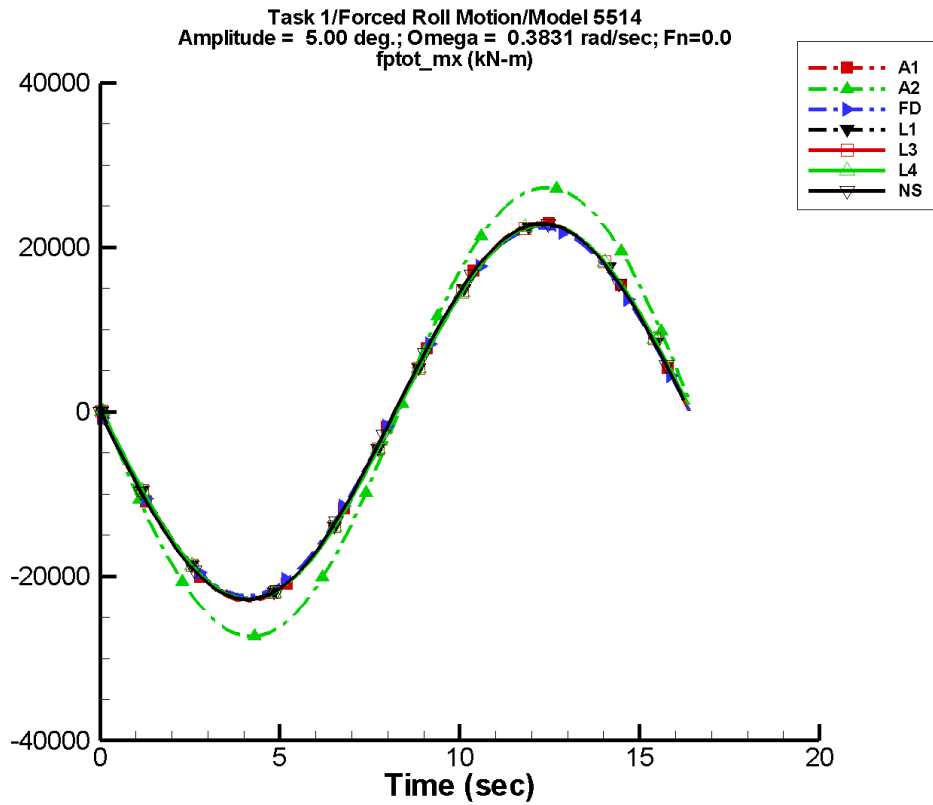
Table D–249. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-4.62	3.10E+05	180	2.60	16
A2	-727.	2.47E+05	180	7.77E+03	-135
FD	-1.13E+03	2.54E+05	-179	6.68E+03	-129
L1	824.	3.49E+05	179	3.24E+03	87
L3	-2.64E+03	2.66E+05	179	1.06E+04	-92
L4	-2.41E+03	2.62E+05	-177	1.03E+04	-102
NF	—	—	—	—	—
NS	-851.	4.10E+05	-179	951.	93

Table D–250. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.10E+05	3.10E+05	-3.10E+05	3.10E+05
A2	-2.24E+05	2.24E+05	-2.22E+05	2.23E+05
FD	-2.26E+05	2.26E+05	-2.25E+05	2.25E+05
L1	-3.62E+05	3.62E+05	-3.62E+05	3.62E+05
L3	-2.36E+05	2.36E+05	-2.36E+05	2.36E+05
L4	-2.60E+05	2.59E+05	-2.59E+05	2.58E+05
NF	—	—	—	—
NS	-4.12E+05	4.09E+05	-4.12E+05	4.09E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-126. Time history of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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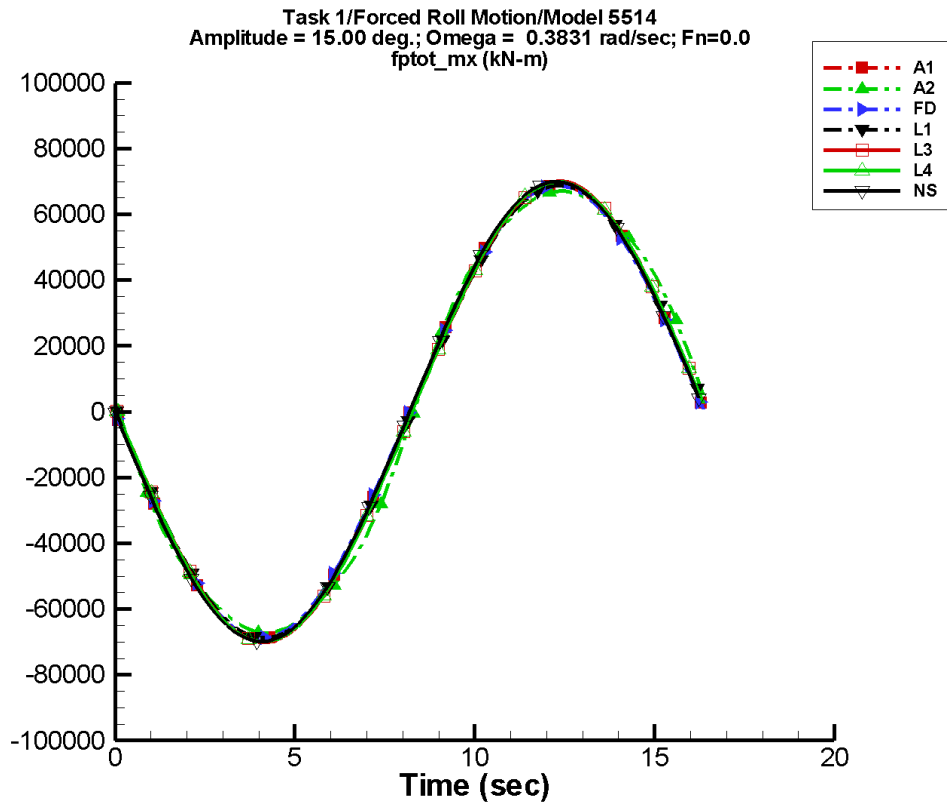
Table D–251. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.74	2.30E+04	-180	3.57	-2
A2	-12.9	2.76E+04	178	62.5	-118
FD	0.296	2.24E+04	-180	1.60	81
L1	0.244	2.27E+04	179	0.789	21
L3	1.53	2.28E+04	179	3.12	39
L4	1.10	2.28E+04	179	6.26	2
NF	—	—	—	—	—
NS	2.32E-02	2.29E+04	-180	0.109	161

Table D–252. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.30E+04	2.29E+04	-2.31E+04	2.29E+04
A2	-2.73E+04	2.73E+04	-2.73E+04	2.72E+04
FD	-2.24E+04	2.24E+04	-2.23E+04	2.23E+04
L1	-2.27E+04	2.27E+04	-2.27E+04	2.27E+04
L3	-2.28E+04	2.28E+04	-2.28E+04	2.28E+04
L4	-2.28E+04	2.28E+04	-2.28E+04	2.28E+04
NF	—	—	—	—
NS	-2.29E+04	2.29E+04	-2.26E+04	2.26E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-127. Time history of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

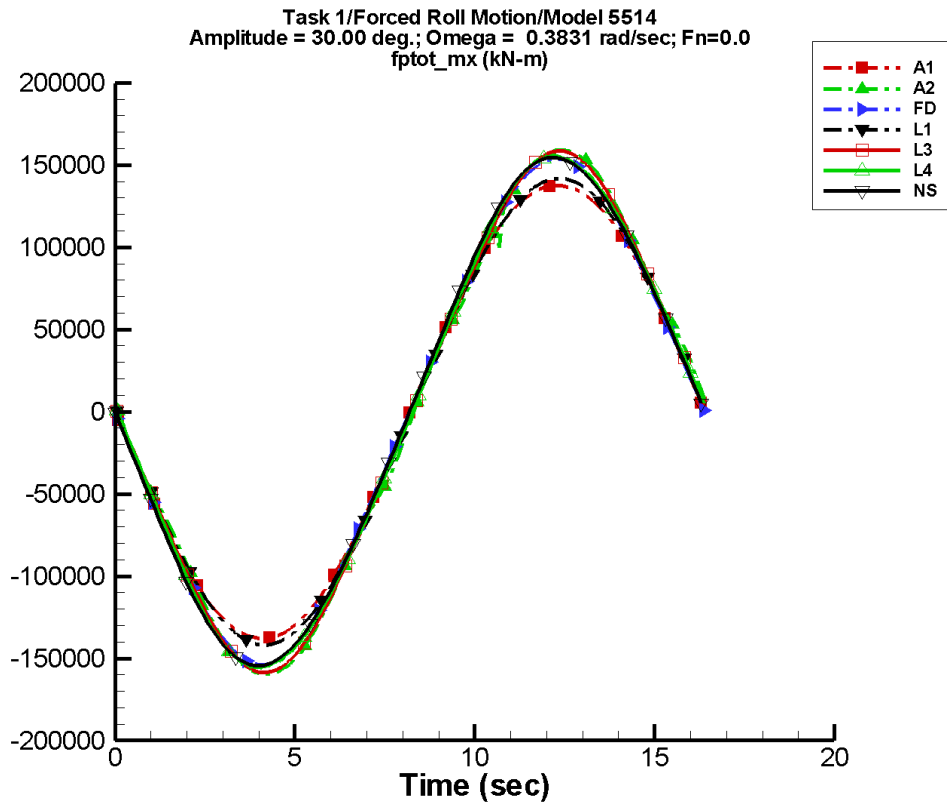
Table D–253. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.22	6.89E+04	-180	10.7	-2
A2	-115.	6.94E+04	178	597.	-117
FD	14.5	6.83E+04	-180	96.9	76
L1	9.87	6.86E+04	179	20.2	27
L3	26.5	6.96E+04	179	51.7	30
L4	21.4	6.96E+04	179	66.2	28
NF	—	—	—	—	—
NS	0.336	6.96E+04	-180	0.181	-153

Table D–254. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.90E+04	6.88E+04	-6.92E+04	6.85E+04
A2	-6.73E+04	6.71E+04	-6.73E+04	6.68E+04
FD	-6.88E+04	6.88E+04	-6.85E+04	6.85E+04
L1	-6.88E+04	6.88E+04	-6.87E+04	6.87E+04
L3	-7.01E+04	7.01E+04	-7.00E+04	7.00E+04
L4	-6.98E+04	6.99E+04	-6.98E+04	6.98E+04
NF	—	—	—	—
NS	-6.99E+04	6.99E+04	-6.92E+04	6.92E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-128. Time history of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

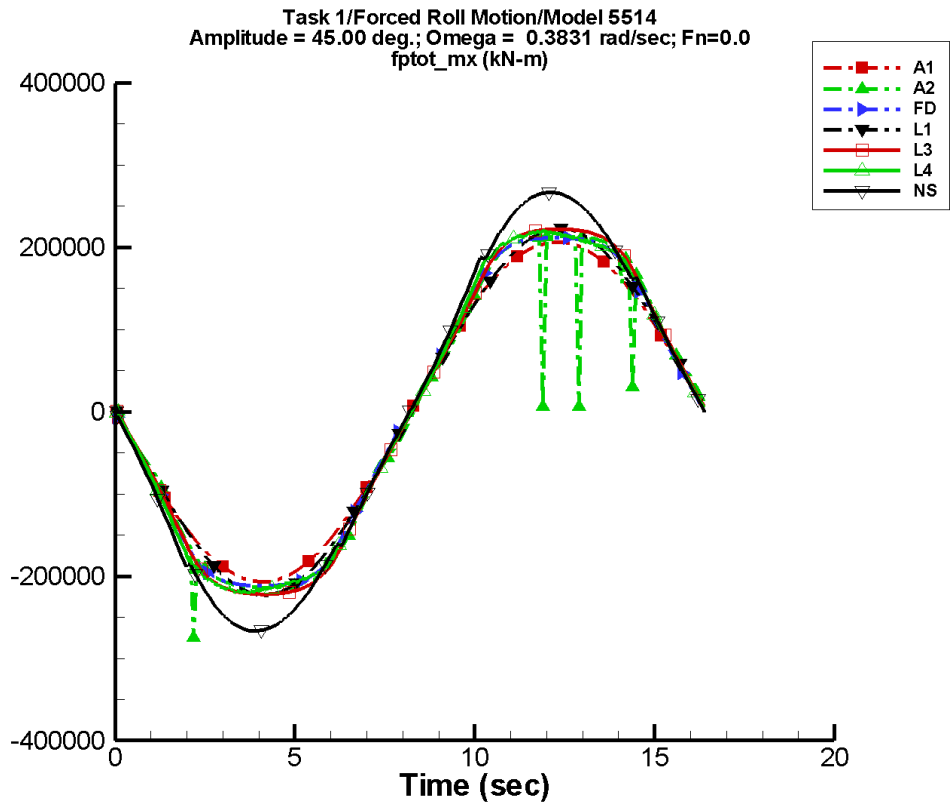
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-10.4	1.38E+05	-180	21.4	-2
A2	-52.1	1.52E+05	177	907.	54
FD	158.	1.49E+05	-180	1.08E+03	76
L1	82.1	1.40E+05	179	159.	28
L3	352.	1.52E+05	179	675.	26
L4	303.	1.51E+05	179	635.	37
NF	—	—	—	—	—
NS	3.32	1.51E+05	-179	3.03	-58

Table D–256. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.38E+05	1.38E+05	-1.38E+05	1.37E+05
A2	-1.59E+05	1.59E+05	-1.60E+05	1.58E+05
FD	-1.54E+05	1.54E+05	-1.53E+05	1.53E+05
L1	-1.42E+05	1.42E+05	-1.42E+05	1.42E+05
L3	-1.59E+05	1.59E+05	-1.58E+05	1.58E+05
L4	-1.56E+05	1.56E+05	-1.55E+05	1.55E+05
NF	—	—	—	—
NS	-1.55E+05	1.55E+05	-1.54E+05	1.54E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-129. Time history of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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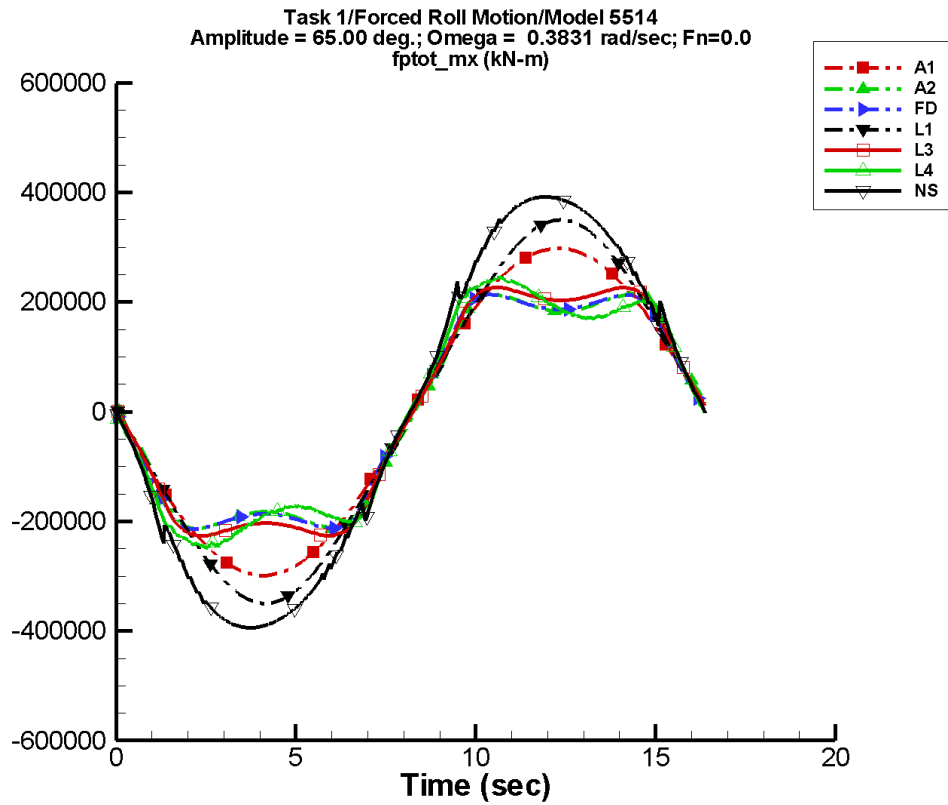
Table D–257. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-15.6	2.07E+05	-180	32.2	-2
A2	-3.91E+03	2.19E+05	178	4.54E+03	81
FD	-125.	2.22E+05	-180	461.	-68
L1	276.	2.18E+05	179	527.	28
L3	185.	2.31E+05	179	510.	74
L4	-251.	2.29E+05	-180	955.	114
NF	—	—	—	—	—
NS	11.3	2.58E+05	-179	11.1	-51

Table D–258. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.07E+05	2.06E+05	-2.08E+05	2.06E+05
A2	-2.74E+05	2.13E+05	-2.15E+05	2.05E+05
FD	-2.12E+05	2.12E+05	-2.11E+05	2.11E+05
L1	-2.23E+05	2.23E+05	-2.23E+05	2.23E+05
L3	-2.22E+05	2.22E+05	-2.22E+05	2.22E+05
L4	-2.21E+05	2.20E+05	-2.19E+05	2.19E+05
NF	—	—	—	—
NS	-2.67E+05	2.67E+05	-2.66E+05	2.66E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-130. Time history of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

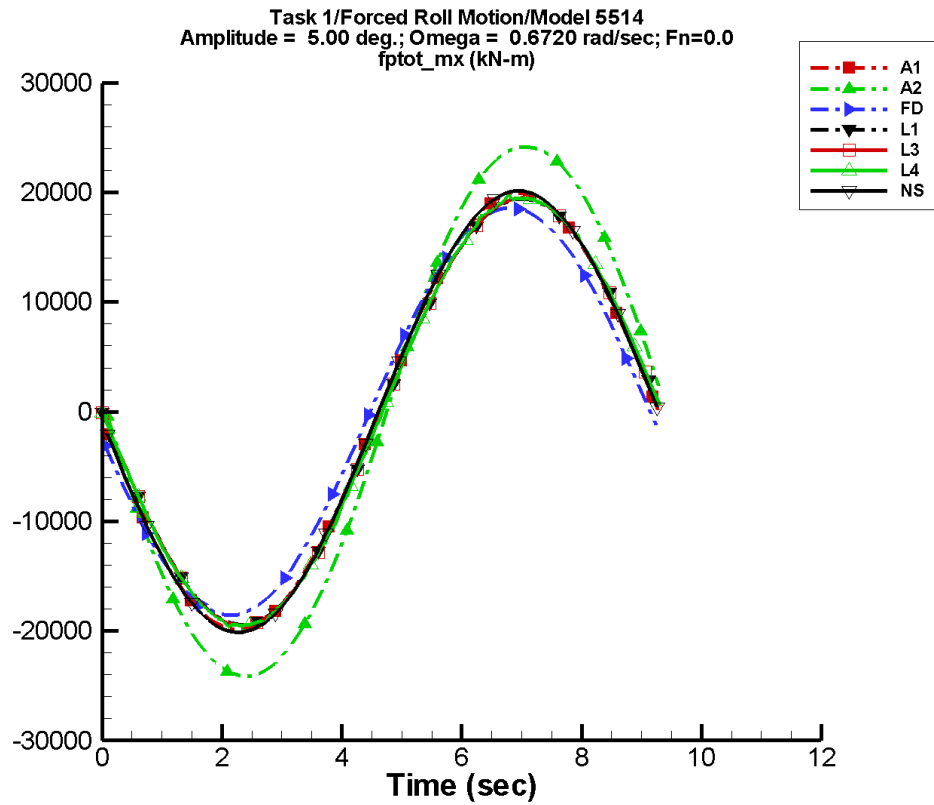
Table D–259. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-22.6	2.99E+05	-180	46.5	-2
A2	-762.	2.36E+05	179	7.92E+03	-129
FD	-1.28E+03	2.37E+05	-179	9.34E+03	-104
L1	801.	3.36E+05	179	1.53E+03	29
L3	-2.44E+03	2.57E+05	180	4.88E+03	-165
L4	-3.52E+03	2.50E+05	-176	6.16E+03	-171
NF	—	—	—	—	—
NS	-604.	3.95E+05	-178	557.	100

Table D–260. Minimum and maximum of of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.99E+05	2.98E+05	-3.00E+05	2.97E+05
A2	-2.14E+05	2.15E+05	-2.12E+05	2.13E+05
FD	-2.14E+05	2.14E+05	-2.12E+05	2.12E+05
L1	-3.50E+05	3.50E+05	-3.49E+05	3.49E+05
L3	-2.27E+05	2.27E+05	-2.26E+05	2.26E+05
L4	-2.48E+05	2.45E+05	-2.45E+05	2.42E+05
NF	—	—	—	—
NS	-3.94E+05	3.92E+05	-3.94E+05	3.92E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-131. Time history of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

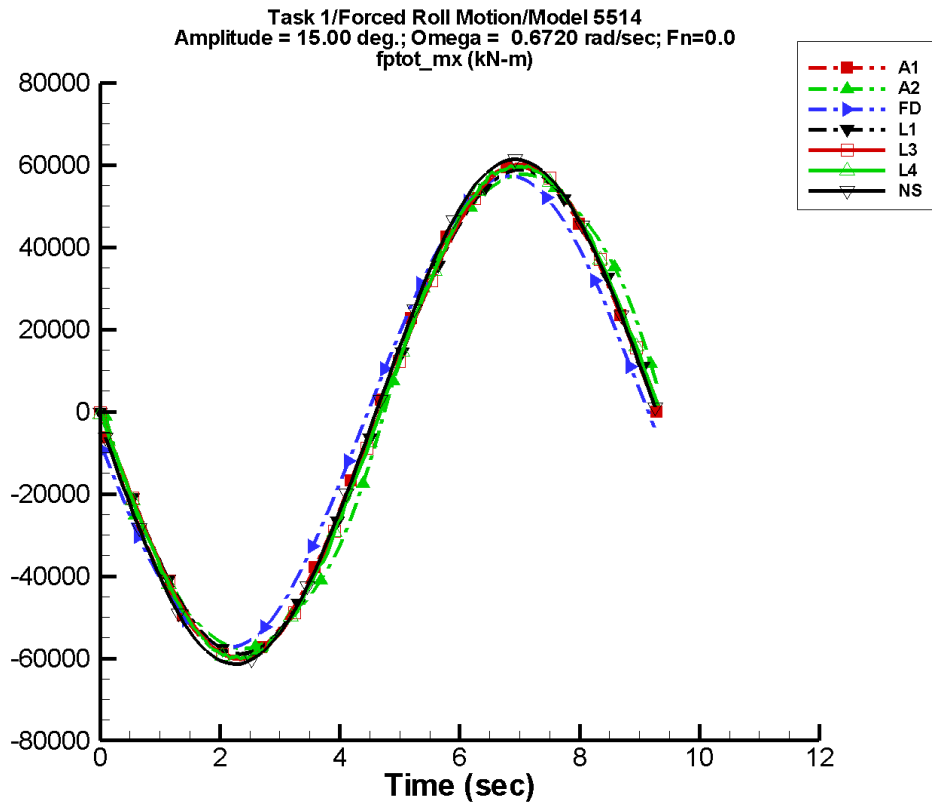
Table D–261. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.31	1.99E+04	-178	10.4	-90
A2	-23.0	2.45E+04	178	54.3	-131
FD	0.678	1.86E+04	-172	1.14	149
L1	-2.45E-02	1.94E+04	-180	0.679	15
L3	1.17	1.95E+04	-180	2.96	41
L4	-8.73	1.96E+04	180	35.0	-41
NF	—	—	—	—	—
NS	-0.847	2.01E+04	-178	1.07	175

Table D–262. Minimum and maximum of of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.99E+04	1.99E+04	-1.97E+04	1.97E+04
A2	-2.41E+04	2.42E+04	-2.39E+04	2.39E+04
FD	-1.86E+04	1.86E+04	-1.84E+04	1.84E+04
L1	-1.94E+04	1.94E+04	-1.93E+04	1.93E+04
L3	-1.95E+04	1.95E+04	-1.94E+04	1.94E+04
L4	-1.96E+04	1.98E+04	-1.94E+04	1.95E+04
NF	—	—	—	—
NS	-2.01E+04	2.01E+04	-1.99E+04	1.99E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-132. Time history of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

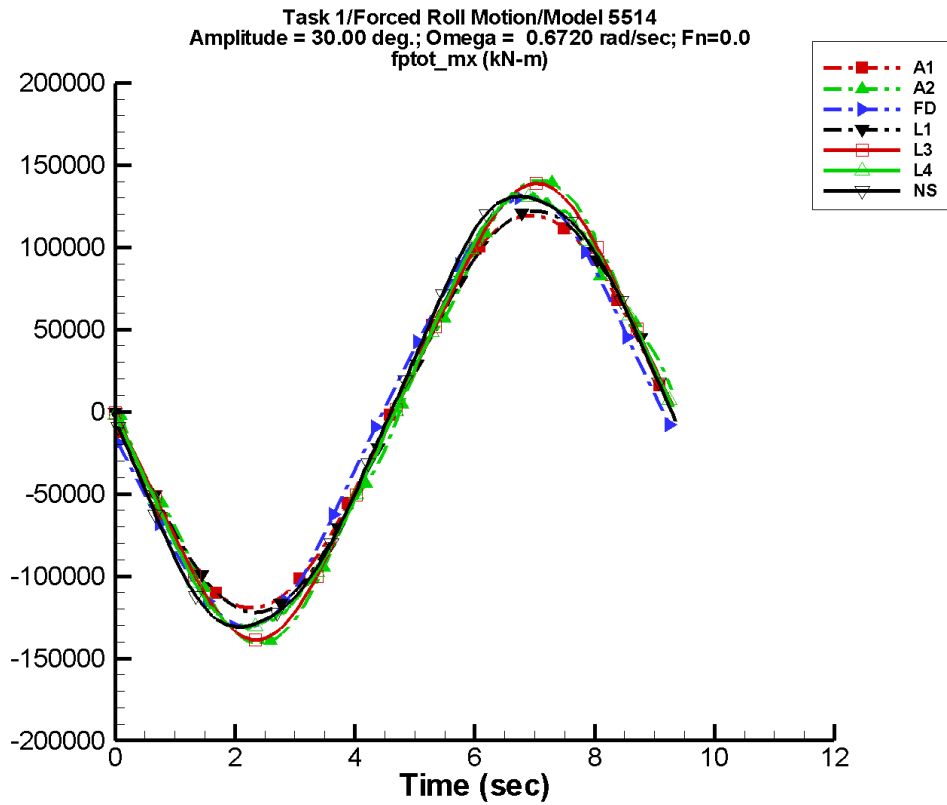
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-6.91	5.97E+04	-178	31.2	-90
A2	-190.	6.02E+04	178	485.	-131
FD	37.1	5.69E+04	-172	68.6	148
L1	9.53	5.87E+04	-180	20.4	24
L3	26.6	5.97E+04	180	52.4	27
L4	-94.8	6.00E+04	-180	149.	-12
NF	—	—	—	—	—
NS	-1.47	6.13E+04	-177	3.09	-173

Table D–264. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.96E+04	5.97E+04	-5.90E+04	5.90E+04
A2	-5.77E+04	5.78E+04	-5.71E+04	5.72E+04
FD	-5.73E+04	5.73E+04	-5.67E+04	5.66E+04
L1	-5.89E+04	5.89E+04	-5.87E+04	5.86E+04
L3	-6.02E+04	6.02E+04	-5.99E+04	5.99E+04
L4	-6.01E+04	5.98E+04	-5.97E+04	5.95E+04
NF	—	—	—	—
NS	-6.14E+04	6.14E+04	-6.08E+04	6.08E+04



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-133. Time history of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

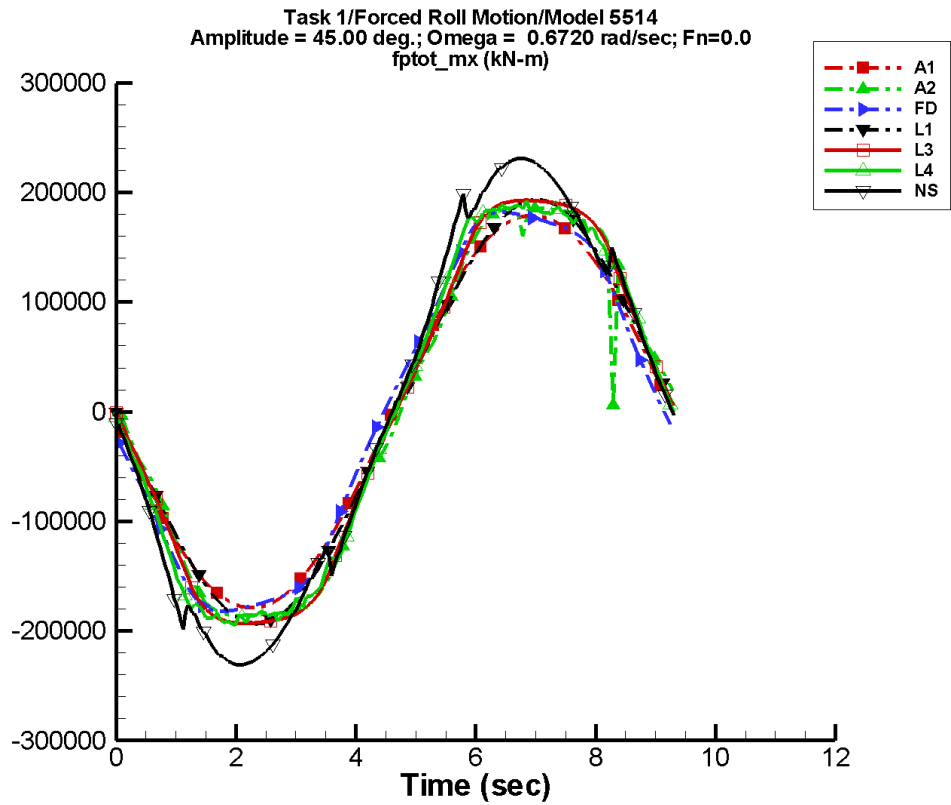
Table D–265. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-13.8	1.19E+05	-178	62.4	-90
A2	62.8	1.33E+05	177	1.13E+03	7
FD	406.	1.26E+05	-173	766.	146
L1	83.2	1.21E+05	180	163.	25
L3	362.	1.32E+05	180	695.	22
L4	-116.	1.29E+05	-179	407.	23
NF	—	—	—	—	—
NS	8.34	1.31E+05	-177	14.6	-110

Table D–266. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.19E+05	1.19E+05	-1.18E+05	1.18E+05
A2	-1.40E+05	1.40E+05	-1.39E+05	1.39E+05
FD	-1.31E+05	1.31E+05	-1.29E+05	1.29E+05
L1	-1.22E+05	1.22E+05	-1.22E+05	1.21E+05
L3	-1.39E+05	1.39E+05	-1.38E+05	1.38E+05
L4	-1.32E+05	1.33E+05	-1.31E+05	1.31E+05
NF	—	—	—	—
NS	-1.31E+05	1.31E+05	-1.30E+05	1.30E+05

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-134. Time history of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

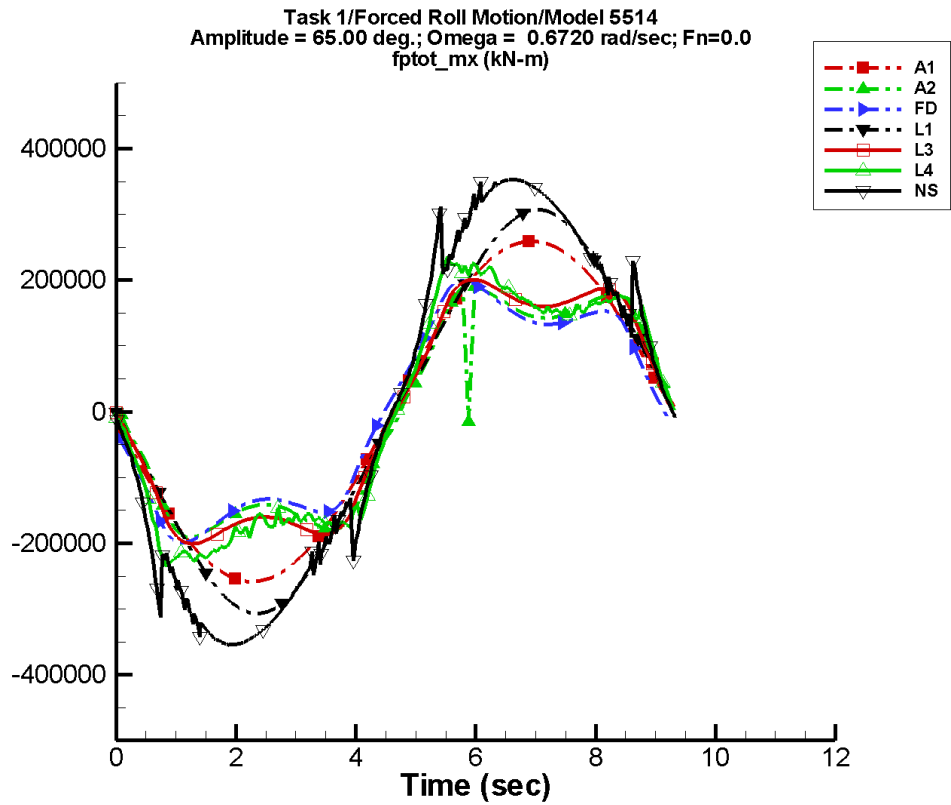
Table D–267. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-20.7	1.79E+05	-178	93.6	-90
A2	-2.07E+03	1.95E+05	178	2.30E+03	26
FD	-229.	1.87E+05	-173	651.	33
L1	280.	1.88E+05	180	539.	25
L3	-42.7	2.02E+05	180	837.	110
L4	-1.70E+03	2.03E+05	-178	1.76E+03	149
NF	—	—	—	—	—
NS	41.2	2.25E+05	-175	39.9	-113

Table D–268. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.79E+05	1.79E+05	-1.77E+05	1.77E+05
A2	-1.86E+05	1.86E+05	-1.86E+05	1.85E+05
FD	-1.82E+05	1.82E+05	-1.81E+05	1.81E+05
L1	-1.93E+05	1.93E+05	-1.92E+05	1.92E+05
L3	-1.93E+05	1.93E+05	-1.93E+05	1.93E+05
L4	-1.95E+05	1.92E+05	-1.91E+05	1.87E+05
NF	—	—	—	—
NS	-2.31E+05	2.31E+05	-2.31E+05	2.31E+05

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

Figure D-135. Time history of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

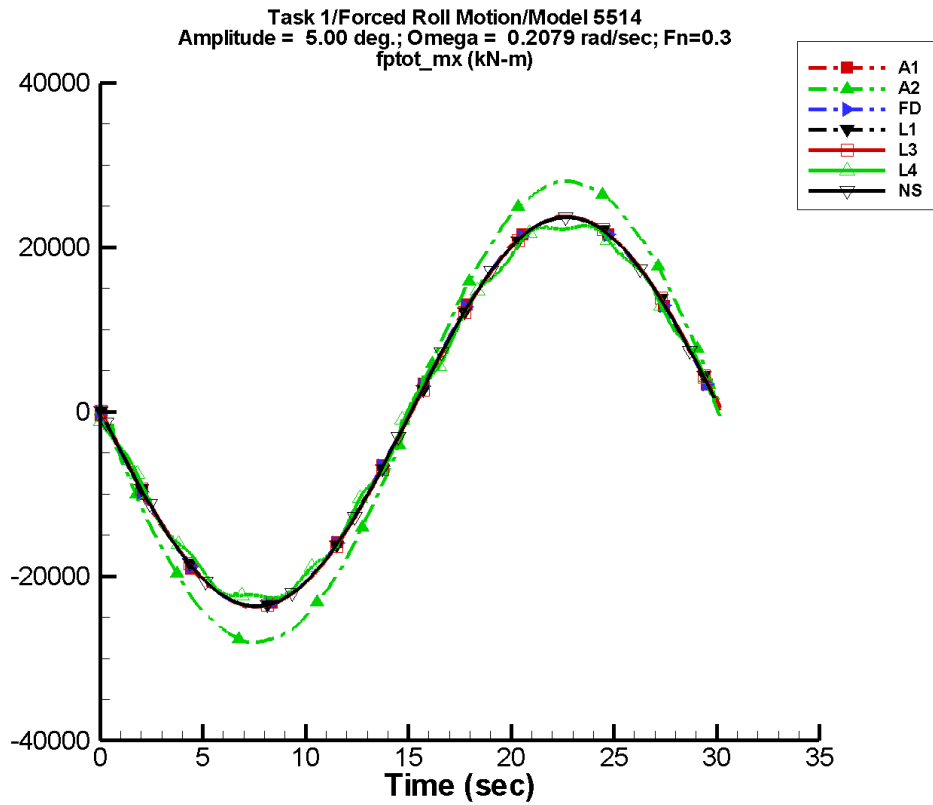
Table D–269. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-29.9	2.59E+05	-178	135.	-90
A2	-4.51E+03	1.96E+05	179	9.70E+03	-169
FD	-3.44E+03	1.87E+05	-168	6.55E+03	-29
L1	815.	2.93E+05	179	1.56E+03	25
L3	-2.66E+03	2.15E+05	-178	5.29E+03	-171
L4	-6.12E+03	2.27E+05	-174	7.66E+03	178
NF	—	—	—	—	—
NS	-311.	3.51E+05	-174	353.	158

Table D–270. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.58E+05	2.59E+05	-2.55E+05	2.56E+05
A2	-1.91E+05	1.91E+05	-1.84E+05	1.73E+05
FD	-2.00E+05	2.00E+05	-1.91E+05	1.91E+05
L1	-3.07E+05	3.07E+05	-3.05E+05	3.05E+05
L3	-2.01E+05	2.01E+05	-1.99E+05	1.99E+05
L4	-2.36E+05	2.36E+05	-2.23E+05	2.22E+05
NF	—	—	—	—
NS	-3.55E+05	3.53E+05	-3.55E+05	3.53E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-136. Time history of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

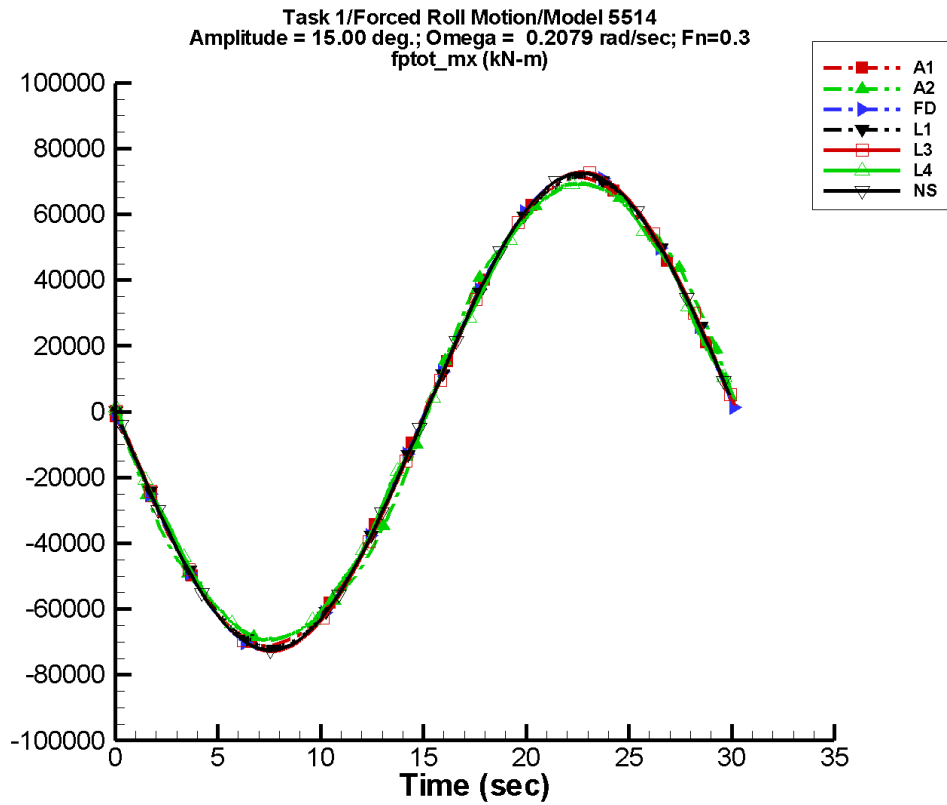
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.276	2.37E+04	-180	0.926	-17
A2	-12.5	2.83E+04	179	61.8	-118
FD	0.255	2.37E+04	-180	1.14	54
L1	0.600	2.36E+04	179	1.58	87
L3	1.78	2.37E+04	179	6.12	86
L4	12.1	2.28E+04	180	31.6	45
NF	—	—	—	—	—
NS	-1.12E-02	2.37E+04	180	9.16E-03	12

Table D–272. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.38E+04	2.38E+04	-2.38E+04	2.37E+04
A2	-2.81E+04	2.81E+04	-2.81E+04	2.80E+04
FD	-2.37E+04	2.37E+04	-2.36E+04	2.36E+04
L1	-2.36E+04	2.36E+04	-2.36E+04	2.36E+04
L3	-2.37E+04	2.37E+04	-2.37E+04	2.37E+04
L4	-2.28E+04	2.27E+04	-2.26E+04	2.26E+04
NF	—	—	—	—
NS	-2.37E+04	2.37E+04	-2.34E+04	2.34E+04



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-137. Time history of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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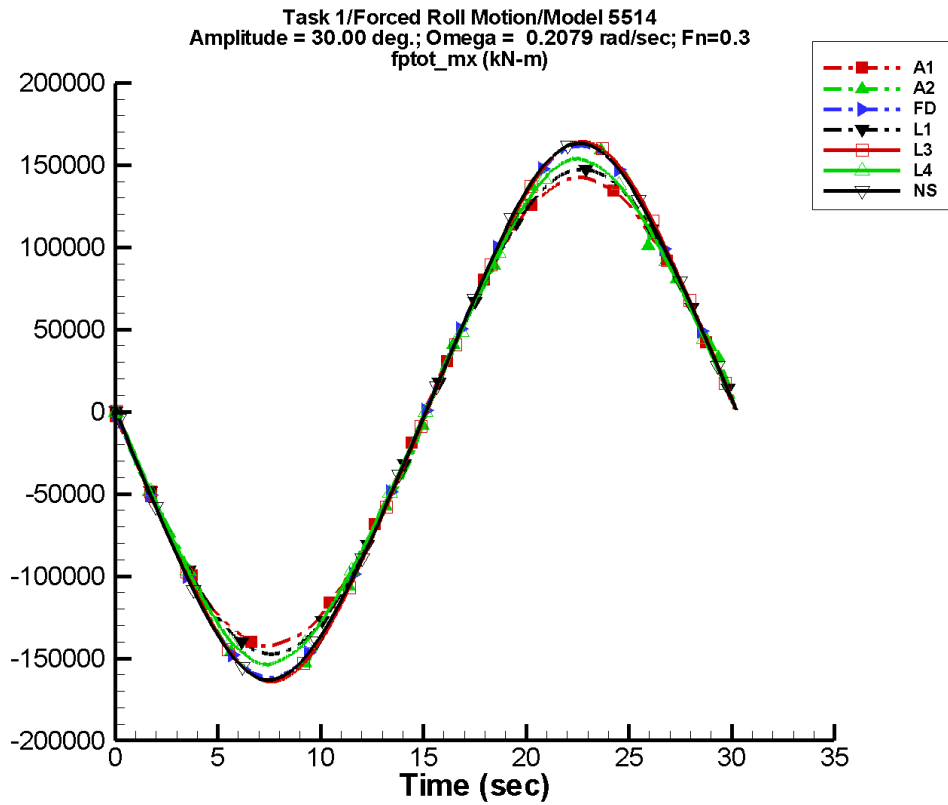
Table D–273. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.833	7.11E+04	-180	2.78	-16
A2	-118.	7.16E+04	179	587.	-116
FD	13.9	7.21E+04	180	70.6	56
L1	11.0	7.14E+04	179	42.9	87
L3	28.3	7.24E+04	179	110.	87
L4	50.9	6.93E+04	180	106.	85
NF	—	—	—	—	—
NS	-0.265	7.21E+04	180	0.225	58

Table D–274. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.13E+04	7.13E+04	-7.13E+04	7.12E+04
A2	-6.95E+04	6.96E+04	-6.95E+04	6.95E+04
FD	-7.27E+04	7.27E+04	-7.26E+04	7.26E+04
L1	-7.15E+04	7.15E+04	-7.15E+04	7.15E+04
L3	-7.28E+04	7.28E+04	-7.28E+04	7.28E+04
L4	-6.93E+04	6.93E+04	-6.93E+04	6.92E+04
NF	—	—	—	—
NS	-7.25E+04	7.25E+04	-7.18E+04	7.18E+04

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

Figure D-138. Time history of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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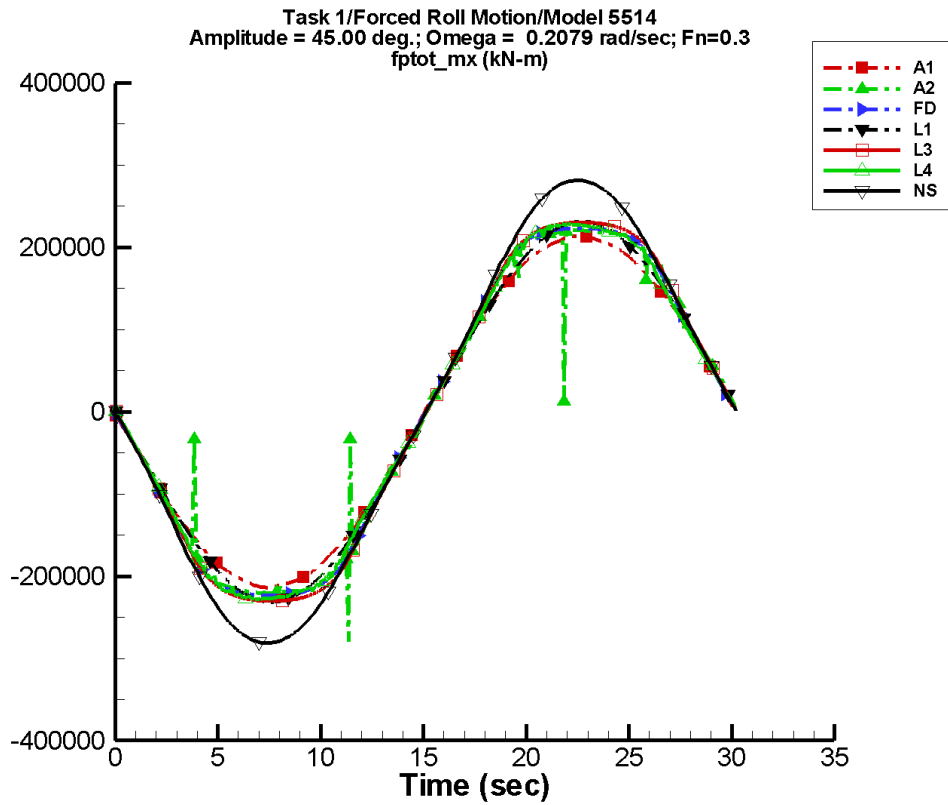
Table D–275. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.67	1.42E+05	-180	5.56	-16
A2	24.1	1.57E+05	179	1.03E+03	41
FD	156.	1.56E+05	180	798.	57
L1	86.1	1.46E+05	179	339.	87
L3	365.	1.58E+05	179	1.44E+03	87
L4	470.	1.48E+05	-180	1.26E+03	92
NF	—	—	—	—	—
NS	-3.10	1.57E+05	180	2.85	67

Table D–276. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.43E+05	1.43E+05	-1.43E+05	1.42E+05
A2	-1.64E+05	1.64E+05	-1.64E+05	1.64E+05
FD	-1.62E+05	1.62E+05	-1.61E+05	1.61E+05
L1	-1.47E+05	1.47E+05	-1.47E+05	1.47E+05
L3	-1.64E+05	1.64E+05	-1.64E+05	1.64E+05
L4	-1.54E+05	1.54E+05	-1.54E+05	1.54E+05
NF	—	—	—	—
NS	-1.63E+05	1.63E+05	-1.62E+05	1.62E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-139. Time history of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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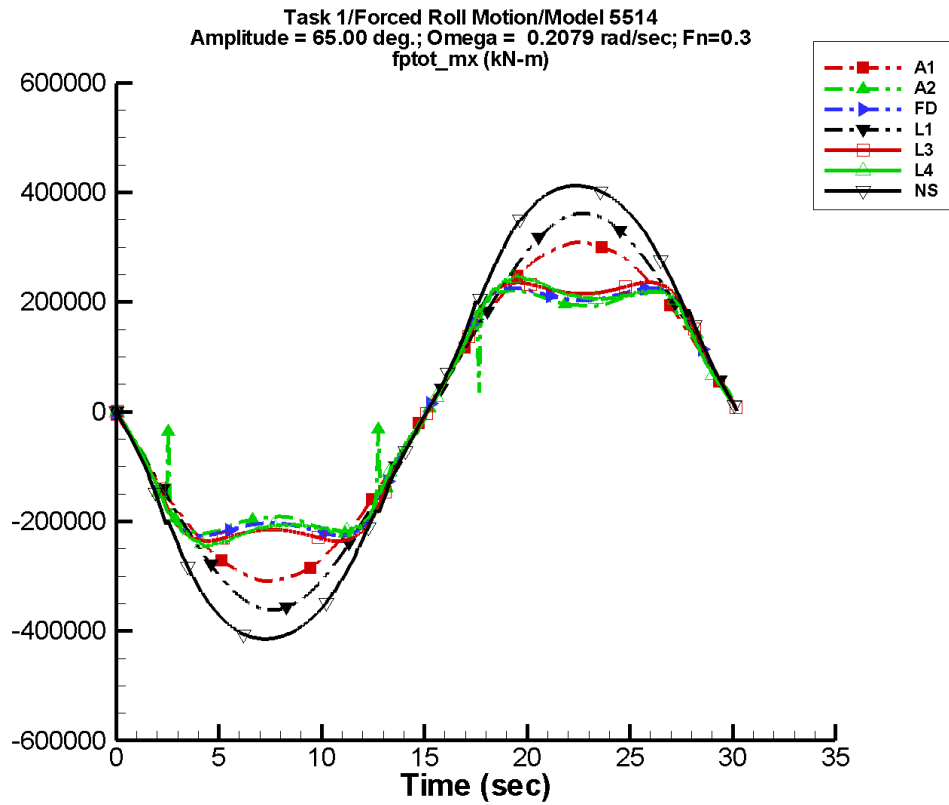
Table D–277. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.48	2.13E+05	-180	8.33	-17
A2	-649.	2.29E+05	179	1.45E+03	119
FD	34.7	2.34E+05	-180	555.	155
L1	284.	2.27E+05	179	1.12E+03	87
L3	86.8	2.39E+05	179	180.	66
L4	660.	2.32E+05	-180	1.30E+03	103
NF	—	—	—	—	—
NS	-11.9	2.69E+05	-180	9.87	62

Table D–278. Minimum and maximum of of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.14E+05	2.14E+05	-2.14E+05	2.14E+05
A2	-2.79E+05	2.21E+05	-2.21E+05	2.23E+05
FD	-2.23E+05	2.23E+05	-2.23E+05	2.23E+05
L1	-2.31E+05	2.31E+05	-2.31E+05	2.31E+05
L3	-2.30E+05	2.30E+05	-2.30E+05	2.30E+05
L4	-2.28E+05	2.28E+05	-2.28E+05	2.28E+05
NF	—	—	—	—
NS	-2.82E+05	2.81E+05	-2.81E+05	2.81E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-140. Time history of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

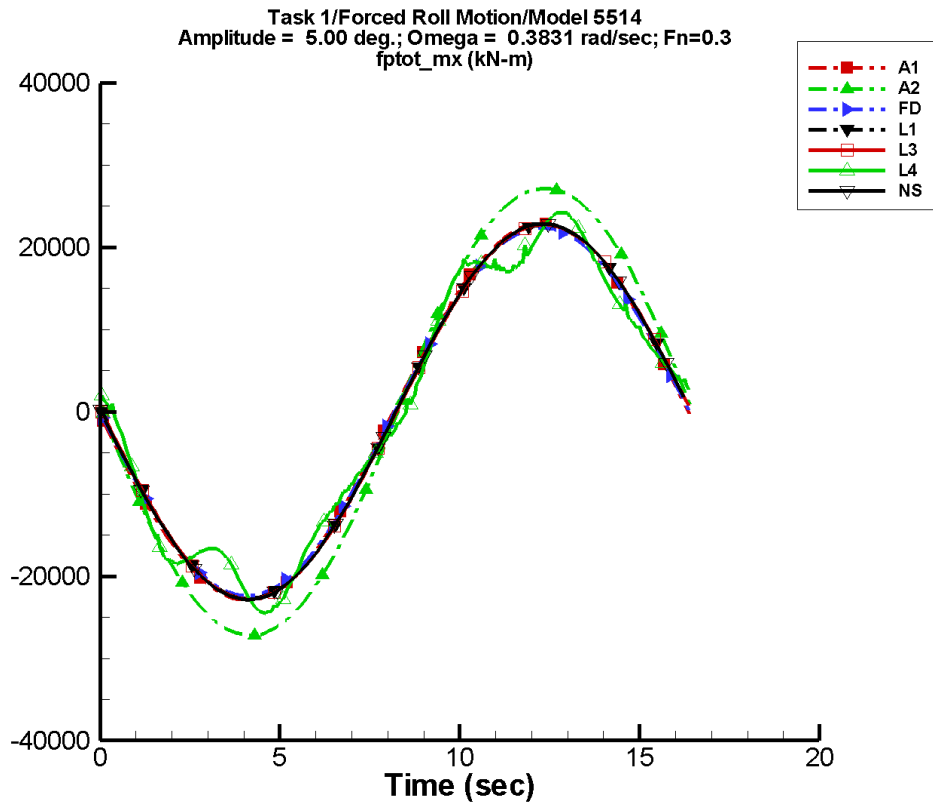
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.66	3.08E+05	-180	12.0	-16
A2	-726.	2.45E+05	-180	7.76E+03	-135
FD	-1.13E+03	2.54E+05	-179	6.68E+03	-129
L1	824.	3.49E+05	179	3.24E+03	87
L3	-2.64E+03	2.66E+05	179	1.06E+04	-92
L4	-1.70E+03	2.59E+05	-179	9.38E+03	-98
NF	—	—	—	—	—
NS	-662.	4.12E+05	-179	674.	90

Table D–280. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.09E+05	3.09E+05	-3.09E+05	3.09E+05
A2	-2.22E+05	2.22E+05	-2.21E+05	2.21E+05
FD	-2.26E+05	2.26E+05	-2.25E+05	2.25E+05
L1	-3.62E+05	3.62E+05	-3.62E+05	3.62E+05
L3	-2.36E+05	2.36E+05	-2.36E+05	2.36E+05
L4	-2.48E+05	2.48E+05	-2.44E+05	2.46E+05
NF	—	—	—	—
NS	-4.15E+05	4.12E+05	-4.14E+05	4.12E+05



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

Figure D-141. Time history of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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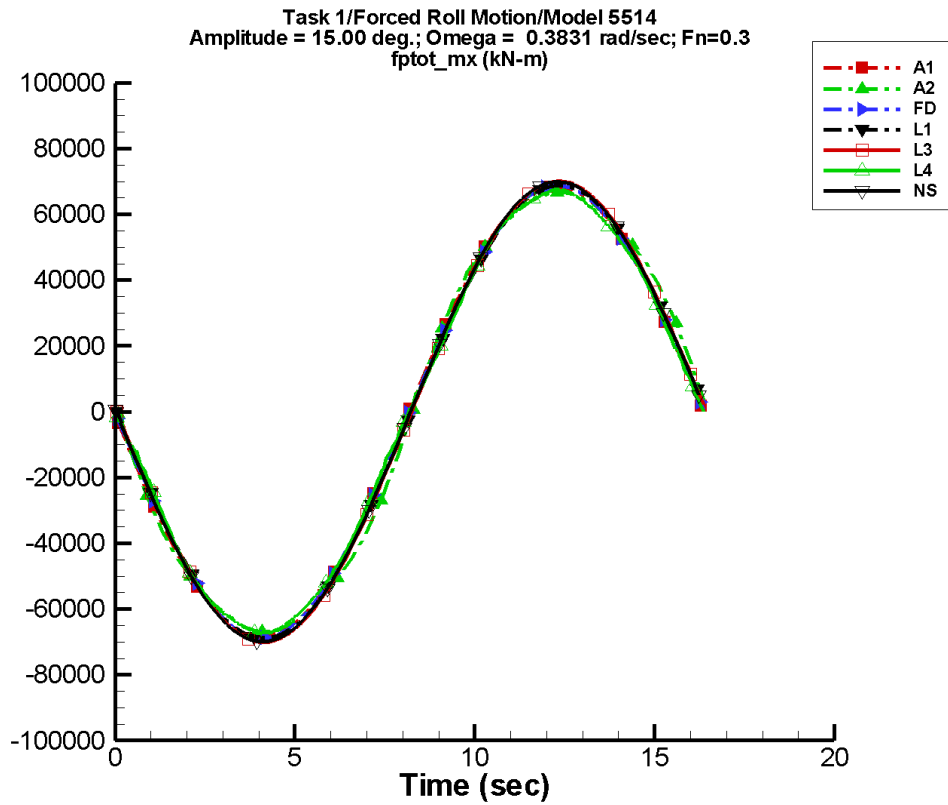
Table D–281. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.12	2.29E+04	-179	4.23	51
A2	-12.3	2.75E+04	179	59.9	-120
FD	0.293	2.24E+04	-180	1.60	81
L1	0.429	2.27E+04	179	0.739	29
L3	1.68	2.28E+04	179	3.11	42
L4	-11.2	2.20E+04	180	260.	146
NF	—	—	—	—	—
NS	1.05E-02	2.29E+04	179	0.105	-175

Table D–282. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.29E+04	2.28E+04	-2.30E+04	2.28E+04
A2	-2.72E+04	2.71E+04	-2.72E+04	2.71E+04
FD	-2.24E+04	2.24E+04	-2.23E+04	2.23E+04
L1	-2.27E+04	2.27E+04	-2.27E+04	2.27E+04
L3	-2.28E+04	2.28E+04	-2.28E+04	2.28E+04
L4	-2.45E+04	2.42E+04	-2.43E+04	2.41E+04
NF	—	—	—	—
NS	-2.29E+04	2.29E+04	-2.26E+04	2.26E+04

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

Figure D-142. Time history of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.38	6.86E+04	-179	12.7	51
A2	-113.	6.91E+04	179	589.	-118
FD	14.5	6.83E+04	-180	96.9	76
L1	10.1	6.86E+04	179	20.1	28
L3	26.7	6.96E+04	179	51.7	31
L4	147.	6.68E+04	-180	274.	58
NF	—	—	—	—	—
NS	0.441	6.96E+04	180	0.380	-124

Table D–284. Minimum and maximum of of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.86E+04	6.85E+04	-6.89E+04	6.82E+04
A2	-6.69E+04	6.67E+04	-6.70E+04	6.65E+04
FD	-6.88E+04	6.88E+04	-6.85E+04	6.85E+04
L1	-6.88E+04	6.88E+04	-6.87E+04	6.87E+04
L3	-7.01E+04	7.01E+04	-7.00E+04	7.00E+04
L4	-6.74E+04	6.76E+04	-6.72E+04	6.72E+04
NF	—	—	—	—
NS	-6.99E+04	6.99E+04	-6.92E+04	6.92E+04

TASK 1/ROLL MOTION/MODEL 5514

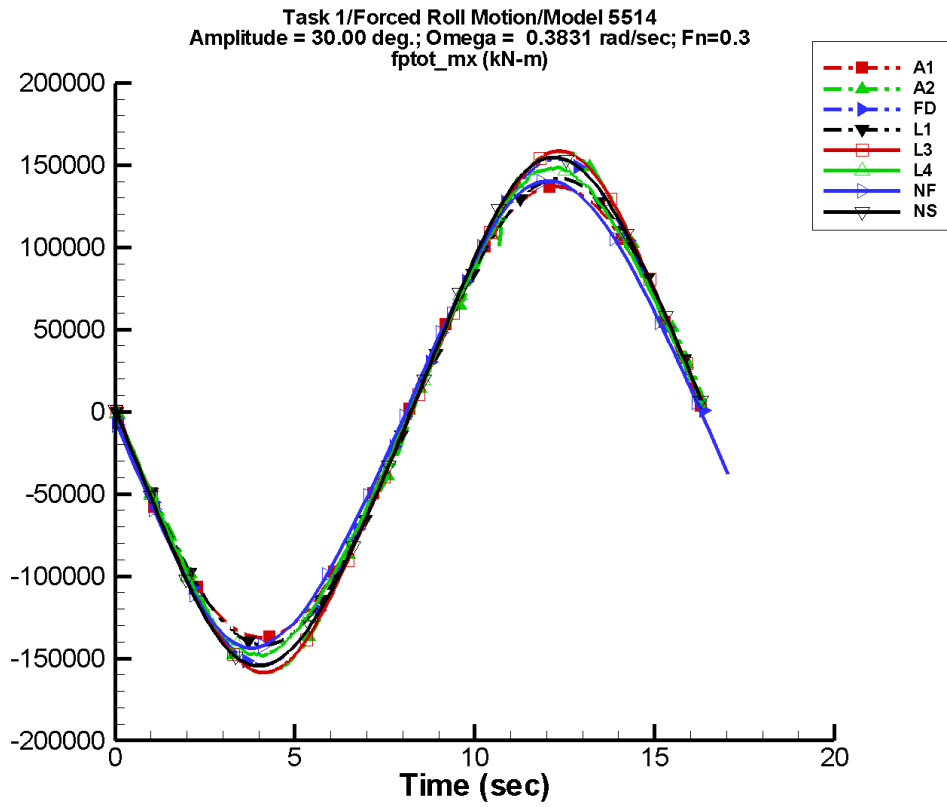


Figure D-143. Time history of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-6.75	1.37E+05	-179	25.3	51
A2	-48.4	1.52E+05	178	921.	55
FD	158.	1.49E+05	-180	1.08E+03	76
L1	82.3	1.40E+05	179	159.	28
L3	352.	1.52E+05	179	675.	26
L4	581.	1.43E+05	-180	773.	36
NF	-2.36E+03	1.36E+05	-139	7.11E+03	63
NS	4.80	1.51E+05	-180	4.33	-73

Table D–286. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.37E+05	1.37E+05	-1.38E+05	1.36E+05
A2	-1.59E+05	1.58E+05	-1.59E+05	1.58E+05
FD	-1.54E+05	1.54E+05	-1.53E+05	1.53E+05
L1	-1.42E+05	1.42E+05	-1.42E+05	1.42E+05
L3	-1.59E+05	1.59E+05	-1.58E+05	1.58E+05
L4	-1.49E+05	1.48E+05	-1.48E+05	1.48E+05
NF	-1.44E+05	1.40E+05	-1.43E+05	1.40E+05
NS	-1.55E+05	1.55E+05	-1.54E+05	1.54E+05

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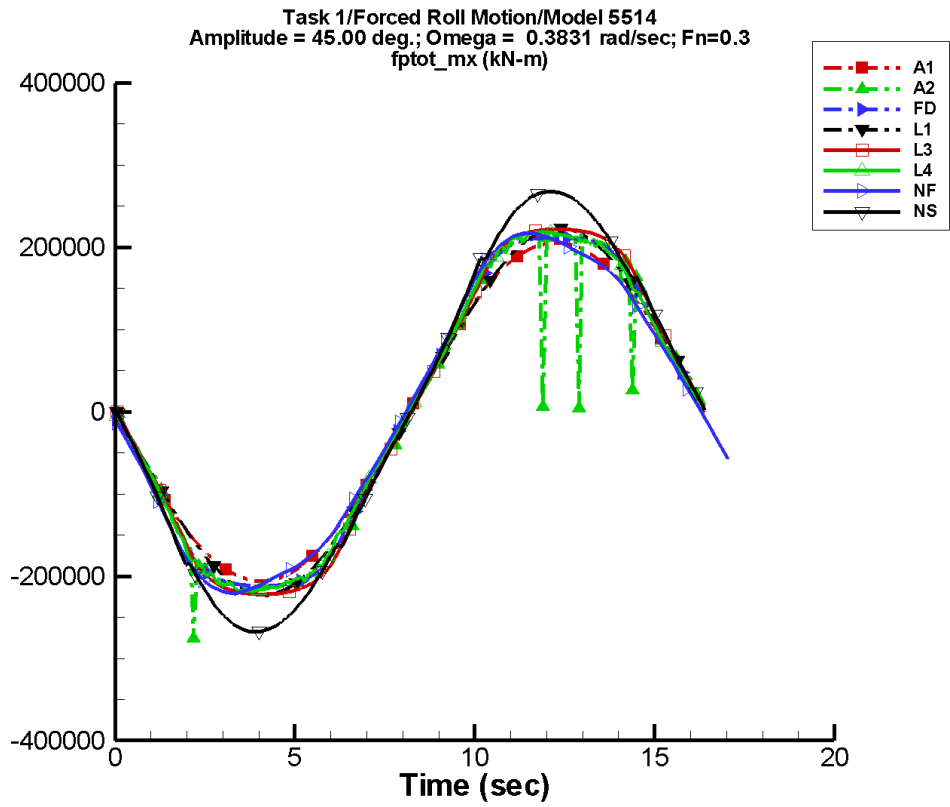


Figure D-144. Time history of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-10.1	2.06E+05	-179	38.0	51
A2	-3.90E+03	2.18E+05	179	4.57E+03	81
FD	-125.	2.22E+05	-180	461.	-68
L1	276.	2.18E+05	179	526.	29
L3	185.	2.31E+05	179	511.	74
L4	395.	2.23E+05	-179	825.	91
NF	-3.47E+03	2.14E+05	-138	1.04E+04	65
NS	21.7	2.58E+05	-179	19.6	-72

Table D–288. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.06E+05	2.05E+05	-2.07E+05	2.05E+05
A2	-2.76E+05	2.12E+05	-2.14E+05	2.06E+05
FD	-2.12E+05	2.12E+05	-2.11E+05	2.11E+05
L1	-2.23E+05	2.23E+05	-2.23E+05	2.23E+05
L3	-2.22E+05	2.22E+05	-2.22E+05	2.22E+05
L4	-2.20E+05	2.19E+05	-2.18E+05	2.18E+05
NF	-2.21E+05	2.18E+05	-2.19E+05	2.15E+05
NS	-2.68E+05	2.68E+05	-2.67E+05	2.67E+05



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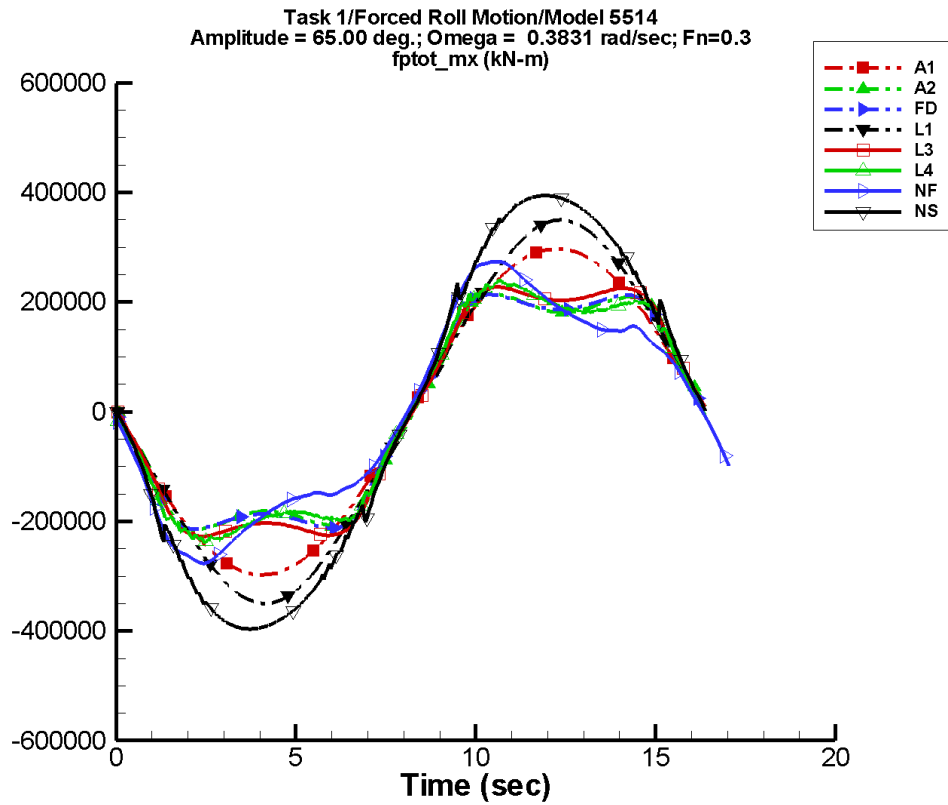


Figure D-145. Time history of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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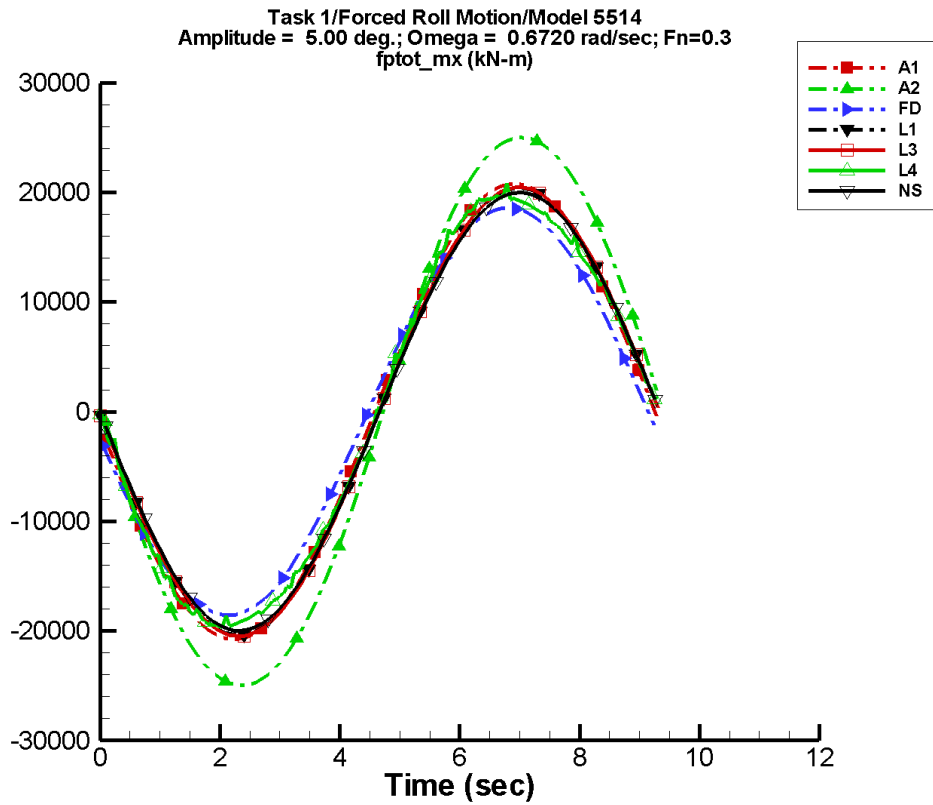
Table D–289. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-14.6	2.97E+05	-179	54.9	51
A2	-754.	2.35E+05	180	7.90E+03	-129
FD	-1.28E+03	2.37E+05	-179	9.34E+03	-104
L1	801.	3.36E+05	179	1.53E+03	29
L3	-2.44E+03	2.57E+05	180	4.88E+03	-165
L4	-2.44E+03	2.47E+05	-176	5.07E+03	-165
NF	-5.08E+03	2.44E+05	-131	5.78E+03	55
NS	-561.	3.97E+05	-178	490.	97

Table D–290. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.97E+05	2.97E+05	-2.98E+05	2.96E+05
A2	-2.16E+05	2.17E+05	-2.14E+05	2.14E+05
FD	-2.14E+05	2.14E+05	-2.12E+05	2.12E+05
L1	-3.50E+05	3.50E+05	-3.49E+05	3.49E+05
L3	-2.28E+05	2.28E+05	-2.27E+05	2.27E+05
L4	-2.39E+05	2.42E+05	-2.33E+05	2.34E+05
NF	-2.77E+05	2.74E+05	-2.70E+05	2.71E+05
NS	-3.97E+05	3.95E+05	-3.97E+05	3.94E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-146. Time history of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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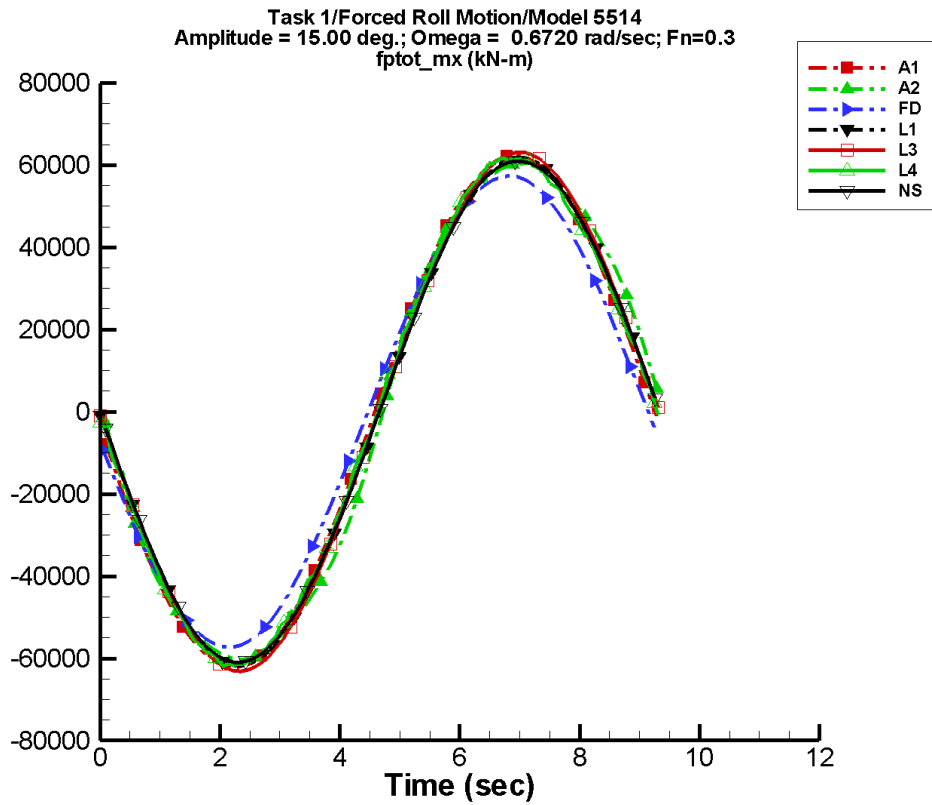
Table D–291. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.04	2.08E+04	-176	10.9	-86
A2	-23.7	2.53E+04	179	54.2	-130
FD	0.679	1.86E+04	-172	1.14	149
L1	0.137	2.04E+04	-179	0.759	23
L3	1.30	2.05E+04	-179	3.09	42
L4	35.9	2.00E+04	-177	87.9	145
NF	—	—	—	—	—
NS	-0.867	2.00E+04	-180	1.10	177

Table D–292. Minimum and maximum of of  $M_x^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.07E+04	2.08E+04	-2.05E+04	2.06E+04
A2	-2.50E+04	2.50E+04	-2.47E+04	2.47E+04
FD	-1.86E+04	1.86E+04	-1.84E+04	1.84E+04
L1	-2.04E+04	2.04E+04	-2.03E+04	2.03E+04
L3	-2.05E+04	2.05E+04	-2.04E+04	2.04E+04
L4	-1.97E+04	2.08E+04	-1.94E+04	1.97E+04
NF	—	—	—	—
NS	-2.00E+04	2.00E+04	-1.98E+04	1.98E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-147. Time history of  $M_x^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.10	6.23E+04	-176	32.7	-86
A2	-192.	6.27E+04	179	485.	-130
FD	37.1	5.69E+04	-172	68.6	148
L1	9.66	6.16E+04	-179	20.6	25
L3	26.7	6.26E+04	-179	52.8	27
L4	119.	6.13E+04	-178	232.	46
NF	—	—	—	—	—
NS	-1.35	6.09E+04	-179	2.91	-171

Table D–294. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.22E+04	6.24E+04	-6.15E+04	6.16E+04
A2	-6.02E+04	6.04E+04	-5.96E+04	5.97E+04
FD	-5.73E+04	5.73E+04	-5.67E+04	5.66E+04
L1	-6.18E+04	6.18E+04	-6.16E+04	6.16E+04
L3	-6.31E+04	6.31E+04	-6.28E+04	6.28E+04
L4	-6.18E+04	6.15E+04	-6.14E+04	6.15E+04
NF	—	—	—	—
NS	-6.09E+04	6.09E+04	-6.03E+04	6.03E+04

TASK 1/ROLL MOTION/MODEL 5514

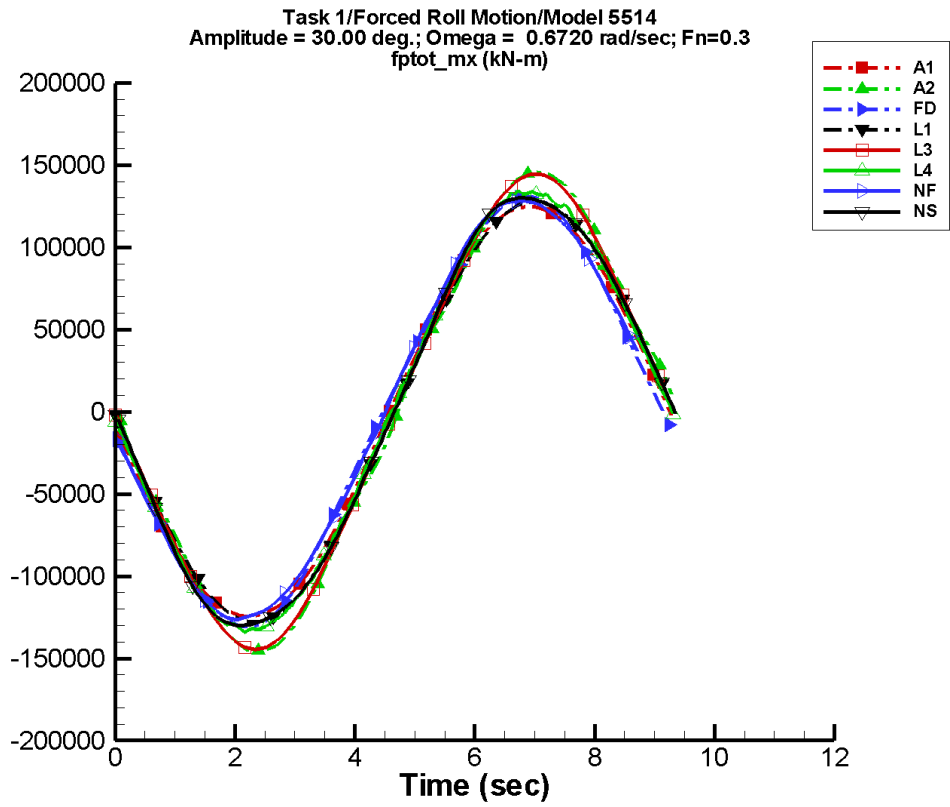


Figure D-148. Time history of  $M_x^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-18.2	1.25E+05	-176	65.5	-86
A2	58.4	1.38E+05	179	1.13E+03	7
FD	406.	1.26E+05	-173	766.	146
L1	83.3	1.26E+05	-179	163.	25
L3	362.	1.38E+05	-180	696.	22
L4	270.	1.31E+05	-178	249.	-16
NF	-3.81E+03	1.27E+05	137	4.88E+03	-95
NS	9.35	1.30E+05	-178	15.1	-111

Table D–296. Minimum and maximum of  $M_x^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.24E+05	1.25E+05	-1.23E+05	1.23E+05
A2	-1.45E+05	1.46E+05	-1.43E+05	1.44E+05
FD	-1.31E+05	1.31E+05	-1.29E+05	1.29E+05
L1	-1.28E+05	1.28E+05	-1.27E+05	1.27E+05
L3	-1.45E+05	1.45E+05	-1.44E+05	1.44E+05
L4	-1.34E+05	1.35E+05	-1.32E+05	1.33E+05
NF	-1.30E+05	1.31E+05	-1.30E+05	1.32E+05
NS	-1.30E+05	1.30E+05	-1.30E+05	1.30E+05



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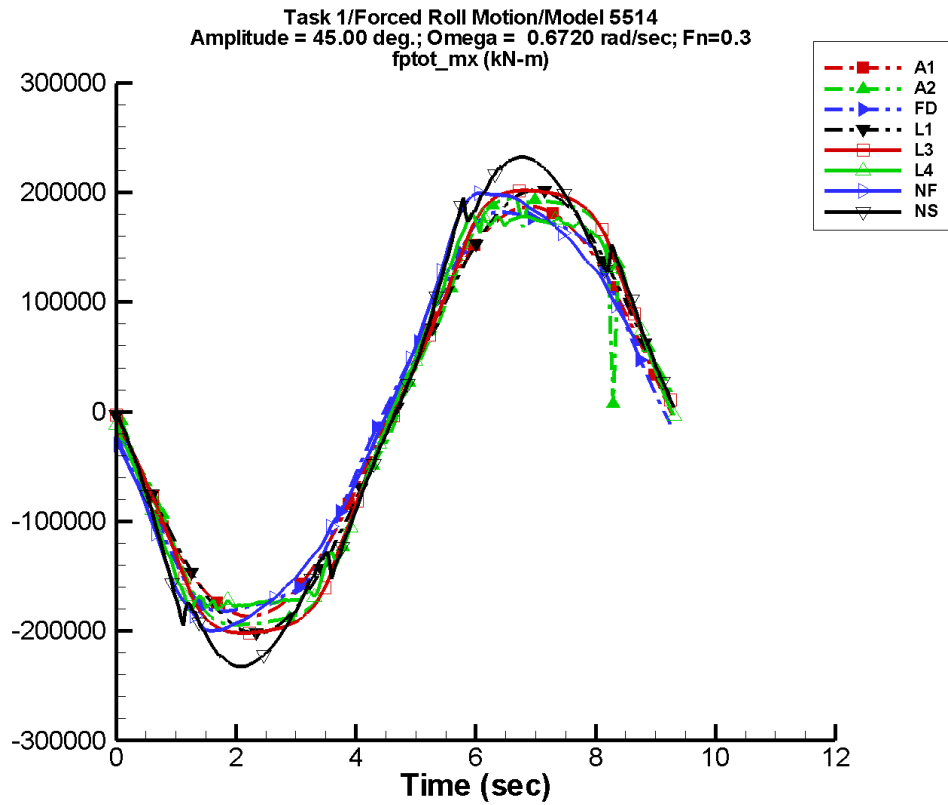


Figure D-149. Time history of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-27.3	1.87E+05	-176	98.2	-86
A2	-2.07E+03	2.03E+05	179	2.30E+03	26
FD	-229.	1.87E+05	-173	651.	33
L1	280.	1.97E+05	-180	539.	25
L3	-42.6	2.11E+05	-180	838.	109
L4	-1.41E+03	1.97E+05	-177	2.43E+03	-172
NF	-5.05E+03	2.00E+05	140	7.69E+03	-105
NS	41.2	2.25E+05	-177	42.7	-117

Table D–298. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.87E+05	1.87E+05	-1.85E+05	1.85E+05
A2	-1.94E+05	1.95E+05	-1.94E+05	1.91E+05
FD	-1.82E+05	1.82E+05	-1.81E+05	1.81E+05
L1	-2.02E+05	2.02E+05	-2.01E+05	2.01E+05
L3	-2.02E+05	2.02E+05	-2.02E+05	2.02E+05
L4	-1.86E+05	1.81E+05	-1.76E+05	1.76E+05
NF	-2.02E+05	2.05E+05	-2.01E+05	2.04E+05
NS	-2.32E+05	2.33E+05	-2.32E+05	2.32E+05

TASK 1/ROLL MOTION/MODEL 5514

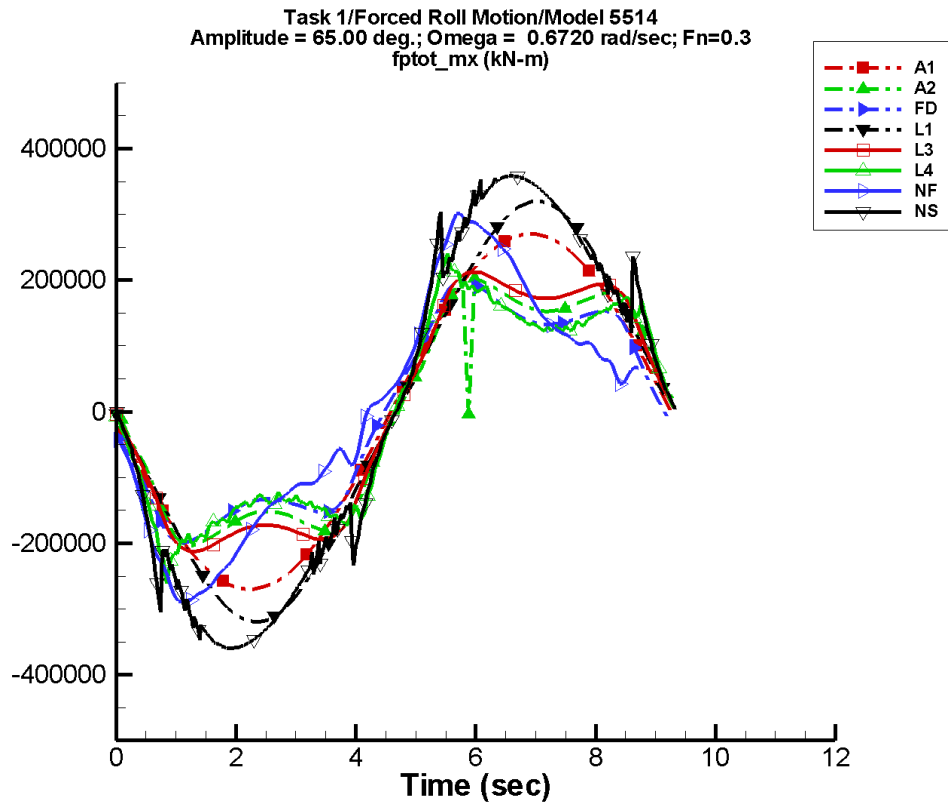


Figure D-150. Time history of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

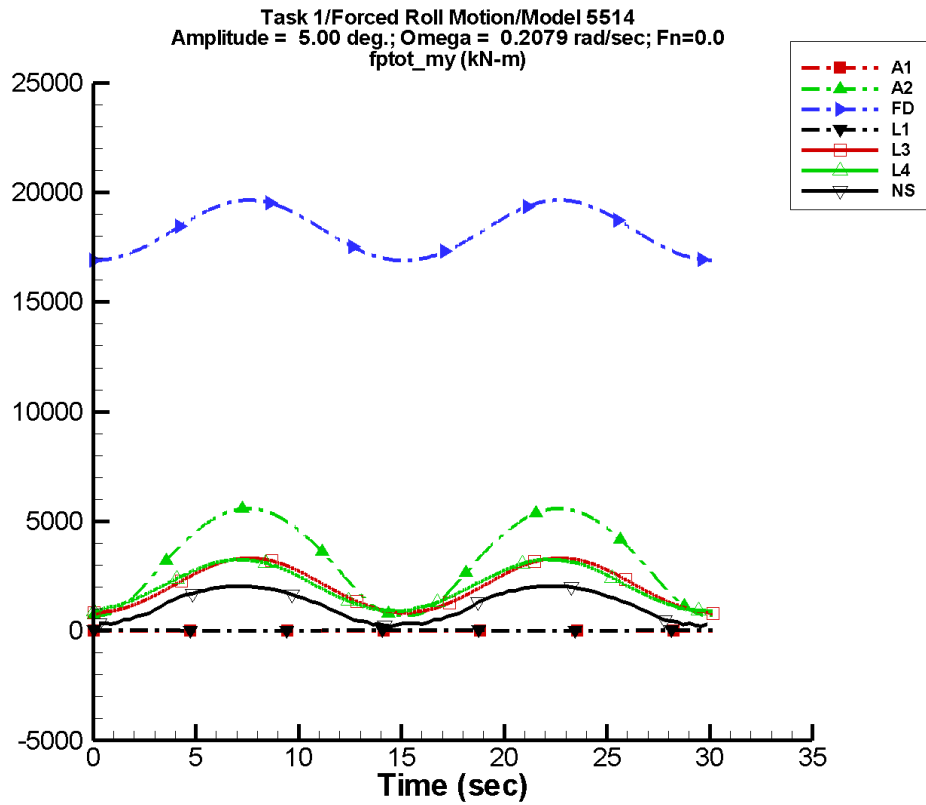
Table D–299. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-39.5	2.70E+05	-176	142.	-86
A2	-4.52E+03	2.07E+05	-180	9.69E+03	-169
FD	-3.44E+03	1.87E+05	-168	6.55E+03	-29
L1	815.	3.06E+05	-180	1.56E+03	26
L3	-2.66E+03	2.28E+05	-178	5.29E+03	-171
L4	-5.59E+03	2.00E+05	-173	9.89E+03	-162
NF	-3.82E+03	2.40E+05	153	1.03E+04	-87
NS	-280.	3.53E+05	-175	284.	161

Table D–300. Minimum and maximum of  $M_x^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.70E+05	2.70E+05	-2.67E+05	2.67E+05
A2	-2.03E+05	2.03E+05	-1.96E+05	1.77E+05
FD	-2.00E+05	2.00E+05	-1.91E+05	1.91E+05
L1	-3.20E+05	3.20E+05	-3.18E+05	3.18E+05
L3	-2.12E+05	2.12E+05	-2.11E+05	2.10E+05
L4	-2.60E+05	2.40E+05	-2.17E+05	2.11E+05
NF	-2.98E+05	3.17E+05	-2.94E+05	3.01E+05
NS	-3.60E+05	3.59E+05	-3.60E+05	3.59E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-151. Time history of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

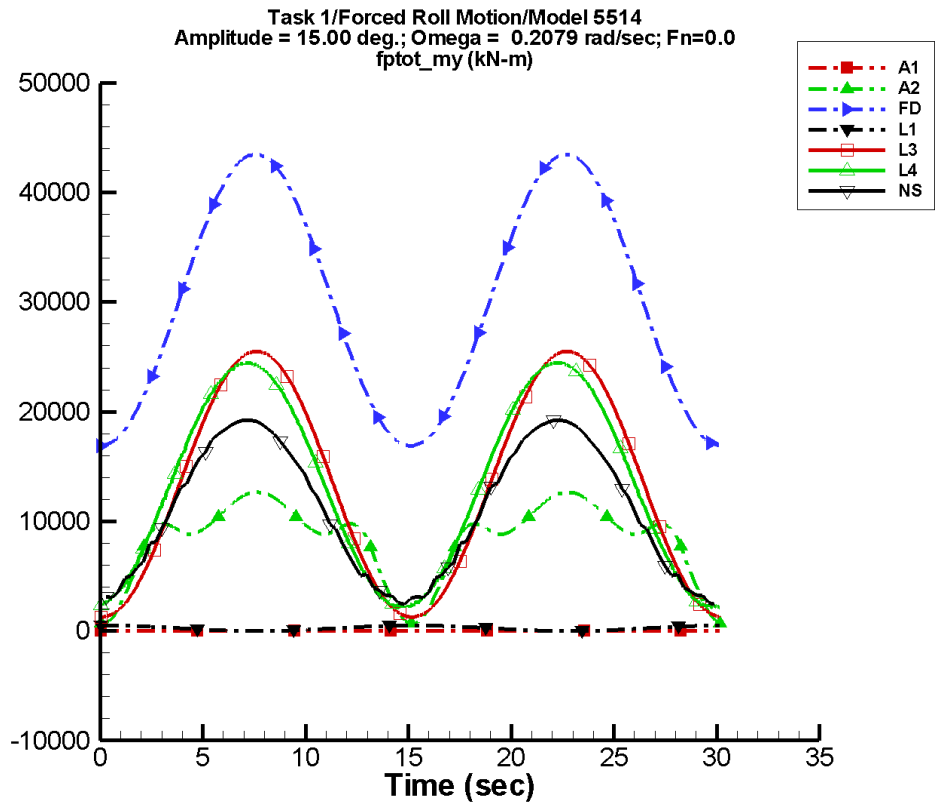
Table D–301. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.33E-04	3.70E-02	14	3.14E-04	107
A2	3.26E+03	1.85	21	2.47E+03	-90
FD	1.82E+04	0.739	-176	1.38E+03	-90
L1	27.9	1.45E-02	172	27.9	87
L3	2.06E+03	1.86	118	1.25E+03	-91
L4	2.07E+03	4.97	178	1.18E+03	-80
NF	—	—	—	—	—
NS	1.17E+03	0.631	-12	922.	-82

Table D–302. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-0.244	0.244	-6.74E-02	6.82E-02
A2	724.	5.59E+03	711.	5.58E+03
FD	1.69E+04	1.97E+04	1.69E+04	1.96E+04
L1	-1.57E-02	55.9	2.91E-02	55.9
L3	812.	3.32E+03	814.	3.32E+03
L4	900.	3.27E+03	912.	3.26E+03
NF	—	—	—	—
NS	199.	2.05E+03	275.	2.02E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-152. Time history of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

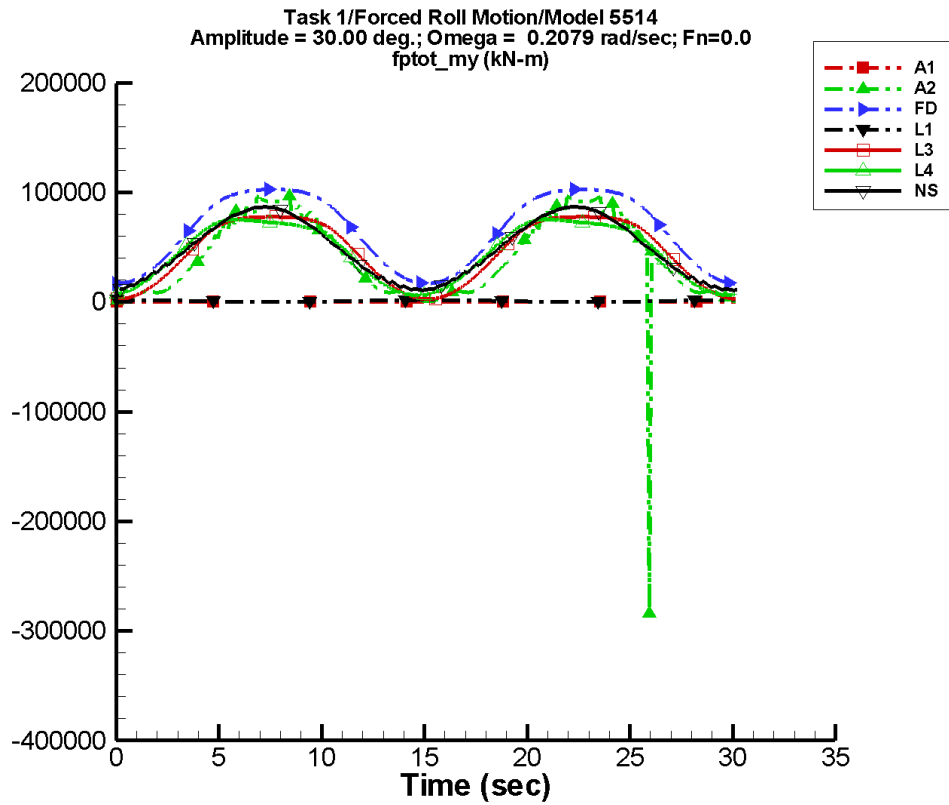
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	1.00E-03	0.111	14	9.41E-04	107
A2	8.28E+03	33.0	-45	4.25E+03	-91
FD	3.00E+04	3.54	-177	1.33E+04	-90
L1	251.	4.98E-02	159	251.	87
L3	1.33E+04	7.64	118	1.22E+04	-91
L4	1.33E+04	31.9	-166	1.12E+04	-81
NF	—	—	—	—	—
NS	1.09E+04	6.07	-13	8.28E+03	-81

Table D–304. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-0.733	0.733	-0.202	0.205
A2	724.	1.27E+04	706.	1.26E+04
FD	1.69E+04	4.35E+04	1.69E+04	4.34E+04
L1	-3.52E-02	503.	0.364	503.
L3	1.26E+03	2.55E+04	1.28E+03	2.55E+04
L4	2.12E+03	2.45E+04	2.22E+03	2.45E+04
NF	—	—	—	—
NS	2.37E+03	1.92E+04	2.66E+03	1.89E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-153. Time history of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

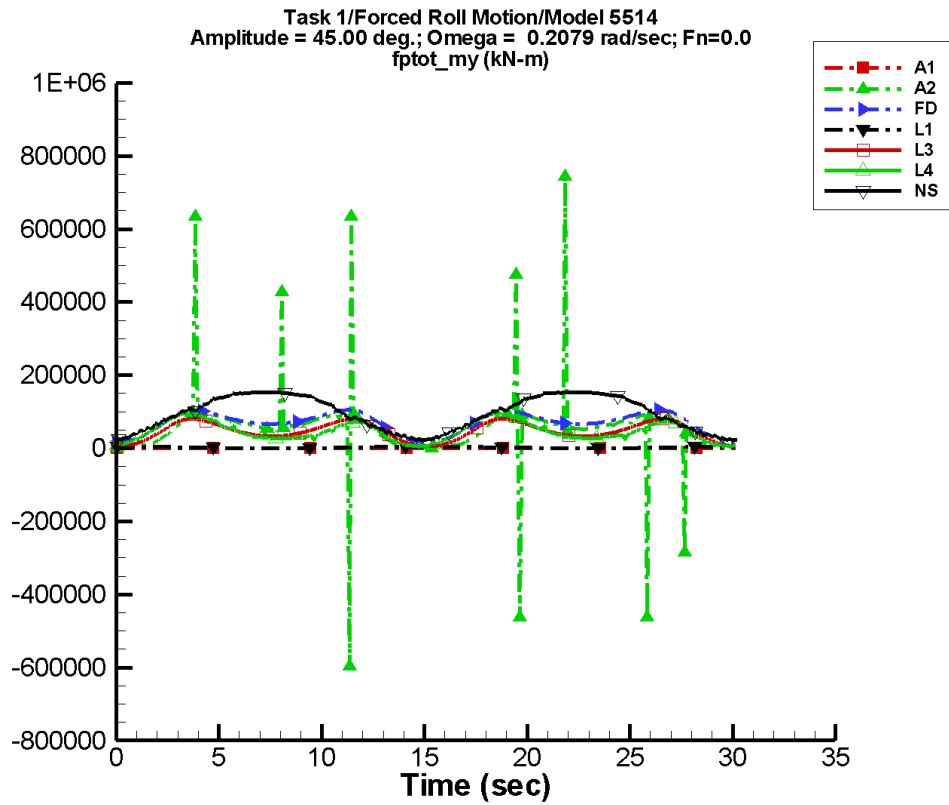
Table D–305. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	2.00E-03	0.222	14	1.88E-03	107
A2	4.11E+04	2.02E+03	-44	4.51E+04	-90
FD	6.51E+04	143.	12	4.49E+04	-90
L1	1.00E+03	0.123	145	1.00E+03	87
L3	4.59E+04	331.	-58	3.90E+04	-91
L4	4.56E+04	226.	-67	3.50E+04	-79
NF	—	—	—	—	—
NS	4.82E+04	27.9	-13	3.73E+04	-81

Table D–306. Minimum and maximum of of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.47	1.47	-0.404	0.409
A2	-2.84E+05	9.66E+04	612.	9.33E+04
FD	1.69E+04	1.03E+05	1.68E+04	1.03E+05
L1	-4.51E-02	2.01E+03	1.53	2.01E+03
L3	2.77E+03	7.77E+04	2.83E+03	7.77E+04
L4	5.92E+03	7.55E+04	6.38E+03	7.54E+04
NF	—	—	—	—
NS	1.03E+04	8.68E+04	1.08E+04	8.62E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-154. Time history of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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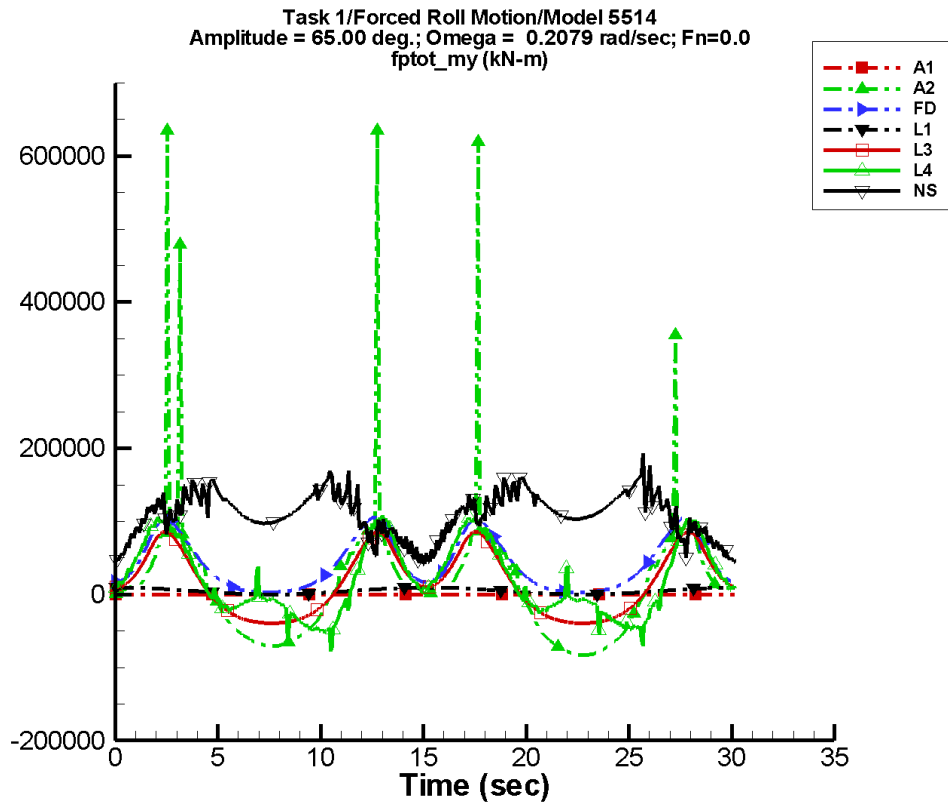
Table D–307. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.00E-03	0.333	14	2.82E-03	107
A2	5.33E+04	4.03E+03	-38	3.73E+04	-76
FD	6.95E+04	640.	5	2.27E+04	-85
L1	2.26E+03	0.225	135	2.26E+03	87
L3	4.75E+04	2.34E+03	-61	8.78E+03	-91
L4	4.72E+04	2.17E+03	-63	1.30E+04	-10
NF	—	—	—	—	—
NS	9.61E+04	48.0	-13	6.43E+04	-82

Table D–308. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.20	2.20	-0.607	0.614
A2	-5.97E+05	7.43E+05	731.	1.64E+05
FD	1.69E+04	1.05E+05	1.70E+04	1.04E+05
L1	-5.11E-02	4.53E+03	3.48	4.52E+03
L3	5.28E+03	8.05E+04	5.43E+03	8.02E+04
L4	4.47E+03	9.57E+04	5.97E+03	9.47E+04
NF	—	—	—	—
NS	2.15E+04	1.54E+05	2.24E+04	1.53E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-155. Time history of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

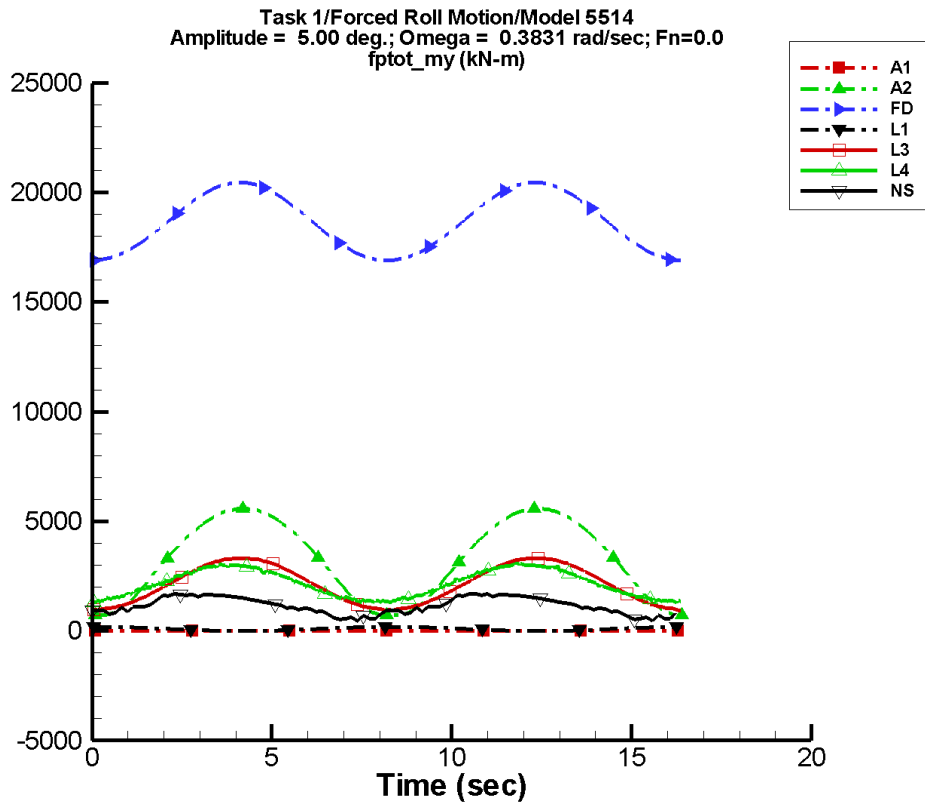
Table D–309. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	4.33E-03	0.481	14	4.08E-03	107
A2	1.17E+04	5.88E+03	-24	6.16E+04	83
FD	4.22E+04	572.	-12	2.87E+04	88
L1	4.72E+03	0.408	127	4.72E+03	87
L3	1.69E+04	2.96E+03	-64	4.95E+04	88
L4	2.15E+04	2.52E+03	-76	5.24E+04	71
NF	—	—	—	—	—
NS	1.09E+05	2.10E+03	-178	2.43E+04	-77

Table D–310. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.17	3.18	-0.876	0.887
A2	-8.33E+04	6.35E+05	-8.28E+04	1.77E+05
FD	2.83E+03	1.05E+05	2.91E+03	1.03E+05
L1	-5.11E-02	9.44E+03	7.34	9.44E+03
L3	-3.94E+04	8.55E+04	-3.93E+04	8.46E+04
L4	-7.79E+04	1.08E+05	-5.47E+04	1.03E+05
NF	—	—	—	—
NS	4.10E+04	1.93E+05	4.56E+04	1.56E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-156. Time history of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

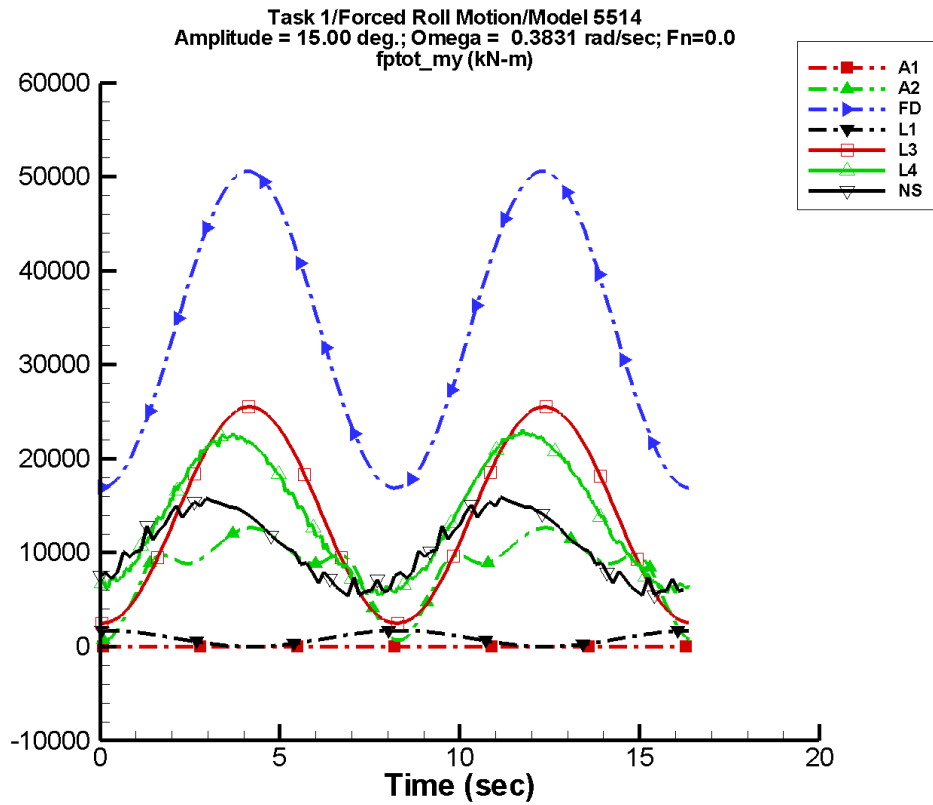
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	5.34E-04	0.431	-17	9.68E-03	129
A2	3.26E+03	1.79	6	2.47E+03	-94
FD	1.86E+04	1.34	121	1.78E+03	-90
L1	95.5	3.53E-02	-156	95.5	85
L3	2.12E+03	1.14	179	1.18E+03	-93
L4	2.15E+03	24.0	-168	833.	-78
NF	—	—	—	—	—
NS	1.15E+03	0.828	-142	516.	-53

Table D–312. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-0.682	0.539	-0.432	0.465
A2	724.	5.59E+03	703.	5.58E+03
FD	1.69E+04	2.05E+04	1.69E+04	2.04E+04
L1	1.05E-03	191.	0.513	191.
L3	947.	3.32E+03	955.	3.31E+03
L4	1.28E+03	3.13E+03	1.34E+03	3.04E+03
NF	—	—	—	—
NS	442.	1.69E+03	600.	1.65E+03



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

Figure D-157. Time history of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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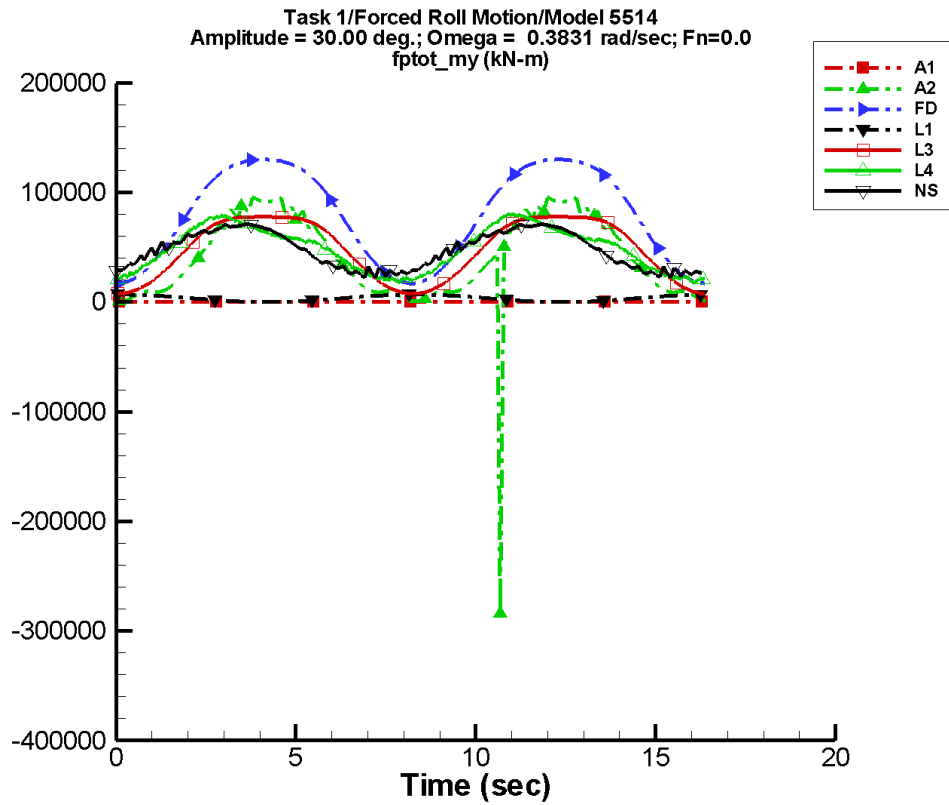
Table D–313. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	1.60E-03	1.29	-17	2.90E-02	129
A2	8.28E+03	36.0	-47	4.25E+03	-93
FD	3.36E+04	7.54	120	1.69E+04	-90
L1	859.	0.117	-140	859.	85
L3	1.39E+04	5.59	166	1.16E+04	-92
L4	1.39E+04	170.	-176	8.32E+03	-73
NF	—	—	—	—	—
NS	1.06E+04	8.74	-146	4.76E+03	-47

Table D–314. Minimum and maximum of of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.05	1.62	-1.29	1.39
A2	724.	1.27E+04	823.	1.26E+04
FD	1.69E+04	5.06E+04	1.70E+04	5.03E+04
L1	0.220	1.72E+03	4.82	1.72E+03
L3	2.47E+03	2.55E+04	2.47E+03	2.54E+04
L4	5.48E+03	2.31E+04	5.84E+03	2.26E+04
NF	—	—	—	—
NS	5.40E+03	1.59E+04	6.12E+03	1.53E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-158. Time history of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

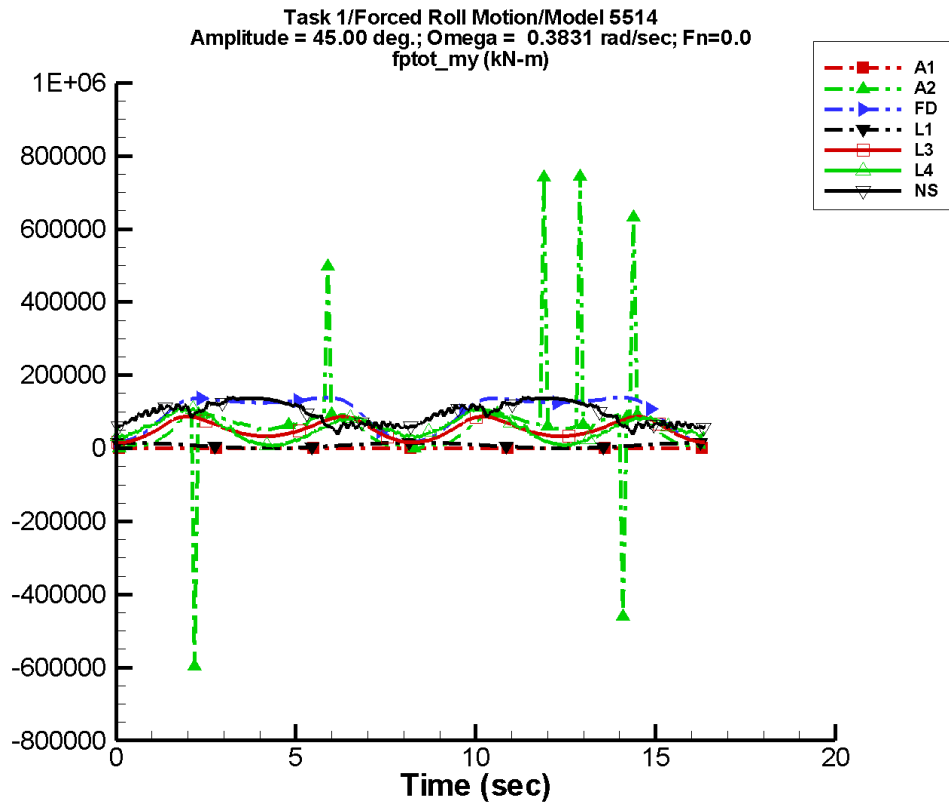
Table D–315. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.20E-03	2.59	-17	5.80E-02	129
A2	4.05E+04	4.29E+03	35	4.53E+04	-100
FD	7.91E+04	305.	-58	5.82E+04	-90
L1	3.44E+03	0.285	-122	3.44E+03	85
L3	4.82E+04	185.	-36	3.71E+04	-92
L4	4.86E+04	443.	-139	2.70E+04	-64
NF	—	—	—	—	—
NS	4.72E+04	39.1	-146	2.27E+04	-52

Table D–316. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.09	3.23	-2.59	2.79
A2	-2.84E+05	9.58E+04	1.07E+03	9.23E+04
FD	1.69E+04	1.30E+05	1.75E+04	1.30E+05
L1	0.801	6.88E+03	19.2	6.87E+03
L3	7.62E+03	7.77E+04	7.57E+03	7.77E+04
L4	1.75E+04	8.01E+04	2.01E+04	7.93E+04
NF	—	—	—	—
NS	2.22E+04	7.11E+04	2.63E+04	7.03E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-159. Time history of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

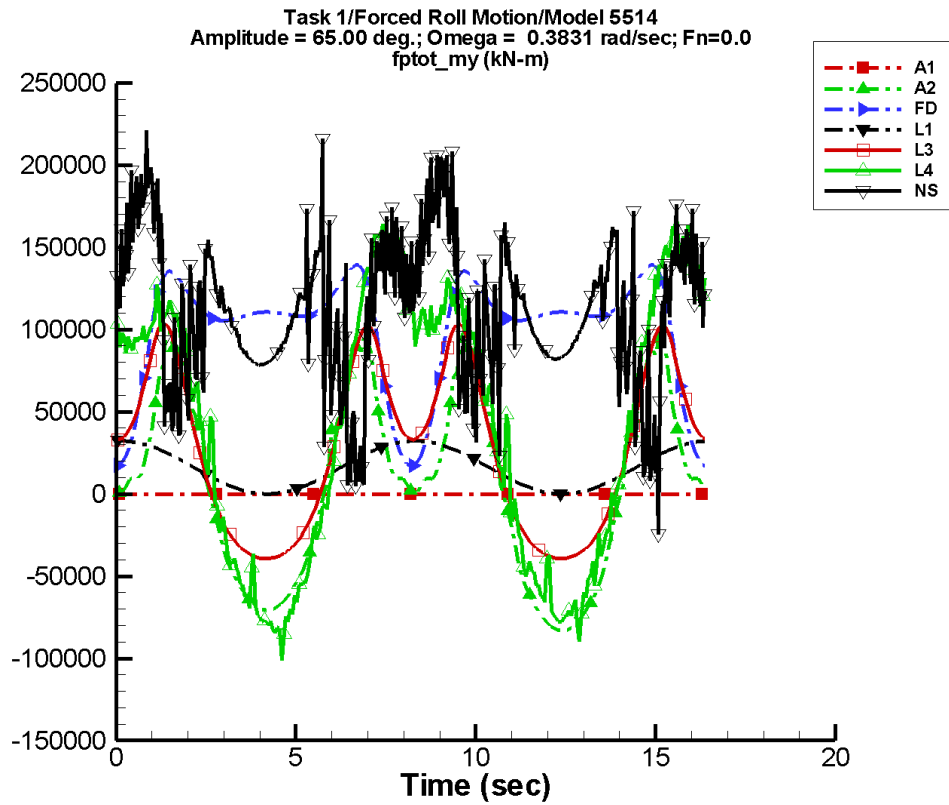
Table D–317. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	4.81E-03	3.88	-17	8.71E-02	129
A2	6.21E+04	1.57E+04	-166	4.45E+04	-102
FD	9.99E+04	1.48E+03	-60	4.95E+04	-90
L1	7.73E+03	0.523	-108	7.73E+03	85
L3	5.23E+04	1.49E+03	-12	7.70E+03	-74
L4	5.49E+04	331.	-46	1.82E+04	38
NF	—	—	—	—	—
NS	9.63E+04	75.8	-148	3.77E+04	-54

Table D–318. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.14	4.85	-3.88	4.18
A2	-5.97E+05	7.43E+05	-1.10E+03	1.50E+05
FD	1.69E+04	1.39E+05	1.83E+04	1.37E+05
L1	1.63	1.55E+04	43.0	1.55E+04
L3	1.62E+04	8.67E+04	1.62E+04	8.58E+04
L4	7.22E+03	1.09E+05	8.66E+03	1.06E+05
NF	—	—	—	—
NS	3.66E+04	1.39E+05	5.50E+04	1.37E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-160. Time history of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

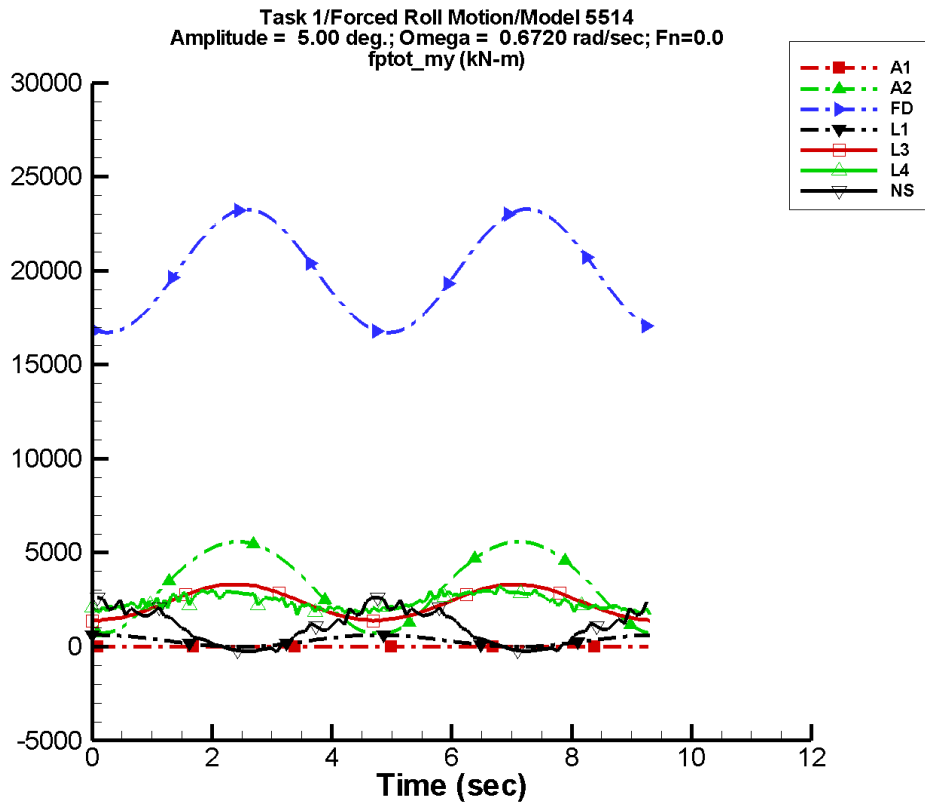
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	6.94E-03	5.61	-17	0.126	129
A2	5.62E+03	4.59E+03	-8	5.64E+04	82
FD	9.95E+04	783.	-62	2.34E+04	-90
L1	1.61E+04	1.01	-99	1.61E+04	85
L3	2.76E+04	1.93E+03	-1	5.64E+04	84
L4	4.15E+04	2.22E+03	-166	1.04E+05	86
NF	—	—	—	—	—
NS	1.11E+05	1.59E+03	-174	2.28E+04	61

Table D–320. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.87	7.00	-5.61	6.04
A2	-8.33E+04	9.87E+04	-8.17E+04	8.42E+04
FD	1.70E+04	1.39E+05	2.01E+04	1.35E+05
L1	3.21	3.23E+04	89.5	3.23E+04
L3	-3.93E+04	1.04E+05	-3.91E+04	1.01E+05
L4	-1.01E+05	1.70E+05	-8.40E+04	1.55E+05
NF	—	—	—	—
NS	-2.51E+04	2.22E+05	2.02E+04	1.90E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-161. Time history of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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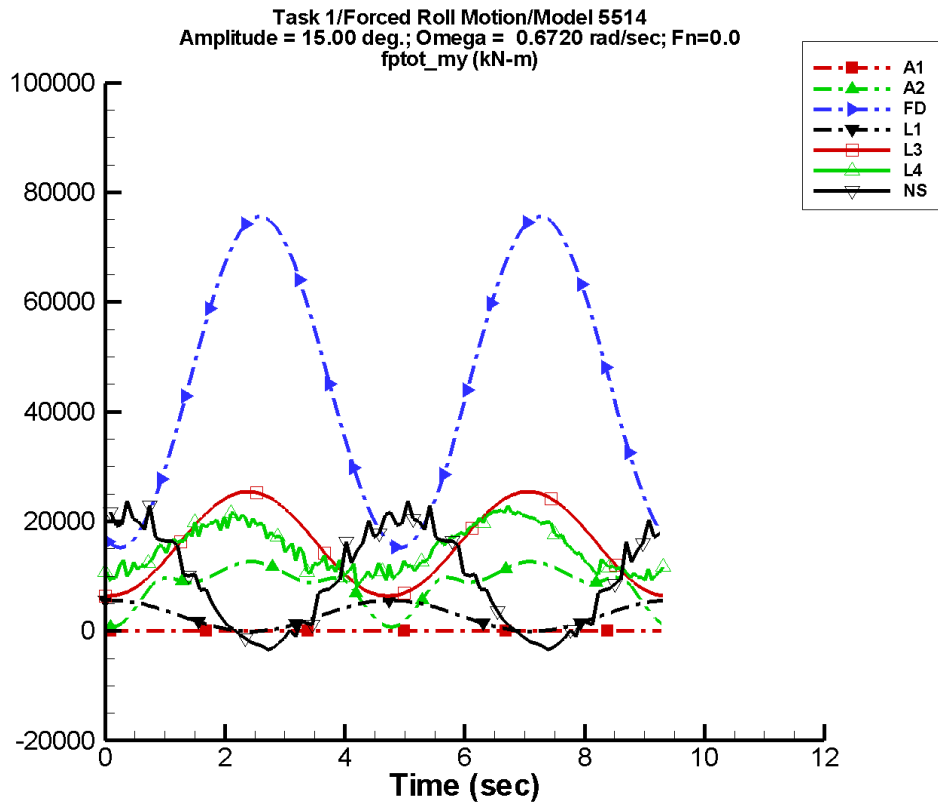
Table D–321. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	9.94E-03	2.82	-116	1.75E-02	134
A2	3.26E+03	9.31	-18	2.47E+03	-97
FD	2.00E+04	2.18	150	3.29E+03	-109
L1	306.	0.101	175	316.	83
L3	2.33E+03	1.84	-179	958.	-94
L4	2.38E+03	89.5	-152	492.	-68
NF	—	—	—	—	—
NS	1.03E+03	3.23	-170	1.23E+03	67

Table D–322. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.54	3.72	-2.96	2.85
A2	722.	5.59E+03	713.	5.49E+03
FD	1.67E+04	2.33E+04	1.67E+04	2.33E+04
L1	-10.1	622.	-4.96	623.
L3	1.38E+03	3.31E+03	1.40E+03	3.29E+03
L4	1.69E+03	3.22E+03	1.89E+03	2.98E+03
NF	—	—	—	—
NS	-265.	2.63E+03	-200.	2.50E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-162. Time history of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

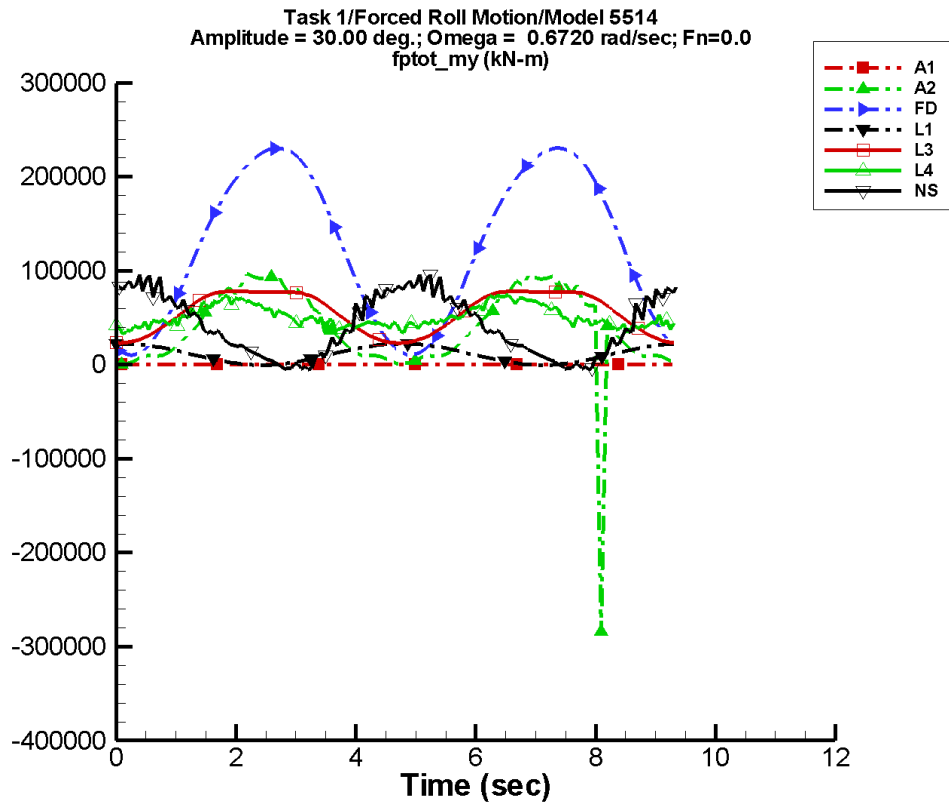
Table D–323. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	2.98E-02	8.45	-116	5.23E-02	134
A2	8.29E+03	65.7	-45	4.29E+03	-96
FD	4.54E+04	7.76	164	3.03E+04	-109
L1	2.75E+03	0.243	-128	2.84E+03	83
L3	1.58E+04	4.57	-178	9.58E+03	-94
L4	1.50E+04	613.	-151	5.46E+03	-68
NF	—	—	—	—	—
NS	9.37E+03	29.7	-175	1.20E+04	65

Table D–324. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-10.6	11.2	-8.87	8.56
A2	716.	1.26E+04	1.17E+03	1.23E+04
FD	1.52E+04	7.57E+04	1.55E+04	7.55E+04
L1	-90.8	5.60E+03	-43.7	5.61E+03
L3	6.35E+03	2.54E+04	6.37E+03	2.53E+04
L4	8.02E+03	2.29E+04	9.83E+03	2.18E+04
NF	—	—	—	—
NS	-3.41E+03	2.38E+04	-2.34E+03	2.10E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-163. Time history of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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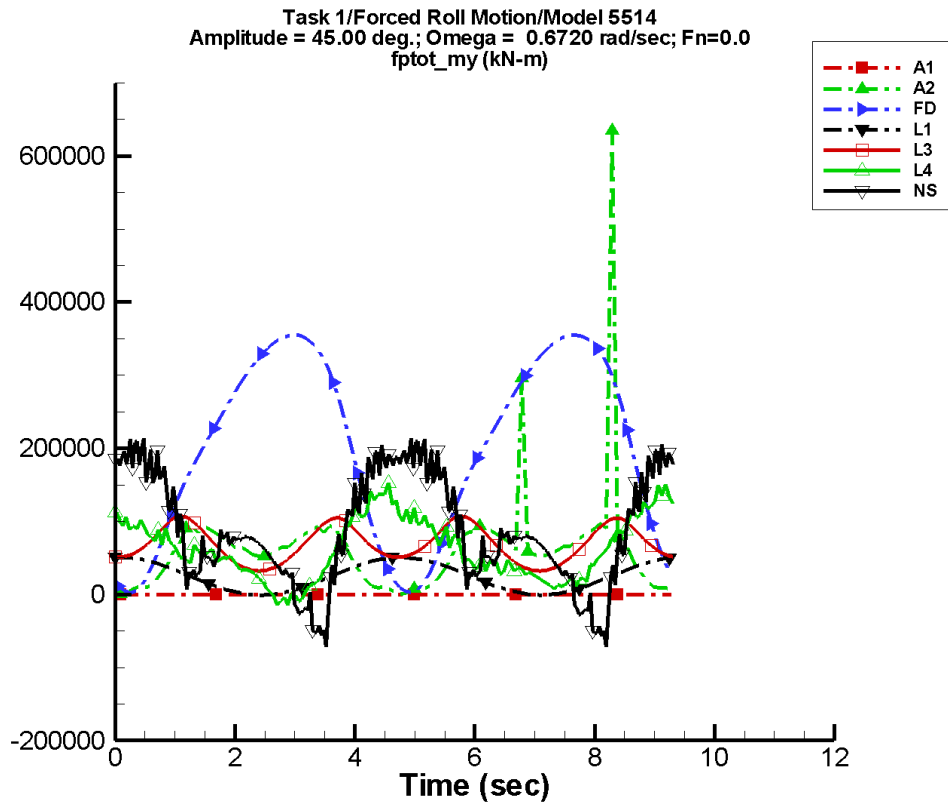
Table D–325. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	5.96E-02	16.9	-116	0.105	134
A2	3.88E+04	6.95E+03	-44	4.40E+04	-90
FD	1.25E+05	501.	-32	1.10E+05	-110
L1	1.10E+04	1.02	-83	1.14E+04	83
L3	5.59E+04	378.	0	2.94E+04	-93
L4	5.07E+04	1.85E+03	-125	1.40E+04	-64
NF	—	—	—	—	—
NS	4.18E+04	123.	-175	4.37E+04	60

Table D–326. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-21.2	22.3	-17.7	17.1
A2	-2.84E+05	9.65E+04	-1.10E+03	9.36E+04
FD	1.04E+04	2.30E+05	1.17E+04	2.28E+05
L1	-362.	2.24E+04	-174.	2.24E+04
L3	2.31E+04	7.82E+04	2.32E+04	7.80E+04
L4	3.27E+04	7.41E+04	3.55E+04	7.14E+04
NF	—	—	—	—
NS	-5.07E+03	9.63E+04	-2.76E+03	8.74E+04

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

Figure D-164. Time history of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

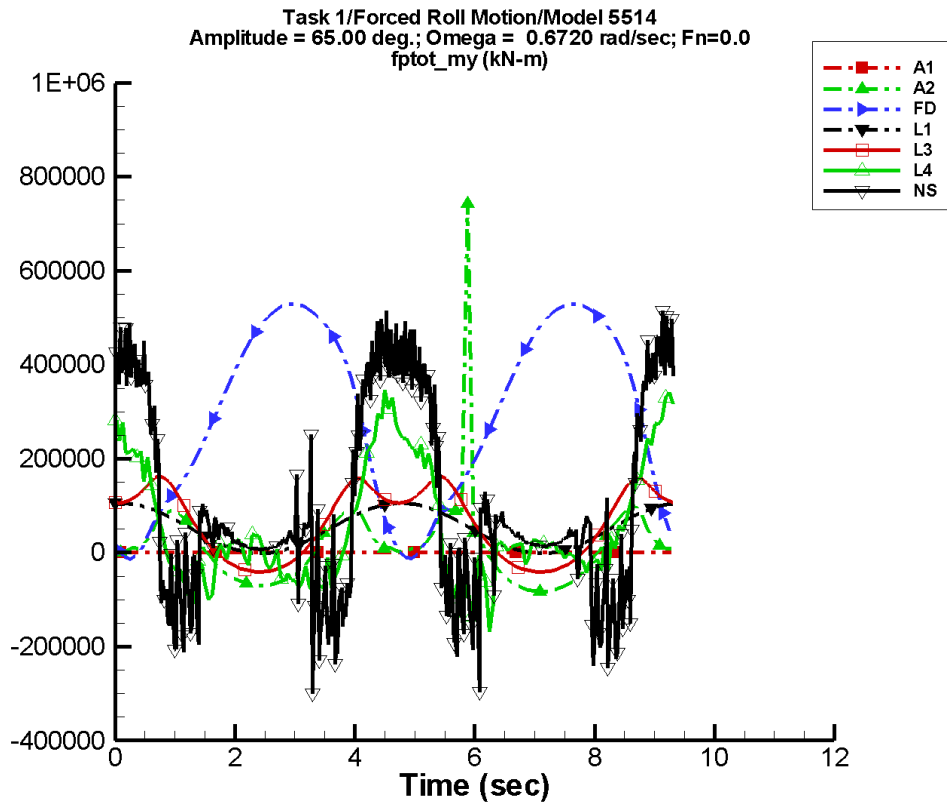
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	8.94E-02	25.4	-116	0.157	134
A2	6.23E+04	1.26E+04	140	3.93E+04	-107
FD	1.98E+05	2.28E+03	-33	1.67E+05	-119
L1	2.48E+04	2.58	-72	2.56E+04	83
L3	6.97E+04	2.14E+03	0	1.09E+04	64
L4	6.18E+04	3.56E+03	170	5.05E+04	86
NF	—	—	—	—	—
NS	8.87E+04	134.	-150	8.34E+04	63

Table D–328. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-31.9	33.5	-26.6	25.7
A2	702.	6.35E+05	903.	1.55E+05
FD	2.35E+03	3.55E+05	6.15E+03	3.50E+05
L1	-814.	5.04E+04	-391.	5.04E+04
L3	3.21E+04	1.07E+05	3.34E+04	1.03E+05
L4	-1.46E+04	1.53E+05	-6.30E+03	1.32E+05
NF	—	—	—	—
NS	-7.26E+04	2.15E+05	-4.52E+04	1.96E+05



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

Figure D-165. Time history of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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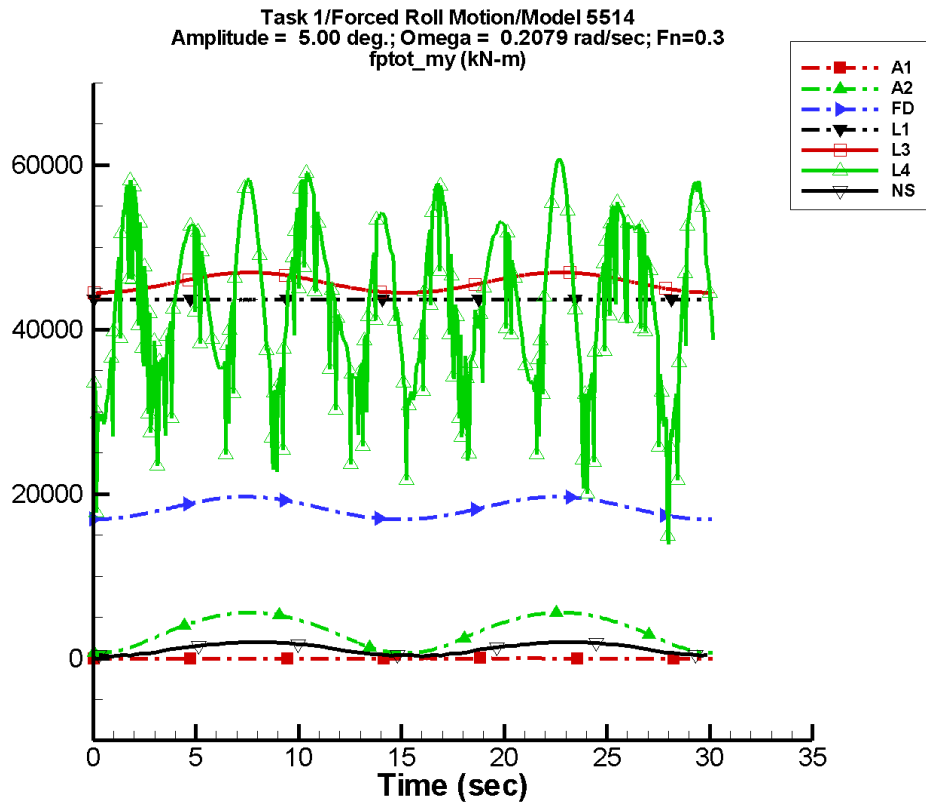
Table D–329. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.129	36.6	-116	0.227	134
A2	1.38E+04	1.26E+04	-113	5.79E+04	64
FD	2.88E+05	2.65E+03	-43	2.59E+05	-128
L1	5.17E+04	5.90	-66	5.34E+04	83
L3	6.31E+04	1.75E+03	-5	9.38E+04	82
L4	5.07E+04	1.90E+04	148	1.36E+05	100
NF	—	—	—	—	—
NS	9.89E+04	783.	-117	1.77E+05	86

Table D–330. Minimum and maximum of of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-46.0	48.4	-38.4	37.1
A2	-8.32E+04	7.43E+05	-8.20E+04	1.50E+05
FD	-1.31E+04	5.29E+05	-2.35E+03	5.21E+05
L1	-1.70E+03	1.05E+05	-816.	1.05E+05
L3	-4.10E+04	1.63E+05	-3.97E+04	1.53E+05
L4	-1.67E+05	3.46E+05	-9.53E+04	2.93E+05
NF	—	—	—	—
NS	-3.08E+05	5.18E+05	-1.41E+05	4.44E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-166. Time history of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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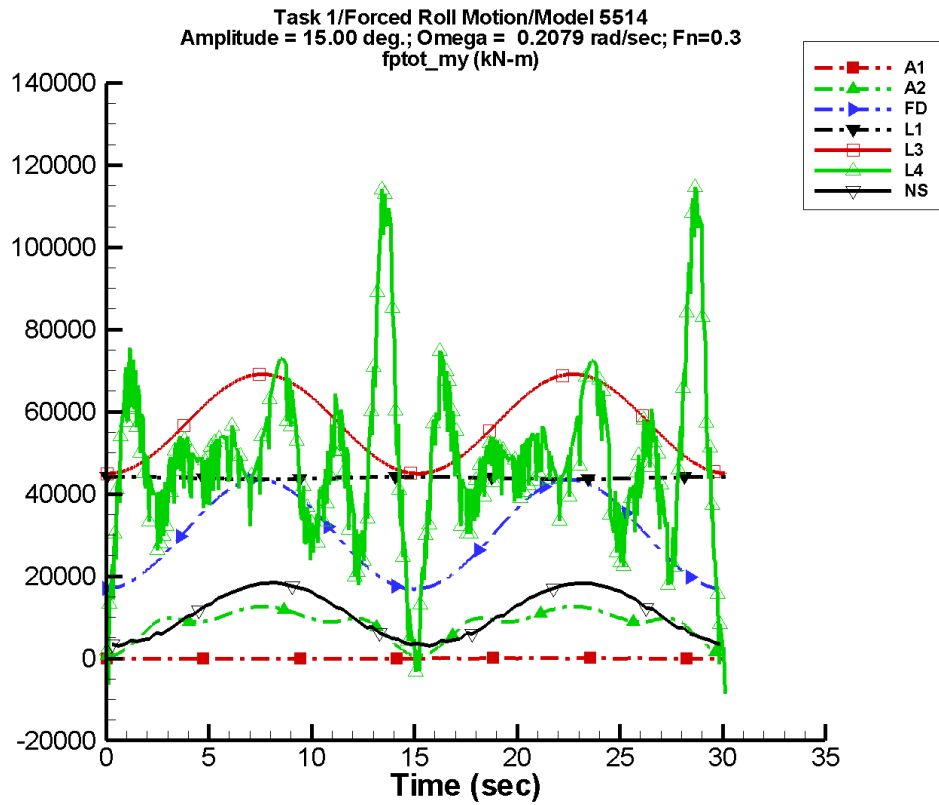
Table D–331. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.91E-03	2.20	-157	1.68E-02	86
A2	3.26E+03	0.681	-60	2.47E+03	-92
FD	1.82E+04	0.738	-176	1.38E+03	-87
L1	4.36E+04	4.27	-158	30.1	88
L3	4.57E+04	3.71	-178	1.25E+03	-91
L4	4.33E+04	51.1	-105	2.15E+03	-97
NF	—	—	—	—	—
NS	1.16E+03	0.978	101	851.	-99

Table D–332. Minimum and maximum of of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.14	4.08	-3.10	3.06
A2	724.	5.59E+03	710.	5.58E+03
FD	1.69E+04	1.97E+04	1.69E+04	1.96E+04
L1	4.36E+04	4.37E+04	4.36E+04	4.37E+04
L3	4.44E+04	4.69E+04	4.44E+04	4.69E+04
L4	1.39E+04	6.08E+04	2.44E+04	6.00E+04
NF	—	—	—	—
NS	228.	1.97E+03	341.	1.95E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-167. Time history of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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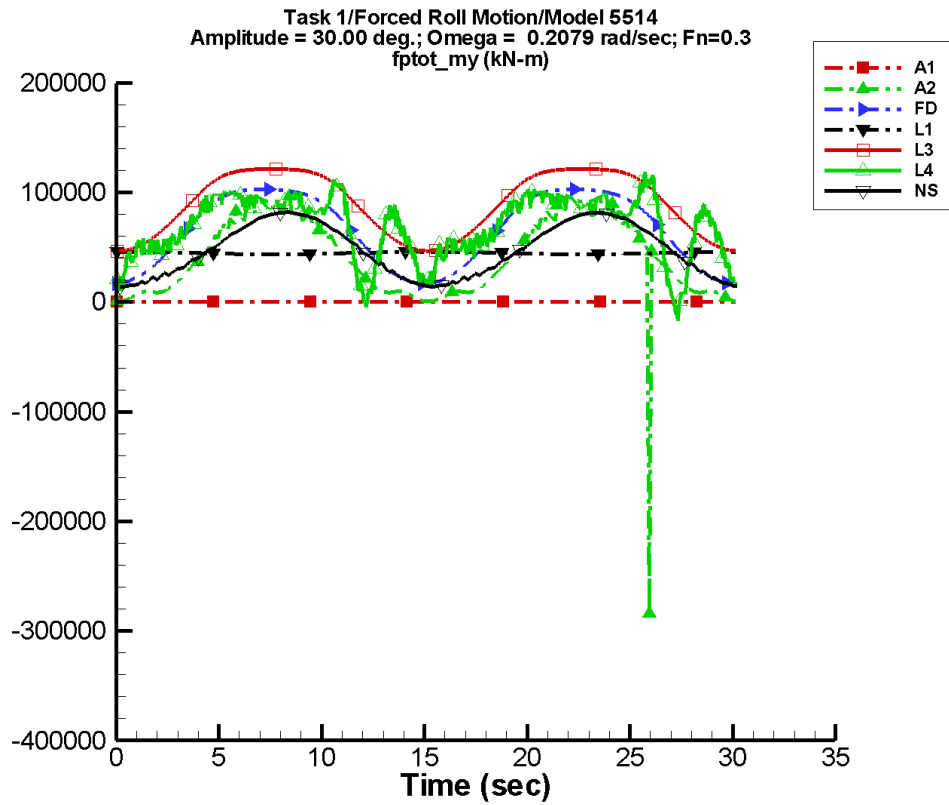
Table D–333. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.97E-02	6.59	-157	5.05E-02	86
A2	8.28E+03	31.1	-57	4.25E+03	-91
FD	3.00E+04	3.67	-179	1.34E+04	-87
L1	4.39E+04	4.36	-158	290.	88
L3	5.69E+04	8.06	142	1.21E+04	-91
L4	4.84E+04	335.	-127	2.58E+03	-120
NF	—	—	—	—	—
NS	1.07E+04	20.7	21	7.52E+03	-101

Table D–334. Minimum and maximum of of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-12.4	12.2	-9.31	9.17
A2	723.	1.27E+04	704.	1.26E+04
FD	1.69E+04	4.35E+04	1.69E+04	4.34E+04
L1	4.36E+04	4.42E+04	4.36E+04	4.42E+04
L3	4.49E+04	6.91E+04	4.50E+04	6.91E+04
L4	-8.51E+03	1.15E+05	-922.	1.08E+05
NF	—	—	—	—
NS	2.91E+03	1.84E+04	3.47E+03	1.80E+04

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

Figure D-168. Time history of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

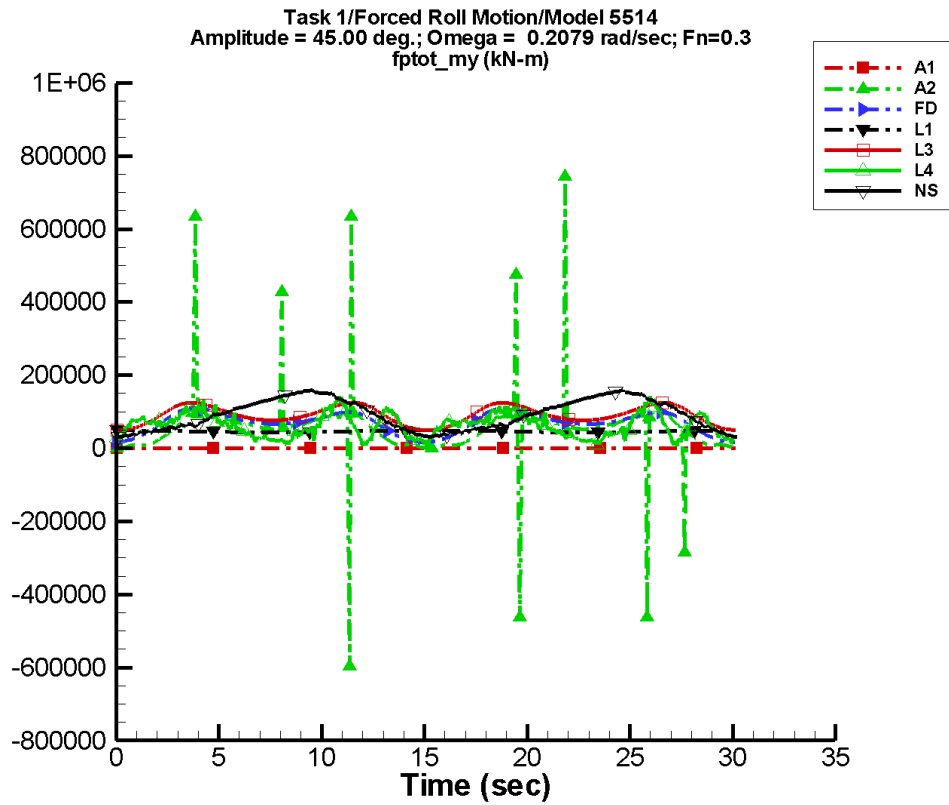
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.95E-02	13.2	-157	0.101	86
A2	4.11E+04	2.01E+03	-45	4.51E+04	-90
FD	6.51E+04	141.	13	4.50E+04	-86
L1	4.48E+04	4.49	-159	1.17E+03	88
L3	8.96E+04	331.	-59	3.88E+04	-91
L4	6.86E+04	437.	-108	3.05E+04	-79
NF	—	—	—	—	—
NS	4.71E+04	76.0	34	3.30E+04	-106

Table D–336. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-24.8	24.5	-18.6	18.3
A2	-2.84E+05	9.66E+04	609.	9.33E+04
FD	1.68E+04	1.03E+05	1.69E+04	1.03E+05
L1	4.36E+04	4.60E+04	4.36E+04	4.59E+04
L3	4.67E+04	1.21E+05	4.68E+04	1.21E+05
L4	-1.82E+04	1.22E+05	-6.77E+03	1.17E+05
NF	—	—	—	—
NS	1.36E+04	8.20E+04	1.44E+04	8.12E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-169. Time history of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

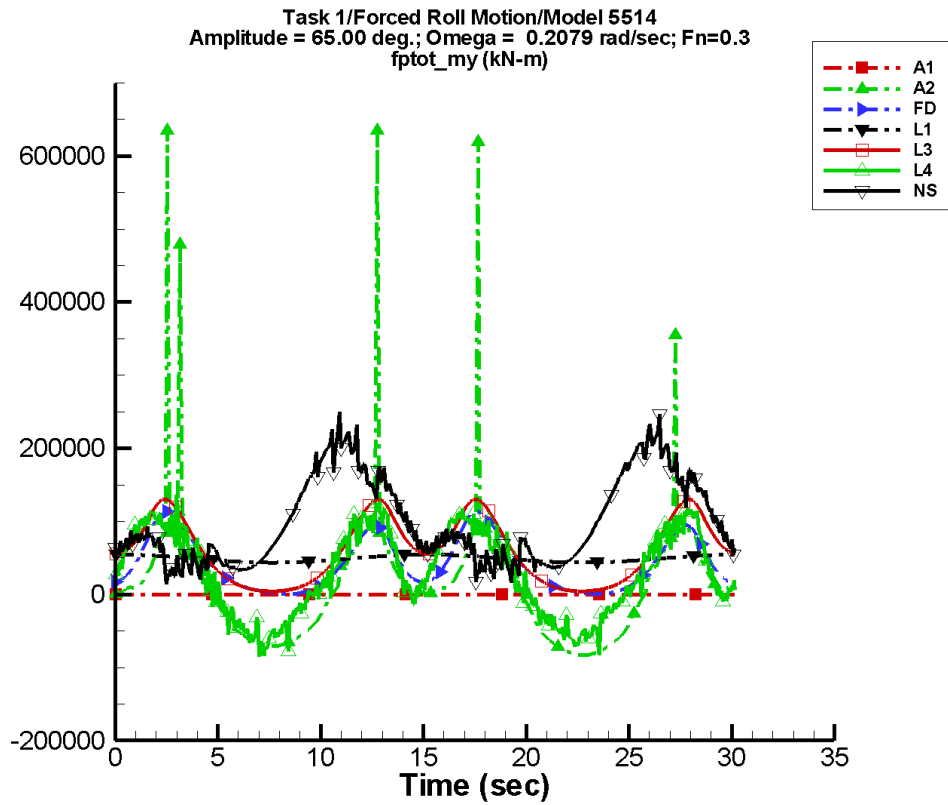
Table D–337. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-8.92E-02	19.8	-157	0.151	86
A2	5.33E+04	4.03E+03	-38	3.73E+04	-76
FD	6.95E+04	631.	6	2.39E+04	-71
L1	4.63E+04	4.58	-159	2.63E+03	88
L3	9.15E+04	2.34E+03	-61	8.41E+03	-92
L4	6.30E+04	2.17E+03	-41	1.12E+04	50
NF	—	—	—	—	—
NS	9.15E+04	233.	31	5.69E+04	-120

Table D–338. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-37.2	36.7	-27.9	27.5
A2	-5.97E+05	7.43E+05	727.	1.64E+05
FD	1.68E+04	1.09E+05	1.72E+04	1.08E+05
L1	4.36E+04	4.89E+04	4.36E+04	4.89E+04
L3	4.96E+04	1.25E+05	4.98E+04	1.24E+05
L4	2.96E+03	1.48E+05	1.69E+04	1.29E+05
NF	—	—	—	—
NS	2.96E+04	1.60E+05	3.12E+04	1.55E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-170. Time history of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

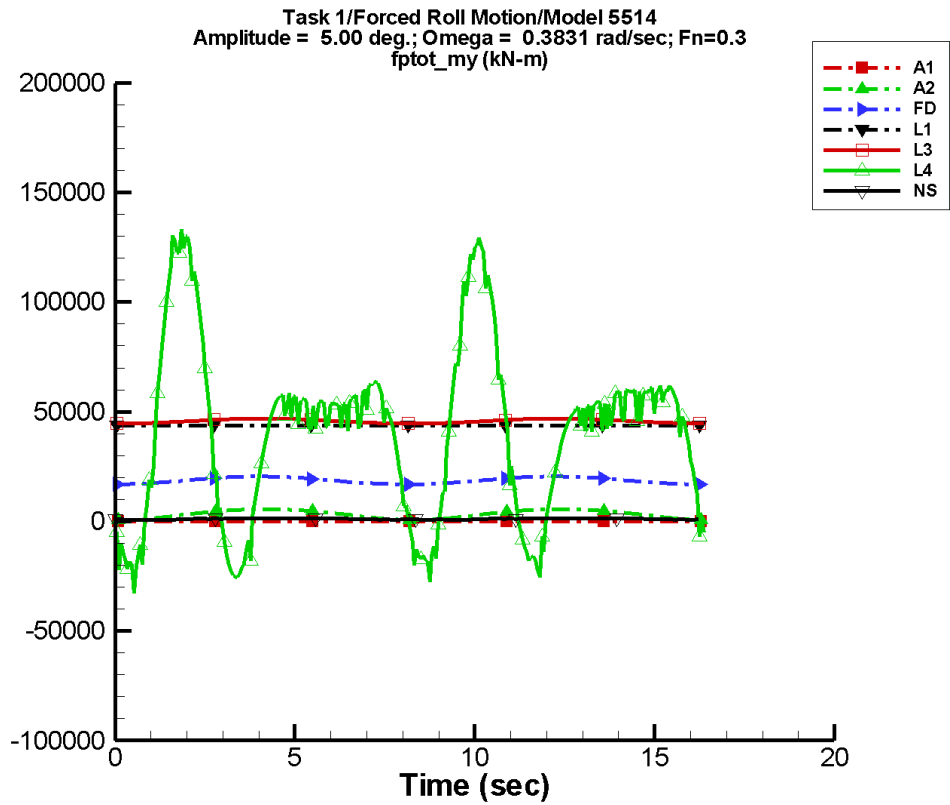
Table D–339. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.129	28.5	-157	0.219	86
A2	1.17E+04	5.86E+03	-24	6.16E+04	83
FD	4.21E+04	525.	-8	3.16E+04	66
L1	4.91E+04	4.61	-159	5.49E+03	88
L3	6.13E+04	2.96E+03	-64	5.03E+04	88
L4	3.25E+04	3.38E+03	-39	6.70E+04	94
NF	—	—	—	—	—
NS	9.77E+04	1.94E+03	-174	7.42E+04	177

Table D–340. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-53.8	53.0	-40.3	39.8
A2	-8.32E+04	6.35E+05	-8.28E+04	1.77E+05
FD	827.	1.13E+05	975.	1.11E+05
L1	4.36E+04	5.46E+04	4.36E+04	5.46E+04
L3	4.28E+03	1.30E+05	4.32E+03	1.29E+05
L4	-8.49E+04	1.36E+05	-7.21E+04	1.17E+05
NF	—	—	—	—
NS	1.25E+04	2.49E+05	2.98E+04	2.18E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-171. Time history of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

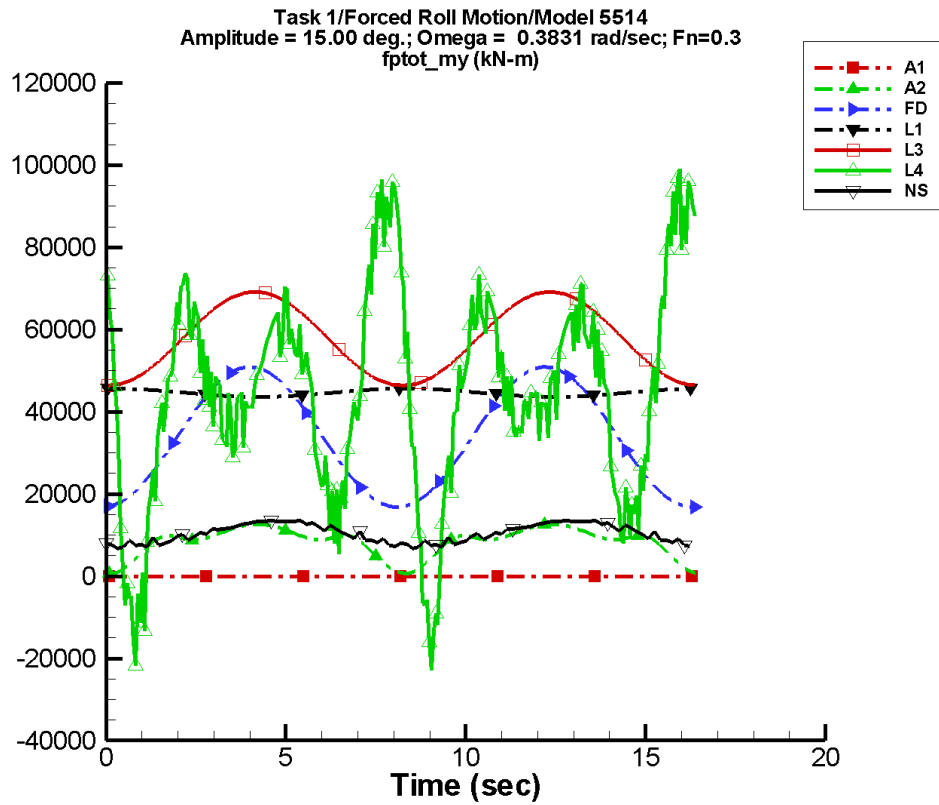
Table D–341. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.21E-02	1.85	-161	0.145	166
A2	3.26E+03	0.479	-143	2.47E+03	-94
FD	1.87E+04	1.33	121	1.80E+03	-86
L1	4.37E+04	1.19	107	113.	83
L3	4.57E+04	2.13	149	1.16E+03	-92
L4	4.17E+04	3.93E+03	-7	8.54E+03	-29
NF	—	—	—	—	—
NS	1.12E+03	1.64	-30	367.	-111

Table D–342. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.00	1.98	-1.91	1.88
A2	724.	5.59E+03	702.	5.57E+03
FD	1.69E+04	2.05E+04	1.69E+04	2.05E+04
L1	4.36E+04	4.38E+04	4.36E+04	4.38E+04
L3	4.46E+04	4.69E+04	4.46E+04	4.69E+04
L4	-3.67E+04	1.47E+05	-2.83E+04	1.35E+05
NF	—	—	—	—
NS	563.	1.48E+03	729.	1.45E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-172. Time history of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	9.62E-02	5.54	-161	0.435	166
A2	8.28E+03	33.1	-56	4.25E+03	-93
FD	3.37E+04	7.53	119	1.71E+04	-86
L1	4.46E+04	1.14	107	1.01E+03	83
L3	5.77E+04	6.61	159	1.14E+04	-92
L4	4.42E+04	2.53E+03	-97	6.08E+03	-129
NF	—	—	—	—	—
NS	1.04E+04	22.1	-25	2.97E+03	-115

Table D–344. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.99	5.93	-5.73	5.63
A2	722.	1.27E+04	822.	1.26E+04
FD	1.68E+04	5.09E+04	1.71E+04	5.06E+04
L1	4.36E+04	4.56E+04	4.36E+04	4.56E+04
L3	4.64E+04	6.91E+04	4.64E+04	6.91E+04
L4	-2.29E+04	9.90E+04	-1.06E+04	9.04E+04
NF	—	—	—	—
NS	6.71E+03	1.36E+04	7.50E+03	1.33E+04



TASK 1/ROLL MOTION/MODEL 5514

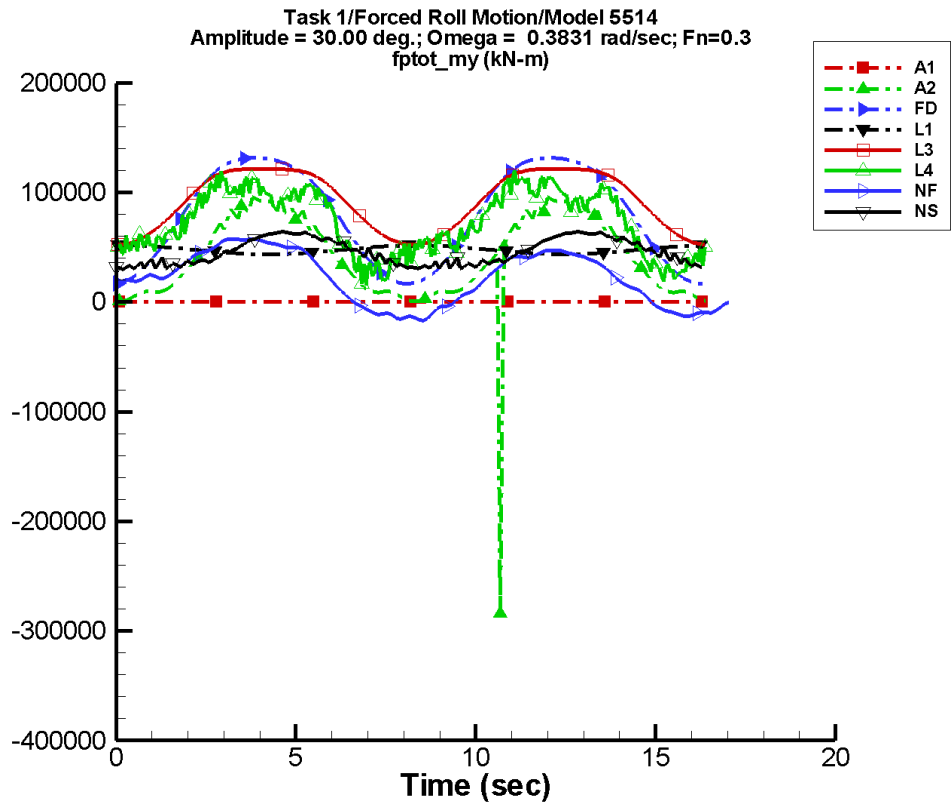


Figure D-173. Time history of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.192	11.1	-161	0.871	166
A2	4.05E+04	4.28E+03	35	4.53E+04	-100
FD	7.96E+04	305.	-58	5.89E+04	-85
L1	4.77E+04	1.07	112	4.05E+03	83
L3	9.24E+04	183.	-36	3.65E+04	-92
L4	7.29E+04	577.	-43	3.62E+04	-74
NF	2.13E+04	8.47E+03	62	3.17E+04	-1
NS	4.54E+04	150.	-18	1.55E+04	-126

Table D–346. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-18.0	11.9	-11.5	11.3
A2	-2.84E+05	9.58E+04	1.07E+03	9.23E+04
FD	1.67E+04	1.32E+05	1.76E+04	1.31E+05
L1	4.36E+04	5.17E+04	4.37E+04	5.17E+04
L3	5.25E+04	1.21E+05	5.24E+04	1.21E+05
L4	1.56E+04	1.20E+05	2.66E+04	1.11E+05
NF	-1.71E+04	5.77E+04	-1.44E+04	5.70E+04
NS	2.99E+04	6.41E+04	3.14E+04	6.33E+04

TASK 1/ROLL MOTION/MODEL 5514

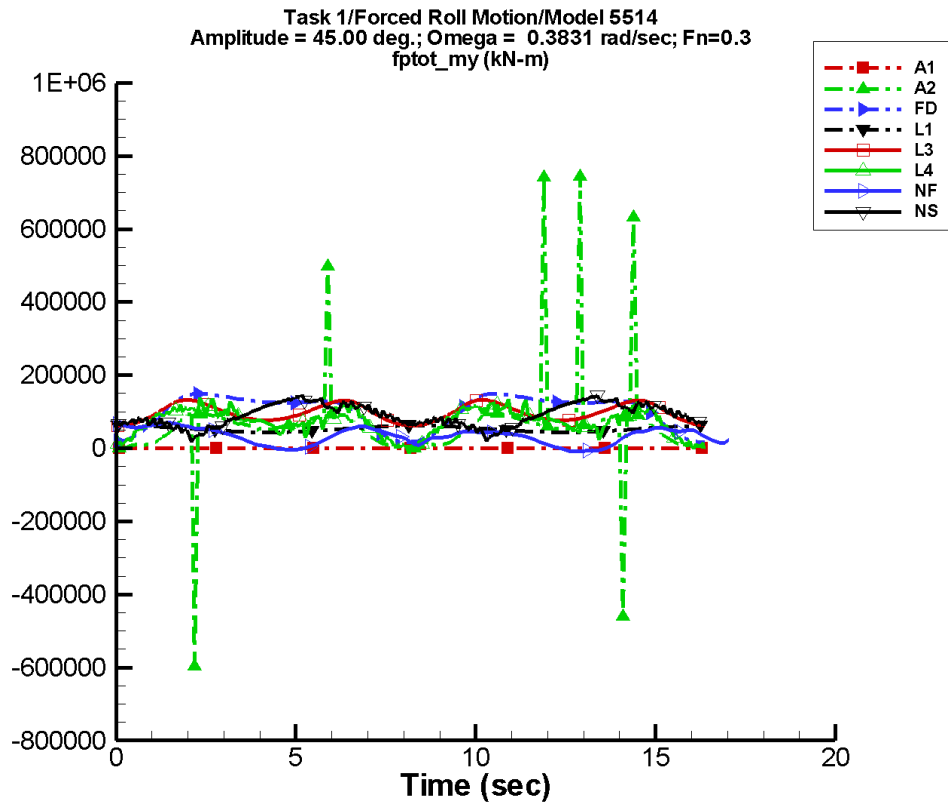


Figure D-174. Time history of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.289	16.6	-161	1.31	166
A2	6.21E+04	1.57E+04	-166	4.45E+04	-102
FD	1.01E+05	1.48E+03	-60	5.17E+04	-77
L1	5.28E+04	0.944	114	9.12E+03	83
L3	9.74E+04	1.49E+03	-12	6.57E+03	-67
L4	7.26E+04	1.75E+03	20	2.60E+04	-52
NF	3.22E+04	8.38E+03	87	1.82E+04	132
NS	8.92E+04	524.	-12	3.81E+04	-156

Table D–348. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-27.0	17.8	-17.2	16.9
A2	-5.97E+05	7.43E+05	-1.12E+03	1.50E+05
FD	1.64E+04	1.49E+05	1.87E+04	1.48E+05
L1	4.37E+04	6.19E+04	4.37E+04	6.19E+04
L3	6.26E+04	1.32E+05	6.27E+04	1.31E+05
L4	-1.42E+04	1.38E+05	3.45E+03	1.12E+05
NF	-8.68E+03	7.06E+04	-7.07E+03	6.58E+04
NS	1.60E+04	1.46E+05	3.37E+04	1.37E+05

TASK 1/ROLL MOTION/MODEL 5514

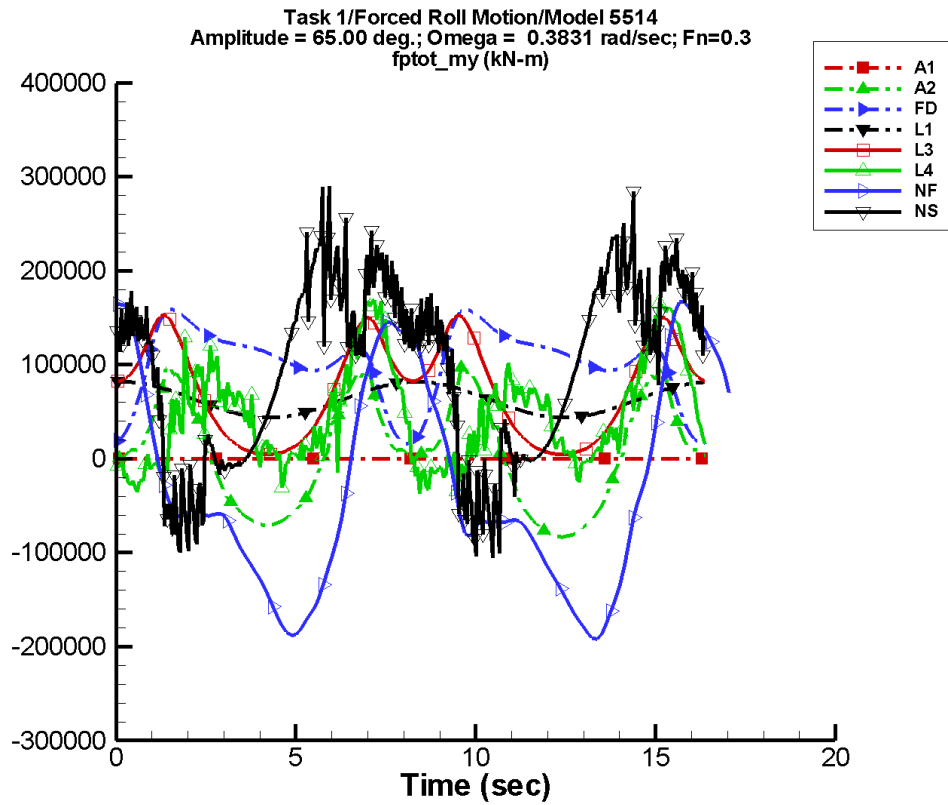


Figure D-175. Time history of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

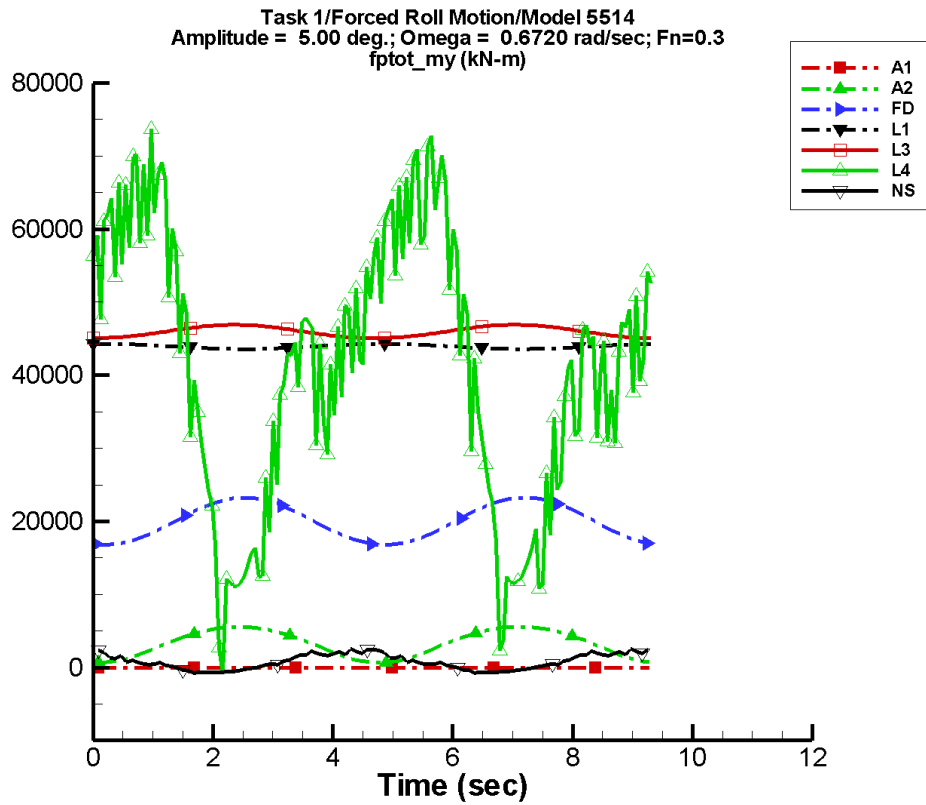
Table D–349. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.417	24.0	-161	1.89	166
A2	5.62E+03	4.57E+03	-8	5.64E+04	82
FD	1.02E+05	784.	-58	3.40E+04	-48
L1	6.28E+04	0.825	116	1.90E+04	83
L3	7.42E+04	1.93E+03	-1	5.93E+04	83
L4	4.44E+04	2.06E+03	-65	2.04E+04	170
NF	-3.32E+04	1.23E+04	130	1.32E+05	164
NS	9.20E+04	1.23E+03	-135	1.18E+05	158

Table D–350. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-39.0	25.7	-24.8	24.4
A2	-8.32E+04	9.87E+04	-8.17E+04	8.42E+04
FD	1.60E+04	1.59E+05	2.05E+04	1.55E+05
L1	4.37E+04	8.18E+04	4.39E+04	8.18E+04
L3	4.42E+03	1.53E+05	4.67E+03	1.49E+05
L4	-3.73E+04	1.69E+05	-2.52E+04	1.61E+05
NF	-1.92E+05	1.67E+05	-1.81E+05	1.62E+05
NS	-1.10E+05	2.92E+05	-6.38E+04	2.20E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-176. Time history of  $M_y^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

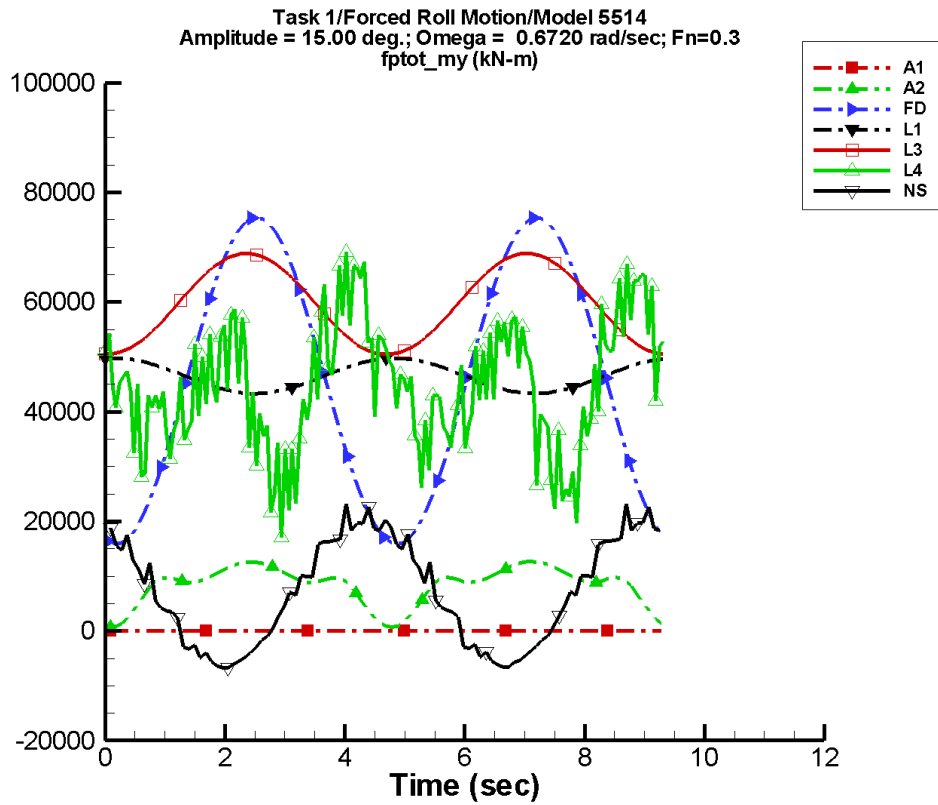
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.01E-03	3.49	142	1.25E-02	39
A2	3.26E+03	7.57	14	2.47E+03	-97
FD	2.00E+04	2.18	150	3.23E+03	-105
L1	4.39E+04	1.07	162	358.	78
L3	4.60E+04	2.67	178	920.	-92
L4	4.13E+04	868.	-7	2.25E+04	58
NF	—	—	—	—	—
NS	791.	2.34	-96	1.42E+03	118

Table D–352. Minimum and maximum of  $M_y^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.37	3.33	-3.33	3.26
A2	722.	5.59E+03	718.	5.50E+03
FD	1.68E+04	2.32E+04	1.68E+04	2.32E+04
L1	4.36E+04	4.43E+04	4.36E+04	4.43E+04
L3	4.50E+04	4.69E+04	4.51E+04	4.69E+04
L4	-869.	7.37E+04	1.00E+04	6.65E+04
NF	—	—	—	—
NS	-750.	2.55E+03	-655.	2.24E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-177. Time history of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.70E-02	10.5	142	3.76E-02	39
A2	8.29E+03	53.0	-38	4.29E+03	-96
FD	4.56E+04	7.70	161	2.98E+04	-105
L1	4.65E+04	1.51	179	3.22E+03	78
L3	5.96E+04	5.79	176	9.24E+03	-92
L4	4.43E+04	1.21E+03	-122	5.13E+03	121
NF	—	—	—	—	—
NS	7.15E+03	19.5	-87	1.33E+04	116

Table D–354. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-10.1	9.98	-9.99	9.79
A2	719.	1.27E+04	1.18E+03	1.23E+04
FD	1.59E+04	7.54E+04	1.60E+04	7.54E+04
L1	4.33E+04	4.98E+04	4.34E+04	4.98E+04
L3	5.05E+04	6.88E+04	5.05E+04	6.87E+04
L4	1.71E+04	6.91E+04	2.74E+04	6.23E+04
NF	—	—	—	—
NS	-6.77E+03	2.32E+04	-5.81E+03	1.99E+04

TASK 1/ROLL MOTION/MODEL 5514

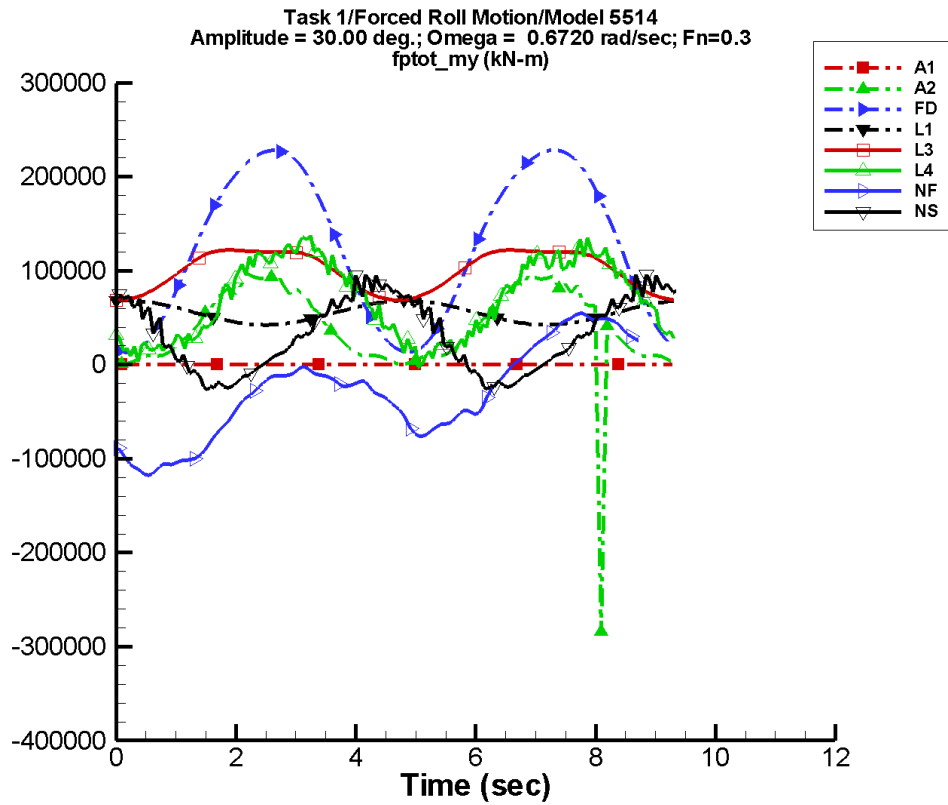


Figure D-178. Time history of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.40E-02	20.9	142	7.52E-02	39
A2	3.88E+04	6.92E+03	-44	4.40E+04	-90
FD	1.25E+05	500.	-31	1.08E+05	-105
L1	5.53E+04	2.30	-160	1.29E+04	78
L3	1.00E+05	376.	0	2.80E+04	-90
L4	6.90E+04	1.97E+03	-59	5.68E+04	-137
NF	2.31E+04	1.23E+04	-65	4.77E+04	118
NS	3.18E+04	125.	-49	5.27E+04	122

Table D–356. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-20.2	20.0	-20.0	19.6
A2	-2.84E+05	9.64E+04	-1.07E+03	9.36E+04
FD	1.29E+04	2.28E+05	1.35E+04	2.28E+05
L1	4.24E+04	6.82E+04	4.26E+04	6.82E+04
L3	6.88E+04	1.22E+05	6.90E+04	1.22E+05
L4	-2.77E+03	1.38E+05	9.97E+03	1.29E+05
NF	-7.61E+04	8.55E+04	-7.12E+04	8.19E+04
NS	-2.69E+04	9.62E+04	-2.30E+04	8.64E+04

TASK 1/ROLL MOTION/MODEL 5514

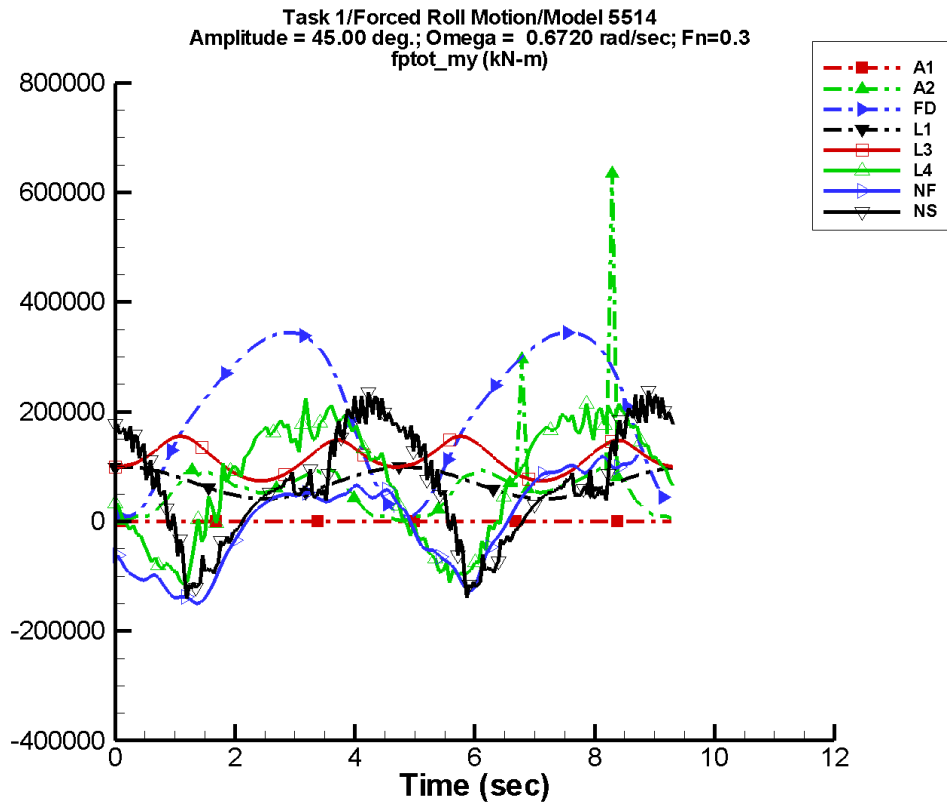


Figure D-179. Time history of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-8.10E-02	31.4	142	0.113	39
A2	6.23E+04	1.27E+04	140	3.93E+04	-107
FD	1.99E+05	2.28E+03	-32	1.61E+05	-112
L1	6.99E+04	3.38	-154	2.90E+04	78
L3	1.15E+05	2.14E+03	0	1.49E+04	59
L4	7.36E+04	1.48E+03	87	1.43E+05	-162
NF	6.03E+04	9.23E+03	-62	8.97E+04	81
NS	6.59E+04	336.	-33	1.25E+05	132

Table D–358. Minimum and maximum of of  $M_y^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-30.3	29.9	-30.0	29.4
A2	708.	6.35E+05	947.	1.55E+05
FD	8.15E+03	3.44E+05	1.02E+04	3.40E+05
L1	4.10E+04	9.89E+04	4.14E+04	9.90E+04
L3	7.41E+04	1.55E+05	7.55E+04	1.52E+05
L4	-1.18E+05	2.24E+05	-9.74E+04	1.97E+05
NF	-1.29E+05	1.69E+05	-1.07E+05	1.58E+05
NS	-1.41E+05	2.38E+05	-1.11E+05	2.13E+05

TASK 1/ROLL MOTION/MODEL 5514

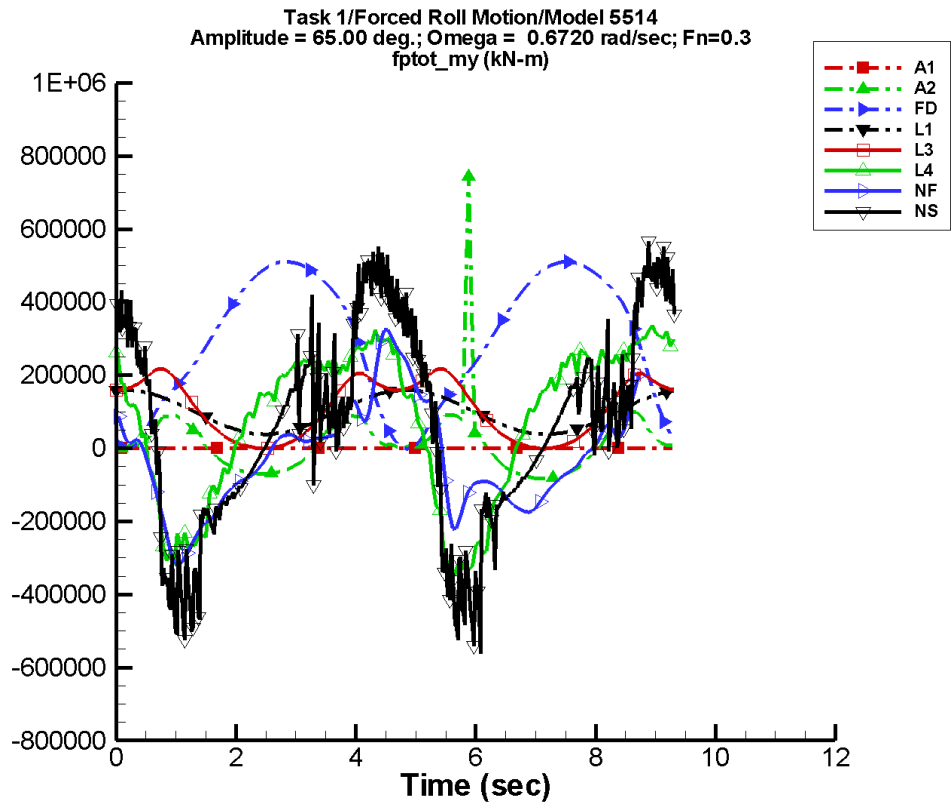


Figure D-180. Time history of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

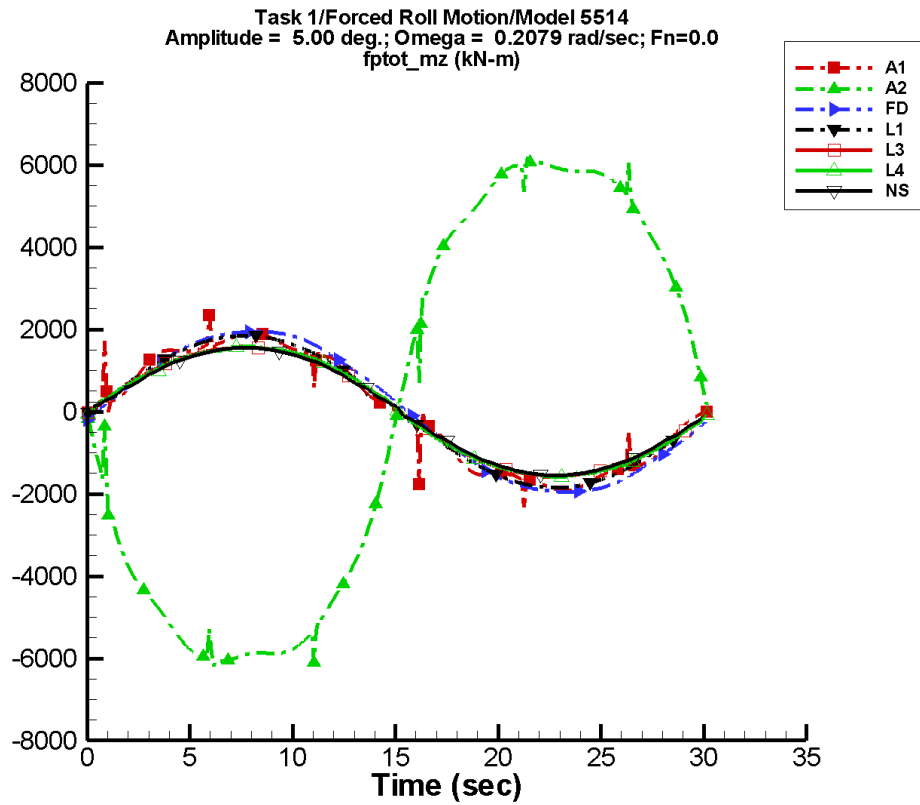
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.117	45.3	142	0.163	39
A2	1.38E+04	1.26E+04	-113	5.79E+04	64
FD	2.91E+05	2.61E+03	-40	2.40E+05	-121
L1	9.86E+04	4.63	-151	6.05E+04	78
L3	1.10E+05	1.75E+03	-4	1.01E+05	79
L4	7.38E+04	1.19E+04	114	2.74E+05	169
NF	4.10E+04	3.16E+04	70	1.92E+05	6
NS	6.13E+04	1.31E+03	-121	3.09E+05	142

Table D–360. Minimum and maximum of  $M_y^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-43.8	43.3	-43.3	42.4
A2	-8.32E+04	7.43E+05	-8.20E+04	1.50E+05
FD	-1.26E+03	5.10E+05	6.00E+03	5.03E+05
L1	3.81E+04	1.59E+05	3.91E+04	1.59E+05
L3	-1.13E+03	2.18E+05	332.	2.08E+05
L4	-3.47E+05	3.36E+05	-3.27E+05	3.14E+05
NF	-2.20E+05	4.36E+05	-1.64E+05	3.82E+05
NS	-5.61E+05	5.67E+05	-4.32E+05	4.87E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-181. Time history of  $M_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

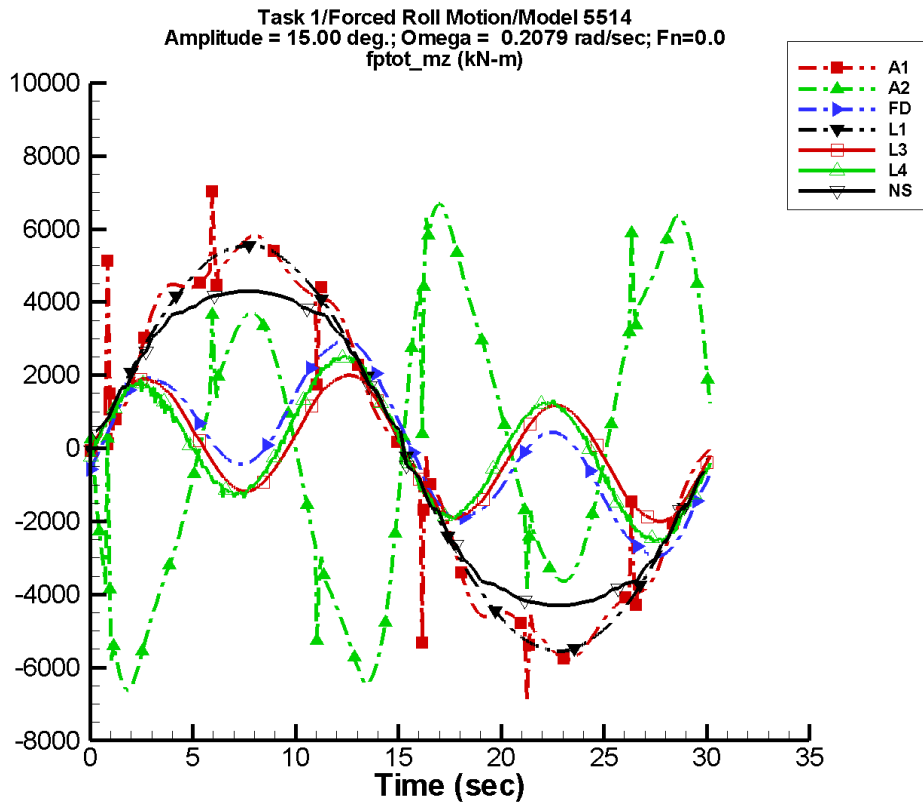
Table D–361. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.97	1.83E+03	0	1.84	23
A2	-26.9	6.67E+03	-179	131.	-116
FD	0.157	1.98E+03	-6	0.991	-21
L1	7.07E-02	1.85E+03	-1	0.154	86
L3	4.05	1.62E+03	-1	15.2	87
L4	3.57	1.62E+03	-2	16.0	109
NF	—	—	—	—	—
NS	-8.21E-03	1.57E+03	-2	4.65E-02	-28

Table D–362. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.32E+03	2.34E+03	-1.92E+03	1.93E+03
A2	-6.20E+03	6.20E+03	-6.07E+03	6.06E+03
FD	-1.95E+03	1.95E+03	-1.95E+03	1.95E+03
L1	-1.85E+03	1.85E+03	-1.85E+03	1.85E+03
L3	-1.59E+03	1.59E+03	-1.59E+03	1.59E+03
L4	-1.58E+03	1.59E+03	-1.58E+03	1.58E+03
NF	—	—	—	—
NS	-1.55E+03	1.55E+03	-1.54E+03	1.54E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-182. Time history of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

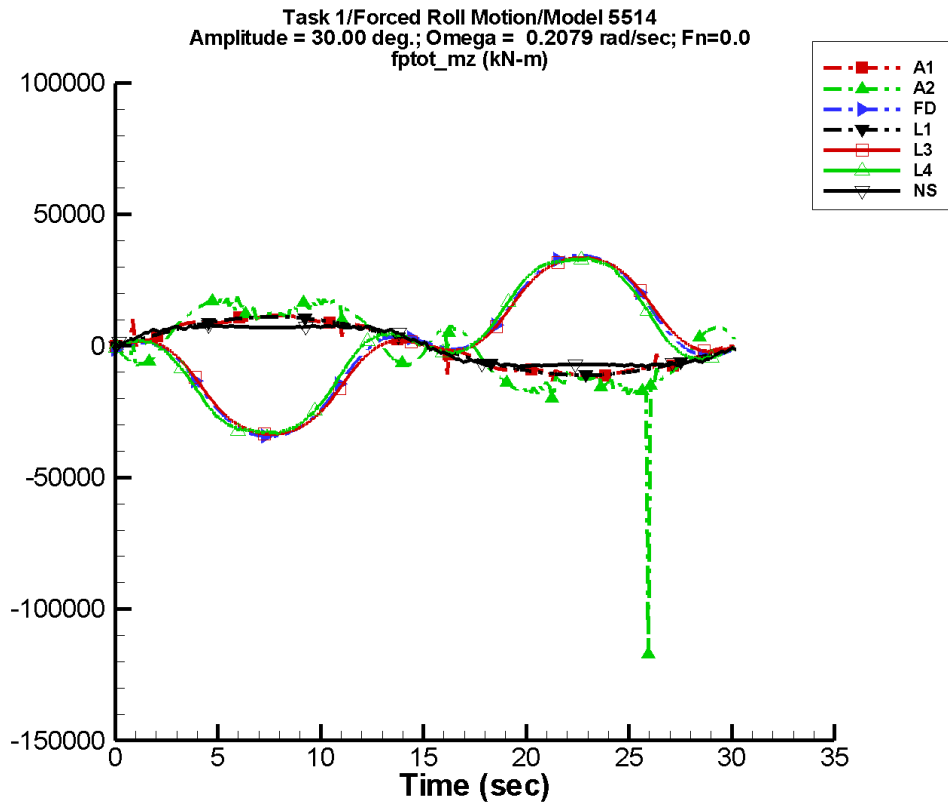
Table D–363. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-8.90	5.50E+03	0	5.53	23
A2	-179.	1.01E+03	-154	857.	-119
FD	50.7	1.43E+03	-18	255.	56
L1	0.213	5.55E+03	-1	0.462	87
L3	102.	529.	-5	401.	87
L4	93.5	722.	-34	435.	99
NF	—	—	—	—	—
NS	-2.68E-03	4.61E+03	-2	0.275	-4

Table D–364. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.95E+03	7.03E+03	-5.75E+03	5.79E+03
A2	-6.73E+03	6.70E+03	-6.61E+03	6.60E+03
FD	-2.97E+03	2.97E+03	-2.94E+03	2.94E+03
L1	-5.55E+03	5.56E+03	-5.55E+03	5.56E+03
L3	-2.01E+03	2.02E+03	-2.00E+03	2.01E+03
L4	-2.56E+03	2.54E+03	-2.51E+03	2.48E+03
NF	—	—	—	—
NS	-4.30E+03	4.30E+03	-4.28E+03	4.28E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-183. Time history of  $M_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

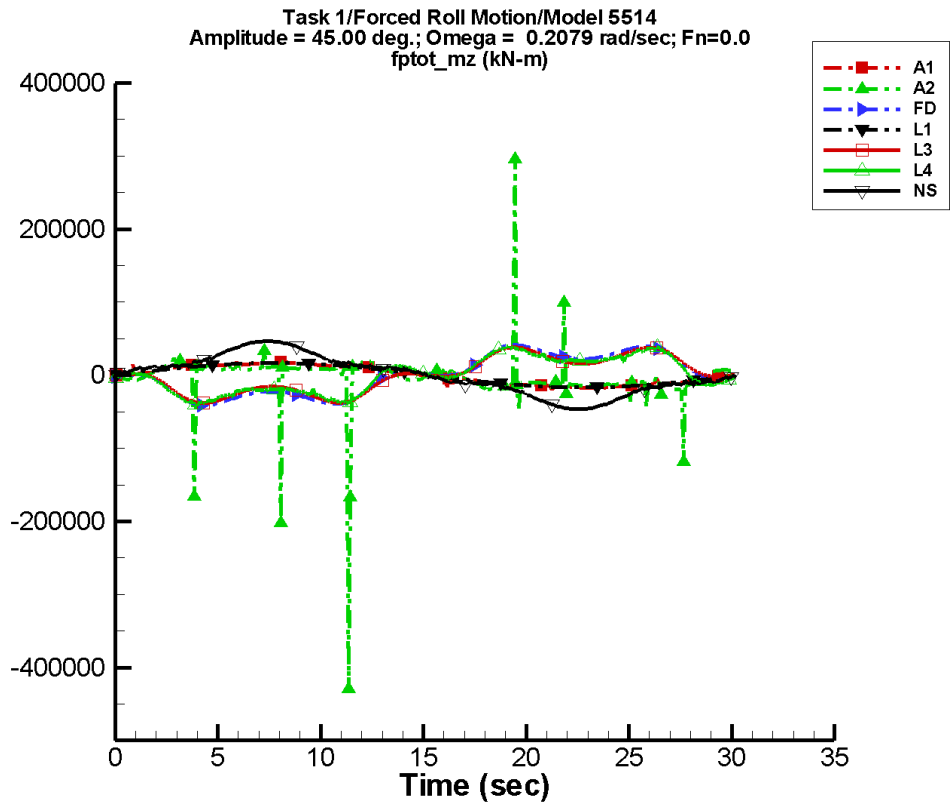
Table D–365. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-17.8	1.10E+04	0	11.1	23
A2	-625.	1.52E+04	-4	864.	-45
FD	348.	2.55E+04	-180	1.73E+03	61
L1	0.431	1.11E+04	-1	0.923	87
L3	661.	2.54E+04	179	2.57E+03	87
L4	677.	2.47E+04	-175	2.88E+03	98
NF	—	—	—	—	—
NS	0.203	8.74E+03	-1	0.544	16

Table D–366. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.39E+04	1.41E+04	-1.15E+04	1.16E+04
A2	-1.17E+05	1.87E+04	-2.90E+04	1.72E+04
FD	-3.43E+04	3.43E+04	-3.43E+04	3.43E+04
L1	-1.11E+04	1.11E+04	-1.11E+04	1.11E+04
L3	-3.35E+04	3.35E+04	-3.35E+04	3.34E+04
L4	-3.40E+04	3.33E+04	-3.30E+04	3.30E+04
NF	—	—	—	—
NS	-7.93E+03	7.93E+03	-7.49E+03	7.49E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-184. Time history of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

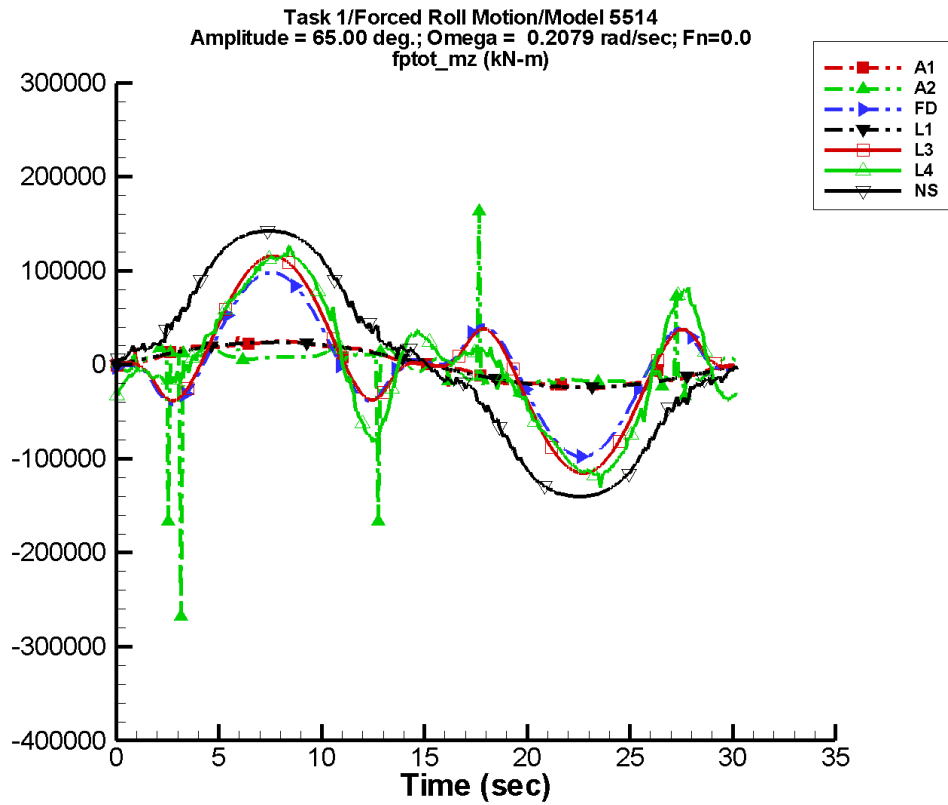
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-26.7	1.65E+04	0	16.6	23
A2	-2.97E+03	7.74E+03	3	6.87E+03	4
FD	143.	3.45E+04	-177	811.	141
L1	0.658	1.66E+04	-1	1.39	87
L3	-113.	3.03E+04	179	689.	-83
L4	-251.	2.91E+04	-174	339.	-68
NF	—	—	—	—	—
NS	4.18	3.46E+04	1	3.56	-101

Table D–368. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.08E+04	2.11E+04	-1.73E+04	1.74E+04
A2	-4.29E+05	2.96E+05	-7.11E+04	2.57E+04
FD	-4.11E+04	4.11E+04	-4.08E+04	4.08E+04
L1	-1.67E+04	1.67E+04	-1.66E+04	1.67E+04
L3	-3.80E+04	3.80E+04	-3.79E+04	3.79E+04
L4	-4.18E+04	3.99E+04	-3.86E+04	3.79E+04
NF	—	—	—	—
NS	-4.65E+04	4.65E+04	-4.62E+04	4.62E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-185. Time history of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

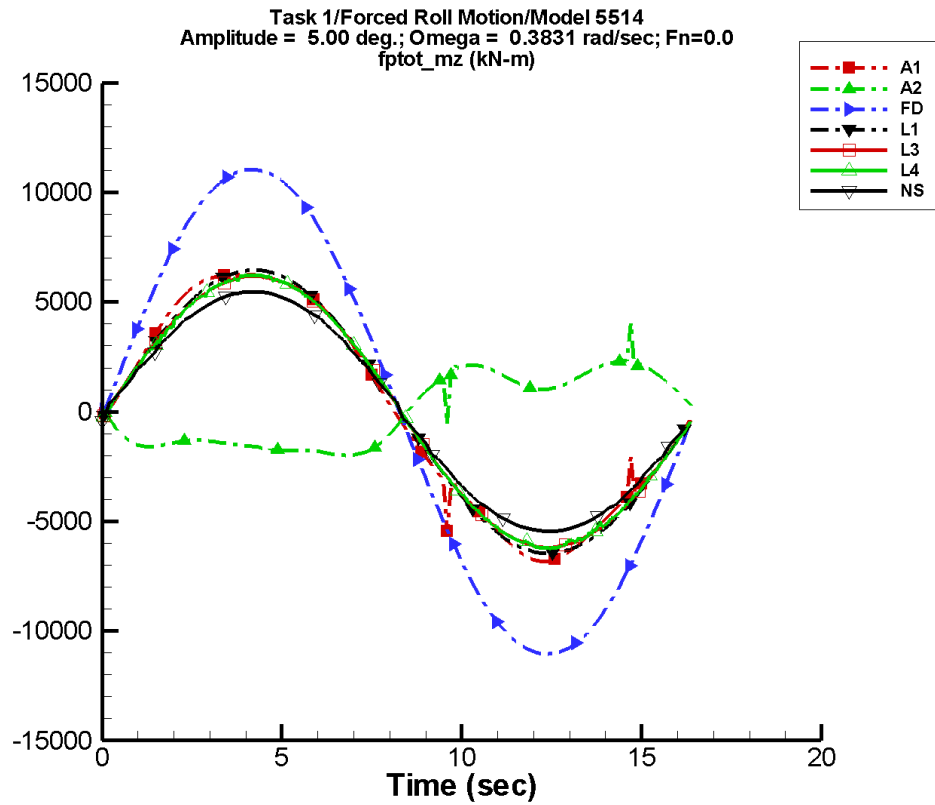
Table D–369. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-38.5	2.38E+04	0	24.0	23
A2	-2.89E+03	1.46E+04	-2	2.02E+03	85
FD	-1.15E+03	4.27E+04	-9	7.25E+03	-129
L1	0.959	2.40E+04	-1	2.00	86
L3	-3.34E+03	5.50E+04	-1	1.33E+04	-92
L4	-4.86E+03	5.92E+04	4	1.59E+04	-86
NF	—	—	—	—	—
NS	708.	1.24E+05	1	678.	-90

Table D–370. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.01E+04	3.05E+04	-2.49E+04	2.51E+04
A2	-2.68E+05	1.63E+05	-3.20E+04	1.85E+04
FD	-9.79E+04	9.79E+04	-9.74E+04	9.74E+04
L1	-2.41E+04	2.41E+04	-2.40E+04	2.41E+04
L3	-1.16E+05	1.16E+05	-1.15E+05	1.15E+05
L4	-1.31E+05	1.30E+05	-1.19E+05	1.20E+05
NF	—	—	—	—
NS	-1.40E+05	1.42E+05	-1.40E+05	1.42E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-186. Time history of  $M_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

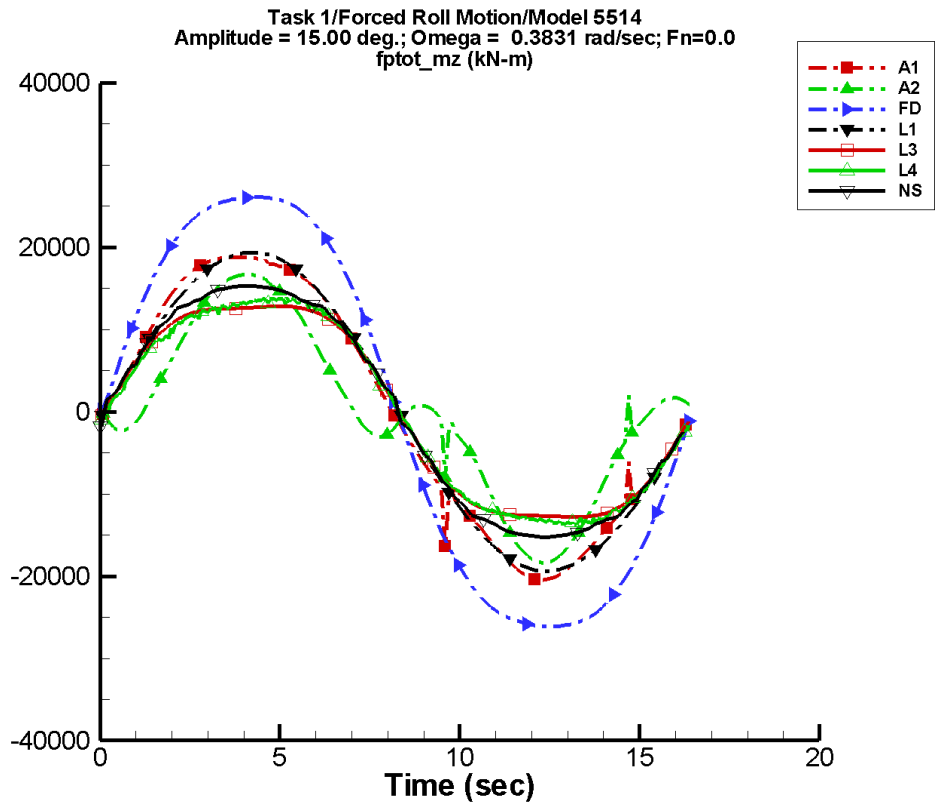
Table D–371. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-14.8	6.46E+03	0	31.4	-12
A2	-37.2	2.05E+03	173	126.	-108
FD	0.880	1.11E+04	-2	2.87	100
L1	2.51E-02	6.46E+03	-3	0.410	-171
L3	4.38	6.24E+03	-3	7.11	41
L4	-1.45	6.22E+03	-3	22.9	-154
NF	—	—	—	—	—
NS	7.07E-02	5.51E+03	-2	0.617	162

Table D–372. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.83E+03	6.97E+03	-6.78E+03	6.26E+03
A2	-1.99E+03	4.04E+03	-1.97E+03	2.50E+03
FD	-1.10E+04	1.10E+04	-1.10E+04	1.10E+04
L1	-6.46E+03	6.46E+03	-6.45E+03	6.45E+03
L3	-6.20E+03	6.20E+03	-6.20E+03	6.19E+03
L4	-6.23E+03	6.22E+03	-6.22E+03	6.22E+03
NF	—	—	—	—
NS	-5.47E+03	5.48E+03	-5.41E+03	5.42E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-187. Time history of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

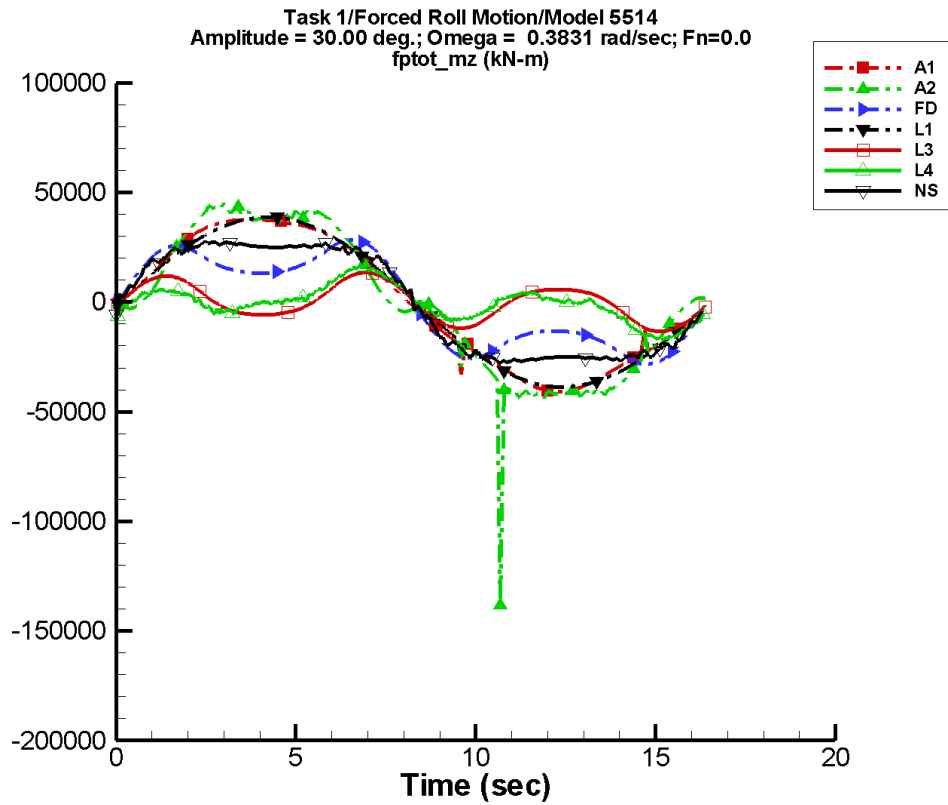
Table D–373. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-44.2	1.94E+04	0	94.1	-12
A2	-200.	1.30E+04	-1	864.	-115
FD	57.9	2.81E+04	-2	394.	76
L1	7.35E-02	1.94E+04	-3	1.23	-171
L3	98.3	1.45E+04	-2	186.	28
L4	-28.3	1.48E+04	-4	47.4	-95
NF	—	—	—	—	—
NS	0.206	1.62E+04	-2	1.62	168

Table D–374. Minimum and maximum of of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.05E+04	2.09E+04	-2.03E+04	1.88E+04
A2	-1.84E+04	1.78E+04	-1.81E+04	1.65E+04
FD	-2.61E+04	2.61E+04	-2.61E+04	2.61E+04
L1	-1.94E+04	1.94E+04	-1.94E+04	1.94E+04
L3	-1.28E+04	1.28E+04	-1.28E+04	1.28E+04
L4	-1.38E+04	1.38E+04	-1.36E+04	1.36E+04
NF	—	—	—	—
NS	-1.53E+04	1.53E+04	-1.52E+04	1.52E+04

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-188. Time history of  $M_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

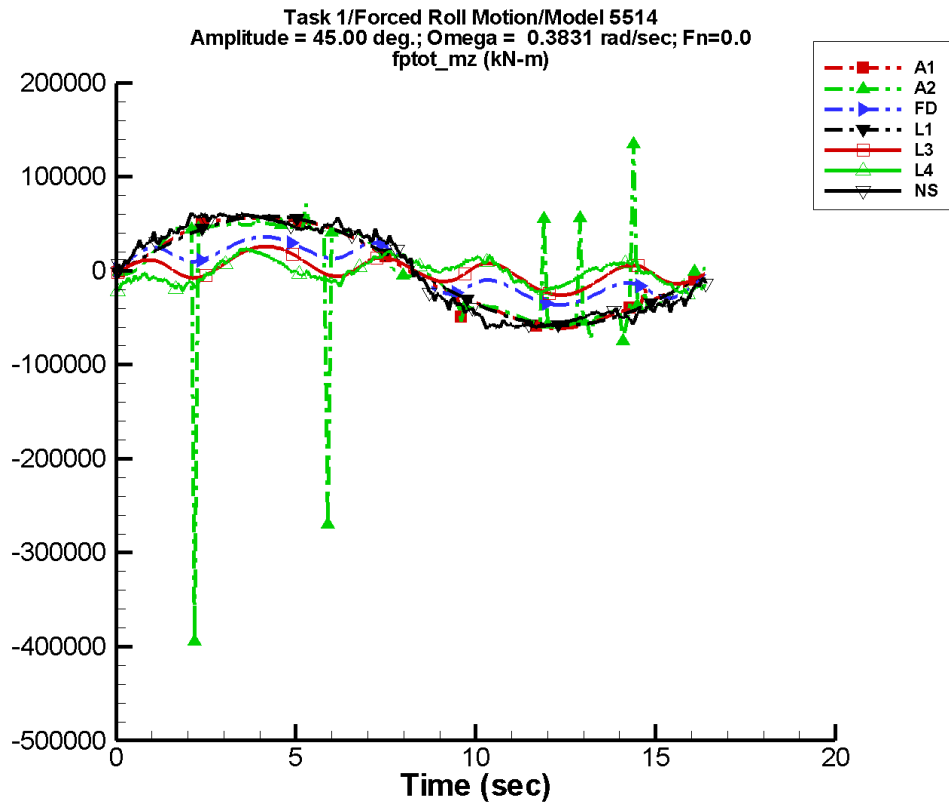
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-88.5	3.88E+04	0	188.	-12
A2	-946.	4.34E+04	0	1.03E+03	-155
FD	378.	2.36E+04	-2	2.66E+03	75
L1	0.159	3.88E+04	-3	2.45	-171
L3	665.	2.96E+03	4	1.26E+03	31
L4	29.1	5.93E+03	-44	476.	-14
NF	—	—	—	—	—
NS	0.336	3.08E+04	-2	2.58	157

Table D–376. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.09E+04	4.18E+04	-4.06E+04	3.75E+04
A2	-1.38E+05	4.79E+04	-5.09E+04	4.30E+04
FD	-2.83E+04	2.83E+04	-2.78E+04	2.78E+04
L1	-3.88E+04	3.88E+04	-3.87E+04	3.87E+04
L3	-1.34E+04	1.34E+04	-1.33E+04	1.33E+04
L4	-1.72E+04	1.64E+04	-1.66E+04	1.56E+04
NF	—	—	—	—
NS	-2.81E+04	2.81E+04	-2.69E+04	2.70E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-189. Time history of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

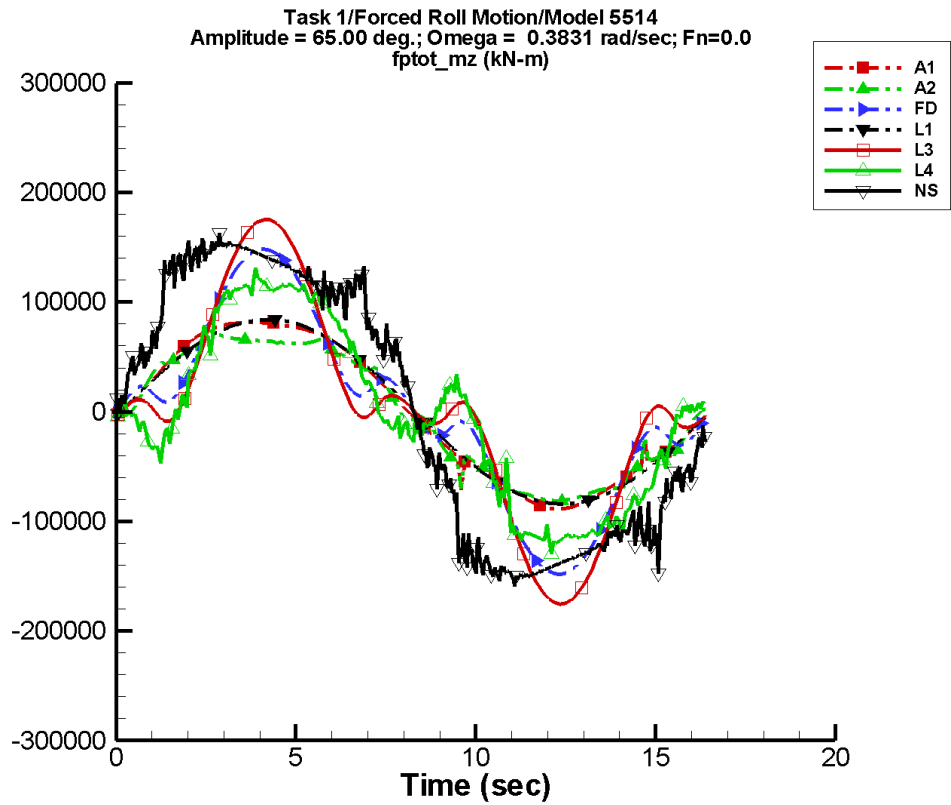
Table D–377. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{pot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-133.	5.81E+04	0	282.	-12
A2	-1.78E+03	4.71E+04	2	1.09E+03	-130
FD	85.2	2.94E+04	-2	997.	56
L1	0.254	5.82E+04	-3	3.68	-171
L3	13.0	1.11E+04	-7	743.	119
L4	-1.82E+03	8.68E+03	-66	1.76E+03	-124
NF	—	—	—	—	—
NS	-3.96	6.24E+04	0	12.0	130

Table D–378. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.14E+04	6.27E+04	-6.10E+04	5.63E+04
A2	-3.95E+05	1.35E+05	-5.07E+04	5.40E+04
FD	-3.62E+04	3.62E+04	-3.55E+04	3.55E+04
L1	-5.82E+04	5.81E+04	-5.81E+04	5.81E+04
L3	-2.59E+04	2.59E+04	-2.56E+04	2.56E+04
L4	-2.51E+04	2.39E+04	-2.19E+04	2.19E+04
NF	—	—	—	—
NS	-6.20E+04	6.19E+04	-5.86E+04	5.89E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-190. Time history of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

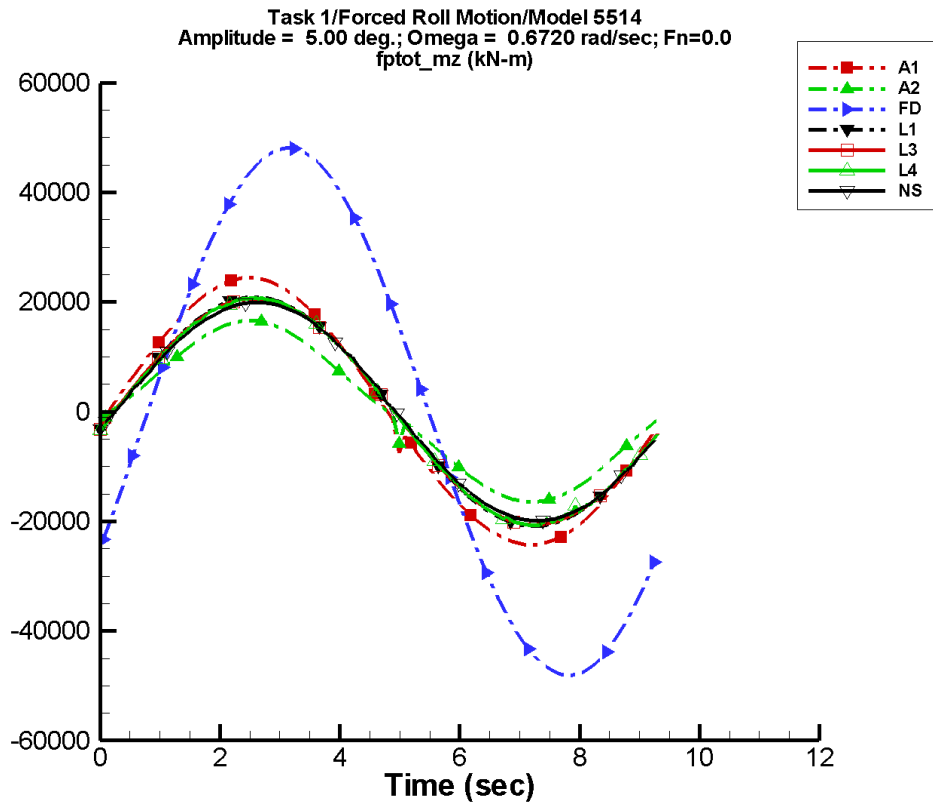
Table D–379. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-192.	8.40E+04	0	408.	-12
A2	-2.44E+03	7.68E+04	0	3.06E+03	70
FD	-833.	1.09E+05	-2	6.73E+03	-104
L1	0.389	8.40E+04	-3	5.33	-171
L3	-3.09E+03	1.12E+05	-5	6.22E+03	-164
L4	-5.32E+03	9.86E+04	-12	7.04E+03	-137
NF	—	—	—	—	—
NS	679.	1.59E+05	1	553.	-84

Table D–380. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.87E+04	9.06E+04	-8.80E+04	8.13E+04
A2	-8.13E+04	7.61E+04	-8.09E+04	7.01E+04
FD	-1.48E+05	1.48E+05	-1.47E+05	1.47E+05
L1	-8.40E+04	8.40E+04	-8.39E+04	8.39E+04
L3	-1.75E+05	1.75E+05	-1.75E+05	1.75E+05
L4	-1.29E+05	1.31E+05	-1.18E+05	1.19E+05
NF	—	—	—	—
NS	-1.59E+05	1.63E+05	-1.51E+05	1.54E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-191. Time history of  $M_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

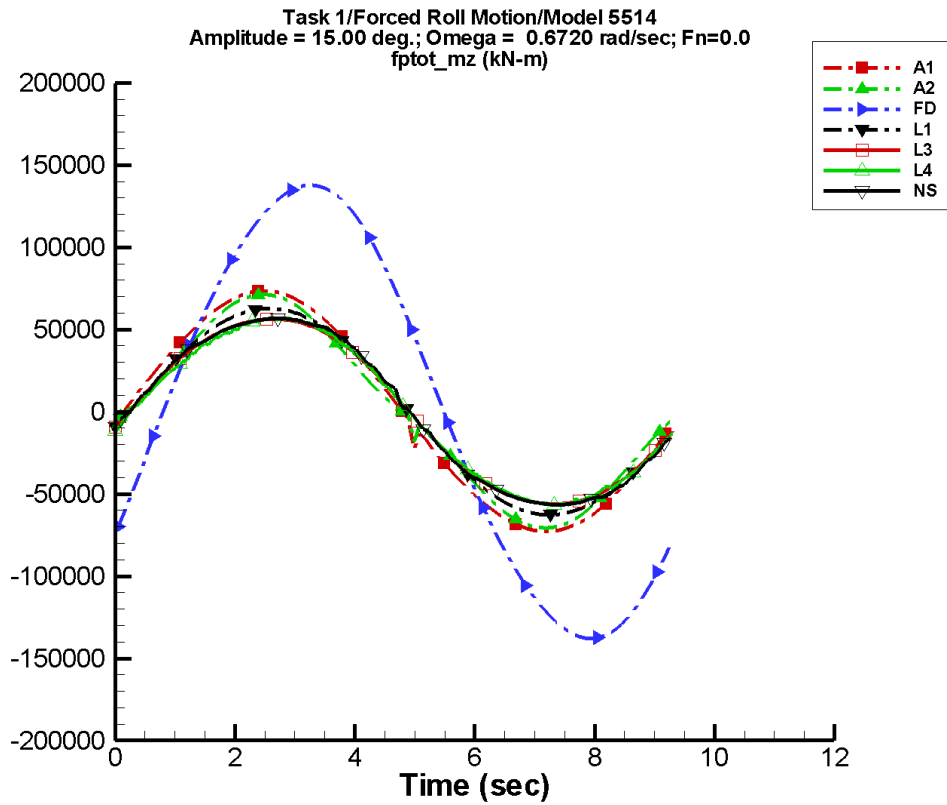
Table D–381. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-33.6	2.41E+04	-5	87.2	-81
A2	-76.3	1.56E+04	-6	160.	-113
FD	2.71	4.81E+04	-31	5.88	130
L1	0.563	2.09E+04	-9	1.25	-131
L3	4.48	2.07E+04	-9	6.24	37
L4	-12.8	2.05E+04	-9	153.	-159
NF	—	—	—	—	—
NS	-1.07	2.00E+04	-10	3.40	-157

Table D–382. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.43E+04	2.45E+04	-2.40E+04	2.41E+04
A2	-1.65E+04	1.66E+04	-1.62E+04	1.64E+04
FD	-4.81E+04	4.81E+04	-4.75E+04	4.76E+04
L1	-2.09E+04	2.09E+04	-2.08E+04	2.08E+04
L3	-2.06E+04	2.07E+04	-2.06E+04	2.06E+04
L4	-2.07E+04	2.08E+04	-2.05E+04	2.06E+04
NF	—	—	—	—
NS	-1.99E+04	1.99E+04	-1.97E+04	1.97E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-192. Time history of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{pot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

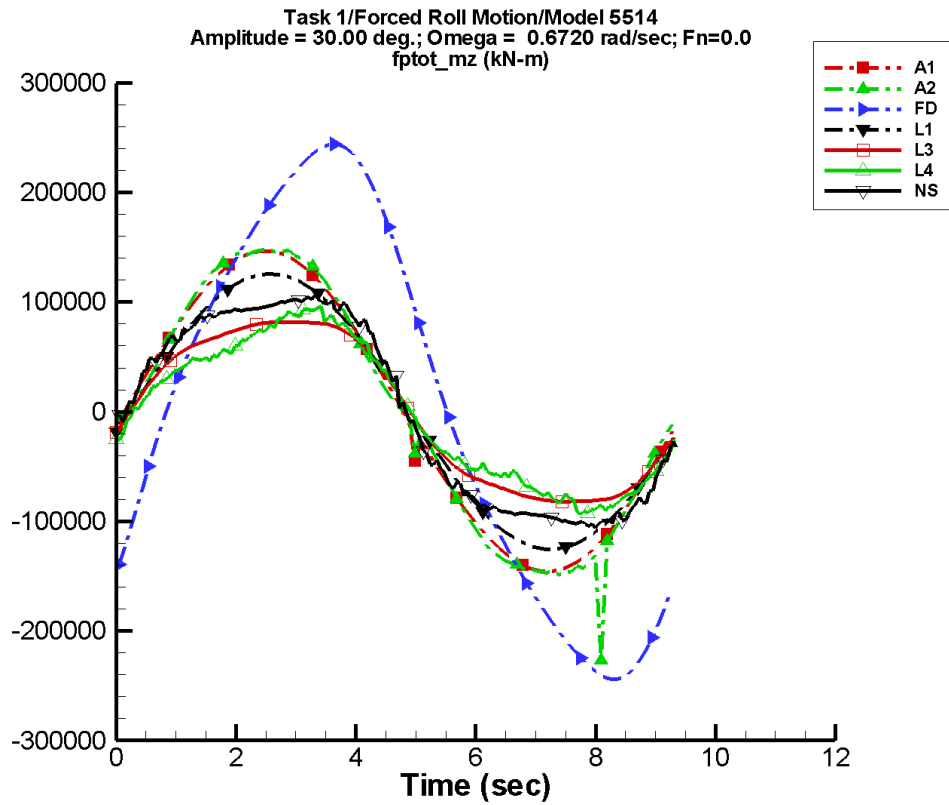
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-101.	7.23E+04	-5	261.	-81
A2	-390.	6.57E+04	-6	816.	-124
FD	186.	1.38E+05	-32	385.	135
L1	1.72	6.27E+04	-9	3.74	-131
L3	103.	5.78E+04	-9	189.	24
L4	-317.	5.71E+04	-11	661.	-162
NF	—	—	—	—	—
NS	-3.19	5.90E+04	-11	10.2	176

Table D–384. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.28E+04	7.33E+04	-7.19E+04	7.24E+04
A2	-7.07E+04	7.13E+04	-6.96E+04	7.01E+04
FD	-1.38E+05	1.38E+05	-1.36E+05	1.36E+05
L1	-6.27E+04	6.27E+04	-6.24E+04	6.25E+04
L3	-5.62E+04	5.62E+04	-5.60E+04	5.60E+04
L4	-5.68E+04	5.71E+04	-5.62E+04	5.64E+04
NF	—	—	—	—
NS	-5.65E+04	5.66E+04	-5.61E+04	5.62E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-193. Time history of  $M_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

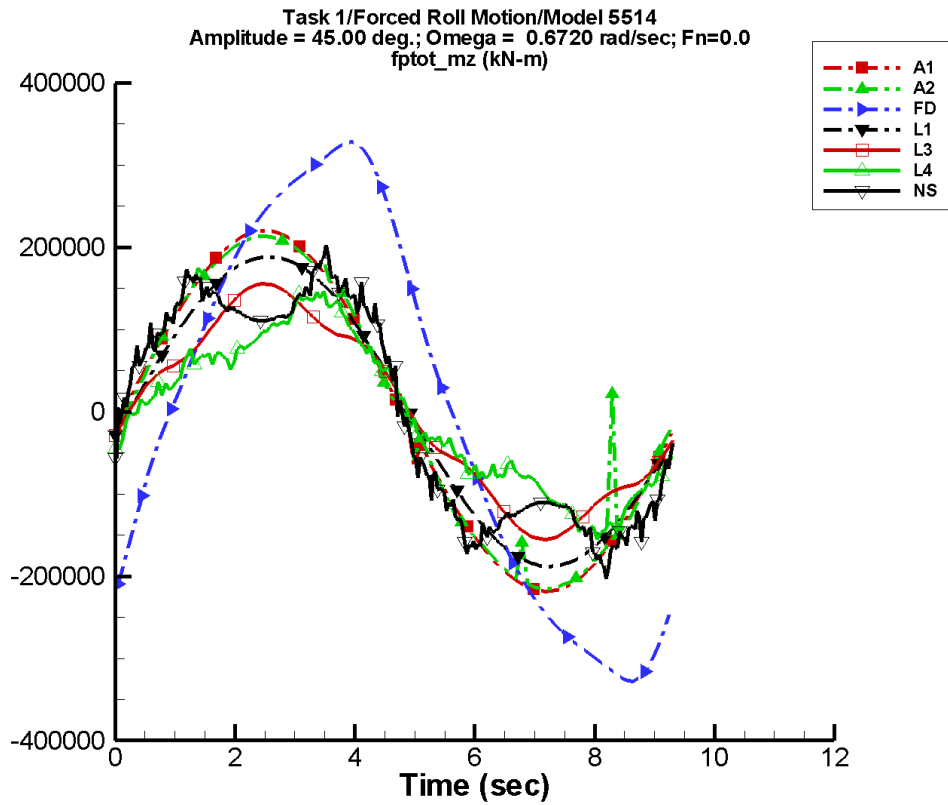
Table D–385. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-202.	1.45E+05	-5	523.	-81
A2	-1.61E+03	1.50E+05	-6	2.23E+03	-24
FD	1.26E+03	2.34E+05	-37	2.76E+03	130
L1	3.45	1.25E+05	-9	7.41	-132
L3	643.	8.97E+04	-11	1.25E+03	31
L4	-602.	8.66E+04	-17	963.	-140
NF	—	—	—	—	—
NS	-4.34	1.12E+05	-10	13.8	-143

Table D–386. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.46E+05	1.47E+05	-1.44E+05	1.45E+05
A2	-2.27E+05	1.48E+05	-1.48E+05	1.46E+05
FD	-2.44E+05	2.44E+05	-2.40E+05	2.40E+05
L1	-1.25E+05	1.25E+05	-1.25E+05	1.25E+05
L3	-8.19E+04	8.20E+04	-8.18E+04	8.19E+04
L4	-9.39E+04	9.64E+04	-8.95E+04	9.18E+04
NF	—	—	—	—
NS	-1.06E+05	1.06E+05	-1.02E+05	1.03E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-194. Time history of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

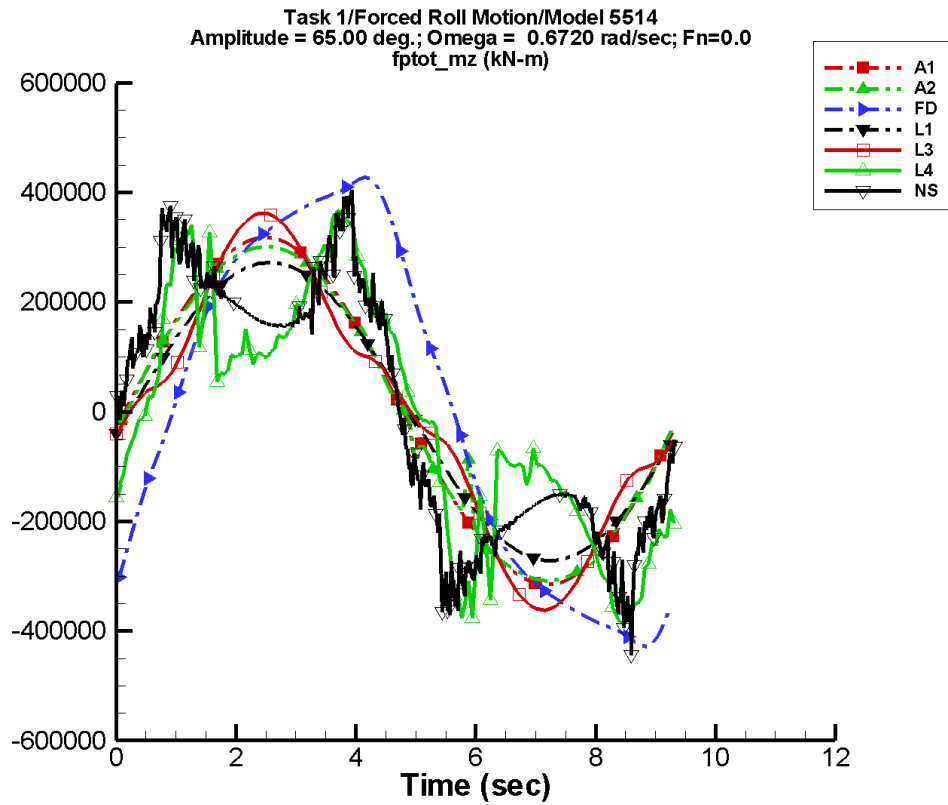
Table D–387. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-302.	2.17E+05	-5	784.	-81
A2	1.80E+03	2.11E+05	-4	3.13E+03	-163
FD	1.21E+03	3.16E+05	-40	4.34E+03	104
L1	5.27	1.88E+05	-9	11.2	-131
L3	-233.	1.41E+05	-11	1.30E+03	130
L4	-2.88E+03	1.22E+05	-20	1.87E+03	-41
NF	—	—	—	—	—
NS	-16.9	1.68E+05	-8	33.4	-46

Table D–388. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.20E+05	-2.16E+05	2.17E+05
A2	-2.16E+05	2.14E+05	-2.12E+05	2.11E+05
FD	-3.28E+05	3.28E+05	-3.20E+05	3.20E+05
L1	-1.88E+05	1.88E+05	-1.87E+05	1.87E+05
L3	-1.55E+05	1.55E+05	-1.54E+05	1.54E+05
L4	-1.56E+05	1.47E+05	-1.45E+05	1.39E+05
NF	—	—	—	—
NS	-2.03E+05	2.03E+05	-1.82E+05	1.82E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-195. Time history of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

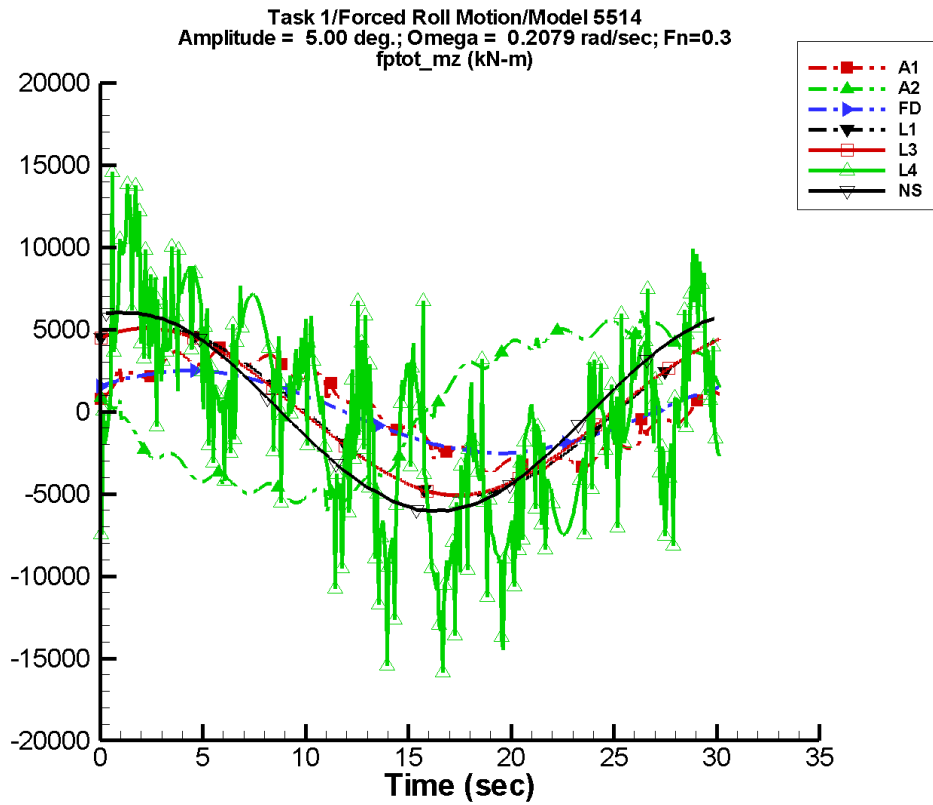
Table D–389. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-437.	3.13E+05	-5	1.13E+03	-81
A2	-1.37E+03	3.05E+05	-5	3.39E+03	24
FD	99.5	4.28E+05	-39	7.22E+03	75
L1	7.71	2.72E+05	-9	16.0	-132
L3	-3.26E+03	2.99E+05	-9	6.57E+03	-168
L4	644.	2.65E+05	-18	2.33E+04	-28
NF	—	—	—	—	—
NS	569.	2.78E+05	-3	623.	-116

Table D–390. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.16E+05	3.18E+05	-3.12E+05	3.14E+05
A2	-3.08E+05	3.01E+05	-3.04E+05	2.97E+05
FD	-4.28E+05	4.28E+05	-4.15E+05	4.15E+05
L1	-2.72E+05	2.72E+05	-2.71E+05	2.71E+05
L3	-3.62E+05	3.62E+05	-3.59E+05	3.59E+05
L4	-3.85E+05	3.67E+05	-3.68E+05	3.43E+05
NF	—	—	—	—
NS	-4.43E+05	4.04E+05	-3.67E+05	3.74E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-196. Time history of  $M_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

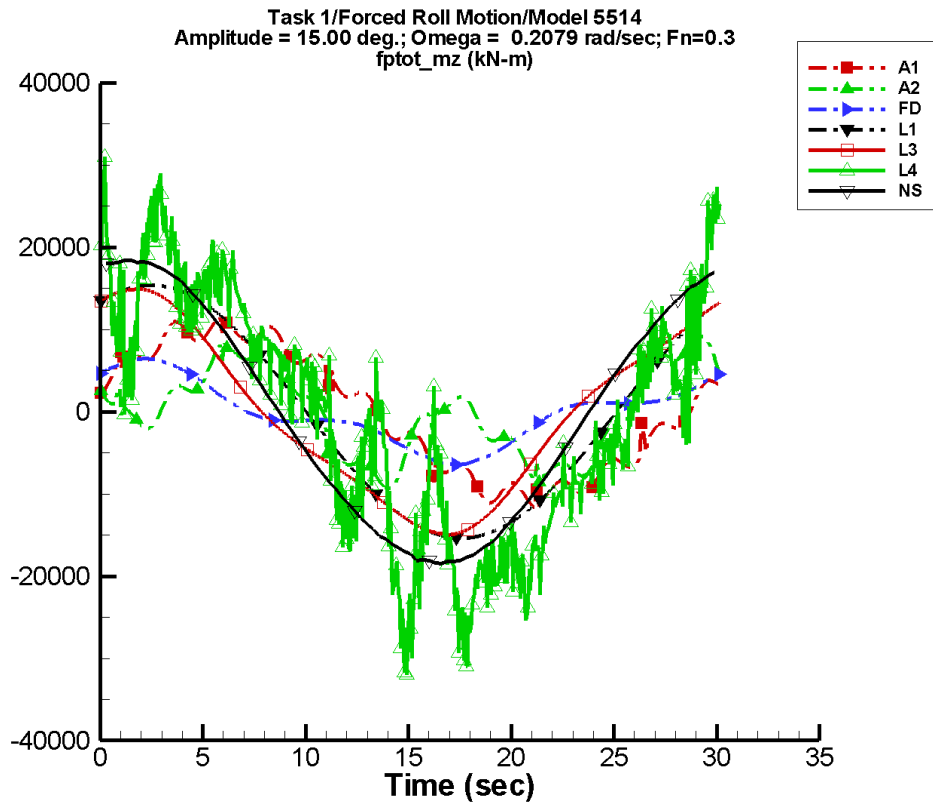
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.81	3.40E+03	21	5.02	-19
A2	-26.5	5.49E+03	166	128.	-118
FD	0.115	2.50E+03	38	0.789	-8
L1	-0.836	5.12E+03	61	0.146	-158
L3	2.50	5.02E+03	63	15.1	87
L4	-135.	5.96E+03	51	290.	77
NF	—	—	—	—	—
NS	1.75E-02	6.03E+03	75	7.46E-02	52

Table D–392. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.89E+03	3.89E+03	-3.65E+03	3.66E+03
A2	-6.13E+03	6.12E+03	-5.46E+03	5.48E+03
FD	-2.53E+03	2.53E+03	-2.52E+03	2.52E+03
L1	-5.13E+03	5.12E+03	-5.12E+03	5.12E+03
L3	-5.08E+03	5.08E+03	-5.08E+03	5.08E+03
L4	-1.59E+04	1.48E+04	-1.20E+04	1.15E+04
NF	—	—	—	—
NS	-6.04E+03	6.04E+03	-5.97E+03	5.97E+03



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

Figure D-197. Time history of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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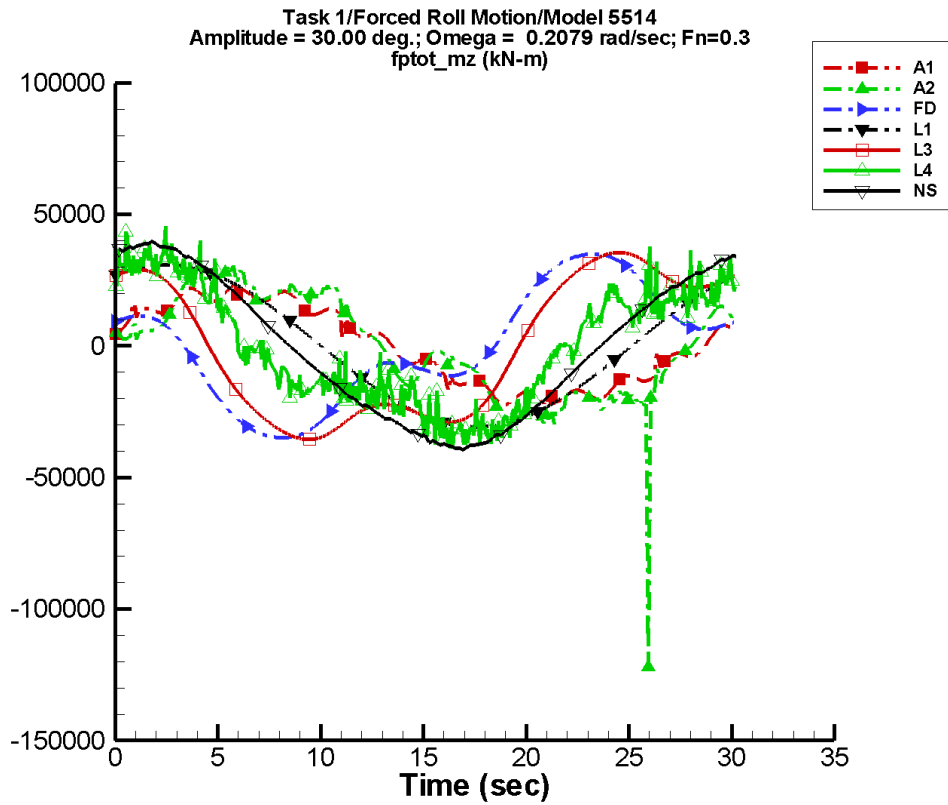
Table D–393. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.42	1.02E+04	21	15.0	-19
A2	-175.	4.47E+03	46	859.	-118
FD	49.7	4.96E+03	74	258.	58
L1	-0.919	1.54E+04	61	0.174	-158
L3	100.	1.37E+04	79	401.	87
L4	-585.	1.88E+04	54	489.	178
NF	—	—	—	—	—
NS	1.59E-02	1.82E+04	75	0.429	35

Table D–394. Minimum and maximum of of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.17E+04	1.17E+04	-1.09E+04	1.10E+04
A2	-9.39E+03	9.14E+03	-9.07E+03	8.83E+03
FD	-6.46E+03	6.46E+03	-6.43E+03	6.43E+03
L1	-1.54E+04	1.54E+04	-1.54E+04	1.54E+04
L3	-1.50E+04	1.50E+04	-1.49E+04	1.49E+04
L4	-3.20E+04	3.10E+04	-2.75E+04	2.52E+04
NF	—	—	—	—
NS	-1.85E+04	1.85E+04	-1.82E+04	1.82E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-198. Time history of  $M_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

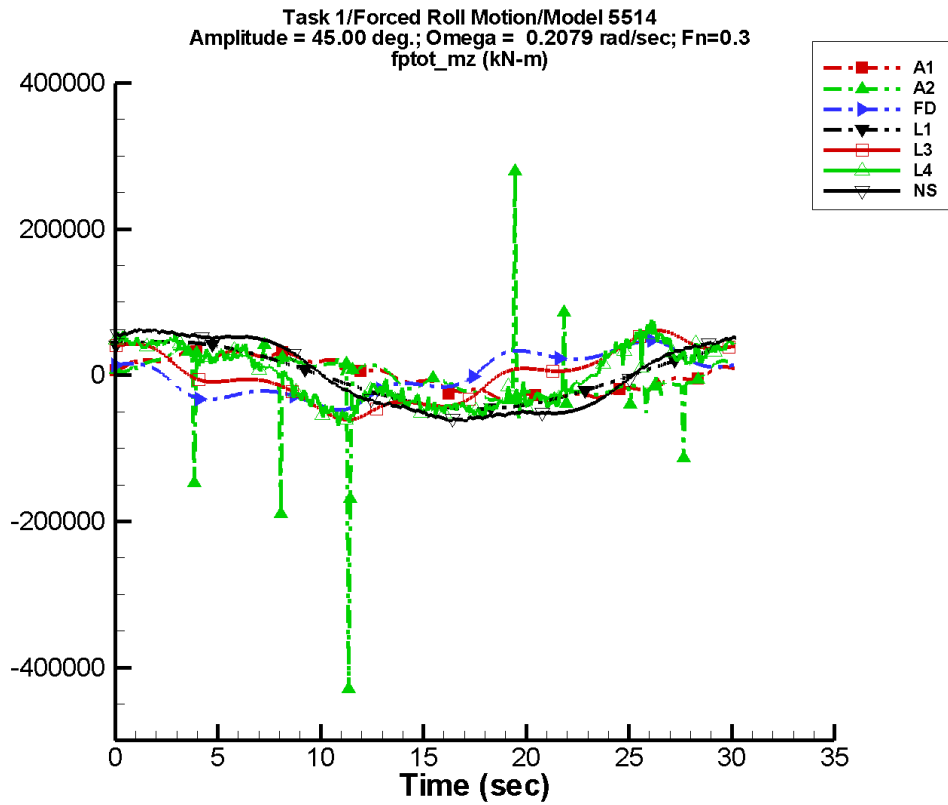
Table D–395. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-10.8	2.04E+04	21	30.1	-19
A2	-618.	2.40E+04	15	887.	-45
FD	340.	2.75E+04	158	1.76E+03	63
L1	-0.969	3.07E+04	61	0.150	-146
L3	659.	3.48E+04	128	2.57E+03	87
L4	411.	2.95E+04	89	2.65E+03	100
NF	—	—	—	—	—
NS	0.506	3.68E+04	76	1.16	44

Table D–396. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.33E+04	2.33E+04	-2.19E+04	2.20E+04
A2	-1.22E+05	3.06E+04	-3.34E+04	2.81E+04
FD	-3.49E+04	3.49E+04	-3.48E+04	3.48E+04
L1	-3.07E+04	3.07E+04	-3.07E+04	3.07E+04
L3	-3.55E+04	3.55E+04	-3.55E+04	3.55E+04
L4	-3.89E+04	4.53E+04	-3.45E+04	3.61E+04
NF	—	—	—	—
NS	-3.96E+04	3.96E+04	-3.85E+04	3.85E+04

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

Figure D-199. Time history of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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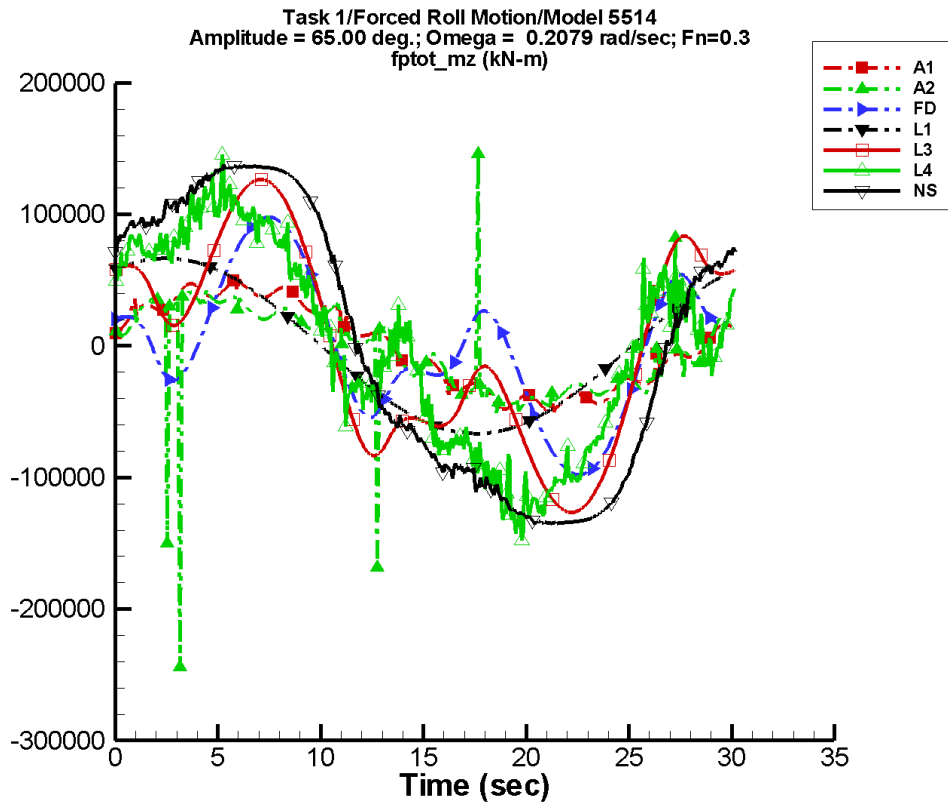
Table D–397. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-16.3	3.06E+04	21	45.1	-19
A2	-2.96E+03	2.28E+04	30	6.89E+03	3
FD	116.	3.70E+04	159	997.	137
L1	-1.03	4.61E+04	61	0.202	-141
L3	-116.	4.79E+04	120	691.	-83
L4	-73.6	4.87E+04	89	1.14E+03	81
NF	—	—	—	—	—
NS	9.19	6.34E+04	57	9.74	-90

Table D–398. Minimum and maximum of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.50E+04	3.50E+04	-3.28E+04	3.29E+04
A2	-4.30E+05	2.79E+05	-7.21E+04	3.56E+04
FD	-4.74E+04	4.74E+04	-4.71E+04	4.71E+04
L1	-4.61E+04	4.61E+04	-4.61E+04	4.61E+04
L3	-6.09E+04	6.09E+04	-6.07E+04	6.07E+04
L4	-7.01E+04	7.59E+04	-5.82E+04	6.27E+04
NF	—	—	—	—
NS	-6.35E+04	6.35E+04	-6.09E+04	6.09E+04

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

Figure D-200. Time history of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

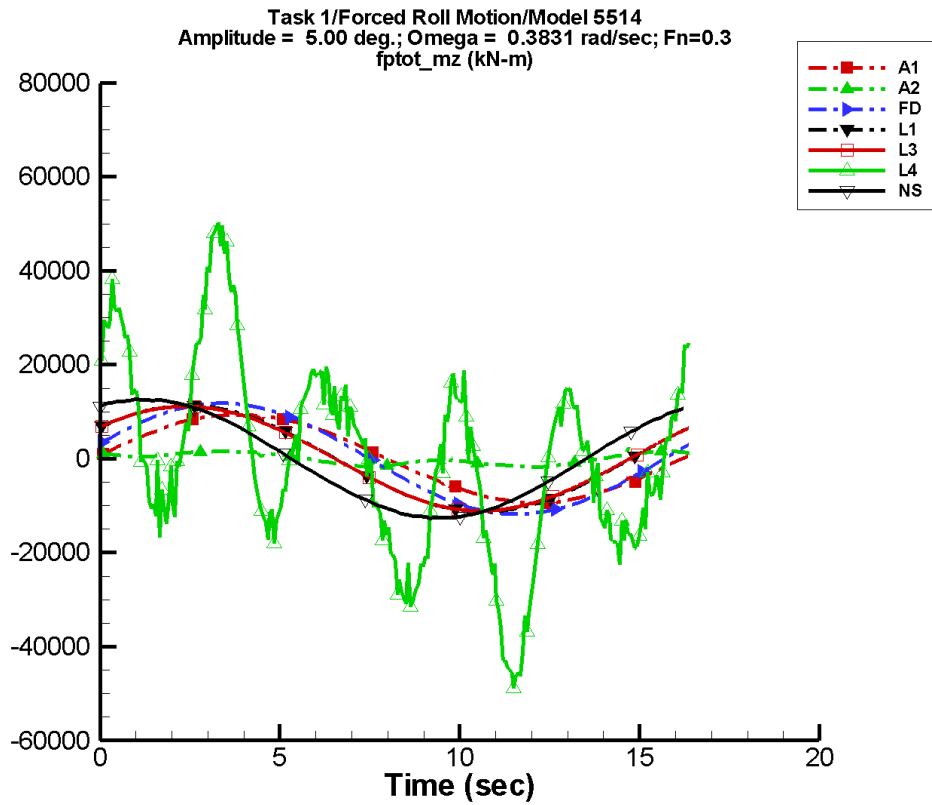
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-23.5	4.42E+04	21	65.2	-19
A2	-2.87E+03	3.54E+04	25	1.99E+03	84
FD	-1.23E+03	4.37E+04	17	7.07E+03	-134
L1	-1.06	6.66E+04	61	0.268	-134
L3	-3.34E+03	8.61E+04	42	1.33E+04	-92
L4	-1.24E+03	9.93E+04	41	2.86E+03	-102
NF	—	—	—	—	—
NS	593.	1.40E+05	31	584.	-91

Table D–400. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.05E+04	5.06E+04	-4.74E+04	4.76E+04
A2	-2.44E+05	1.46E+05	-4.43E+04	4.21E+04
FD	-9.79E+04	9.80E+04	-9.74E+04	9.74E+04
L1	-6.66E+04	6.66E+04	-6.66E+04	6.66E+04
L3	-1.27E+05	1.27E+05	-1.26E+05	1.26E+05
L4	-1.48E+05	1.46E+05	-1.34E+05	1.18E+05
NF	—	—	—	—
NS	-1.35E+05	1.38E+05	-1.35E+05	1.36E+05



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

Figure D-201. Time history of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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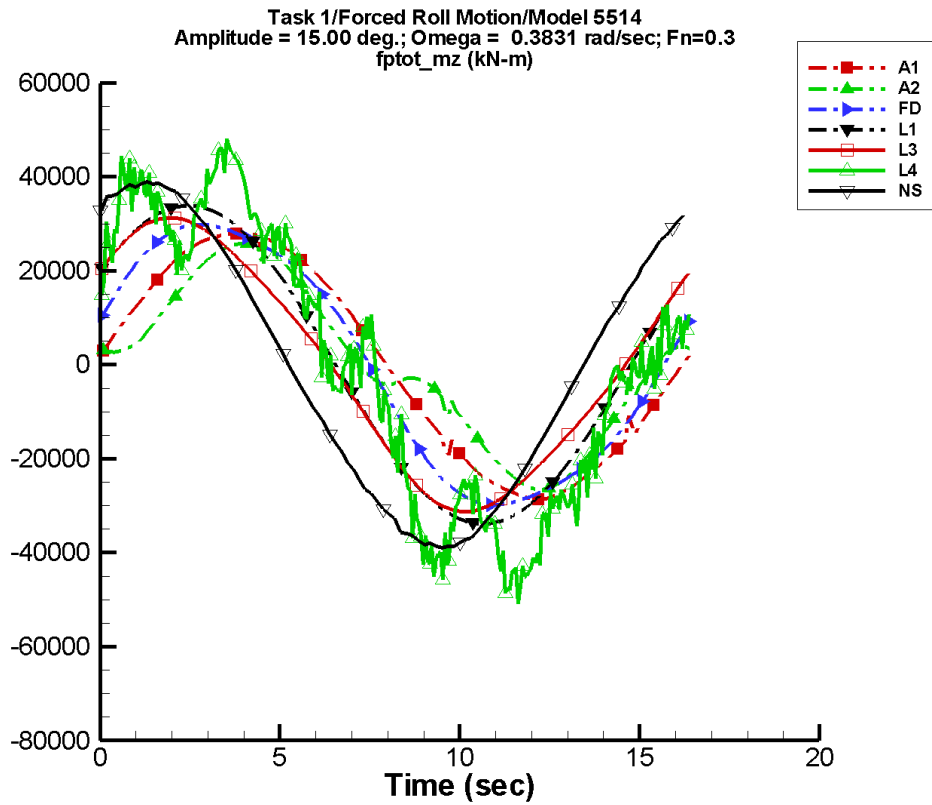
Table D–401. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.06	9.36E+03	5	36.0	46
A2	-27.5	1.32E+03	51	98.2	-116
FD	1.04	1.18E+04	16	3.37	110
L1	-0.669	1.13E+04	36	1.64E-02	57
L3	2.81	1.11E+04	37	7.45	39
L4	-282.	1.46E+04	31	1.95E+03	143
NF	—	—	—	—	—
NS	-0.332	1.26E+04	63	1.04	-127

Table D–402. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-9.56E+03	9.64E+03	-9.50E+03	9.31E+03
A2	-1.74E+03	2.47E+03	-1.69E+03	1.55E+03
FD	-1.18E+04	1.18E+04	-1.18E+04	1.18E+04
L1	-1.13E+04	1.13E+04	-1.13E+04	1.13E+04
L3	-1.11E+04	1.11E+04	-1.11E+04	1.11E+04
L4	-4.88E+04	5.03E+04	-4.55E+04	4.68E+04
NF	—	—	—	—
NS	-1.26E+04	1.26E+04	-1.25E+04	1.24E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-202. Time history of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $M_z^{\text{pot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-15.2	2.81E+04	5	108.	46
A2	-171.	2.17E+04	5	785.	-119
FD	62.3	3.05E+04	18	399.	78
L1	-0.703	3.39E+04	36	4.52E-02	-135
L3	96.7	3.02E+04	42	187.	28
L4	89.8	3.92E+04	29	1.67E+03	114
NF	—	—	—	—	—
NS	-0.807	3.78E+04	64	3.73	-126

Table D-404. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.87E+04	2.89E+04	-2.85E+04	2.79E+04
A2	-2.65E+04	2.61E+04	-2.63E+04	2.57E+04
FD	-2.98E+04	2.98E+04	-2.97E+04	2.97E+04
L1	-3.39E+04	3.39E+04	-3.38E+04	3.38E+04
L3	-3.13E+04	3.13E+04	-3.12E+04	3.12E+04
L4	-5.08E+04	4.81E+04	-4.61E+04	4.53E+04
NF	—	—	—	—
NS	-3.90E+04	3.89E+04	-3.84E+04	3.83E+04

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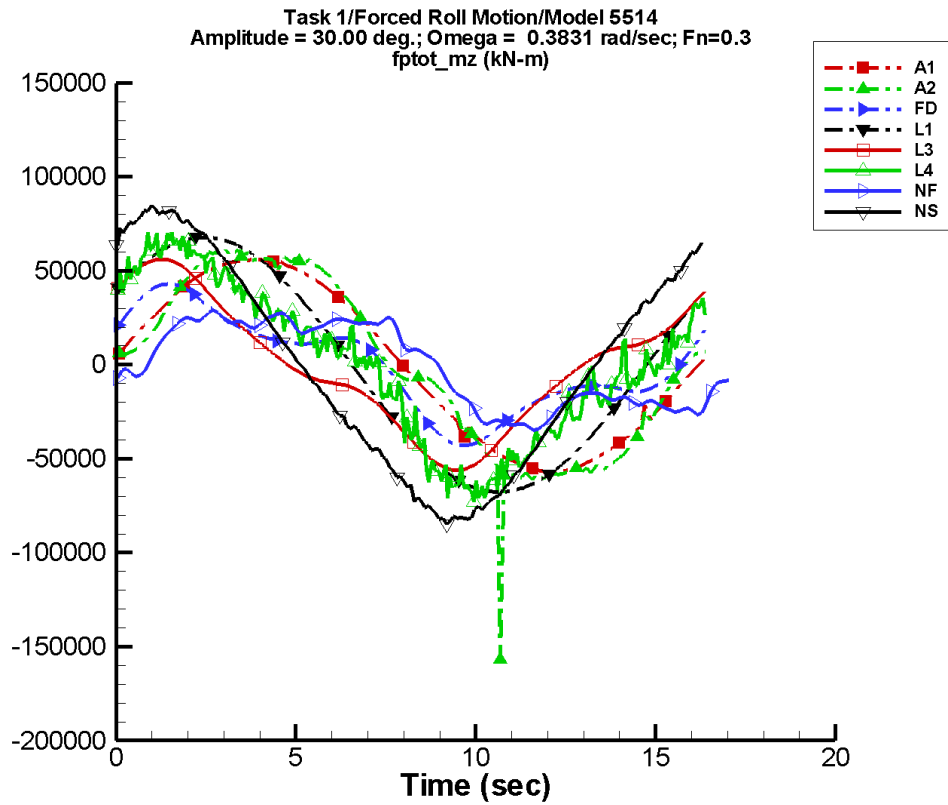


Figure D-203. Time history of  $M_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-30.3	5.61E+04	5	216.	46
A2	-888.	6.07E+04	4	998.	-166
FD	413.	3.18E+04	37	2.70E+03	78
L1	-0.717	6.77E+04	36	0.138	-142
L3	663.	4.60E+04	66	1.27E+03	31
L4	1.42E+03	5.62E+04	43	1.83E+03	109
NF	-867.	2.83E+04	26	2.61E+03	-93
NS	-1.48	7.59E+04	65	9.25	-132

Table D-406. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.73E+04	5.78E+04	-5.70E+04	5.59E+04
A2	-1.57E+05	6.21E+04	-6.92E+04	5.99E+04
FD	-4.30E+04	4.30E+04	-4.24E+04	4.24E+04
L1	-6.77E+04	6.77E+04	-6.76E+04	6.76E+04
L3	-5.61E+04	5.61E+04	-5.59E+04	5.59E+04
L4	-7.27E+04	7.09E+04	-6.77E+04	6.57E+04
NF	-3.46E+04	2.90E+04	-3.27E+04	2.58E+04
NS	-8.50E+04	8.48E+04	-8.22E+04	8.20E+04

TASK 1/ROLL MOTION/MODEL 5514

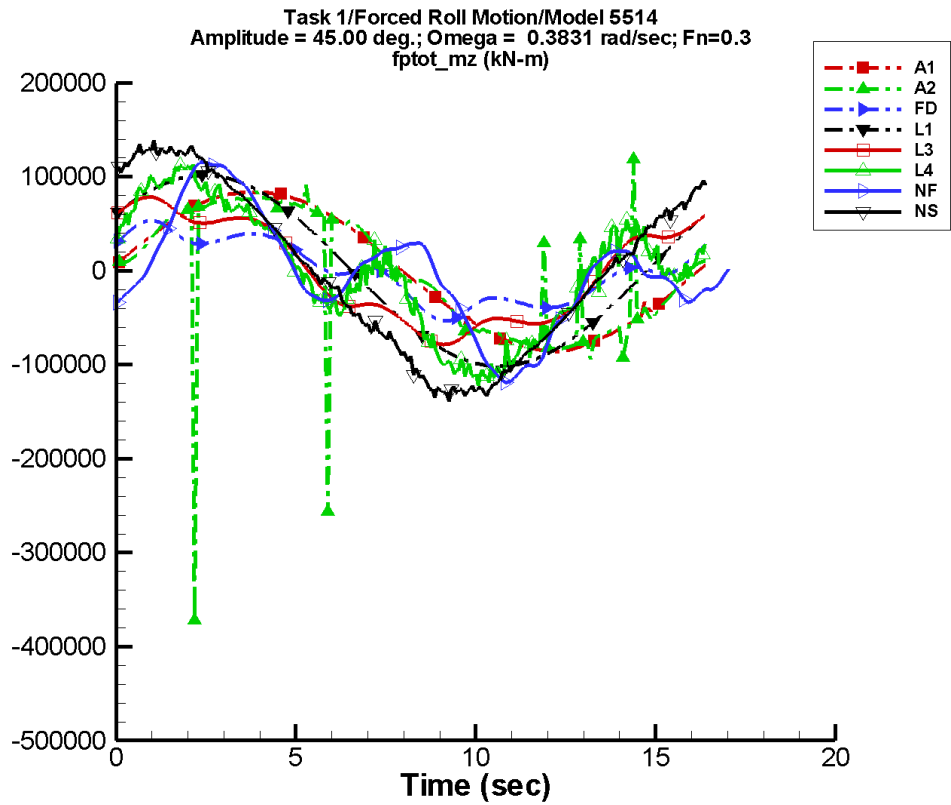


Figure D-204. Time history of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $M_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-45.5	8.42E+04	5	324.	46
A2	-1.69E+03	7.33E+04	7	926.	-144
FD	200.	4.19E+04	41	1.08E+03	84
L1	-0.803	1.02E+05	36	0.137	-121
L3	11.1	7.05E+04	60	741.	119
L4	576.	8.37E+04	50	1.57E+03	154
NF	-2.04E+03	5.77E+04	58	7.01E+03	-32
NS	6.52	1.21E+05	59	30.1	-124

Table D-408. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.60E+04	8.67E+04	-8.54E+04	8.38E+04
A2	-3.72E+05	1.19E+05	-7.49E+04	7.97E+04
FD	-5.32E+04	5.32E+04	-5.14E+04	5.15E+04
L1	-1.02E+05	1.02E+05	-1.01E+05	1.01E+05
L3	-7.84E+04	7.84E+04	-7.79E+04	7.79E+04
L4	-1.23E+05	1.20E+05	-1.12E+05	1.09E+05
NF	-1.19E+05	1.16E+05	-1.12E+05	1.12E+05
NS	-1.39E+05	1.39E+05	-1.29E+05	1.29E+05



TASK 1/ROLL MOTION/MODEL 5514

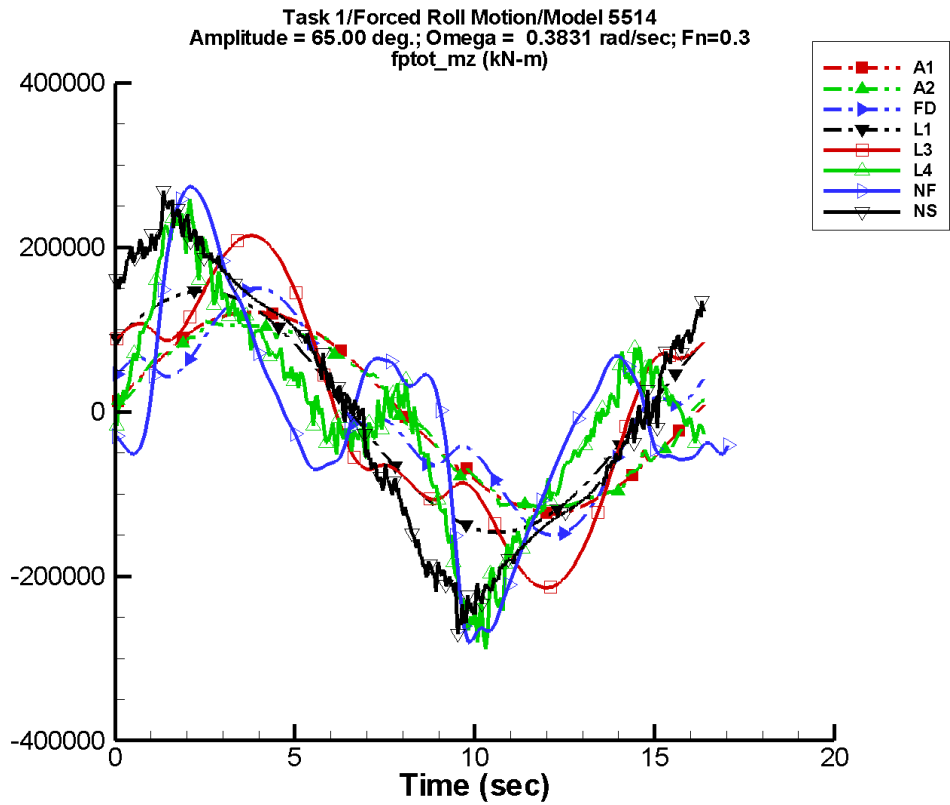


Figure D-205. Time history of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

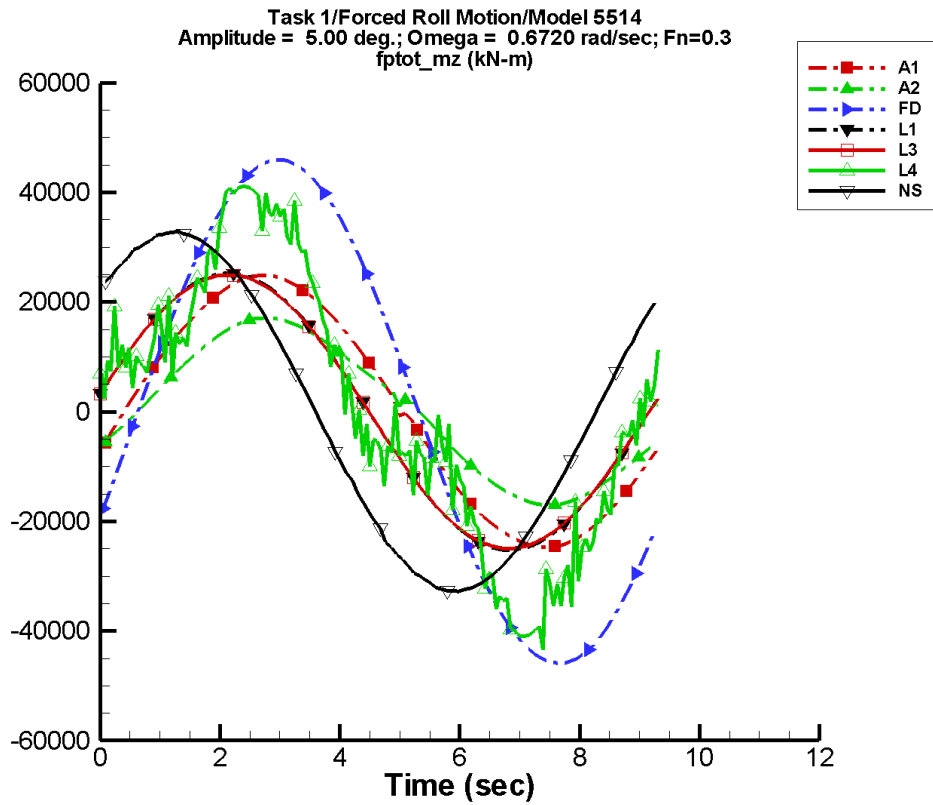
Table D-409. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-65.7	1.22E+05	5	467.	46
A2	-2.31E+03	1.15E+05	5	3.43E+03	73
FD	-503.	1.16E+05	17	6.53E+03	-117
L1	-0.954	1.47E+05	36	0.280	-114
L3	-3.09E+03	1.67E+05	29	6.21E+03	-164
L4	596.	1.52E+05	41	5.61E+03	-119
NF	-2.79E+03	1.17E+05	68	1.66E+04	-16
NS	651.	2.07E+05	42	644.	-79

Table D-410. Minimum and maximum of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.24E+05	1.25E+05	-1.23E+05	1.21E+05
A2	-1.17E+05	1.10E+05	-1.16E+05	1.06E+05
FD	-1.50E+05	1.50E+05	-1.49E+05	1.49E+05
L1	-1.47E+05	1.47E+05	-1.47E+05	1.47E+05
L3	-2.14E+05	2.14E+05	-2.13E+05	2.13E+05
L4	-2.89E+05	2.58E+05	-2.58E+05	2.30E+05
NF	-2.81E+05	2.98E+05	-2.68E+05	2.62E+05
NS	-2.70E+05	2.69E+05	-2.48E+05	2.52E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-206. Time history of  $M_z^{ptot}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

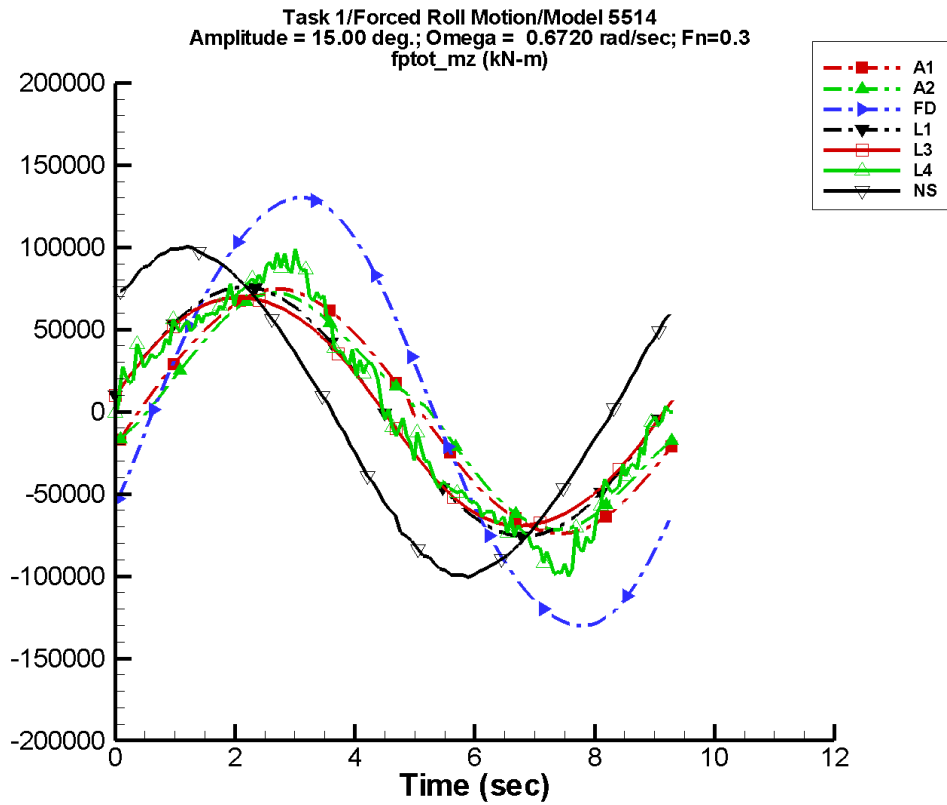
Table D–411. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-20.3	2.46E+04	-15	67.5	-88
A2	-63.0	1.63E+04	-21	148.	-120
FD	2.95	4.59E+04	-25	5.92	137
L1	-0.638	2.52E+04	7	0.252	-148
L3	2.38	2.50E+04	7	7.48	38
L4	13.3	3.11E+04	-2	1.14E+03	161
NF	—	—	—	—	—
NS	-1.80	3.26E+04	42	5.07	-144

Table D–412. Minimum and maximum of of  $M_z^{\text{ptot}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.47E+04	2.49E+04	-2.44E+04	2.45E+04
A2	-1.70E+04	1.71E+04	-1.67E+04	1.68E+04
FD	-4.59E+04	4.59E+04	-4.54E+04	4.54E+04
L1	-2.52E+04	2.52E+04	-2.51E+04	2.51E+04
L3	-2.49E+04	2.49E+04	-2.49E+04	2.49E+04
L4	-4.34E+04	4.11E+04	-4.01E+04	4.06E+04
NF	—	—	—	—
NS	-3.29E+04	3.28E+04	-3.24E+04	3.24E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-207. Time history of  $M_z^{ptot}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{pot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-60.9	7.36E+04	-15	202.	-88
A2	-350.	6.72E+04	-16	792.	-128
FD	192.	1.31E+05	-26	387.	137
L1	-0.644	7.57E+04	7	0.308	-166
L3	100.	7.09E+04	8	193.	24
L4	401.	8.08E+04	1	2.81E+03	125
NF	—	—	—	—	—
NS	-5.50	9.75E+04	42	9.15	-172

Table D–414. Minimum and maximum of  $M_z^{\text{pot}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.42E+04	7.46E+04	-7.32E+04	7.36E+04
A2	-7.17E+04	7.22E+04	-7.05E+04	7.10E+04
FD	-1.30E+05	1.30E+05	-1.29E+05	1.29E+05
L1	-7.57E+04	7.57E+04	-7.54E+04	7.54E+04
L3	-6.94E+04	6.94E+04	-6.91E+04	6.91E+04
L4	-1.00E+05	9.89E+04	-9.38E+04	9.08E+04
NF	—	—	—	—
NS	-1.01E+05	1.01E+05	-9.84E+04	9.84E+04

TASK 1/ROLL MOTION/MODEL 5514

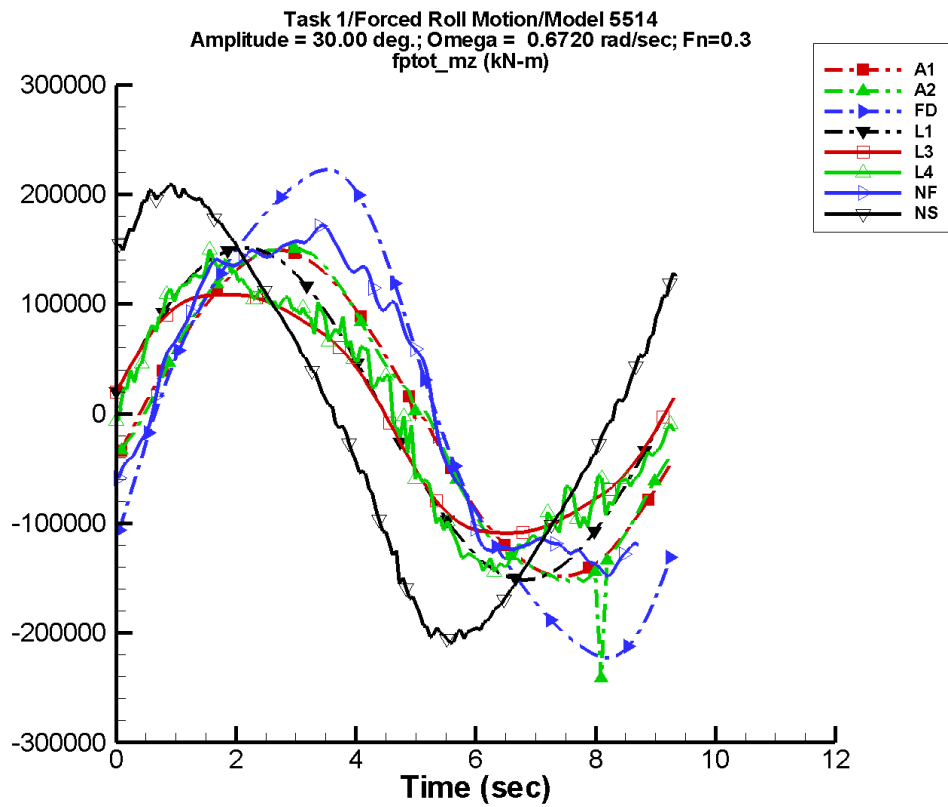


Figure D-208. Time history of  $M_z^{ptot}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-122.	1.47E+05	-15	405.	-88
A2	-1.53E+03	1.53E+05	-15	2.12E+03	-22
FD	1.31E+03	2.18E+05	-30	2.76E+03	133
L1	-0.678	1.51E+05	7	0.714	-177
L3	638.	1.16E+05	11	1.25E+03	31
L4	1.39E+03	1.32E+05	8	1.95E+03	-114
NF	-5.18E+03	1.41E+05	-78	1.89E+03	-30
NS	-10.8	1.94E+05	44	5.62	-163

Table D–416. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.48E+05	1.49E+05	-1.46E+05	1.47E+05
A2	-2.41E+05	1.54E+05	-1.57E+05	1.50E+05
FD	-2.23E+05	2.23E+05	-2.19E+05	2.19E+05
L1	-1.51E+05	1.51E+05	-1.51E+05	1.51E+05
L3	-1.09E+05	1.09E+05	-1.09E+05	1.09E+05
L4	-1.44E+05	1.51E+05	-1.38E+05	1.45E+05
NF	-1.48E+05	1.28E+05	-1.41E+05	1.23E+05
NS	-2.09E+05	2.09E+05	-2.03E+05	2.03E+05



TASK 1/ROLL MOTION/MODEL 5514

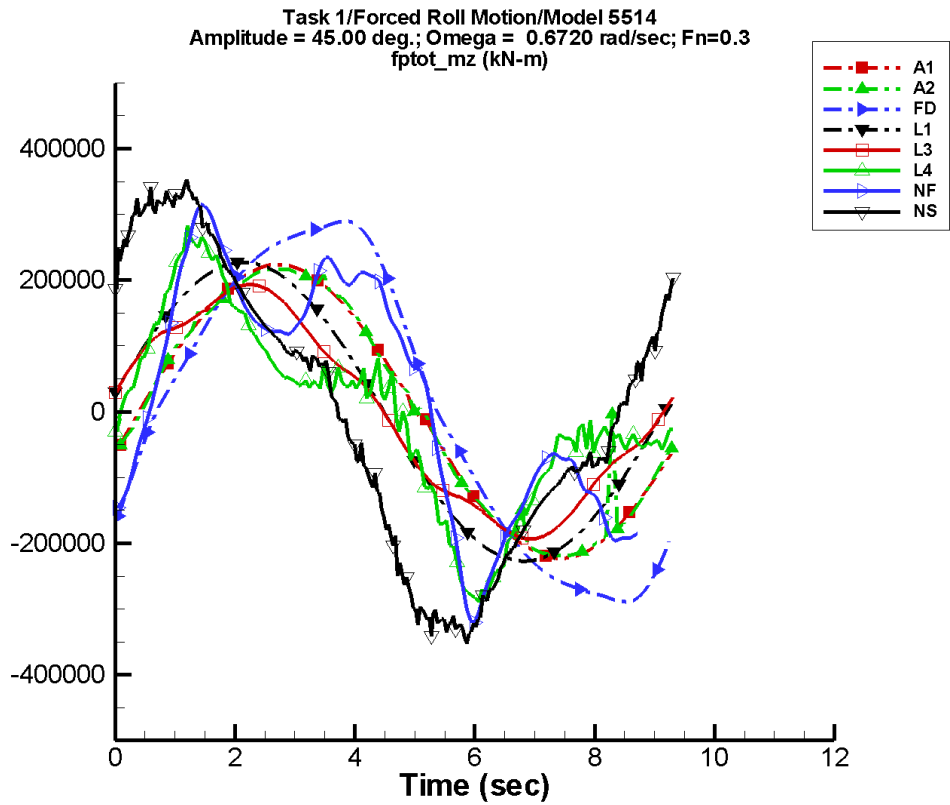


Figure D-209. Time history of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-183.	2.21E+05	-15	607.	-88
A2	1.92E+03	2.15E+05	-15	3.20E+03	-167
FD	1.37E+03	2.91E+05	-32	4.14E+03	109
L1	-0.774	2.27E+05	7	1.20	179
L3	-240.	1.80E+05	10	1.30E+03	130
L4	333.	1.80E+05	23	8.06E+03	-64
NF	-1.16E+04	1.84E+05	-67	6.90E+03	68
NS	-2.75	2.91E+05	45	61.9	-30

Table D–418. Minimum and maximum of  $M_z^{ptot}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.23E+05	2.24E+05	-2.20E+05	2.21E+05
A2	-2.19E+05	2.17E+05	-2.17E+05	2.14E+05
FD	-2.90E+05	2.90E+05	-2.85E+05	2.85E+05
L1	-2.27E+05	2.27E+05	-2.26E+05	2.26E+05
L3	-1.93E+05	1.93E+05	-1.92E+05	1.92E+05
L4	-2.90E+05	2.90E+05	-2.76E+05	2.60E+05
NF	-3.20E+05	2.70E+05	-2.88E+05	2.49E+05
NS	-3.53E+05	3.53E+05	-3.34E+05	3.34E+05

TASK 1/ROLL MOTION/MODEL 5514

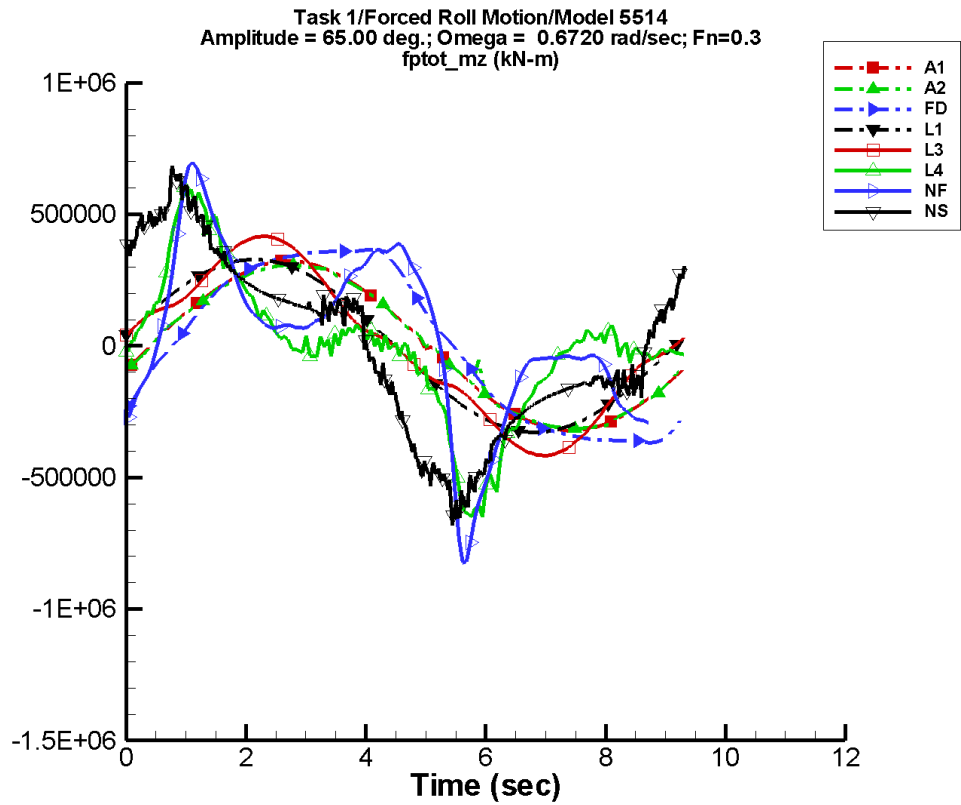


Figure D-210. Time history of  $M_z^{ptot}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

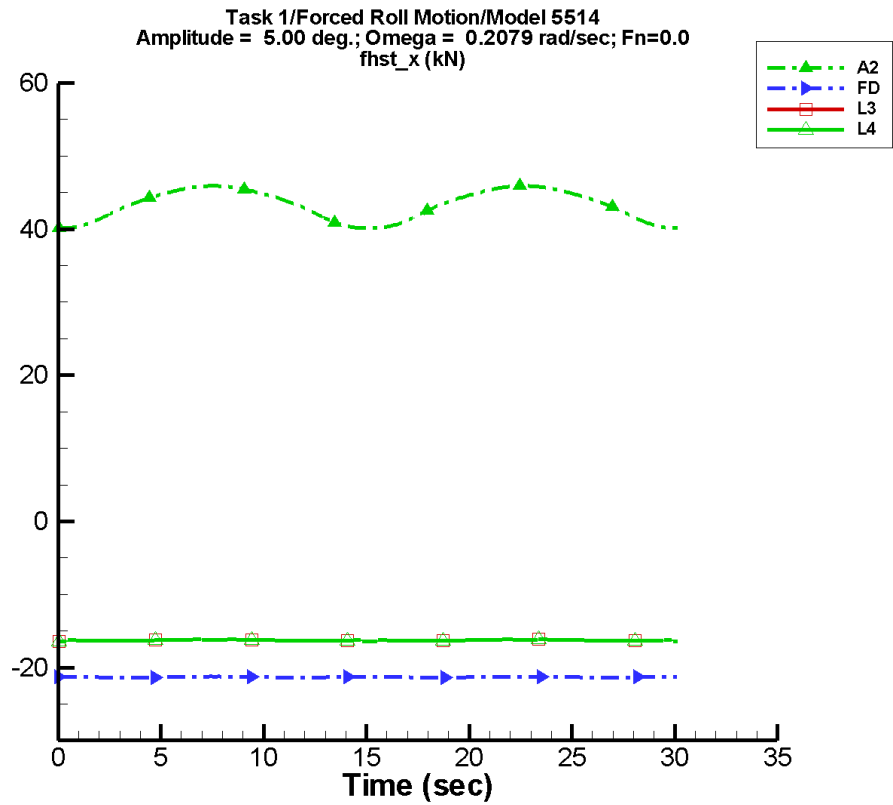
Table D–419. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-264.	3.19E+05	-15	877.	-88
A2	-1.19E+03	3.11E+05	-15	3.36E+03	29
FD	558.	3.93E+05	-32	6.11E+03	82
L1	-1.01	3.28E+05	7	1.70	-180
L3	-3.27E+03	3.54E+05	6	6.56E+03	-168
L4	5.62E+03	3.20E+05	38	2.13E+04	-55
NF	-8.27E+03	2.72E+05	-50	2.02E+04	17
NS	483.	4.29E+05	42	595.	-91

Table D–420. Minimum and maximum of  $M_z^{\text{ptot}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.21E+05	3.23E+05	-3.17E+05	3.19E+05
A2	-3.15E+05	3.07E+05	-3.12E+05	3.04E+05
FD	-3.67E+05	3.67E+05	-3.63E+05	3.63E+05
L1	-3.28E+05	3.28E+05	-3.27E+05	3.27E+05
L3	-4.17E+05	4.17E+05	-4.13E+05	4.13E+05
L4	-6.51E+05	6.05E+05	-6.10E+05	5.64E+05
NF	-8.24E+05	8.06E+05	-7.07E+05	6.84E+05
NS	-6.81E+05	6.84E+05	-6.28E+05	6.39E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-211. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

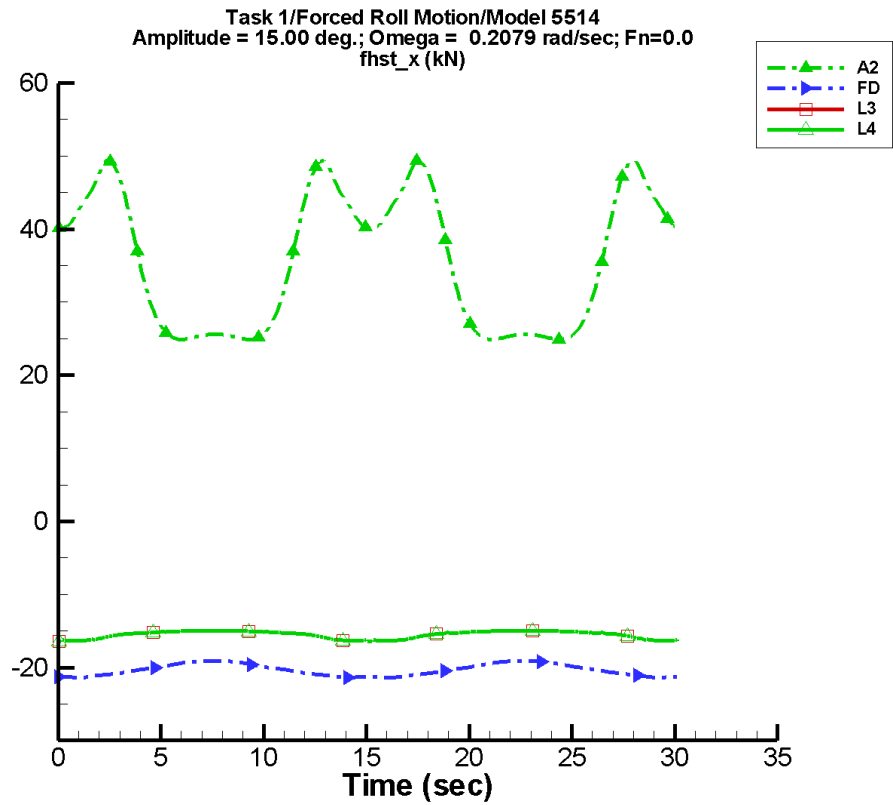
Table D-421. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	43.3	5.02E-03	16	2.86	-90
FD	-21.3	1.25E-03	-169	2.19E-02	-105
L1	—	—	—	—	—
L3	-16.3	1.95E-03	118	7.61E-02	-91
L4	-16.3	1.95E-03	118	7.61E-02	-91
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-422. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	—	—	—	—
L3	-16.4	-16.1	-16.4	-16.2
L4	-16.4	-16.1	-16.4	-16.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-212. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

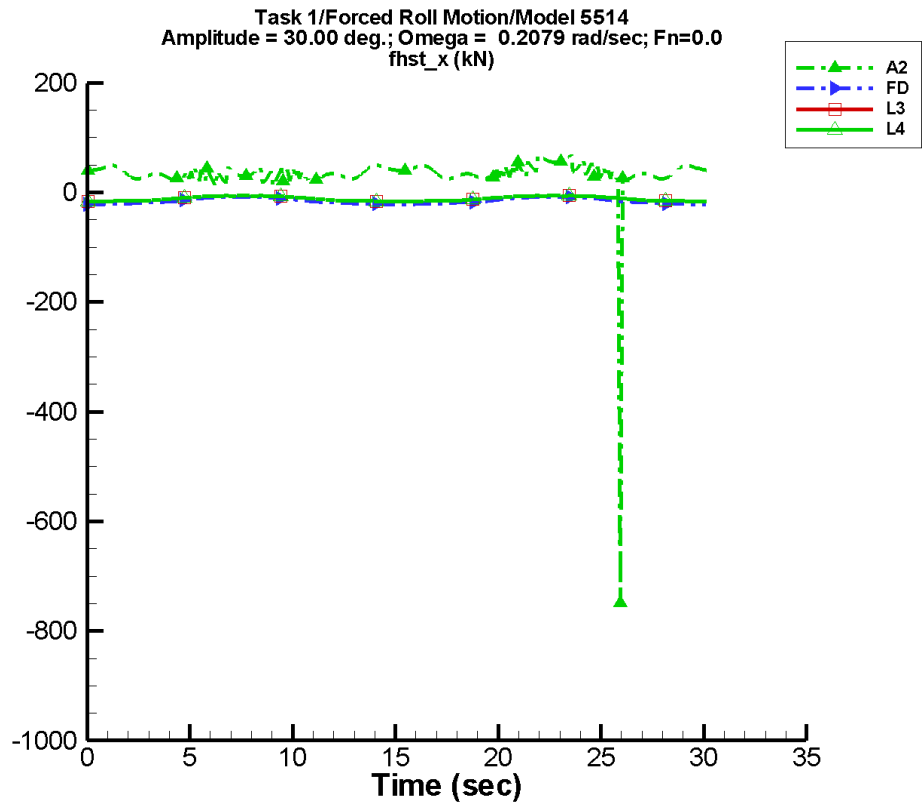
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	35.6	6.87E-02	-59	11.7	87
FD	-20.3	3.06E-03	-170	1.12	-91
L1	—	—	—	—	—
L3	-15.5	1.48E-02	-61	0.682	-92
L4	-15.5	1.48E-02	-61	0.682	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-424. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	24.9	49.4	24.9	48.9
FD	-21.4	-19.1	-21.4	-19.1
L1	—	—	—	—
L3	-16.4	-15.0	-16.4	-15.0
L4	-16.4	-15.0	-16.4	-15.0
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-213. Time history of  $F_x^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

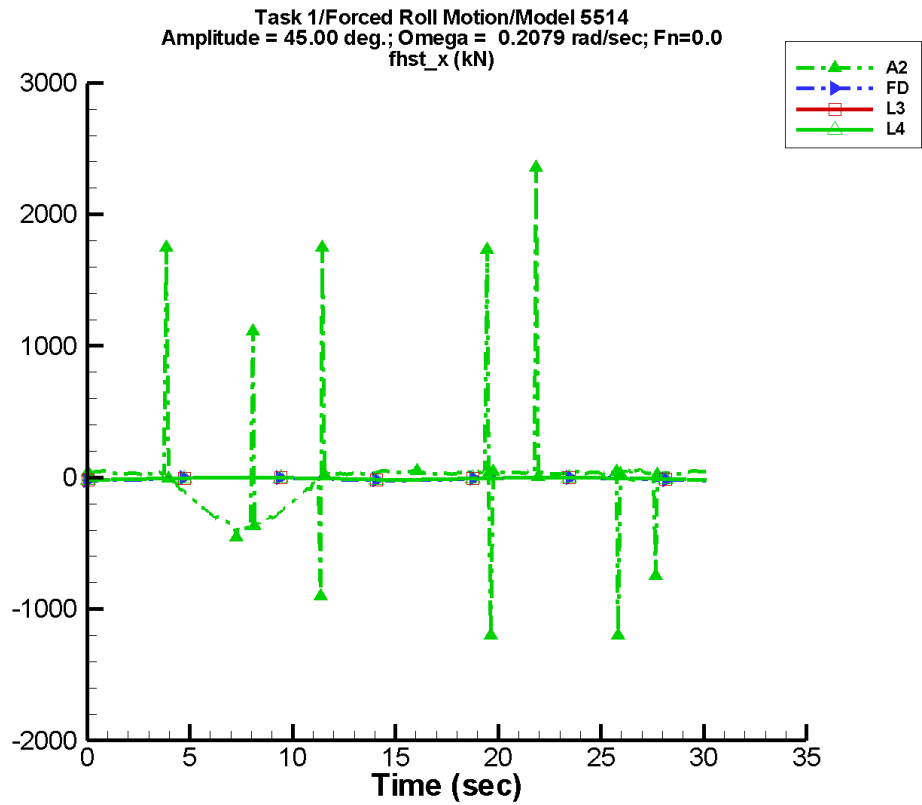
Table D-425. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	33.7	3.43	-123	5.03	23
FD	-15.6	2.05E-02	-171	6.73	-91
L1	—	—	—	—	—
L3	-11.6	5.98E-02	118	5.53	-91
L4	-11.6	5.98E-02	118	5.53	-91
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-426. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-748.	69.2	-77.4	58.6
FD	-21.4	-7.97	-21.3	-8.00
L1	—	—	—	—
L3	-16.4	-5.86	-16.4	-5.97
L4	-16.4	-5.86	-16.4	-5.97
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-214. Time history of  $F_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

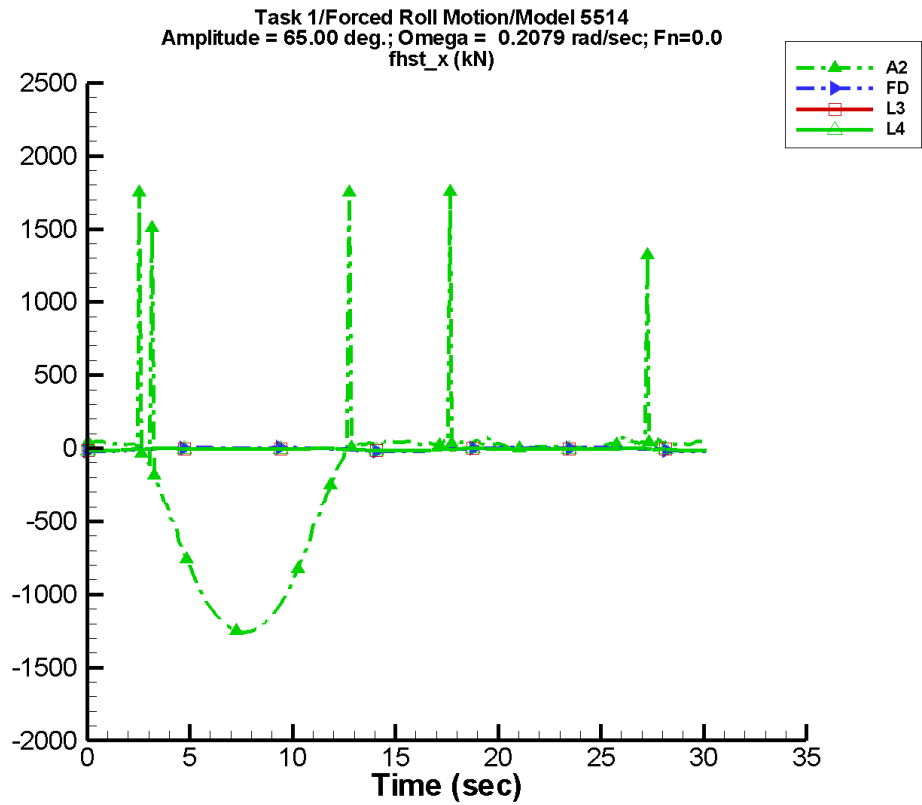
Table D-427. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-16.4	119.	-177	96.3	70
FD	-9.65	2.29E-02	15	11.2	-89
L1	—	—	—	—	—
L3	-7.52	3.70E-02	-24	8.48	-92
L4	-7.52	3.70E-02	-24	8.48	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-428. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.20E+03	2.36E+03	-391.	349.
FD	-21.4	0.541	-21.4	0.514
L1	—	—	—	—
L3	-16.4	1.04	-16.3	0.532
L4	-16.4	1.04	-16.3	0.532
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-215. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

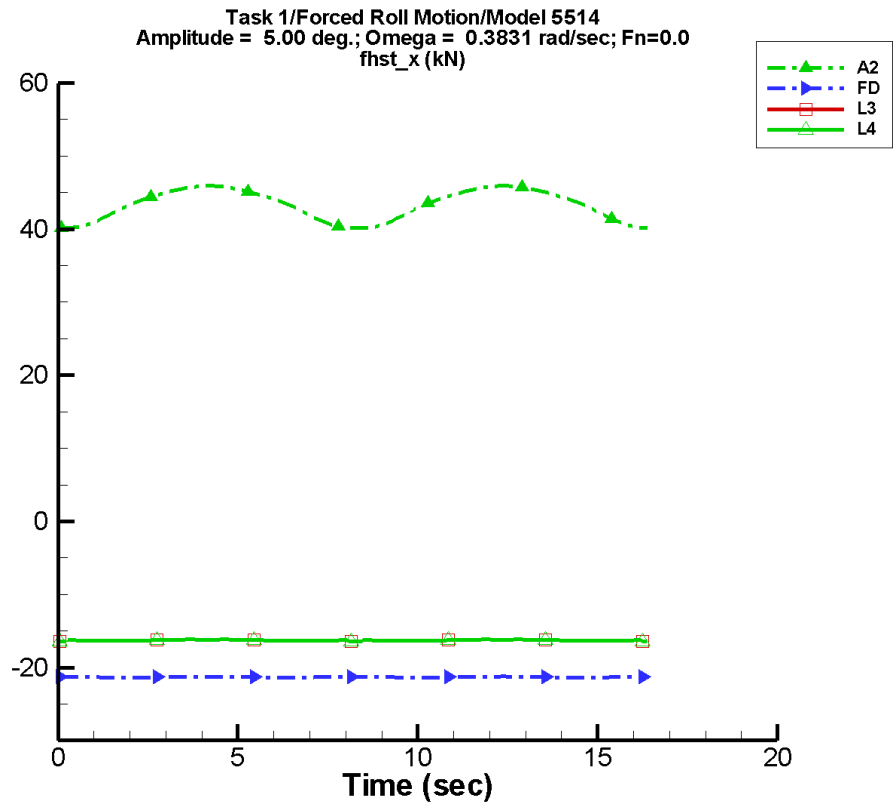
Table D-429. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-212.	475.	177	402.	84
FD	-5.09	0.114	5	11.8	-88
L1	—	—	—	—	—
L3	-7.22	0.379	-60	3.74	-92
L4	-7.22	0.379	-60	3.74	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-430. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.26E+03	1.76E+03	-1.26E+03	263.
FD	-21.4	4.06	-21.3	3.87
L1	—	—	—	—
L3	-16.4	1.03	-16.3	8.06E-02
L4	-16.4	1.03	-16.3	8.06E-02
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-216. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

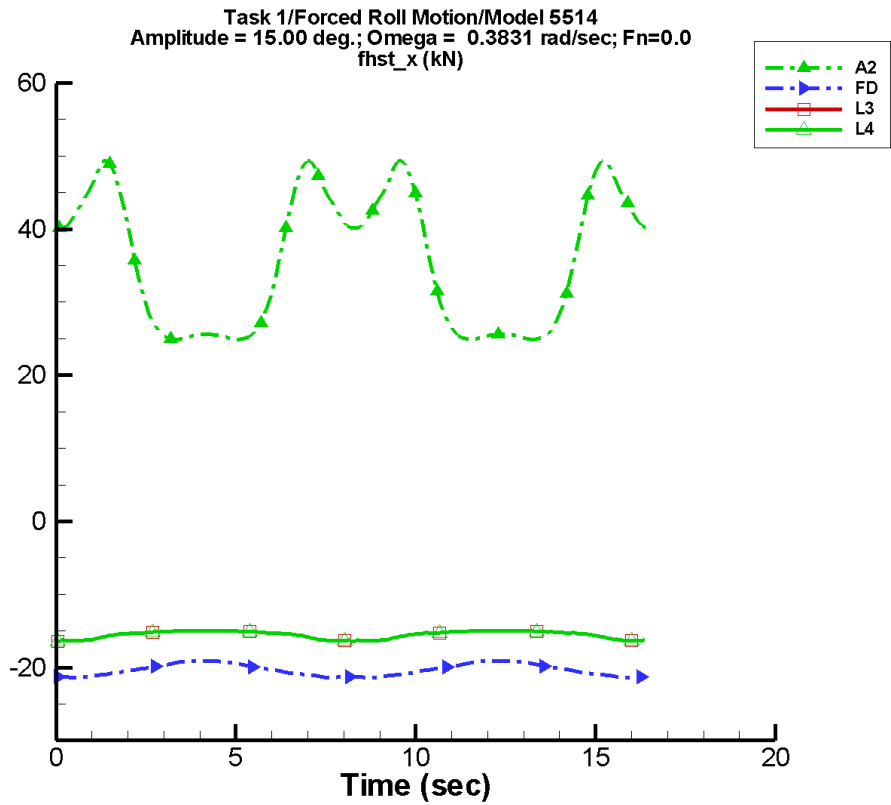
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	43.3	5.33E-03	9	2.86	-94
FD	-21.3	3.24E-03	117	2.62E-02	-93
L1	—	—	—	—	—
L3	-16.3	1.45E-03	-156	7.33E-02	-93
L4	-16.3	1.45E-03	-156	7.33E-02	-93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-432. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	—	—	—	—
L3	-16.4	-16.1	-16.4	-16.2
L4	-16.4	-16.1	-16.4	-16.2
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-217. Time history of  $F_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

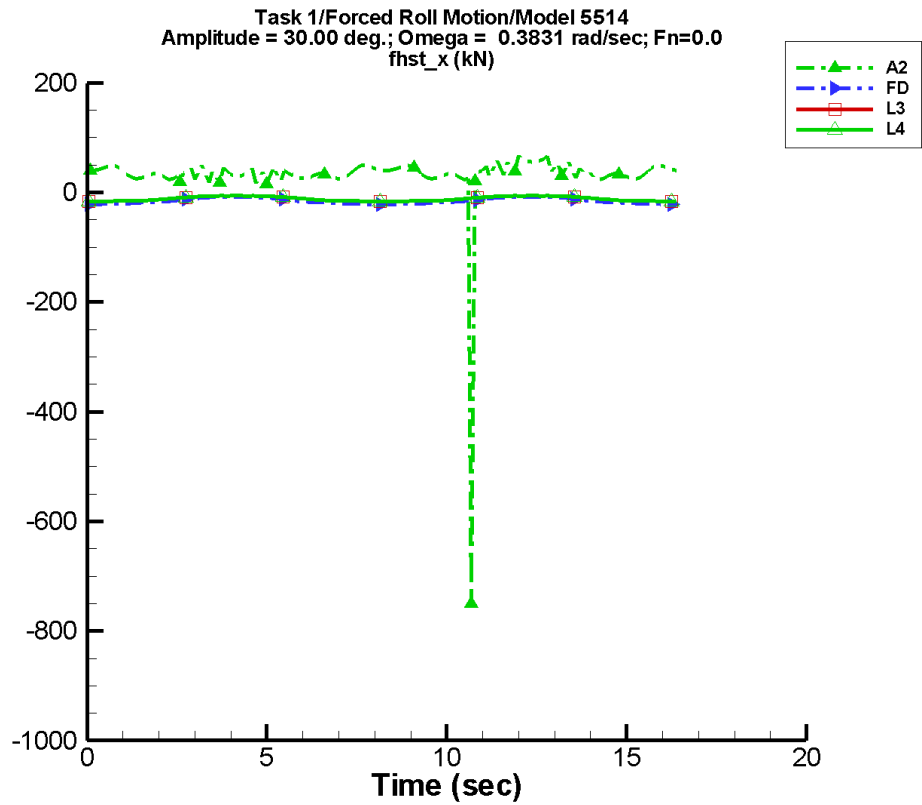
Table D-433. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	35.6	8.01E-02	-54	11.7	85
FD	-20.3	5.43E-03	123	1.13	-90
L1	—	—	—	—	—
L3	-15.5	8.10E-03	10	0.707	-92
L4	-15.5	8.10E-03	10	0.707	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-434. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	24.9	49.4	25.1	47.9
FD	-21.4	-19.1	-21.3	-19.1
L1	—	—	—	—
L3	-16.4	-15.0	-16.4	-15.0
L4	-16.4	-15.0	-16.4	-15.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-218. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

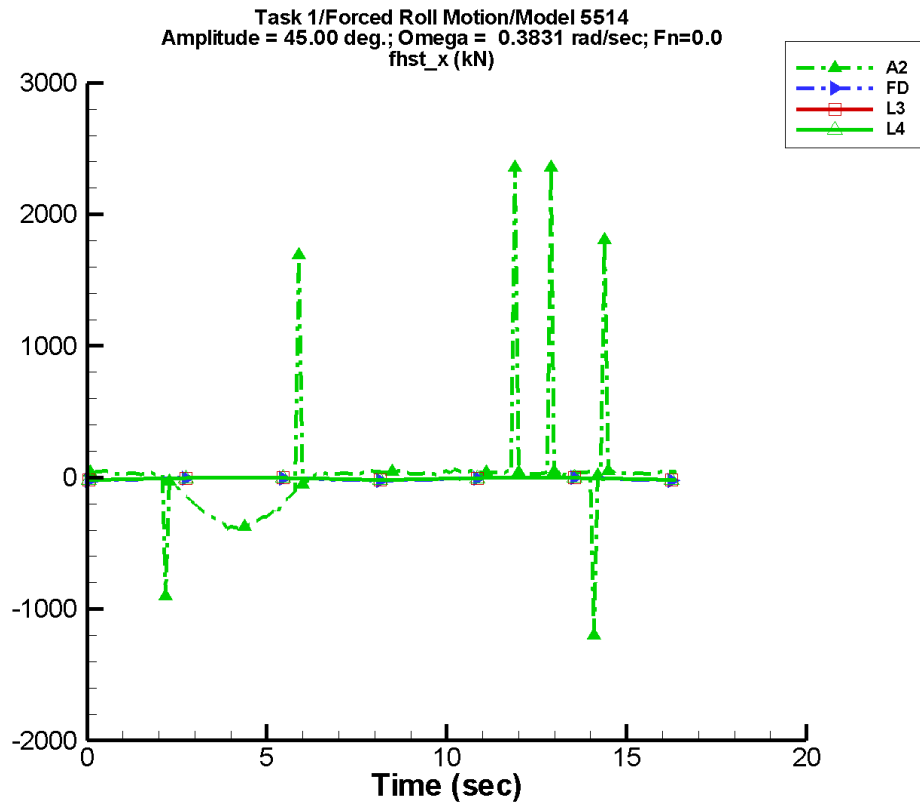
Table D-435. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	32.3	6.83	65	8.86	161
FD	-15.6	6.56E-02	122	6.81	-90
L1	—	—	—	—	—
L3	-11.5	3.94E-02	-174	5.43	-93
L4	-11.5	3.94E-02	-174	5.43	-93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-436. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-750.	67.2	-73.5	58.2
FD	-21.4	-7.97	-21.3	-8.09
L1	—	—	—	—
L3	-16.4	-5.88	-16.4	-6.04
L4	-16.4	-5.88	-16.4	-6.04
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-219. Time history of  $F_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

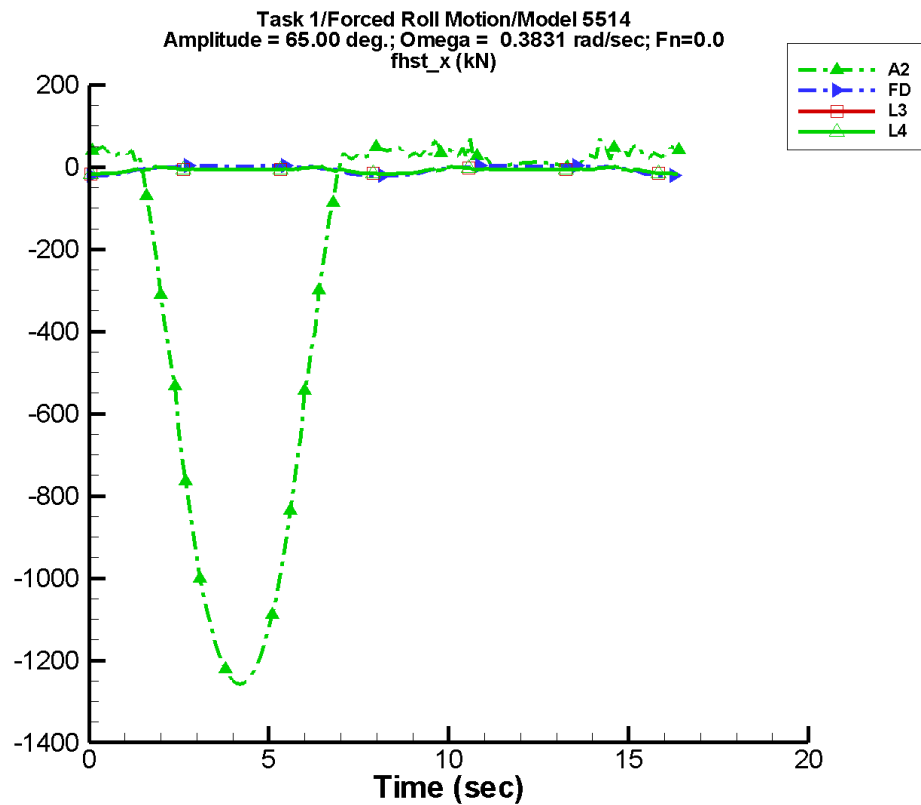
Table D-437. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	12.0	173.	178	65.6	103
FD	-9.60	0.109	-60	11.1	-90
L1	—	—	—	—	—
L3	-7.49	8.91E-02	-14	8.56	-92
L4	-7.49	8.91E-02	-14	8.56	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-438. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.20E+03	2.36E+03	-373.	332.
FD	-21.4	0.539	-21.3	0.472
L1	—	—	—	—
L3	-16.4	1.03	-16.4	0.366
L4	-16.4	1.03	-16.4	0.366
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-220. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

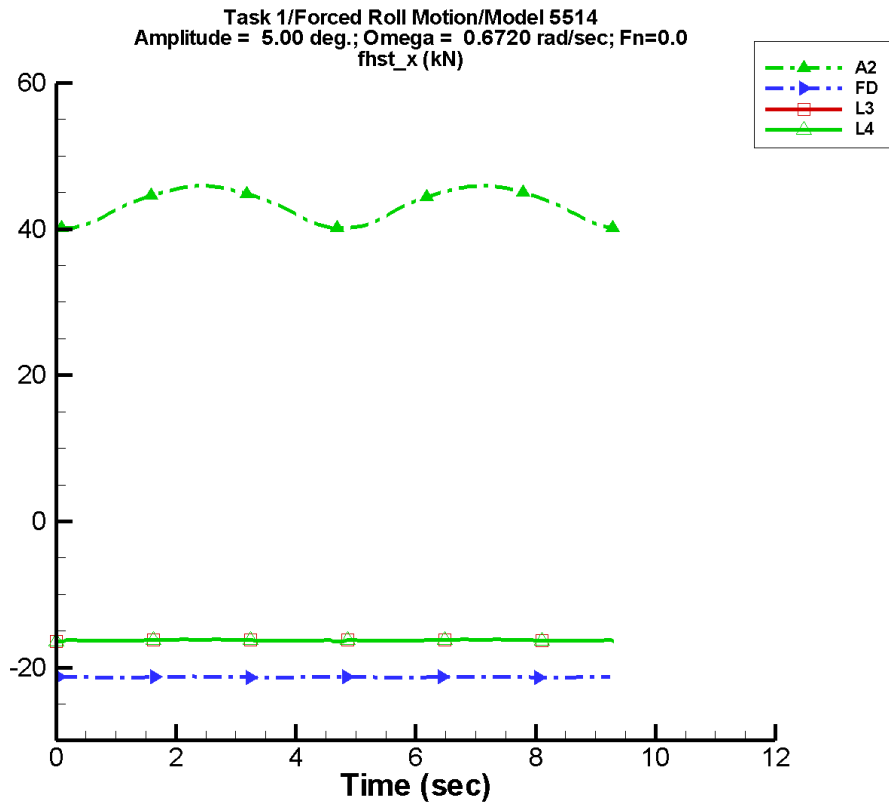
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-234.	478.	176	384.	83
FD	-5.02	0.207	-61	11.5	-89
L1	—	—	—	—	—
L3	-7.32	0.258	-16	4.44	-87
L4	-7.32	0.258	-16	4.44	-87
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-440. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.26E+03	70.2	-1.25E+03	47.9
FD	-21.4	4.05	-21.2	3.38
L1	—	—	—	—
L3	-16.4	0.639	-16.4	-0.378
L4	-16.4	0.639	-16.4	-0.378
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-221. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

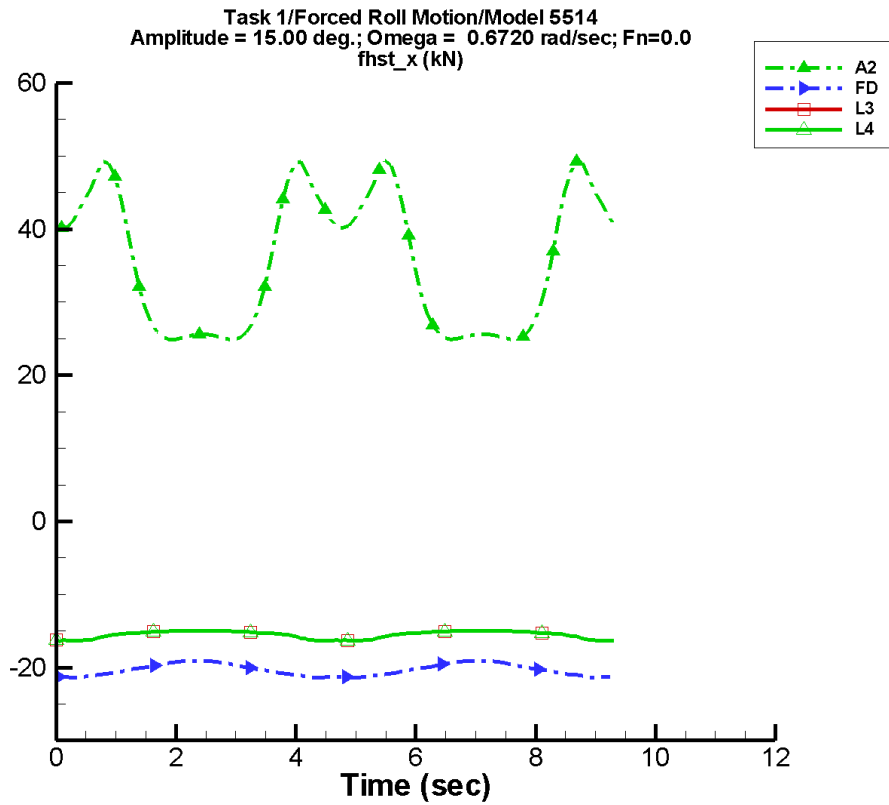
Table D-441. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	43.3	2.01E-02	-10	2.88	-97
FD	-21.3	4.63E-03	147	2.49E-02	-103
L1	—	—	—	—	—
L3	-16.3	2.54E-03	-165	7.04E-02	-96
L4	-16.3	2.54E-03	-165	7.04E-02	-96
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-442. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	40.2	45.9	40.2	45.8
FD	-21.4	-21.2	-21.4	-21.2
L1	—	—	—	—
L3	-16.4	-16.1	-16.4	-16.2
L4	-16.4	-16.1	-16.4	-16.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-222. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

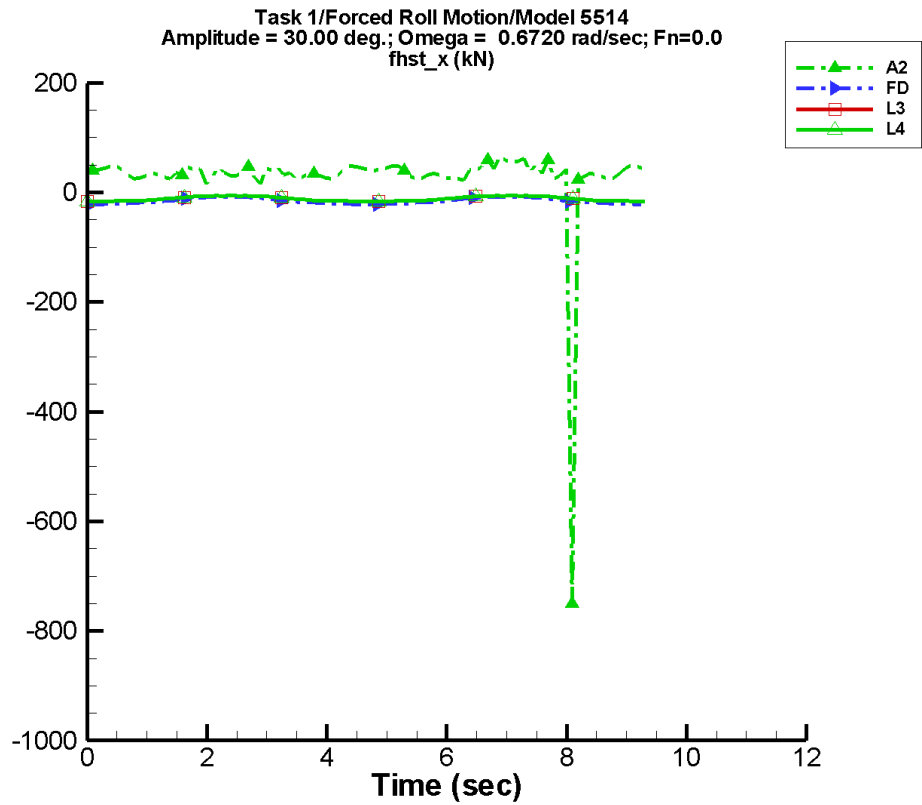
Table D-443. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	35.6	9.48E-02	-70	11.7	81
FD	-20.3	1.00E-02	152	1.13	-91
L1	—	—	—	—	—
L3	-15.5	1.40E-02	-3	0.707	-93
L4	-15.5	1.40E-02	-3	0.707	-93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-444. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	24.9	49.4	25.1	46.0
FD	-21.4	-19.1	-21.3	-19.1
L1	—	—	—	—
L3	-16.4	-15.0	-16.4	-15.0
L4	-16.4	-15.0	-16.4	-15.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-223. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

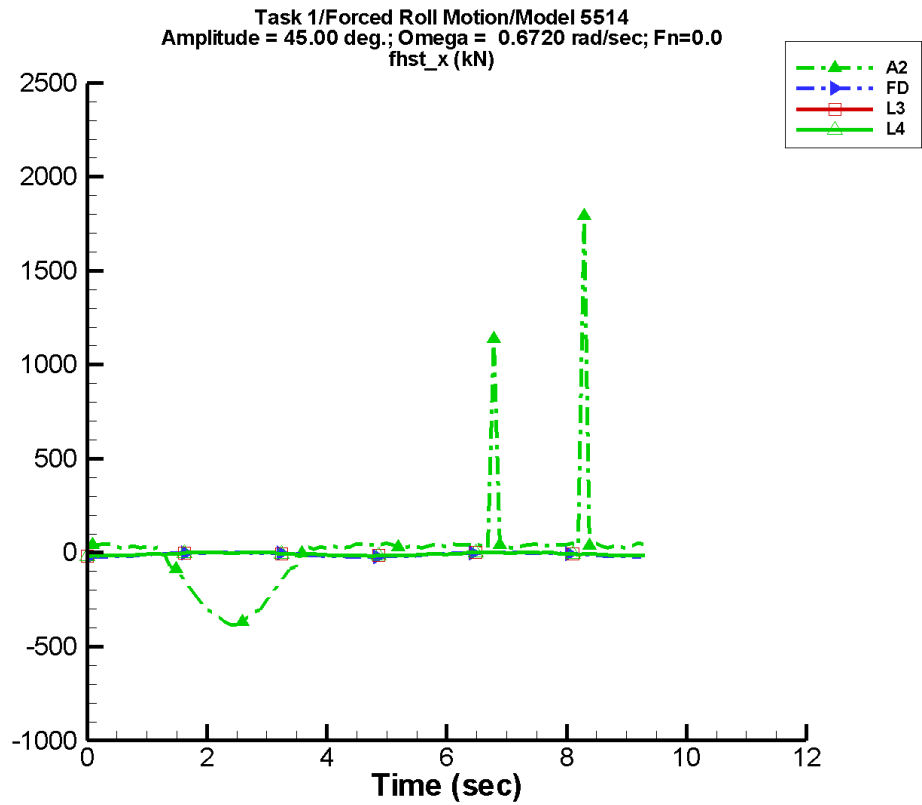
Table D-445. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	28.5	12.7	-56	15.1	12
FD	-15.5	7.12E-02	150	6.78	-91
L1	—	—	—	—	—
L3	-11.5	5.00E-02	-178	5.44	-95
L4	-11.5	5.00E-02	-178	5.44	-95
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-446. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-749.	66.4	-71.6	62.8
FD	-21.4	-7.97	-21.3	-8.19
L1	—	—	—	—
L3	-16.4	-5.87	-16.4	-6.04
L4	-16.4	-5.87	-16.4	-6.04
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-224. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

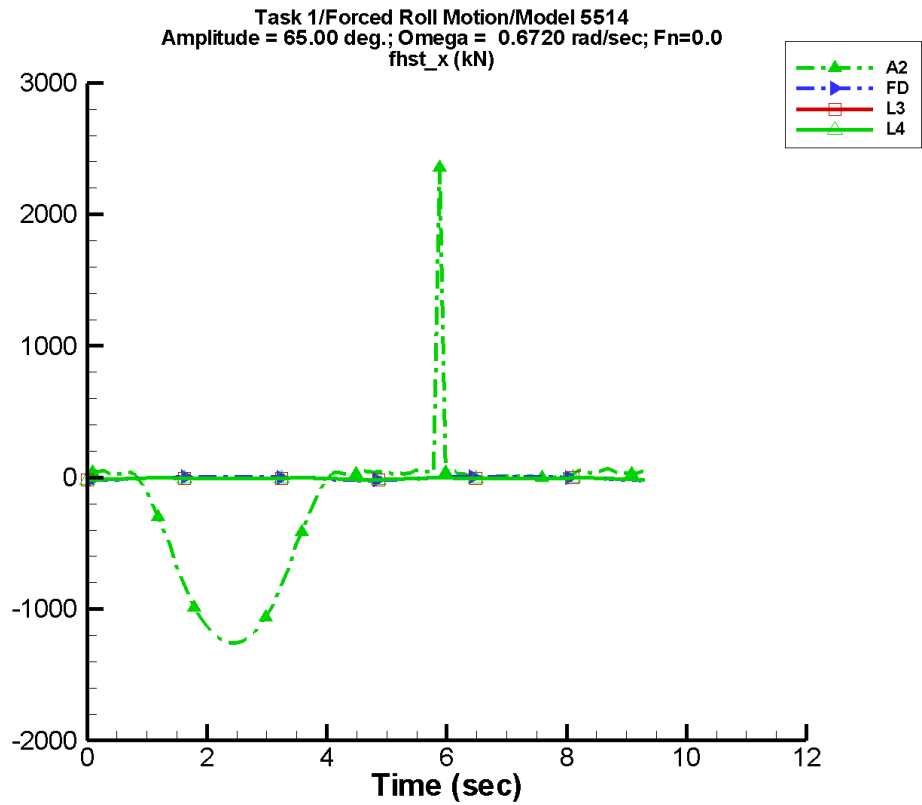
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	5.47	169.	166	79.8	93
FD	-9.68	7.96E-02	-31	11.2	-89
L1	—	—	—	—	—
L3	-7.53	4.56E-02	-134	8.53	-94
L4	-7.53	4.56E-02	-134	8.53	-94
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-448. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-383.	1.79E+03	-353.	279.
FD	-21.4	0.538	-21.2	0.365
L1	—	—	—	—
L3	-16.4	1.03	-16.3	0.227
L4	-16.4	1.03	-16.3	0.227
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-225. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

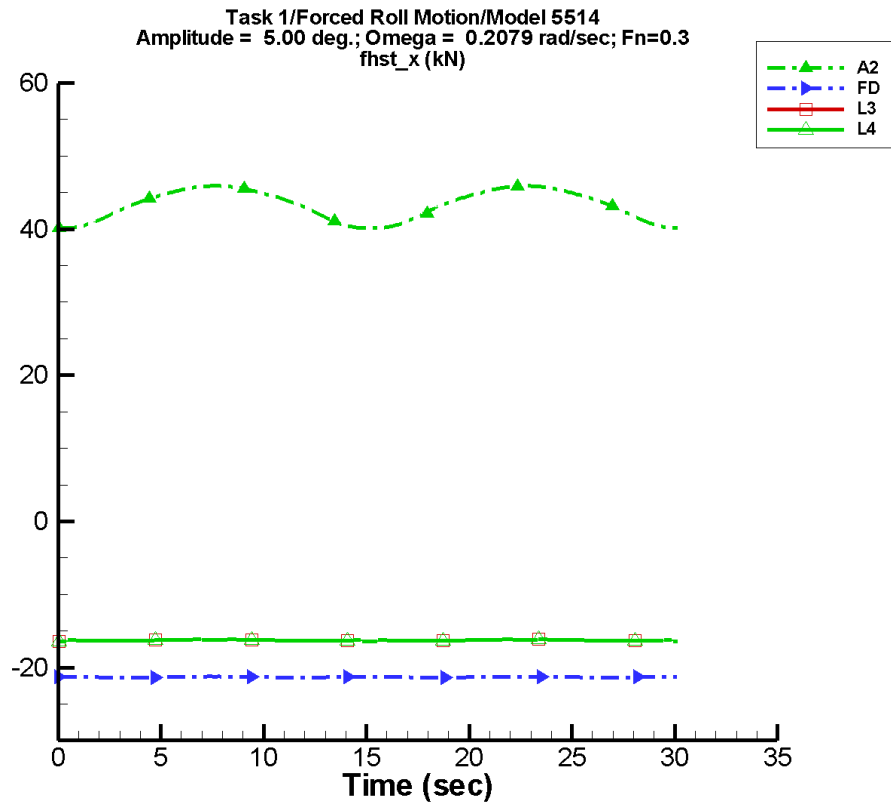
Table D-449. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-203.	501.	179	379.	72
FD	-5.22	0.352	-29	11.6	-88
L1	—	—	—	—	—
L3	-7.33	0.327	0	4.51	-87
L4	-7.33	0.327	0	4.51	-87
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-450. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.26E+03	2.36E+03	-1.22E+03	349.
FD	-21.4	4.06	-20.8	2.74
L1	—	—	—	—
L3	-16.4	0.639	-16.4	-1.79
L4	-16.4	0.639	-16.4	-1.79
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-226. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

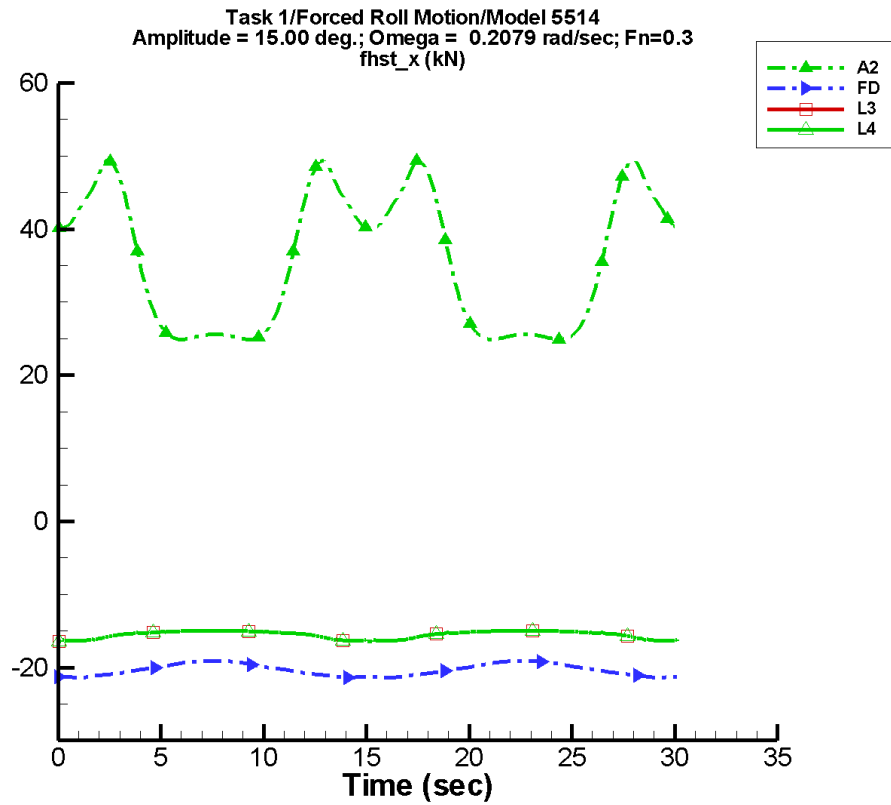
Table D-451. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	43.3	5.98E-03	2	2.86	-92
FD	-21.3	1.22E-03	-168	2.19E-02	-105
L1	—	—	—	—	—
L3	-16.3	1.98E-03	117	7.61E-02	-91
L4	-16.3	1.98E-03	117	7.61E-02	-91
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-452. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	—	—	—	—
L3	-16.4	-16.1	-16.4	-16.2
L4	-16.4	-16.1	-16.4	-16.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-227. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

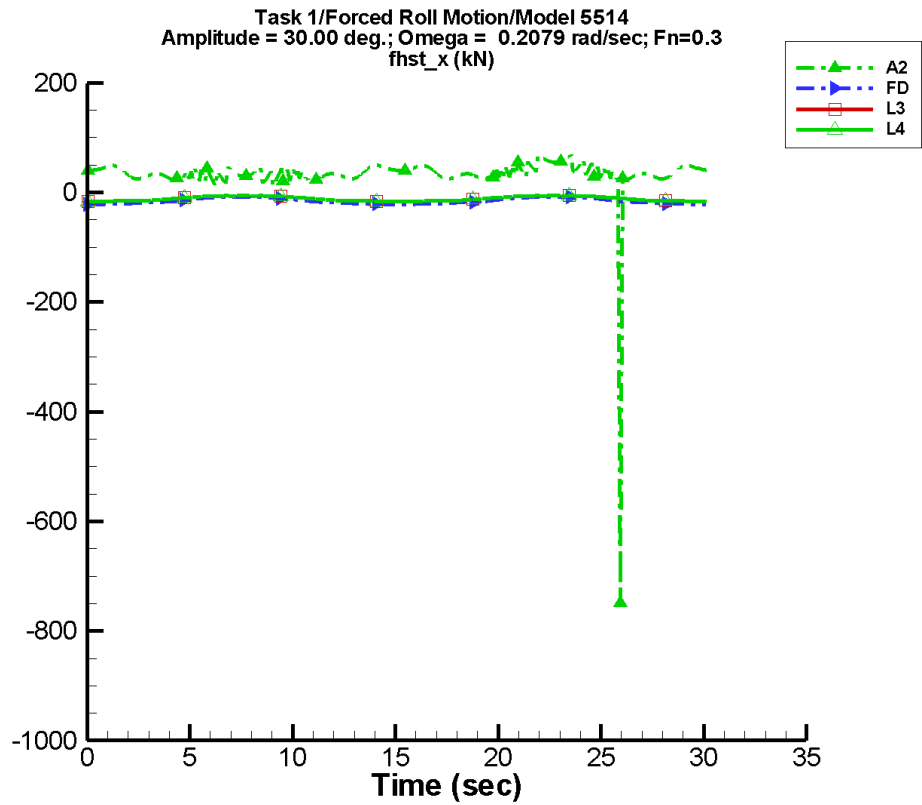
Table D-453. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	35.6	6.87E-02	-59	11.7	87
FD	-20.3	3.08E-03	-170	1.12	-91
L1	—	—	—	—	—
L3	-15.5	1.48E-02	-61	0.682	-92
L4	-15.5	1.48E-02	-61	0.682	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-454. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	24.9	49.4	24.9	48.9
FD	-21.4	-19.1	-21.4	-19.1
L1	—	—	—	—
L3	-16.4	-15.0	-16.4	-15.0
L4	-16.4	-15.0	-16.4	-15.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-228. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

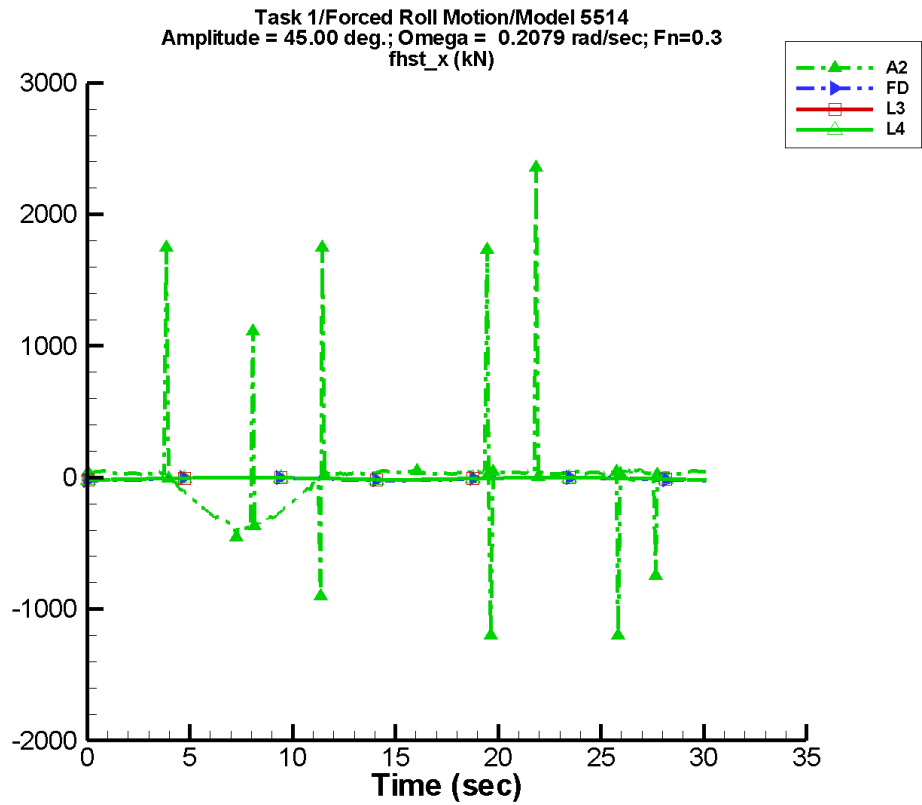
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	33.7	3.43	-123	5.03	23
FD	-15.6	2.05E-02	-170	6.73	-91
L1	—	—	—	—	—
L3	-11.6	5.98E-02	118	5.53	-91
L4	-11.6	5.98E-02	118	5.53	-91
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-456. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-748.	69.2	-77.4	58.6
FD	-21.4	-7.97	-21.3	-8.00
L1	—	—	—	—
L3	-16.4	-5.86	-16.4	-5.97
L4	-16.4	-5.86	-16.4	-5.97
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-229. Time history of  $F_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

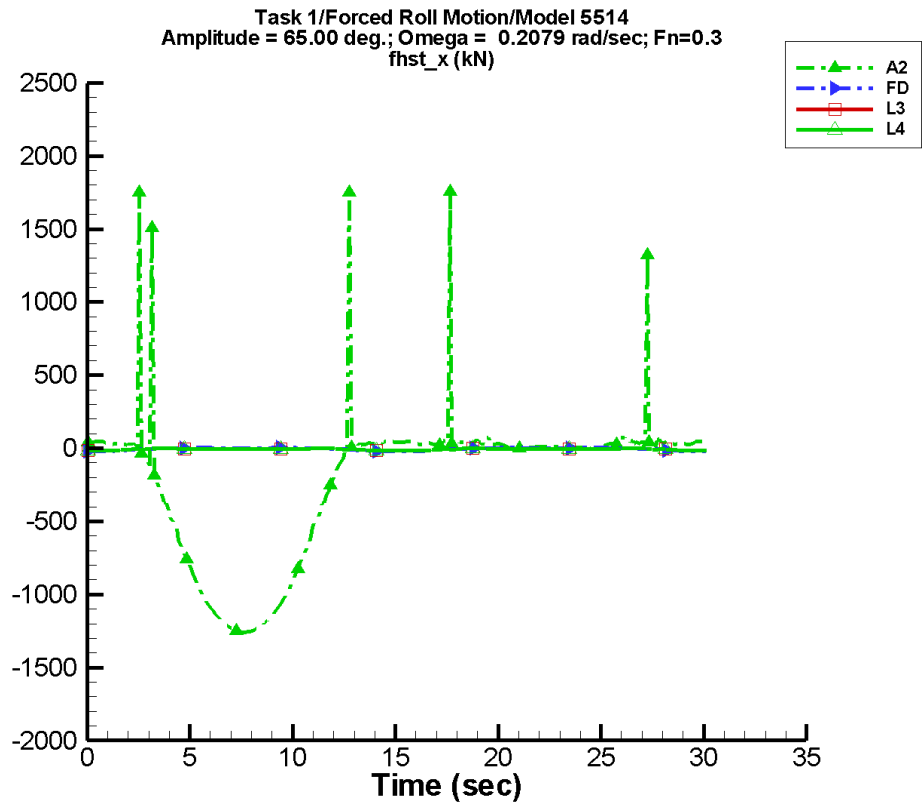
Table D-457. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-16.4	119.	-177	96.3	70
FD	-9.65	2.29E-02	15	11.2	-89
L1	—	—	—	—	—
L3	-7.52	3.71E-02	-24	8.48	-92
L4	-7.52	3.71E-02	-24	8.48	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-458. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.20E+03	2.36E+03	-391.	349.
FD	-21.4	0.541	-21.4	0.514
L1	—	—	—	—
L3	-16.4	1.04	-16.3	0.531
L4	-16.4	1.04	-16.3	0.531
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-230. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

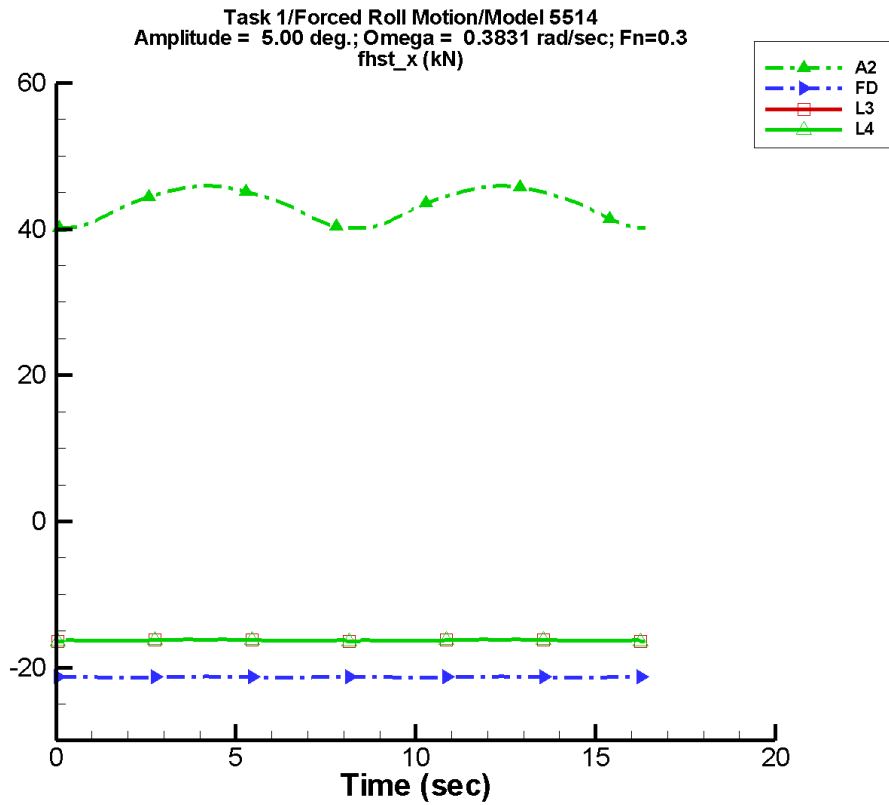
Table D-459. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-212.	475.	177	402.	84
FD	-5.09	0.114	5	11.8	-88
L1	—	—	—	—	—
L3	-7.22	0.379	-60	3.74	-92
L4	-7.22	0.379	-60	3.74	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-460. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.26E+03	1.76E+03	-1.26E+03	263.
FD	-21.4	4.06	-21.3	3.87
L1	—	—	—	—
L3	-16.4	1.03	-16.3	8.07E-02
L4	-16.4	1.03	-16.3	8.07E-02
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-231. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

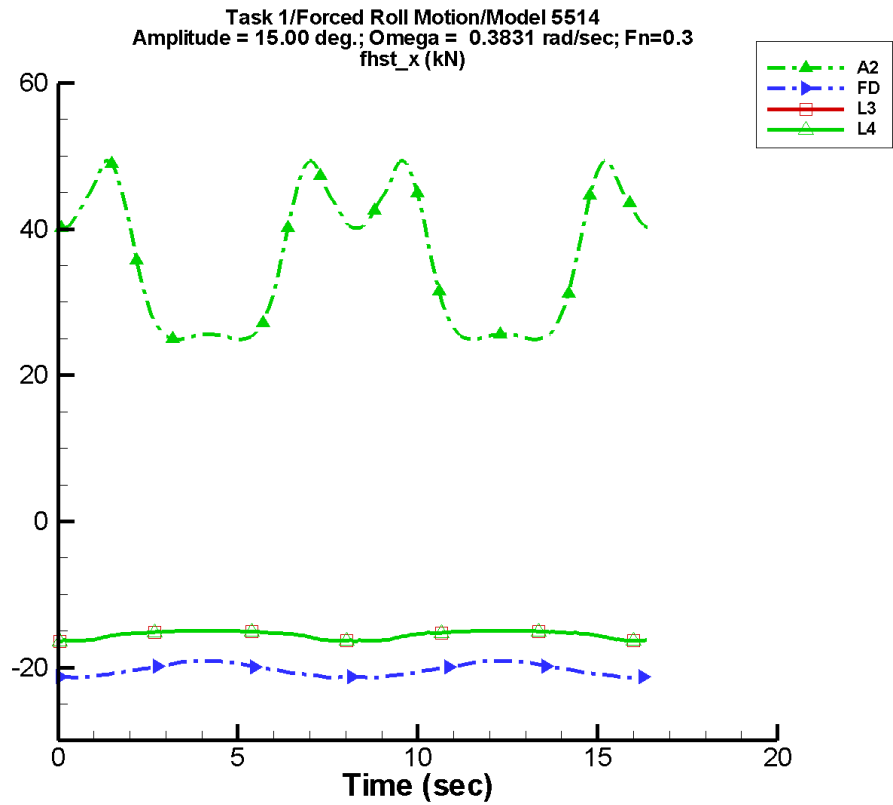
Table D-461. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	43.3	5.33E-03	9	2.86	-94
FD	-21.3	3.24E-03	116	2.61E-02	-93
L1	—	—	—	—	—
L3	-16.3	1.42E-03	-157	7.32E-02	-93
L4	-16.3	1.42E-03	-157	7.32E-02	-93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-462. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	40.2	45.9	40.2	45.9
FD	-21.4	-21.2	-21.4	-21.2
L1	—	—	—	—
L3	-16.4	-16.1	-16.4	-16.2
L4	-16.4	-16.1	-16.4	-16.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-232. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

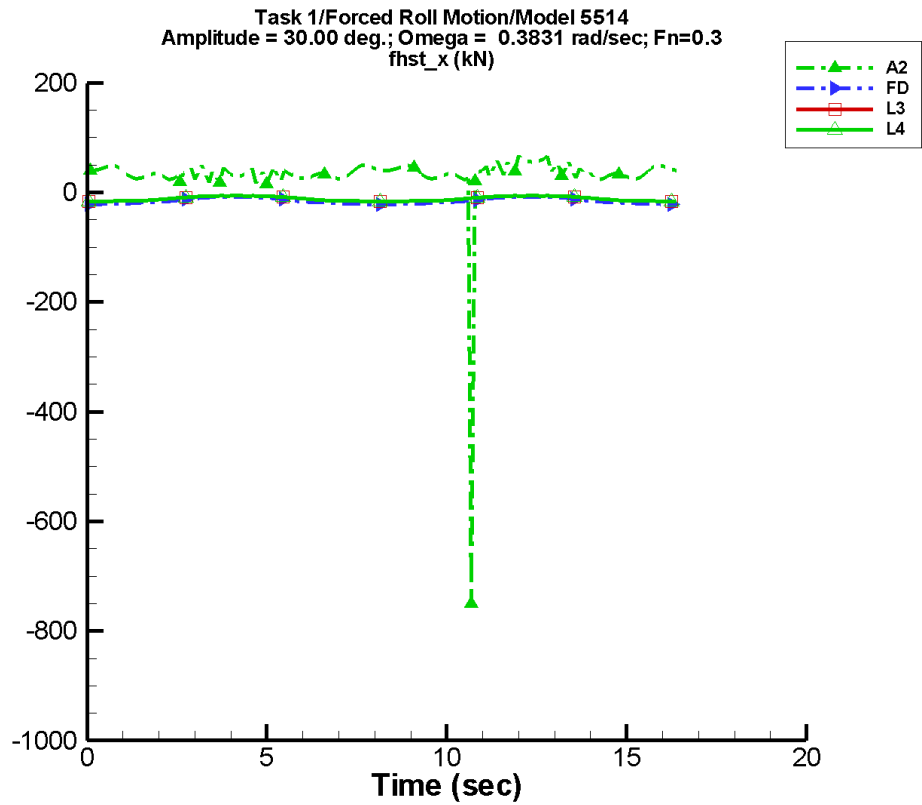
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	35.6	8.01E-02	-54	11.7	85
FD	-20.3	5.38E-03	123	1.13	-90
L1	—	—	—	—	—
L3	-15.5	8.09E-03	10	0.707	-92
L4	-15.5	8.09E-03	10	0.707	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-464. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	24.9	49.4	25.1	47.9
FD	-21.4	-19.1	-21.3	-19.1
L1	—	—	—	—
L3	-16.4	-15.0	-16.4	-15.0
L4	-16.4	-15.0	-16.4	-15.0
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-233. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

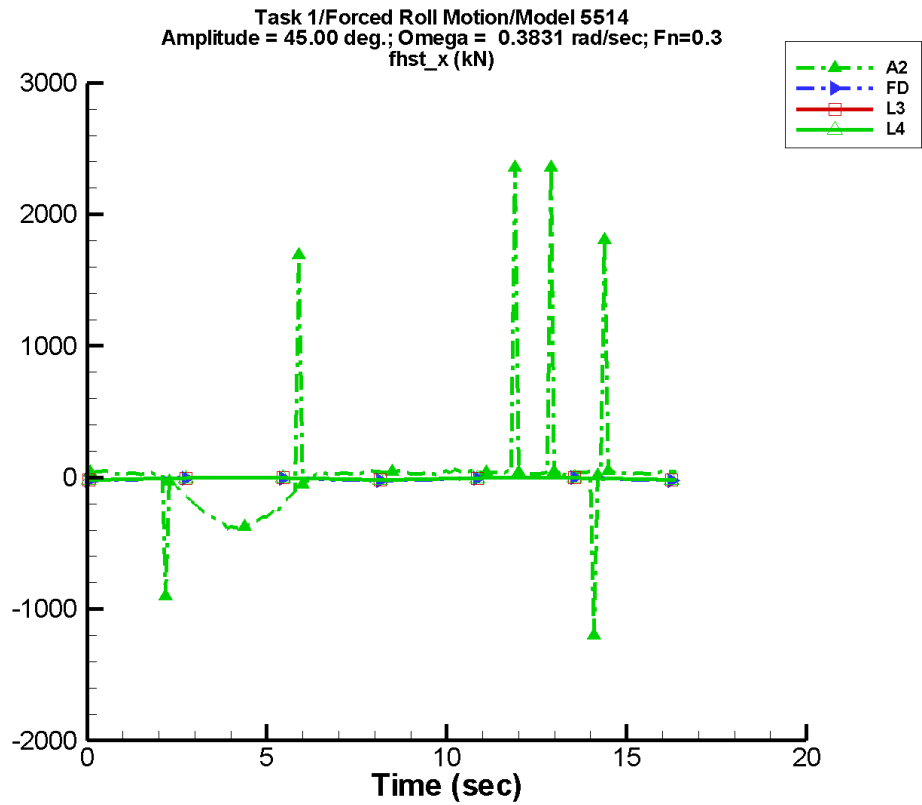
Table D-465. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	32.3	6.83	65	8.86	161
FD	-15.6	6.56E-02	122	6.81	-90
L1	—	—	—	—	—
L3	-11.5	3.93E-02	-174	5.43	-93
L4	-11.5	3.93E-02	-174	5.43	-93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-466. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-750.	67.2	-73.5	58.2
FD	-21.4	-7.97	-21.3	-8.09
L1	—	—	—	—
L3	-16.4	-5.88	-16.4	-6.04
L4	-16.4	-5.88	-16.4	-6.04
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-234. Time history of  $F_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

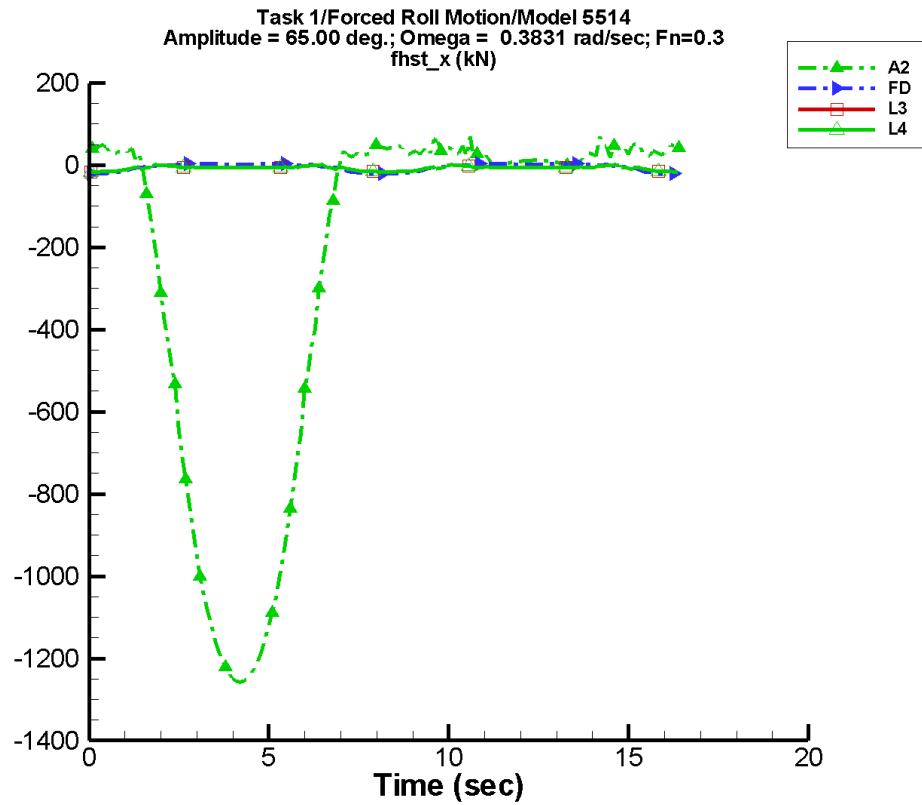
Table D-467. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	12.0	173.	178	65.6	103
FD	-9.60	0.109	-60	11.1	-90
L1	—	—	—	—	—
L3	-7.49	8.90E-02	-14	8.56	-92
L4	-7.49	8.90E-02	-14	8.56	-92
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-468. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.20E+03	2.36E+03	-373.	332.
FD	-21.4	0.538	-21.3	0.472
L1	—	—	—	—
L3	-16.4	1.03	-16.4	0.366
L4	-16.4	1.03	-16.4	0.366
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-235. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

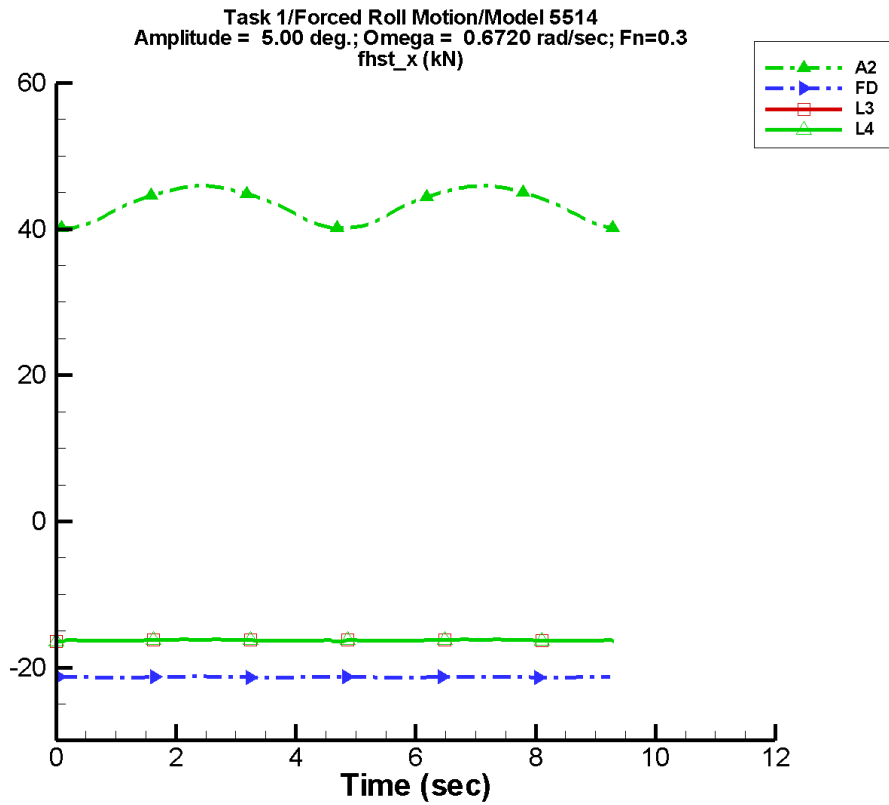
Table D-469. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-234.	478.	176	384.	83
FD	-5.02	0.207	-61	11.5	-89
L1	—	—	—	—	—
L3	-7.32	0.258	-16	4.44	-87
L4	-7.32	0.258	-16	4.44	-87
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-470. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.26E+03	70.2	-1.25E+03	47.9
FD	-21.4	4.05	-21.2	3.38
L1	—	—	—	—
L3	-16.4	0.639	-16.4	-0.378
L4	-16.4	0.639	-16.4	-0.378
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-236. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

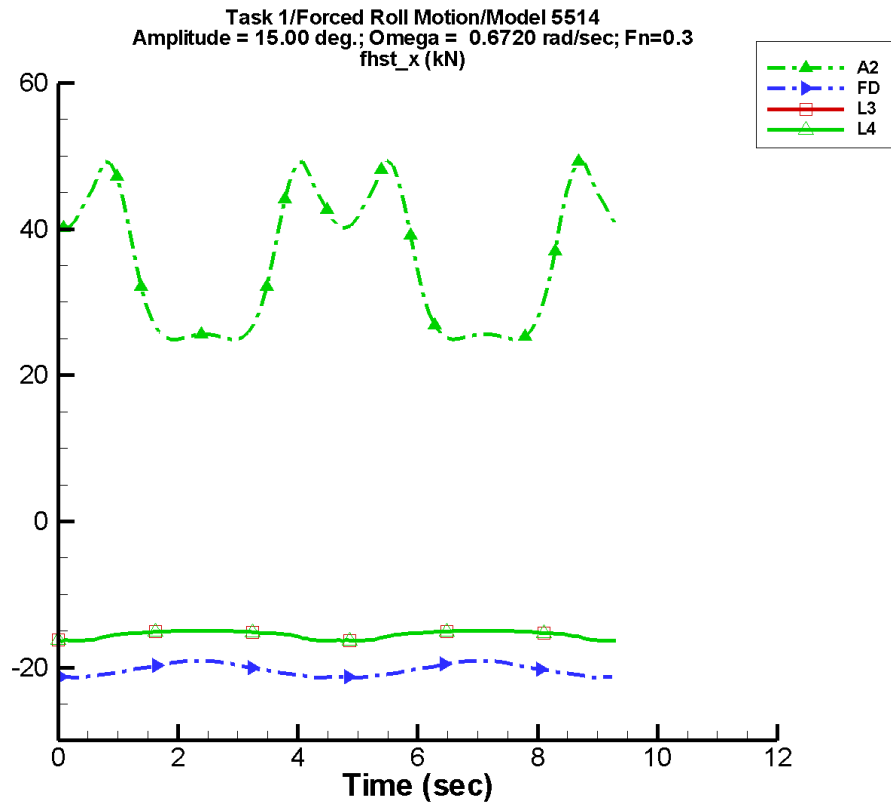
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	43.3	2.01E-02	-10	2.88	-97
FD	-21.3	4.68E-03	147	2.49E-02	-103
L1	—	—	—	—	—
L3	-16.3	2.42E-03	-165	7.04E-02	-96
L4	-16.3	2.42E-03	-165	7.04E-02	-96
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-472. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	40.2	45.9	40.2	45.8
FD	-21.4	-21.2	-21.4	-21.2
L1	—	—	—	—
L3	-16.4	-16.1	-16.4	-16.2
L4	-16.4	-16.1	-16.4	-16.2
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-237. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

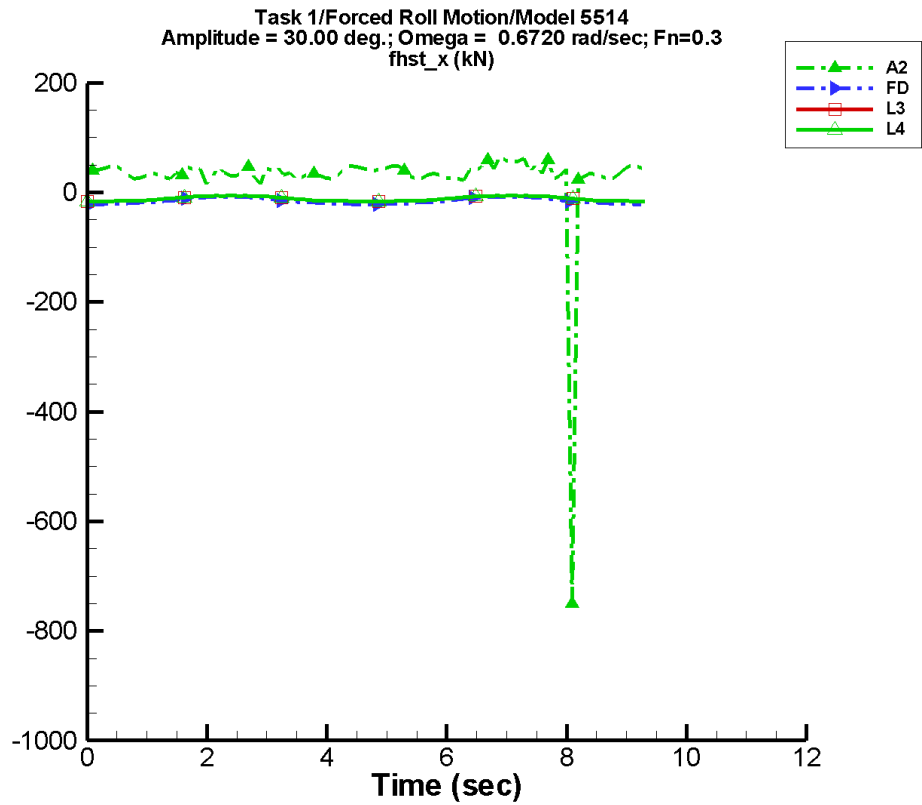
Table D-473. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	35.6	9.48E-02	-70	11.7	81
FD	-20.3	1.00E-02	152	1.13	-91
L1	—	—	—	—	—
L3	-15.5	1.40E-02	-3	0.707	-93
L4	-15.5	1.40E-02	-3	0.707	-93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-474. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	24.9	49.4	25.1	46.0
FD	-21.4	-19.1	-21.3	-19.1
L1	—	—	—	—
L3	-16.4	-15.0	-16.4	-15.0
L4	-16.4	-15.0	-16.4	-15.0
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-238. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

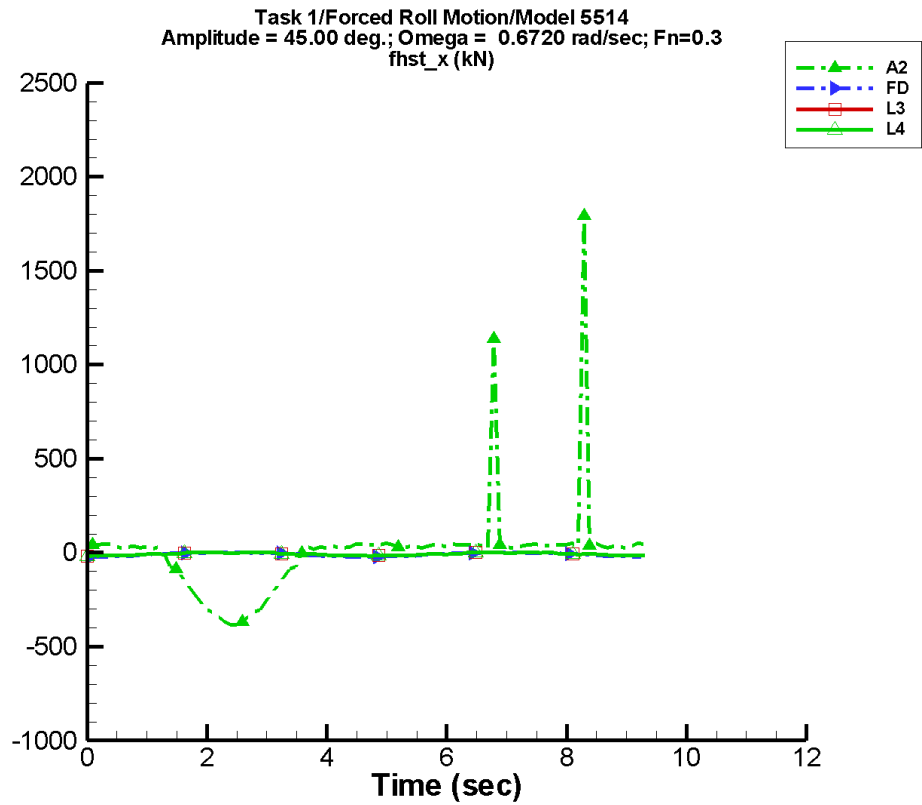
Table D-475. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	28.5	12.7	-56	15.1	12
FD	-15.5	7.11E-02	150	6.78	-91
L1	—	—	—	—	—
L3	-11.5	5.00E-02	-178	5.44	-95
L4	-11.5	5.00E-02	-178	5.44	-95
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-476. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-749.	66.4	-71.6	62.8
FD	-21.4	-7.97	-21.3	-8.18
L1	—	—	—	—
L3	-16.4	-5.87	-16.4	-6.04
L4	-16.4	-5.87	-16.4	-6.04
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-239. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

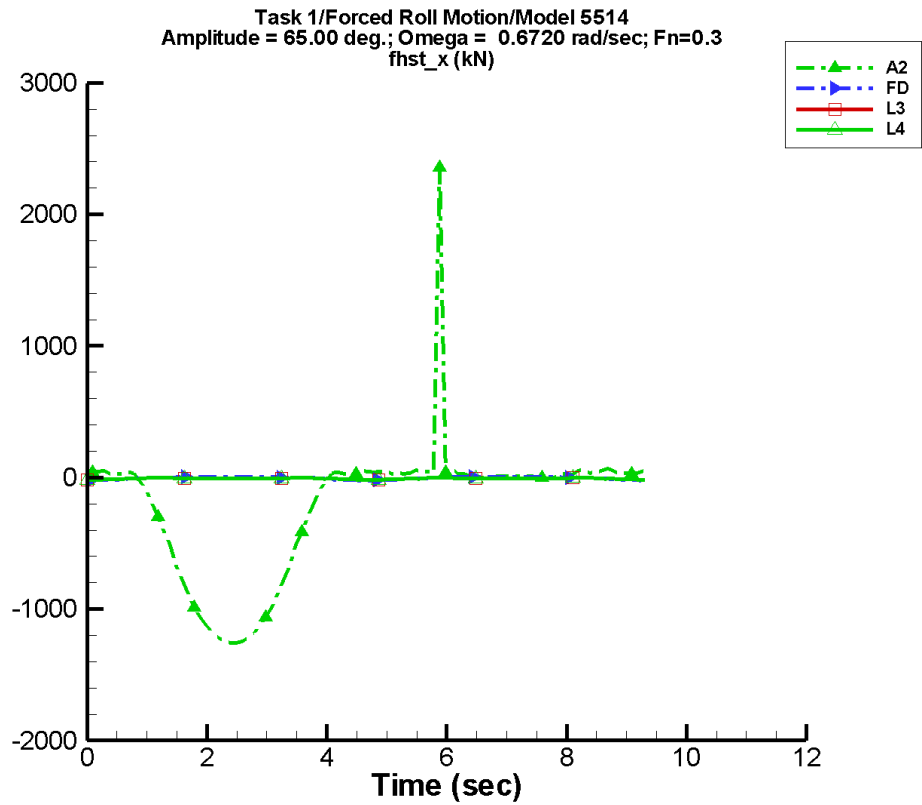
Table D-477. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	5.47	169.	166	79.8	93
FD	-9.68	7.96E-02	-31	11.2	-89
L1	—	—	—	—	—
L3	-7.53	4.56E-02	-134	8.53	-94
L4	-7.53	4.56E-02	-134	8.53	-94
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-478. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-383.	1.79E+03	-353.	279.
FD	-21.4	0.537	-21.2	0.365
L1	—	—	—	—
L3	-16.4	1.03	-16.3	0.228
L4	-16.4	1.03	-16.3	0.228
NF	—	—	—	—
NS	—	—	—	—

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-240. Time history of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

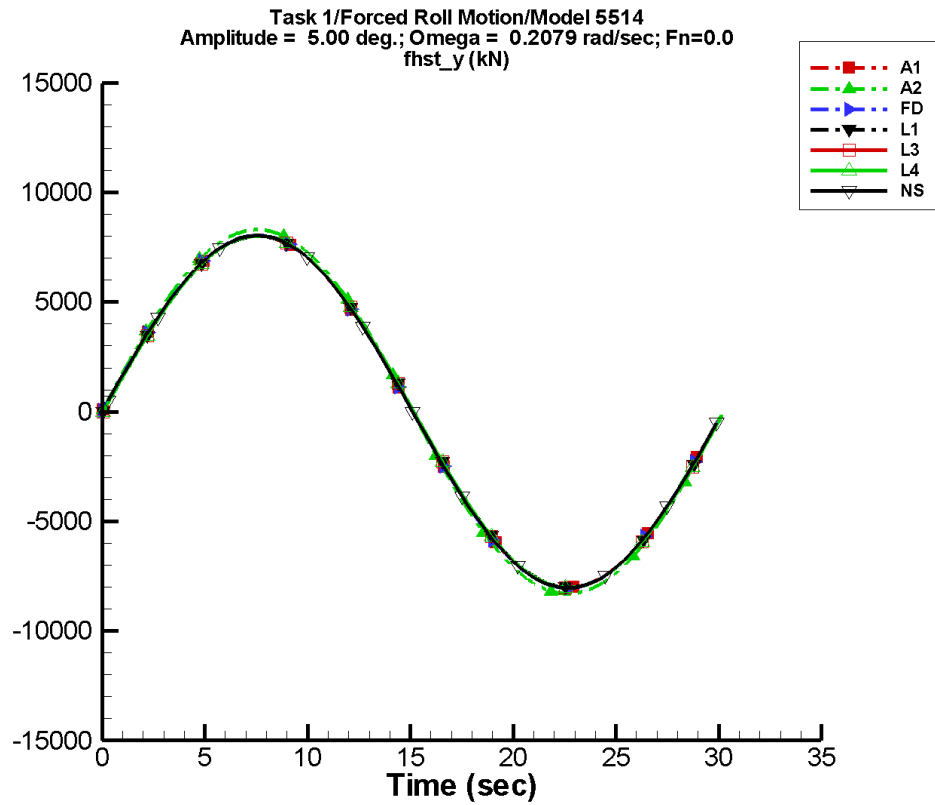
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-203.	501.	179	379.	72
FD	-5.22	0.352	-29	11.6	-88
L1	—	—	—	—	—
L3	-7.33	0.327	0	4.51	-87
L4	-7.33	0.327	0	4.51	-87
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-480. Minimum and maximum of  $F_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	—	—	—	—
A2	-1.26E+03	2.36E+03	-1.22E+03	349.
FD	-21.4	4.06	-20.8	2.74
L1	—	—	—	—
L3	-16.4	0.639	-16.4	-1.79
L4	-16.4	0.639	-16.4	-1.79
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-241. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

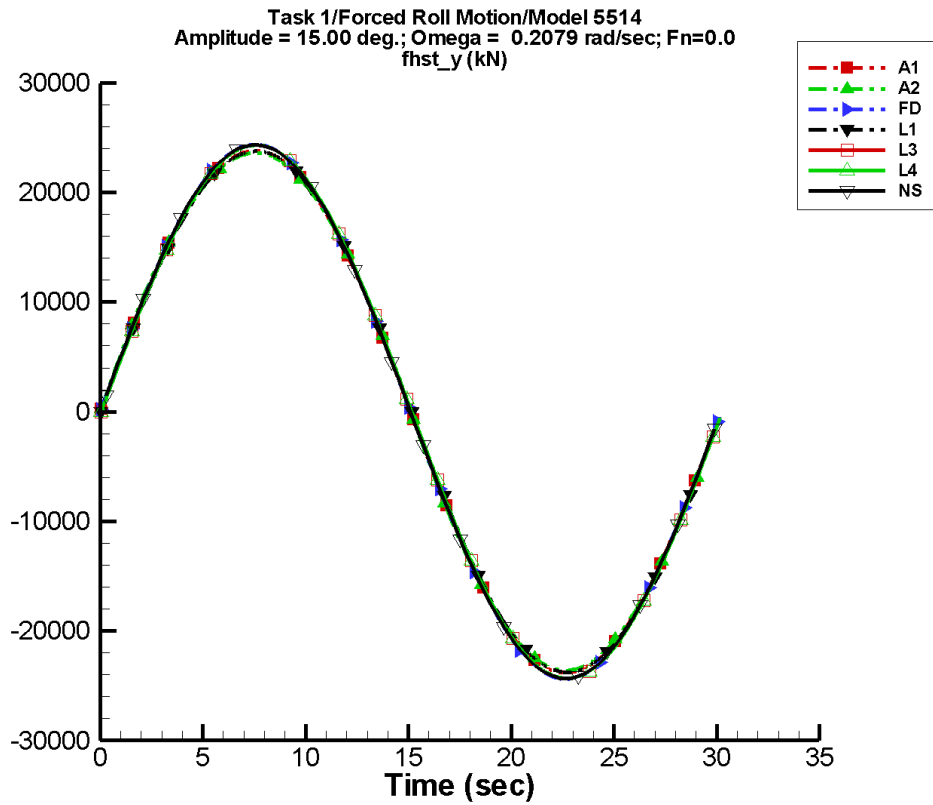
Table D–481. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.89E-02	8.02E+03	0	0.405	58
A2	1.27	8.34E+03	0	6.92	64
FD	-5.47E-03	8.04E+03	0	4.13E-02	154
L1	0.145	8.00E+03	-1	0.608	87
L3	-0.147	8.02E+03	-1	0.529	-93
L4	-0.147	8.02E+03	-1	0.529	-93
NF	—	—	—	—	—
NS	-8.15E-05	8.03E+03	0	6.10E-04	8

Table D–482. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+03	8.02E+03	-8.01E+03	8.02E+03
A2	-8.30E+03	8.30E+03	-8.29E+03	8.30E+03
FD	-8.04E+03	8.04E+03	-8.03E+03	8.03E+03
L1	-8.00E+03	8.00E+03	-8.00E+03	8.00E+03
L3	-8.02E+03	8.02E+03	-8.02E+03	8.02E+03
L4	-8.02E+03	8.02E+03	-8.02E+03	8.02E+03
NF	—	—	—	—
NS	-8.03E+03	8.03E+03	-7.95E+03	7.95E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-242. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

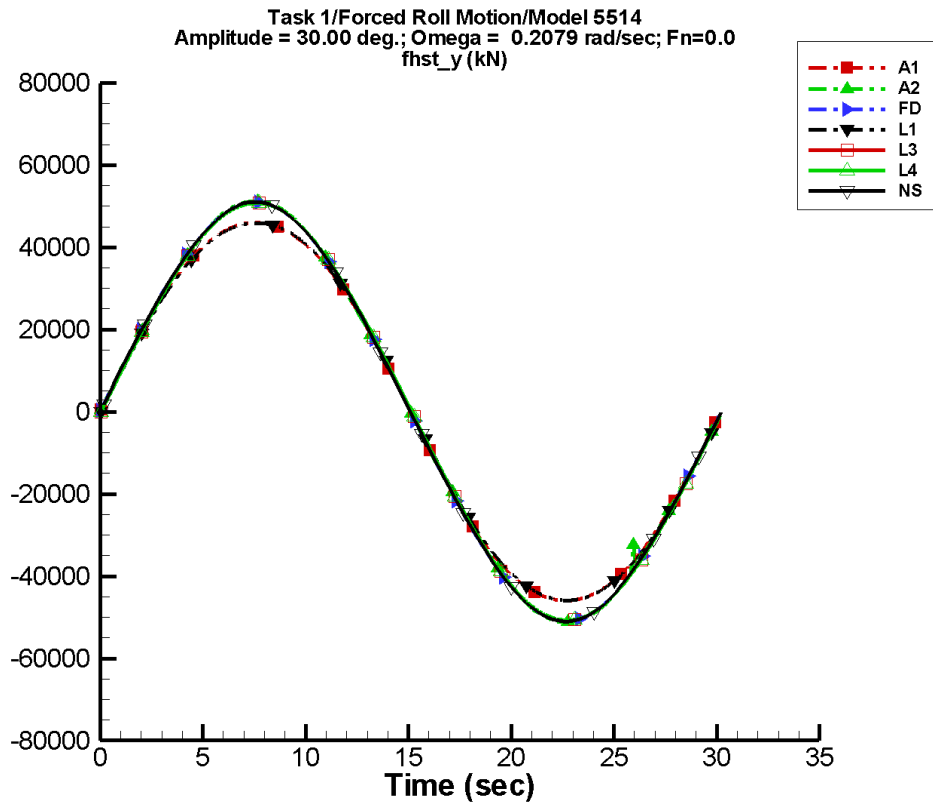
Table D-483. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.72	2.39E+04	0	10.8	59
A2	10.3	2.38E+04	0	51.0	67
FD	-2.11	2.43E+04	0	10.7	-124
L1	4.15	2.38E+04	-1	16.4	87
L3	-4.34	2.42E+04	-1	17.1	-93
L4	-4.34	2.42E+04	-1	17.1	-93
NF	—	—	—	—	—
NS	2.64E-04	2.43E+04	0	2.48E-03	57

Table D-484. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.38E+04	2.38E+04	-2.38E+04	2.38E+04
A2	-2.36E+04	2.36E+04	-2.36E+04	2.36E+04
FD	-2.44E+04	2.44E+04	-2.44E+04	2.44E+04
L1	-2.38E+04	2.38E+04	-2.38E+04	2.38E+04
L3	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
L4	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
NF	—	—	—	—
NS	-2.43E+04	2.43E+04	-2.41E+04	2.41E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-243. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

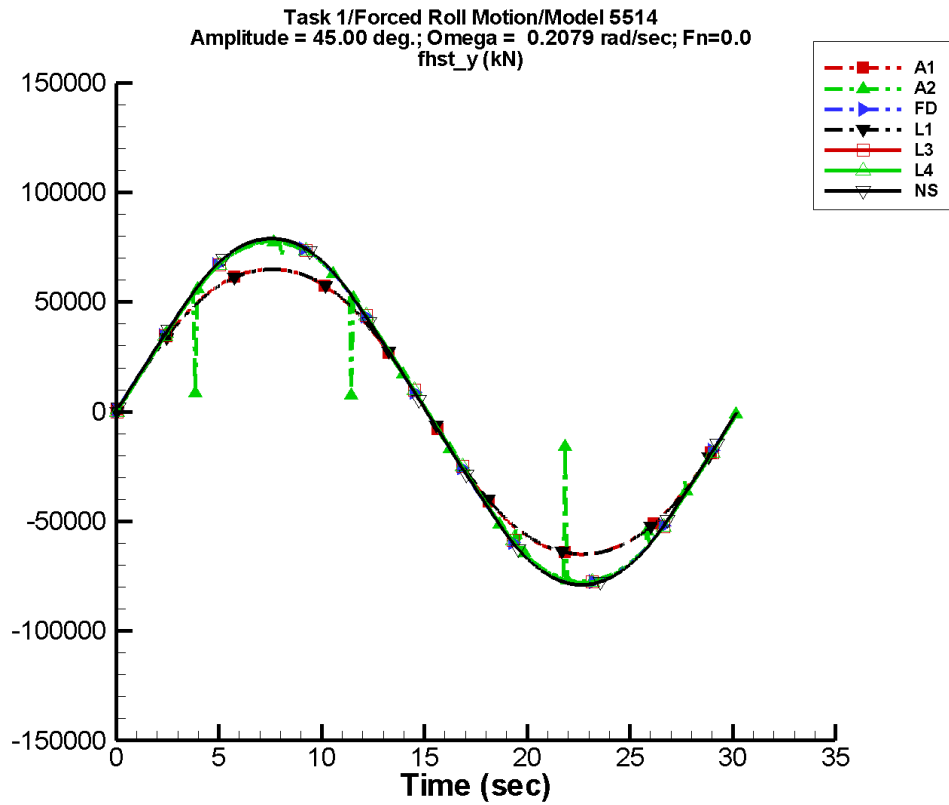
Table D–485. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	13.7	4.65E+04	0	85.5	59
A2	-1.08	5.02E+04	0	201.	-136
FD	-21.0	5.02E+04	0	106.	-123
L1	32.8	4.64E+04	-1	129.	87
L3	-42.3	5.00E+04	-1	167.	-93
L4	-42.3	5.00E+04	-1	167.	-93
NF	—	—	—	—	—
NS	-1.31E-03	5.02E+04	0	2.15E-03	67

Table D–486. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E+04	4.60E+04	-4.59E+04	4.60E+04
A2	-5.12E+04	5.12E+04	-5.11E+04	5.12E+04
FD	-5.09E+04	5.09E+04	-5.09E+04	5.09E+04
L1	-4.59E+04	4.59E+04	-4.59E+04	4.59E+04
L3	-5.07E+04	5.07E+04	-5.07E+04	5.07E+04
L4	-5.07E+04	5.07E+04	-5.07E+04	5.07E+04
NF	—	—	—	—
NS	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-244. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

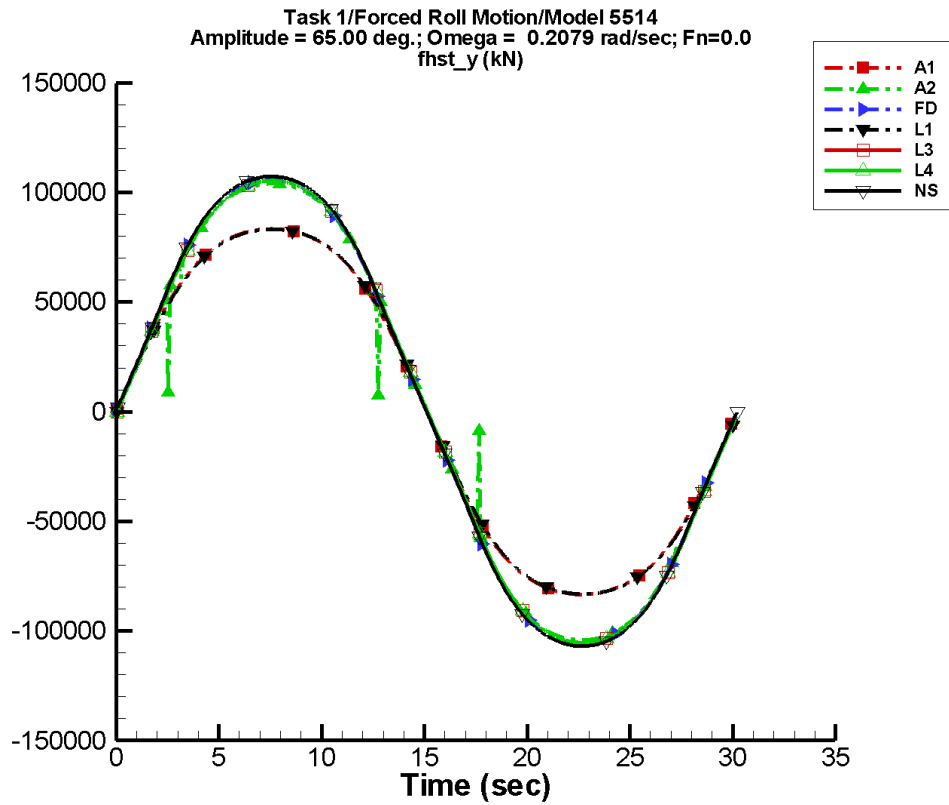
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	45.6	6.68E+04	0	283.	59
A2	0.539	7.60E+04	0	560.	-71
FD	-41.8	7.76E+04	0	201.	-112
L1	108.	6.67E+04	-1	427.	87
L3	-80.8	7.73E+04	-1	309.	-94
L4	-80.8	7.73E+04	-1	309.	-94
NF	—	—	—	—	—
NS	9.39E-02	7.82E+04	0	0.156	-90

Table D-488. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.50E+04	6.50E+04	-6.50E+04	6.51E+04
A2	-7.74E+04	7.77E+04	-7.80E+04	7.74E+04
FD	-7.82E+04	7.82E+04	-7.81E+04	7.81E+04
L1	-6.49E+04	6.49E+04	-6.49E+04	6.49E+04
L3	-7.79E+04	7.79E+04	-7.79E+04	7.79E+04
L4	-7.79E+04	7.79E+04	-7.79E+04	7.79E+04
NF	—	—	—	—
NS	-7.90E+04	7.90E+04	-7.89E+04	7.89E+04



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

Figure D-245. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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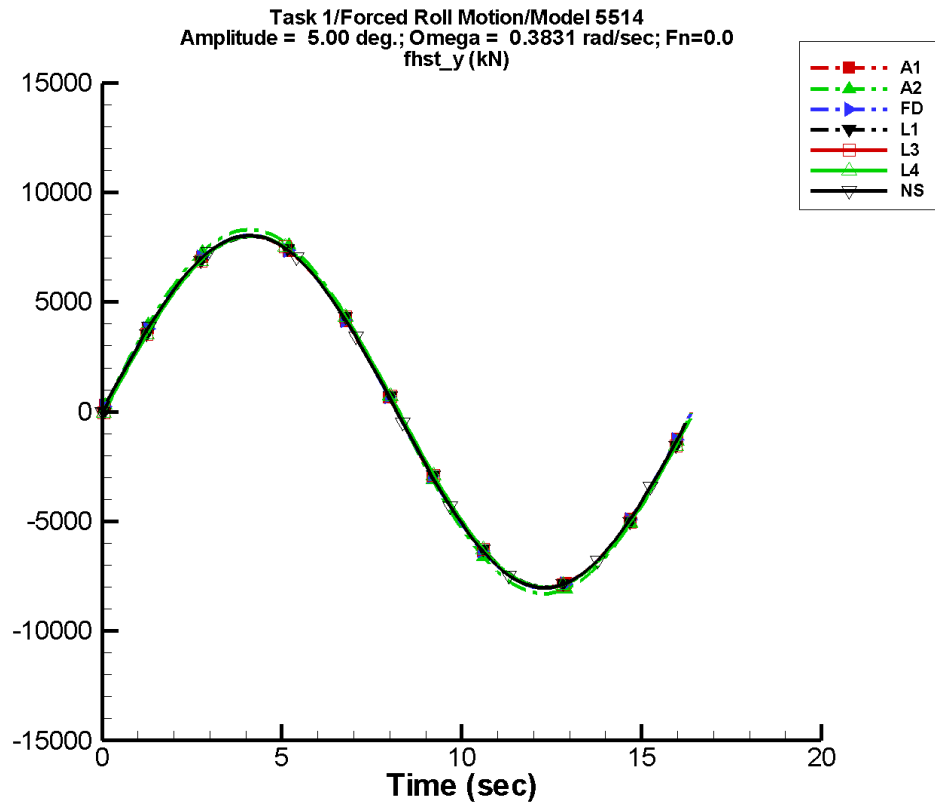
Table D-489. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	133.	8.84E+04	0	819.	59
A2	-92.7	1.07E+05	0	494.	5
FD	20.1	1.09E+05	0	228.	26
L1	314.	8.83E+04	-1	1.24E+03	87
L3	81.7	1.08E+05	-1	354.	90
L4	81.7	1.08E+05	-1	354.	90
NF	—	—	—	—	—
NS	92.8	1.10E+05	0	114.	-90

Table D-490. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.34E+04	8.34E+04	-8.33E+04	8.35E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05
FD	-1.06E+05	1.06E+05	-1.06E+05	1.06E+05
L1	-8.32E+04	8.32E+04	-8.32E+04	8.32E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
NF	—	—	—	—
NS	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-246. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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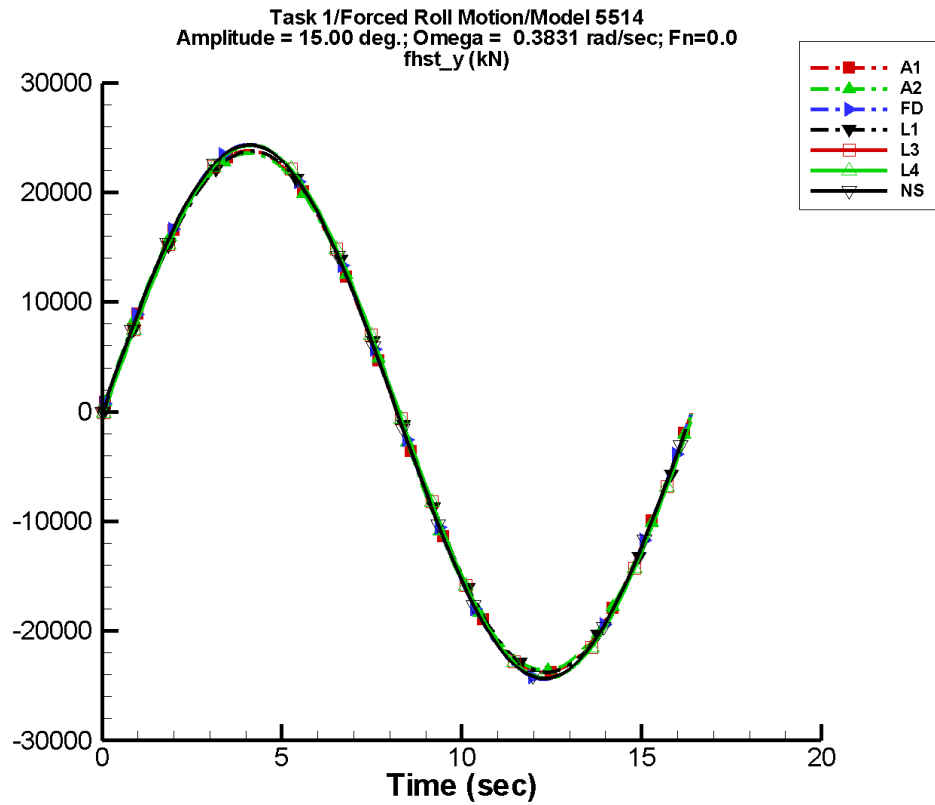
Table D-491. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.39E-02	8.02E+03	0	0.431	60
A2	1.20	8.34E+03	0	6.97	60
FD	-2.27E-02	8.04E+03	0	5.68E-02	-47
L1	0.197	8.00E+03	-1	0.285	28
L3	-9.17E-02	8.02E+03	-1	0.250	-148
L4	-9.17E-02	8.02E+03	-1	0.250	-148
NF	—	—	—	—	—
NS	3.60E-04	8.03E+03	0	1.01E-03	-35

Table D-492. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+03	8.02E+03	-7.99E+03	8.04E+03
A2	-8.30E+03	8.30E+03	-8.27E+03	8.33E+03
FD	-8.04E+03	8.04E+03	-8.01E+03	8.01E+03
L1	-8.00E+03	8.00E+03	-7.99E+03	7.99E+03
L3	-8.02E+03	8.02E+03	-8.01E+03	8.01E+03
L4	-8.02E+03	8.02E+03	-8.01E+03	8.01E+03
NF	—	—	—	—
NS	-8.03E+03	8.03E+03	-7.95E+03	7.95E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-247. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

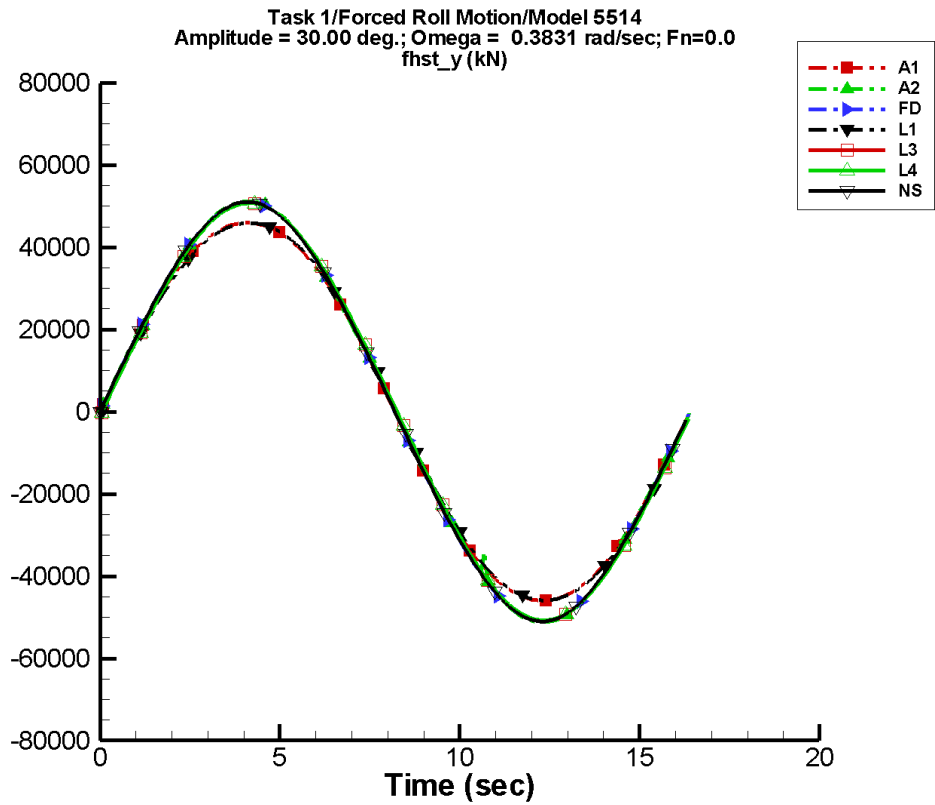
Table D-493. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.43	2.39E+04	0	11.6	60
A2	9.79	2.38E+04	0	52.2	65
FD	-2.16	2.43E+04	0	14.6	-104
L1	4.25	2.38E+04	-1	7.67	28
L3	-3.95	2.42E+04	-1	7.96	-152
L4	-3.95	2.42E+04	-1	7.96	-152
NF	—	—	—	—	—
NS	3.54E-04	2.43E+04	0	3.51E-03	-15

Table D-494. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.38E+04	2.38E+04	-2.37E+04	2.39E+04
A2	-2.36E+04	2.36E+04	-2.35E+04	2.37E+04
FD	-2.44E+04	2.44E+04	-2.43E+04	2.43E+04
L1	-2.38E+04	2.38E+04	-2.37E+04	2.37E+04
L3	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
L4	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
NF	—	—	—	—
NS	-2.43E+04	2.43E+04	-2.41E+04	2.41E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-248. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

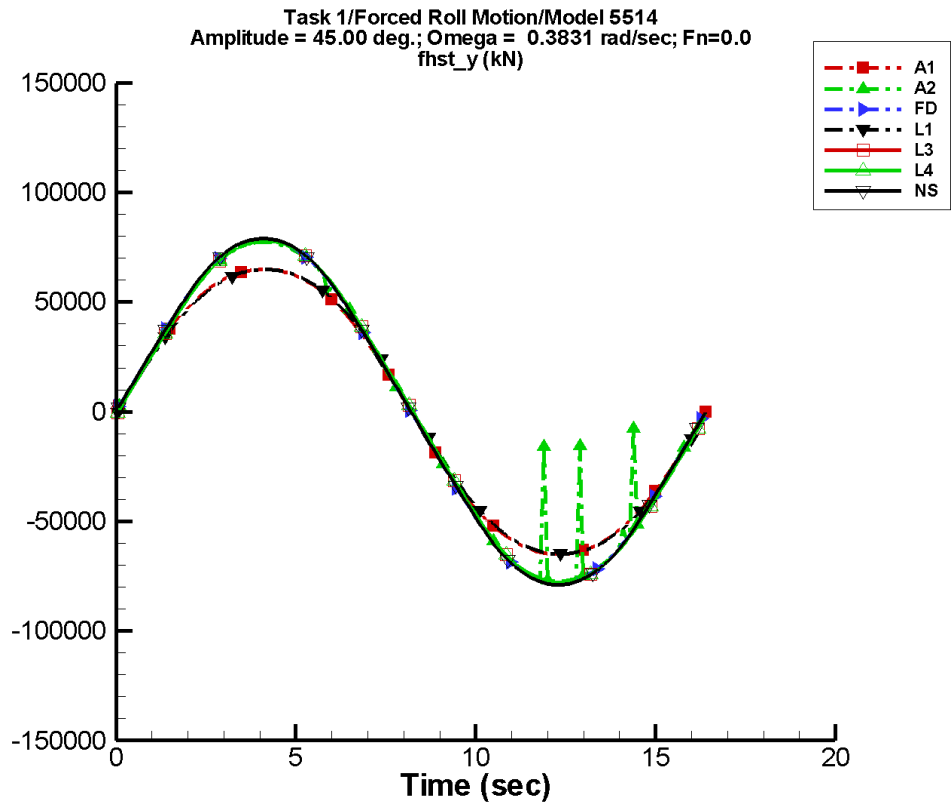
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	11.4	4.65E+04	0	91.4	60
A2	17.6	5.01E+04	0	161.	-106
FD	-21.4	5.02E+04	0	145.	-104
L1	32.3	4.65E+04	-1	60.6	28
L3	-40.5	5.00E+04	-1	78.0	-153
L4	-40.5	5.00E+04	-1	78.0	-153
NF	—	—	—	—	—
NS	-2.03E-04	5.02E+04	0	1.34E-03	101

Table D-496. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E+04	4.60E+04	-4.58E+04	4.61E+04
A2	-5.12E+04	5.12E+04	-5.10E+04	5.13E+04
FD	-5.09E+04	5.09E+04	-5.07E+04	5.07E+04
L1	-4.59E+04	4.59E+04	-4.58E+04	4.58E+04
L3	-5.07E+04	5.07E+04	-5.07E+04	5.06E+04
L4	-5.07E+04	5.07E+04	-5.07E+04	5.06E+04
NF	—	—	—	—
NS	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-249. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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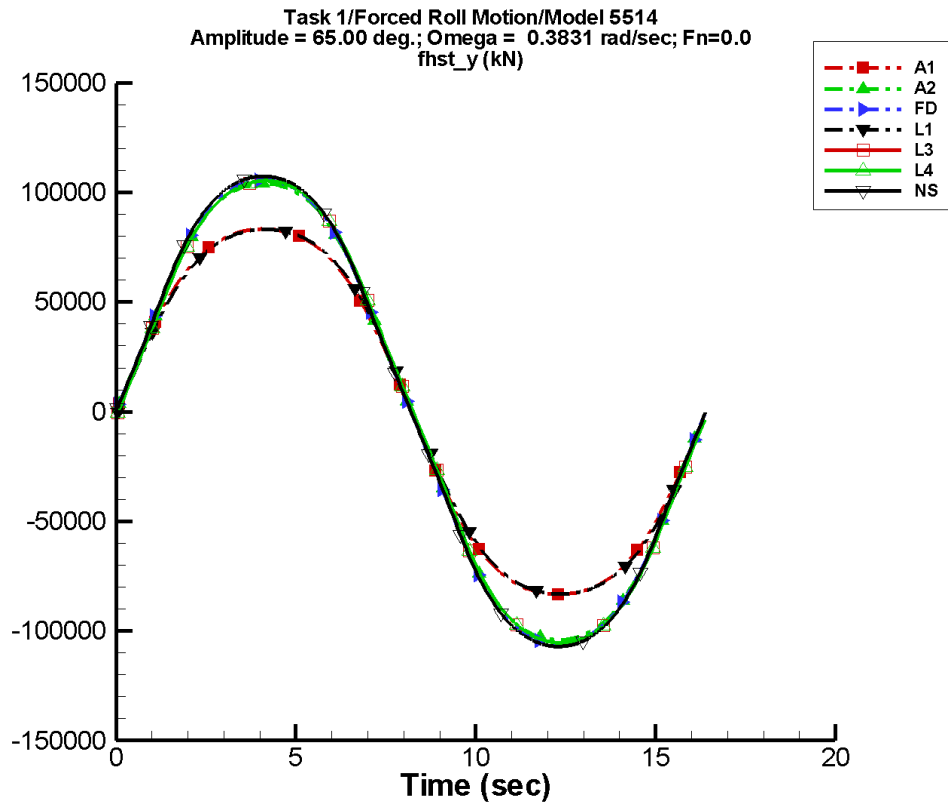
Table D-497. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	37.7	6.68E+04	0	302.	60
A2	1.01E+03	7.50E+04	0	1.58E+03	-114
FD	-32.3	7.76E+04	0	251.	-108
L1	106.	6.68E+04	-1	201.	29
L3	-85.1	7.72E+04	-1	164.	-145
L4	-85.1	7.72E+04	-1	164.	-145
NF	—	—	—	—	—
NS	-0.127	7.82E+04	0	0.202	90

Table D-498. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.50E+04	6.50E+04	-6.48E+04	6.52E+04
A2	-7.74E+04	7.74E+04	-7.23E+04	7.76E+04
FD	-7.82E+04	7.82E+04	-7.79E+04	7.79E+04
L1	-6.49E+04	6.49E+04	-6.48E+04	6.48E+04
L3	-7.79E+04	7.79E+04	-7.78E+04	7.78E+04
L4	-7.79E+04	7.79E+04	-7.78E+04	7.78E+04
NF	—	—	—	—
NS	-7.90E+04	7.90E+04	-7.89E+04	7.89E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-250. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

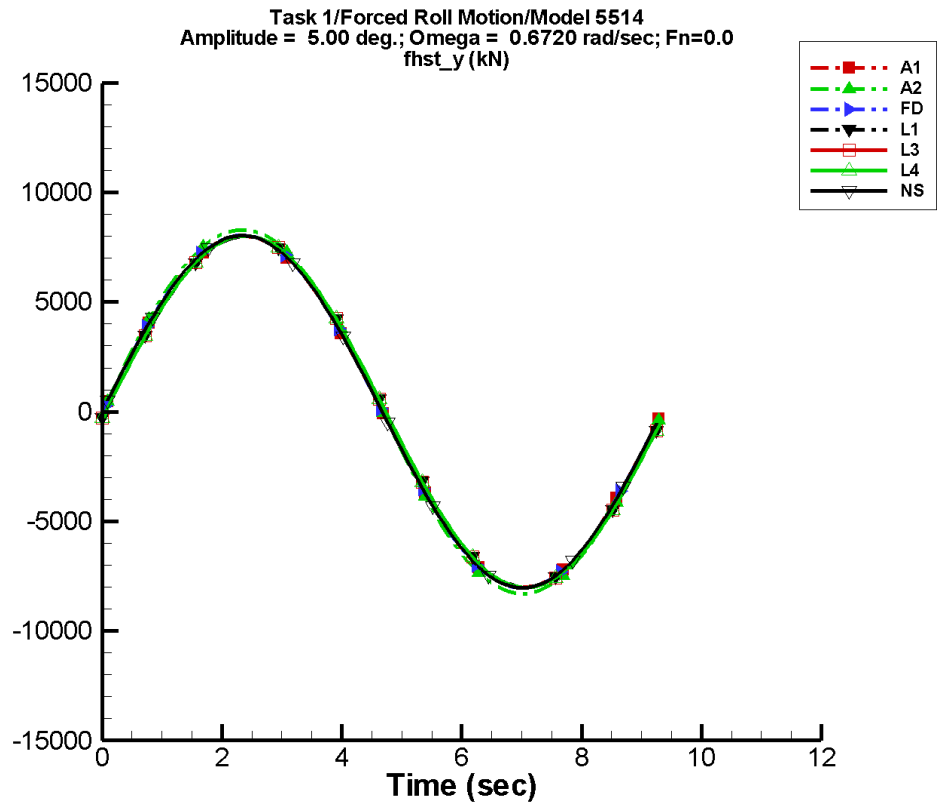
Table D-499. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	110.	8.83E+04	0	874.	61
A2	-20.6	1.07E+05	0	327.	48
FD	49.0	1.09E+05	0	323.	82
L1	306.	8.86E+04	-1	582.	29
L3	62.3	1.09E+05	-1	169.	-14
L4	62.3	1.09E+05	-1	169.	-14
NF	—	—	—	—	—
NS	72.2	1.10E+05	0	85.6	-90

Table D-500. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.34E+04	8.34E+04	-8.32E+04	8.37E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05
FD	-1.06E+05	1.06E+05	-1.05E+05	1.05E+05
L1	-8.32E+04	8.32E+04	-8.31E+04	8.31E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
NF	—	—	—	—
NS	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-251. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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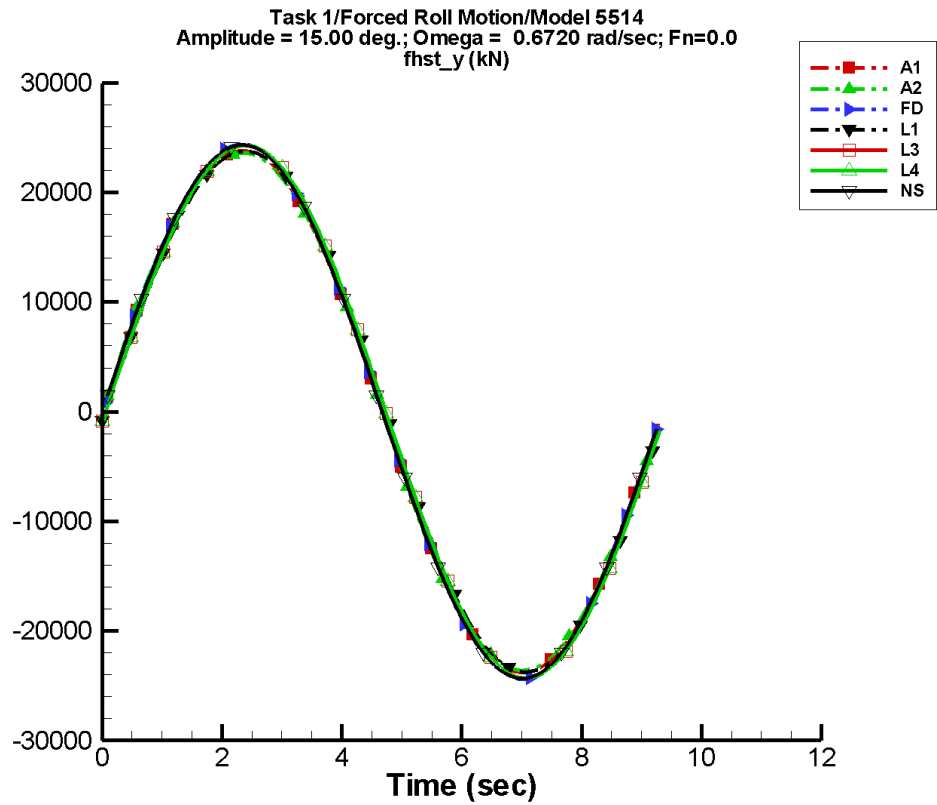
Table D–501. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.120	8.02E+03	0	0.308	41
A2	2.21	8.34E+03	0	5.13	41
FD	-4.03E-02	8.04E+03	0	4.32E-02	28
L1	0.302	8.00E+03	-2	0.290	27
L3	1.20E-02	8.02E+03	-2	0.261	-152
L4	1.20E-02	8.02E+03	-2	0.261	-152
NF	—	—	—	—	—
NS	-9.13E-04	8.03E+03	0	1.06E-03	56

Table D–502. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+03	8.01E+03	-7.93E+03	7.92E+03
A2	-8.30E+03	8.30E+03	-8.21E+03	8.21E+03
FD	-8.04E+03	8.04E+03	-8.00E+03	7.95E+03
L1	-8.00E+03	8.00E+03	-7.97E+03	7.97E+03
L3	-8.02E+03	8.02E+03	-7.99E+03	7.99E+03
L4	-8.02E+03	8.02E+03	-7.99E+03	7.99E+03
NF	—	—	—	—
NS	-8.03E+03	8.03E+03	-7.95E+03	7.95E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-252. Time history of  $F_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

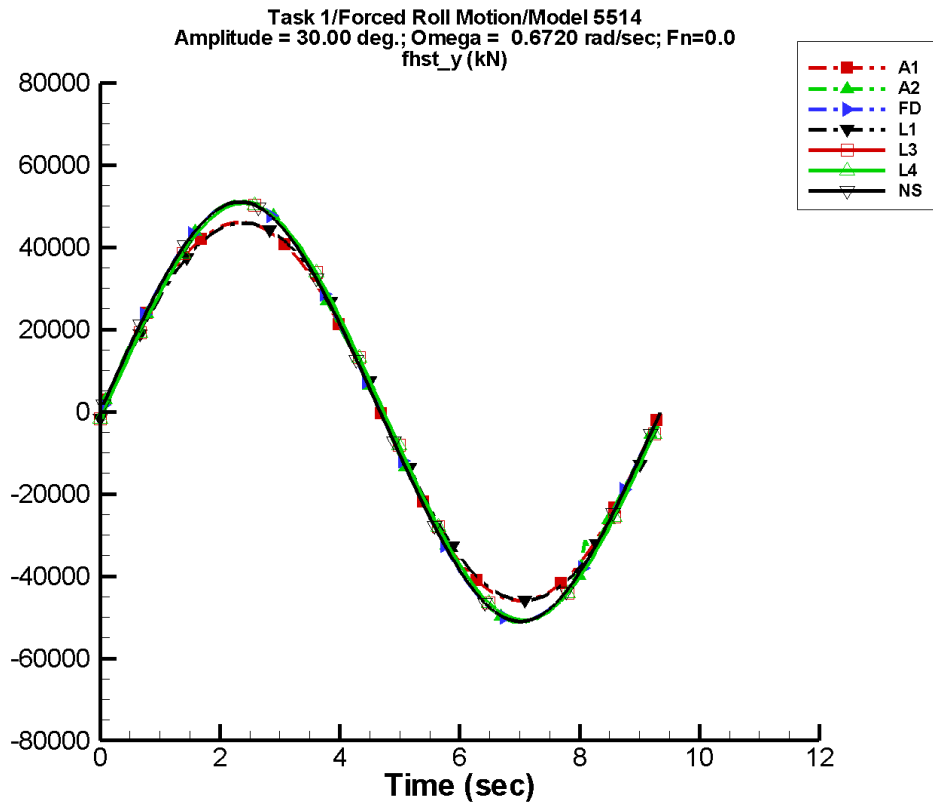
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	3.42	2.39E+04	0	8.13	44
A2	15.1	2.38E+04	0	41.6	54
FD	-5.58	2.43E+04	0	10.3	-33
L1	4.61	2.38E+04	-2	7.86	25
L3	-3.88	2.42E+04	-2	8.24	-157
L4	-3.88	2.42E+04	-2	8.24	-157
NF	—	—	—	—	—
NS	-1.20E-03	2.43E+04	0	3.42E-03	54

Table D-504. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.38E+04	2.38E+04	-2.35E+04	2.35E+04
A2	-2.36E+04	2.36E+04	-2.33E+04	2.33E+04
FD	-2.44E+04	2.44E+04	-2.42E+04	2.41E+04
L1	-2.38E+04	2.38E+04	-2.37E+04	2.37E+04
L3	-2.43E+04	2.43E+04	-2.42E+04	2.42E+04
L4	-2.43E+04	2.43E+04	-2.42E+04	2.42E+04
NF	—	—	—	—
NS	-2.43E+04	2.43E+04	-2.41E+04	2.41E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-253. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

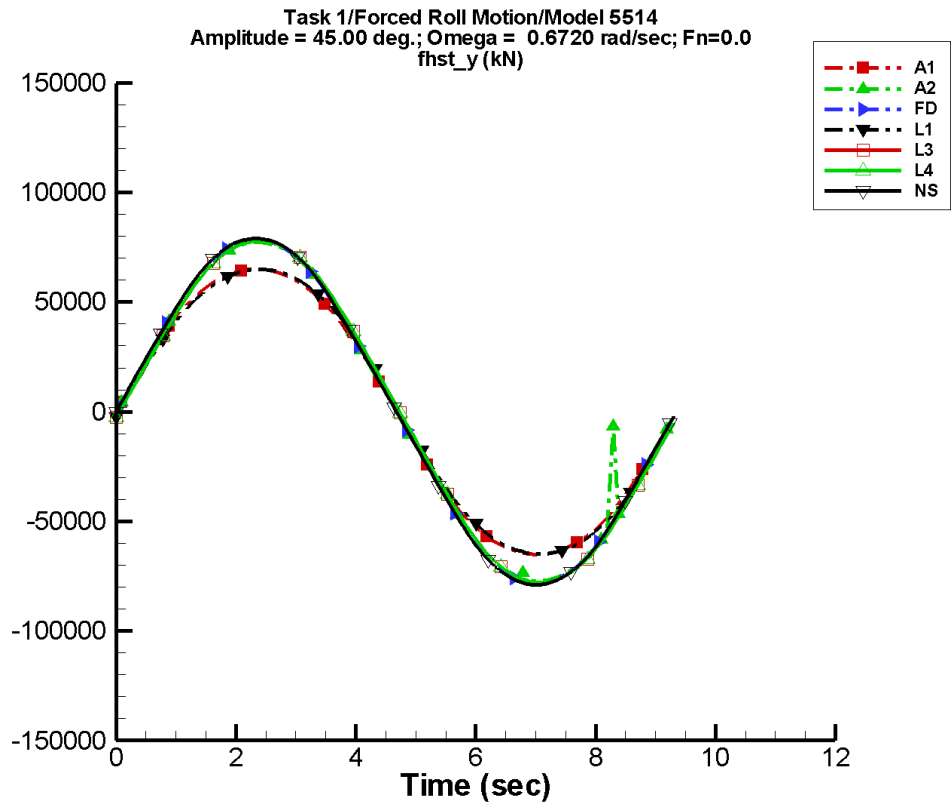
Table D-505. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	27.1	4.65E+04	0	64.2	44
A2	16.5	5.00E+04	0	257.	-164
FD	-54.8	5.03E+04	0	102.	-34
L1	33.7	4.65E+04	-2	62.2	25
L3	-41.4	5.00E+04	-2	80.5	-157
L4	-41.4	5.00E+04	-2	80.5	-157
NF	—	—	—	—	—
NS	8.55E-03	5.02E+04	0	1.96E-02	14

Table D-506. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E+04	4.60E+04	-4.55E+04	4.55E+04
A2	-5.12E+04	5.12E+04	-5.06E+04	5.06E+04
FD	-5.09E+04	5.09E+04	-5.06E+04	5.03E+04
L1	-4.59E+04	4.59E+04	-4.57E+04	4.57E+04
L3	-5.07E+04	5.07E+04	-5.05E+04	5.05E+04
L4	-5.07E+04	5.07E+04	-5.05E+04	5.05E+04
NF	—	—	—	—
NS	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-254. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

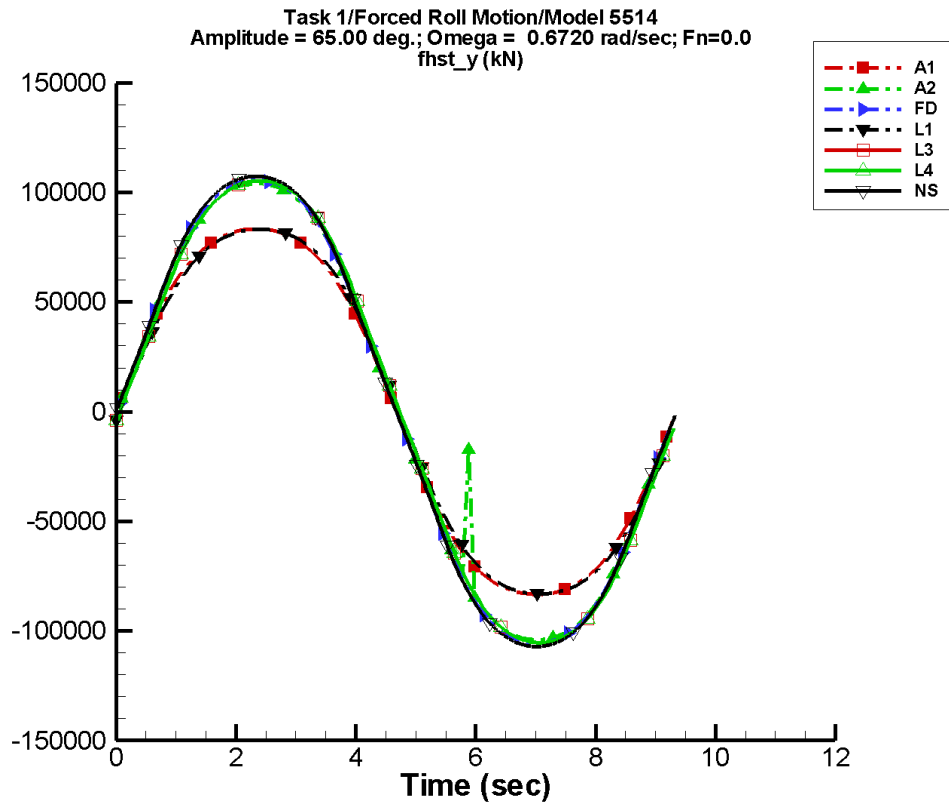
Table D-507. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	89.7	6.69E+04	0	212.	44
A2	454.	7.62E+04	0	983.	-172
FD	-87.4	7.76E+04	0	182.	-47
L1	110.	6.68E+04	-2	206.	25
L3	-72.3	7.72E+04	-2	157.	-137
L4	-72.3	7.72E+04	-2	157.	-137
NF	—	—	—	—	—
NS	4.08E-02	7.82E+04	0	7.47E-02	-93

Table D-508. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.50E+04	6.50E+04	-6.44E+04	6.44E+04
A2	-7.73E+04	7.74E+04	-7.62E+04	7.65E+04
FD	-7.82E+04	7.82E+04	-7.78E+04	7.73E+04
L1	-6.49E+04	6.49E+04	-6.47E+04	6.47E+04
L3	-7.79E+04	7.79E+04	-7.76E+04	7.76E+04
L4	-7.79E+04	7.79E+04	-7.76E+04	7.76E+04
NF	—	—	—	—
NS	-7.90E+04	7.90E+04	-7.89E+04	7.89E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-255. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

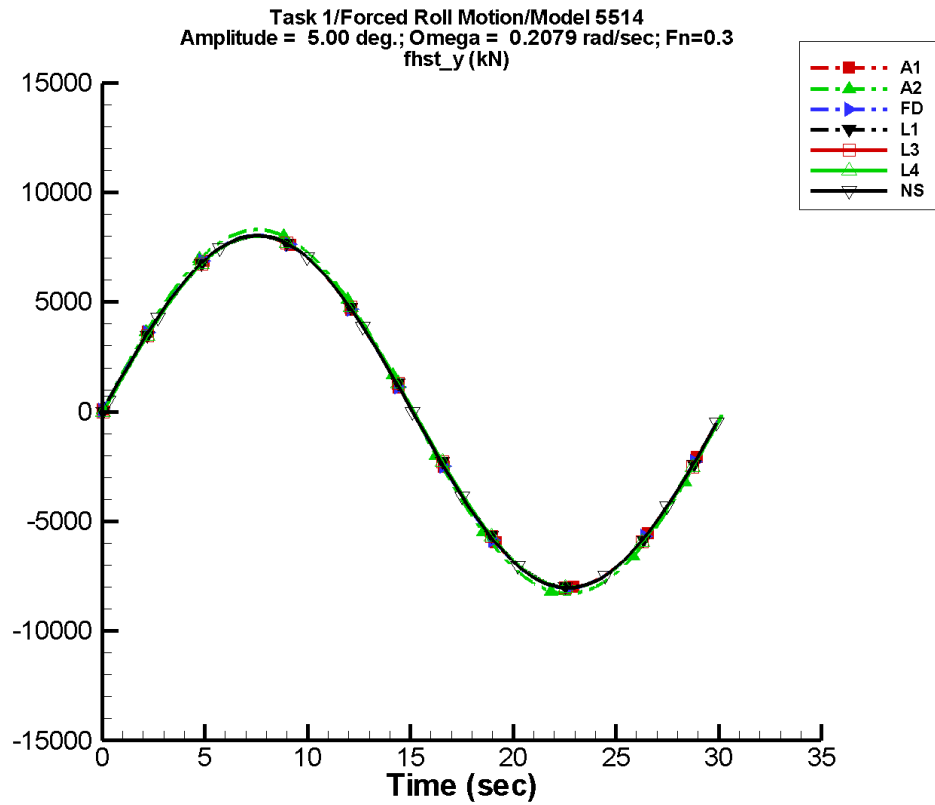
Table D–509. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	259.	8.86E+04	0	616.	45
A2	703.	1.06E+05	-1	1.47E+03	-1
FD	127.	1.09E+05	0	250.	174
L1	315.	8.86E+04	-2	595.	26
L3	97.6	1.09E+05	-2	248.	-22
L4	97.6	1.09E+05	-2	248.	-22
NF	—	—	—	—	—
NS	70.5	1.10E+05	0	83.0	-90

Table D–510. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.33E+04	8.33E+04	-8.28E+04	8.28E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.03E+05
FD	-1.06E+05	1.06E+05	-1.06E+05	1.05E+05
L1	-8.32E+04	8.32E+04	-8.30E+04	8.30E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
NF	—	—	—	—
NS	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05

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

Figure D-256. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

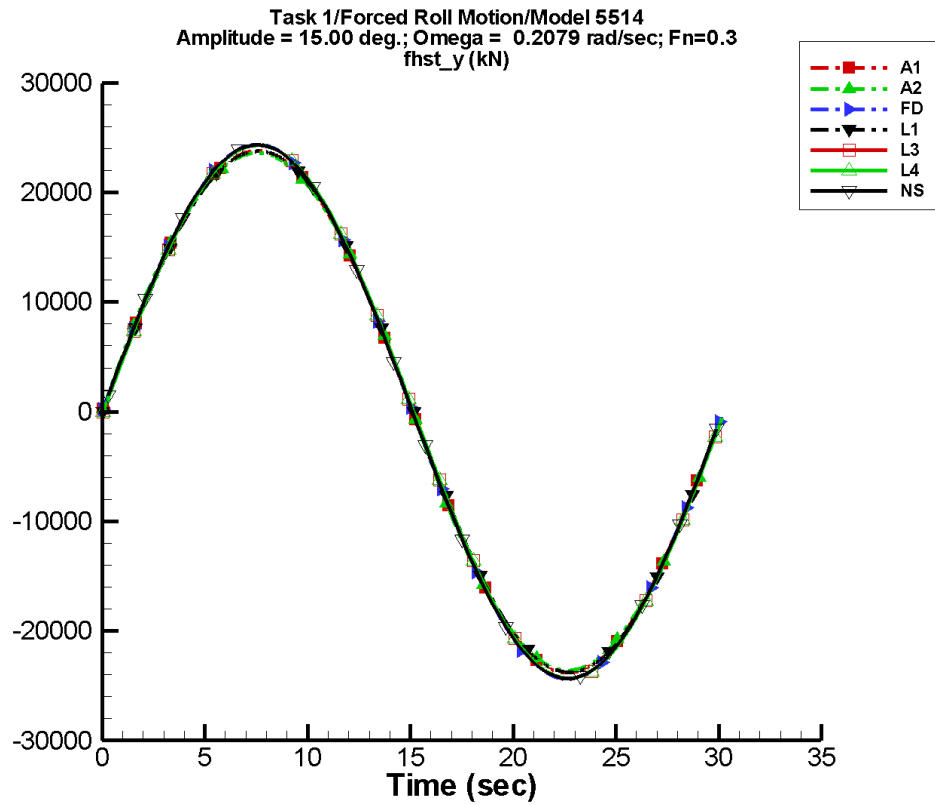
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.89E-02	8.02E+03	0	0.405	58
A2	1.31	8.34E+03	0	6.74	61
FD	-5.41E-03	8.04E+03	0	4.11E-02	154
L1	0.145	8.00E+03	-1	0.608	87
L3	-0.145	8.02E+03	-1	0.531	-93
L4	-0.145	8.02E+03	-1	0.531	-93
NF	—	—	—	—	—
NS	-8.15E-05	8.03E+03	0	6.10E-04	8

Table D–512. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+03	8.02E+03	-8.01E+03	8.02E+03
A2	-8.30E+03	8.30E+03	-8.29E+03	8.30E+03
FD	-8.04E+03	8.04E+03	-8.03E+03	8.03E+03
L1	-8.00E+03	8.00E+03	-8.00E+03	8.00E+03
L3	-8.02E+03	8.02E+03	-8.02E+03	8.02E+03
L4	-8.02E+03	8.02E+03	-8.02E+03	8.02E+03
NF	—	—	—	—
NS	-8.03E+03	8.03E+03	-7.95E+03	7.95E+03



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

Figure D-257. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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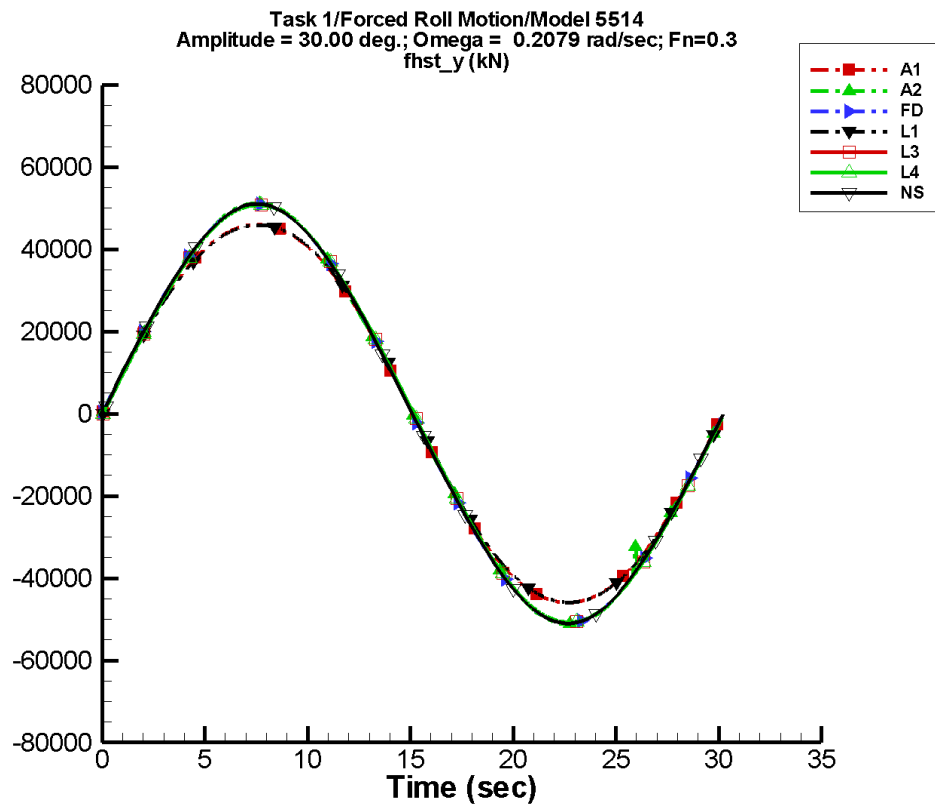
Table D-513. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.72	2.39E+04	0	10.8	59
A2	10.3	2.38E+04	0	51.0	67
FD	-2.11	2.43E+04	0	10.7	-124
L1	4.15	2.38E+04	-1	16.4	87
L3	-4.33	2.42E+04	-1	17.1	-93
L4	-4.33	2.42E+04	-1	17.1	-93
NF	—	—	—	—	—
NS	2.64E-04	2.43E+04	0	2.48E-03	57

Table D-514. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.38E+04	2.38E+04	-2.38E+04	2.38E+04
A2	-2.36E+04	2.36E+04	-2.36E+04	2.36E+04
FD	-2.44E+04	2.44E+04	-2.44E+04	2.44E+04
L1	-2.38E+04	2.38E+04	-2.38E+04	2.38E+04
L3	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
L4	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
NF	—	—	—	—
NS	-2.43E+04	2.43E+04	-2.41E+04	2.41E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-258. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

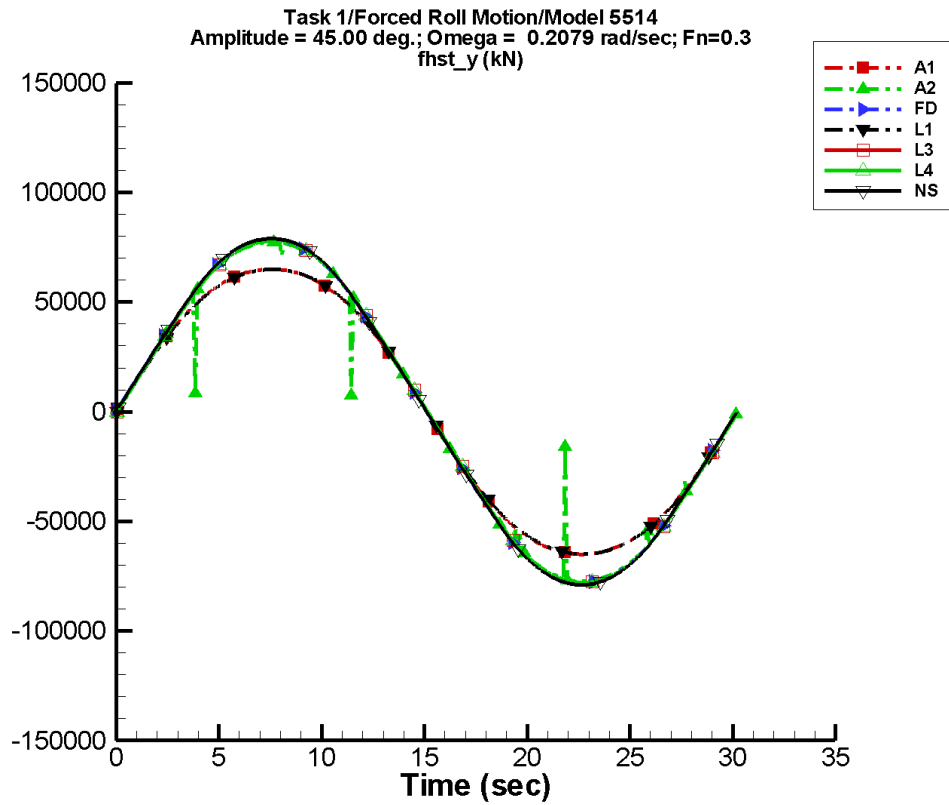
Table D–515. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	13.7	4.65E+04	0	85.5	59
A2	-1.08	5.02E+04	0	201.	-136
FD	-21.0	5.02E+04	0	106.	-123
L1	32.8	4.64E+04	-1	129.	87
L3	-42.3	5.00E+04	-1	167.	-93
L4	-42.3	5.00E+04	-1	167.	-93
NF	—	—	—	—	—
NS	-1.31E-03	5.02E+04	0	2.15E-03	67

Table D–516. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E+04	4.60E+04	-4.59E+04	4.60E+04
A2	-5.12E+04	5.12E+04	-5.11E+04	5.12E+04
FD	-5.09E+04	5.09E+04	-5.09E+04	5.09E+04
L1	-4.59E+04	4.59E+04	-4.59E+04	4.59E+04
L3	-5.07E+04	5.07E+04	-5.07E+04	5.07E+04
L4	-5.07E+04	5.07E+04	-5.07E+04	5.07E+04
NF	—	—	—	—
NS	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-259. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

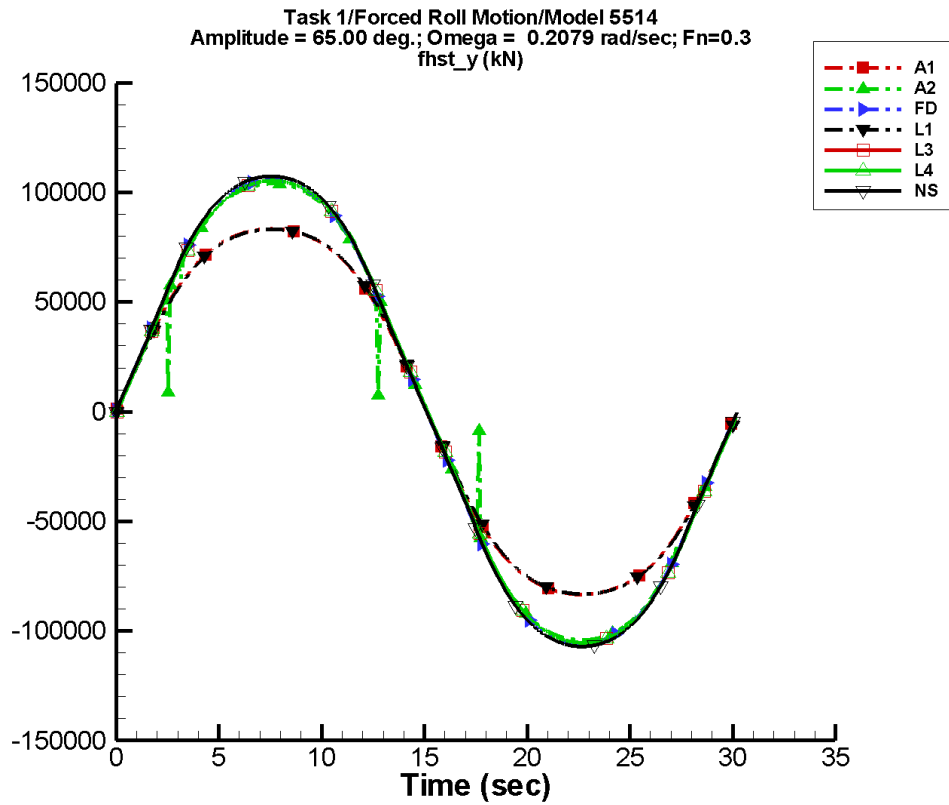
Table D-517. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	45.6	6.68E+04	0	283.	59
A2	0.539	7.60E+04	0	560.	-71
FD	-41.8	7.76E+04	0	201.	-112
L1	108.	6.67E+04	-1	427.	87
L3	-80.9	7.73E+04	-1	309.	-94
L4	-80.9	7.73E+04	-1	309.	-94
NF	—	—	—	—	—
NS	9.39E-02	7.82E+04	0	0.156	-90

Table D-518. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.50E+04	6.50E+04	-6.50E+04	6.51E+04
A2	-7.74E+04	7.77E+04	-7.80E+04	7.74E+04
FD	-7.82E+04	7.82E+04	-7.81E+04	7.81E+04
L1	-6.49E+04	6.49E+04	-6.49E+04	6.49E+04
L3	-7.79E+04	7.79E+04	-7.79E+04	7.79E+04
L4	-7.79E+04	7.79E+04	-7.79E+04	7.79E+04
NF	—	—	—	—
NS	-7.90E+04	7.90E+04	-7.89E+04	7.89E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-260. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

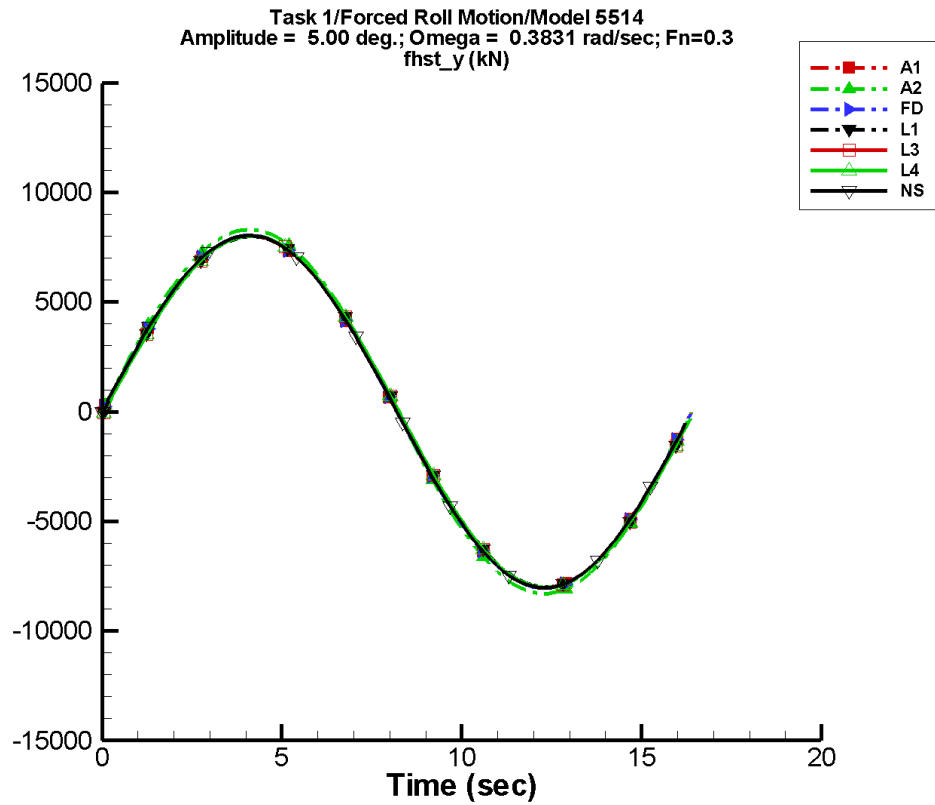
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	133.	8.84E+04	0	819.	59
A2	-92.7	1.07E+05	0	494.	5
FD	20.1	1.09E+05	0	228.	26
L1	314.	8.83E+04	-1	1.24E+03	87
L3	81.7	1.08E+05	-1	354.	90
L4	81.7	1.08E+05	-1	354.	90
NF	—	—	—	—	—
NS	71.5	1.10E+05	0	84.8	-90

Table D–520. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.34E+04	8.34E+04	-8.33E+04	8.35E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05
FD	-1.06E+05	1.06E+05	-1.06E+05	1.06E+05
L1	-8.32E+04	8.32E+04	-8.32E+04	8.32E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
NF	—	—	—	—
NS	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-261. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

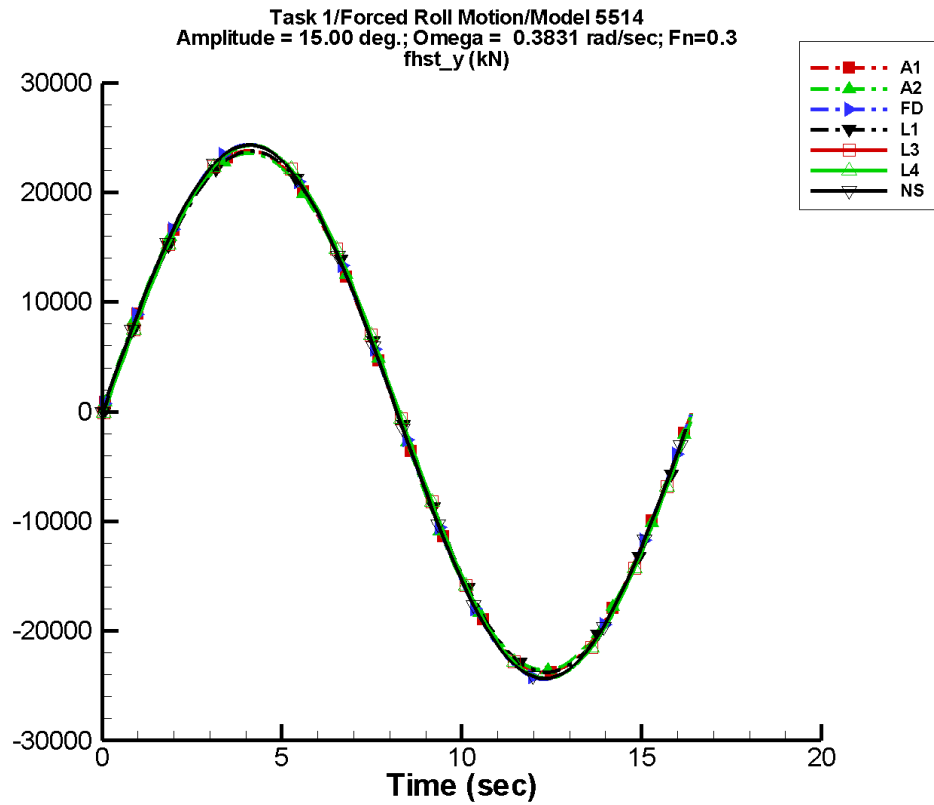
Table D–521. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.39E-02	8.02E+03	0	0.431	60
A2	1.20	8.34E+03	0	6.97	60
FD	-2.27E-02	8.04E+03	0	5.71E-02	-48
L1	0.197	8.00E+03	-1	0.285	28
L3	-9.23E-02	8.02E+03	-1	0.251	-148
L4	-9.23E-02	8.02E+03	-1	0.251	-148
NF	—	—	—	—	—
NS	3.60E-04	8.03E+03	0	1.01E-03	-35

Table D–522. Minimum and maximum of of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+03	8.02E+03	-7.99E+03	8.04E+03
A2	-8.30E+03	8.30E+03	-8.27E+03	8.33E+03
FD	-8.04E+03	8.04E+03	-8.01E+03	8.01E+03
L1	-8.00E+03	8.00E+03	-7.99E+03	7.99E+03
L3	-8.02E+03	8.02E+03	-8.01E+03	8.01E+03
L4	-8.02E+03	8.02E+03	-8.01E+03	8.01E+03
NF	—	—	—	—
NS	-8.03E+03	8.03E+03	-7.95E+03	7.95E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-262. Time history of  $F_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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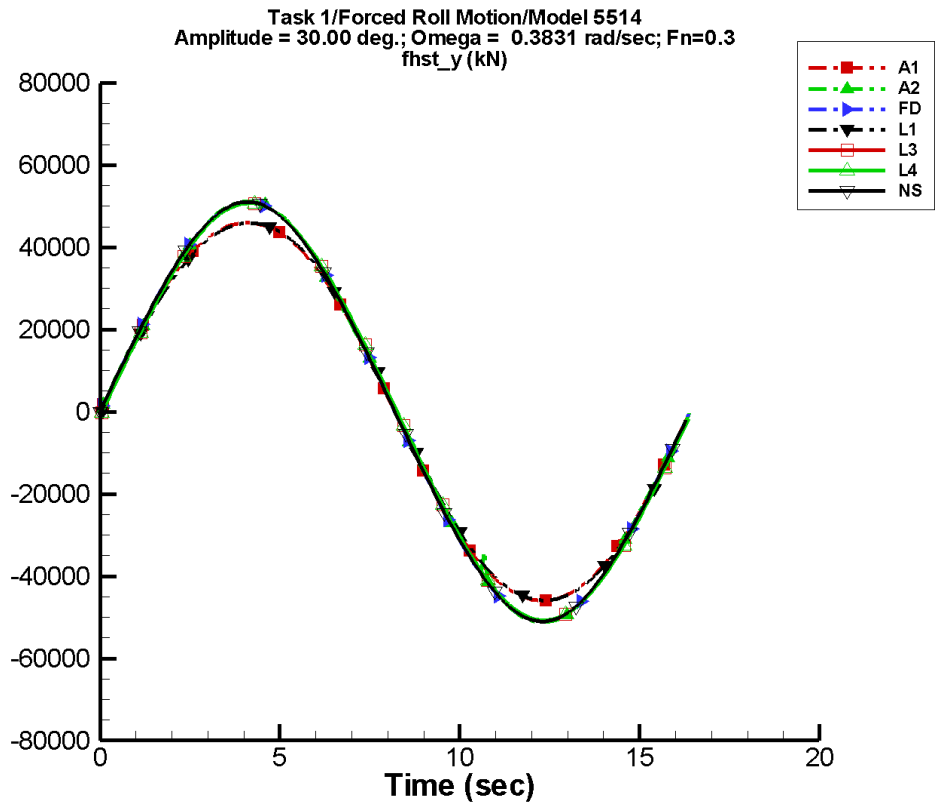
Table D-523. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.43	2.39E+04	0	11.6	60
A2	9.79	2.38E+04	0	52.2	65
FD	-2.15	2.43E+04	0	14.6	-104
L1	4.25	2.38E+04	-1	7.67	28
L3	-3.95	2.42E+04	-1	7.96	-152
L4	-3.95	2.42E+04	-1	7.96	-152
NF	—	—	—	—	—
NS	3.54E-04	2.43E+04	0	3.51E-03	-15

Table D-524. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.38E+04	2.38E+04	-2.37E+04	2.39E+04
A2	-2.36E+04	2.36E+04	-2.35E+04	2.37E+04
FD	-2.44E+04	2.44E+04	-2.43E+04	2.43E+04
L1	-2.38E+04	2.38E+04	-2.37E+04	2.37E+04
L3	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
L4	-2.43E+04	2.43E+04	-2.43E+04	2.43E+04
NF	—	—	—	—
NS	-2.43E+04	2.43E+04	-2.41E+04	2.41E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-263. Time history of  $F_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

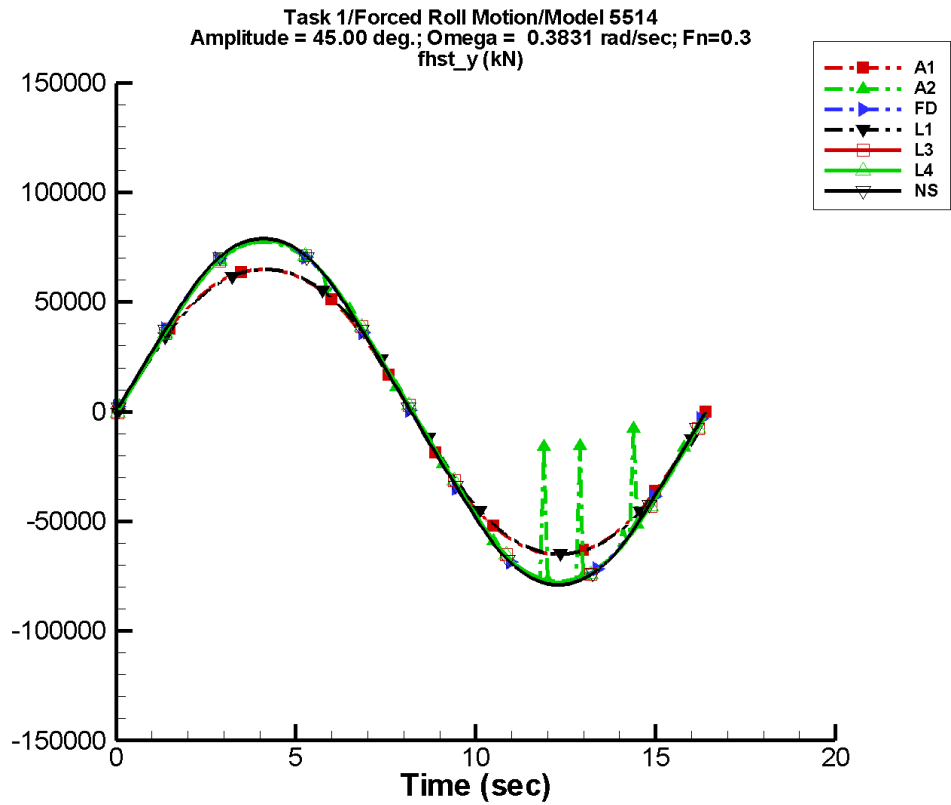
Table D–525. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	11.4	4.65E+04	0	91.4	60
A2	17.6	5.01E+04	0	161.	-106
FD	-21.4	5.02E+04	0	145.	-104
L1	32.3	4.65E+04	-1	60.6	28
L3	-40.5	5.00E+04	-1	78.0	-153
L4	-40.5	5.00E+04	-1	78.0	-153
NF	—	—	—	—	—
NS	-2.03E-04	5.02E+04	0	1.34E-03	101

Table D–526. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E+04	4.60E+04	-4.58E+04	4.61E+04
A2	-5.12E+04	5.12E+04	-5.10E+04	5.13E+04
FD	-5.09E+04	5.09E+04	-5.07E+04	5.07E+04
L1	-4.59E+04	4.59E+04	-4.58E+04	4.58E+04
L3	-5.07E+04	5.07E+04	-5.07E+04	5.06E+04
L4	-5.07E+04	5.07E+04	-5.07E+04	5.06E+04
NF	—	—	—	—
NS	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-264. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

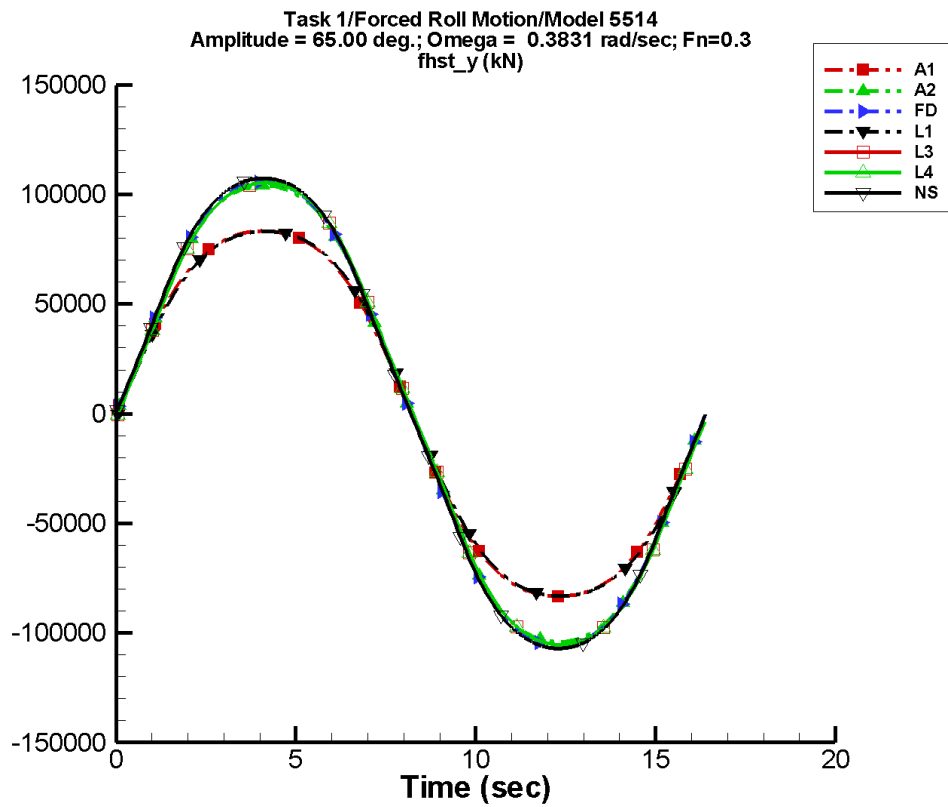
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	37.7	6.68E+04	0	302.	60
A2	1.01E+03	7.50E+04	0	1.58E+03	-114
FD	-32.3	7.76E+04	0	251.	-108
L1	106.	6.68E+04	-1	201.	29
L3	-85.1	7.72E+04	-1	164.	-145
L4	-85.1	7.72E+04	-1	164.	-145
NF	—	—	—	—	—
NS	-0.127	7.82E+04	0	0.202	90

Table D–528. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.50E+04	6.50E+04	-6.48E+04	6.52E+04
A2	-7.74E+04	7.74E+04	-7.23E+04	7.76E+04
FD	-7.82E+04	7.82E+04	-7.79E+04	7.79E+04
L1	-6.49E+04	6.49E+04	-6.48E+04	6.48E+04
L3	-7.79E+04	7.79E+04	-7.78E+04	7.78E+04
L4	-7.79E+04	7.79E+04	-7.78E+04	7.78E+04
NF	—	—	—	—
NS	-7.90E+04	7.90E+04	-7.89E+04	7.89E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-265. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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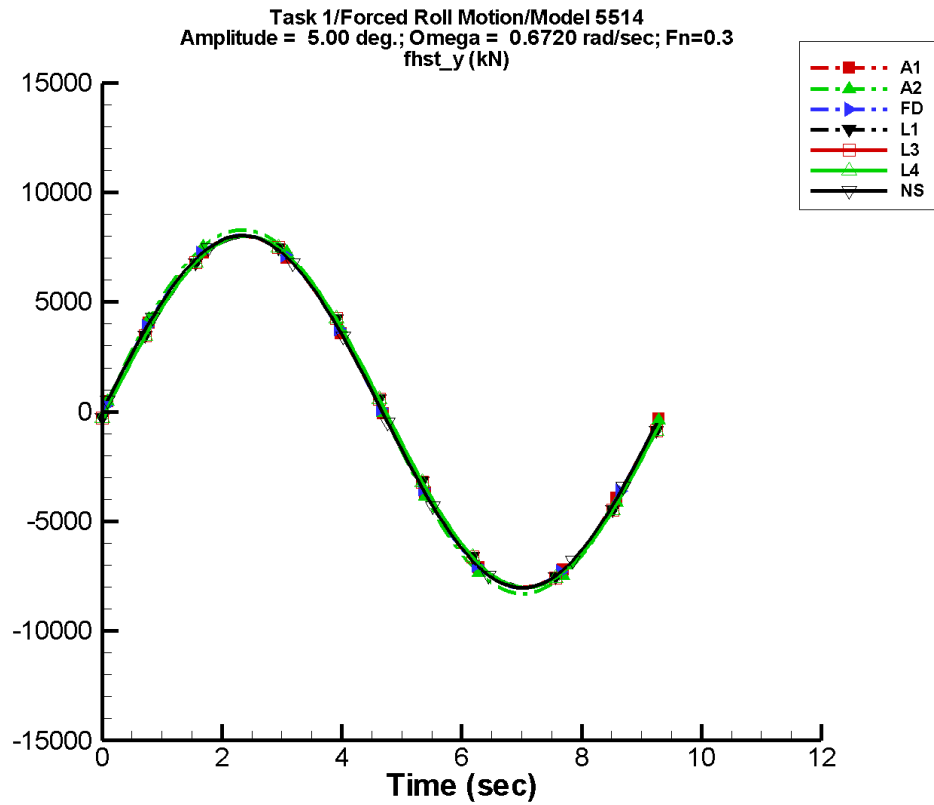
Table D–529. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	110.	8.83E+04	0	874.	61
A2	-20.6	1.07E+05	0	327.	48
FD	49.0	1.09E+05	0	323.	82
L1	306.	8.86E+04	-1	582.	29
L3	62.2	1.09E+05	-1	169.	-14
L4	62.2	1.09E+05	-1	169.	-14
NF	—	—	—	—	—
NS	72.2	1.10E+05	0	85.6	-90

Table D–530. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.34E+04	8.34E+04	-8.32E+04	8.37E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.04E+05
FD	-1.06E+05	1.06E+05	-1.05E+05	1.05E+05
L1	-8.32E+04	8.32E+04	-8.31E+04	8.31E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
NF	—	—	—	—
NS	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-266. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

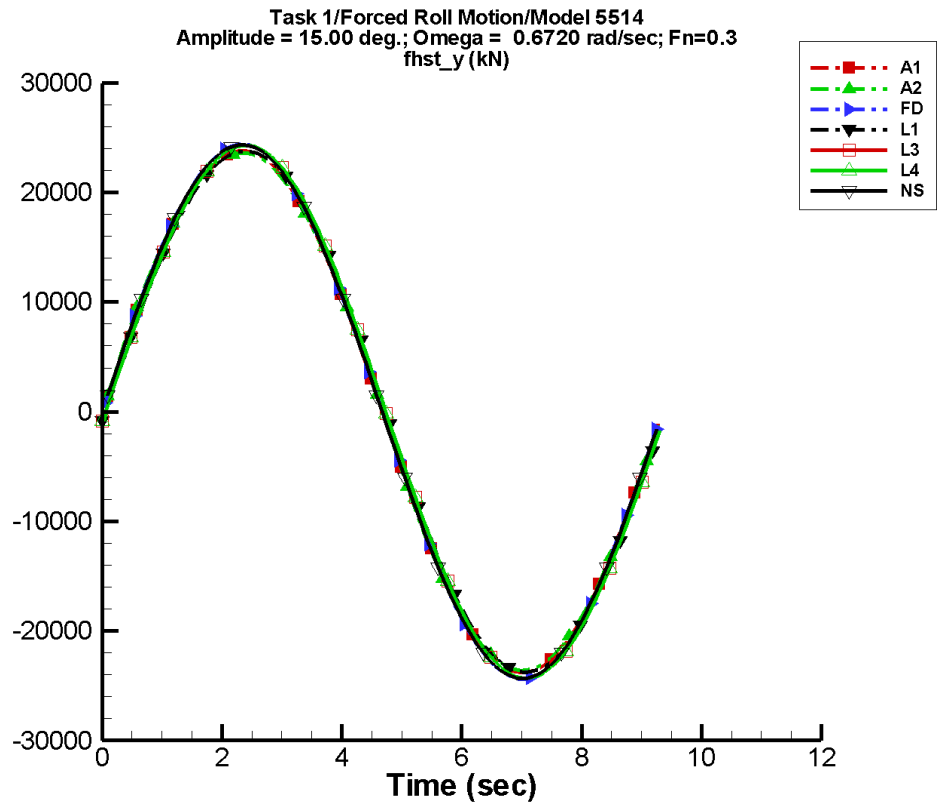
Table D–531. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.120	8.02E+03	0	0.308	41
A2	2.21	8.34E+03	0	5.13	41
FD	-3.99E-02	8.04E+03	0	4.26E-02	28
L1	0.302	8.00E+03	-2	0.290	27
L3	1.23E-02	8.02E+03	-2	0.260	-153
L4	1.23E-02	8.02E+03	-2	0.260	-153
NF	—	—	—	—	—
NS	-9.13E-04	8.03E+03	0	1.06E-03	56

Table D–532. Minimum and maximum of of  $F_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.02E+03	8.01E+03	-7.93E+03	7.92E+03
A2	-8.30E+03	8.30E+03	-8.21E+03	8.21E+03
FD	-8.04E+03	8.04E+03	-8.00E+03	7.95E+03
L1	-8.00E+03	8.00E+03	-7.97E+03	7.97E+03
L3	-8.02E+03	8.02E+03	-7.99E+03	7.99E+03
L4	-8.02E+03	8.02E+03	-7.99E+03	7.99E+03
NF	—	—	—	—
NS	-8.03E+03	8.03E+03	-7.95E+03	7.95E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-267. Time history of  $F_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

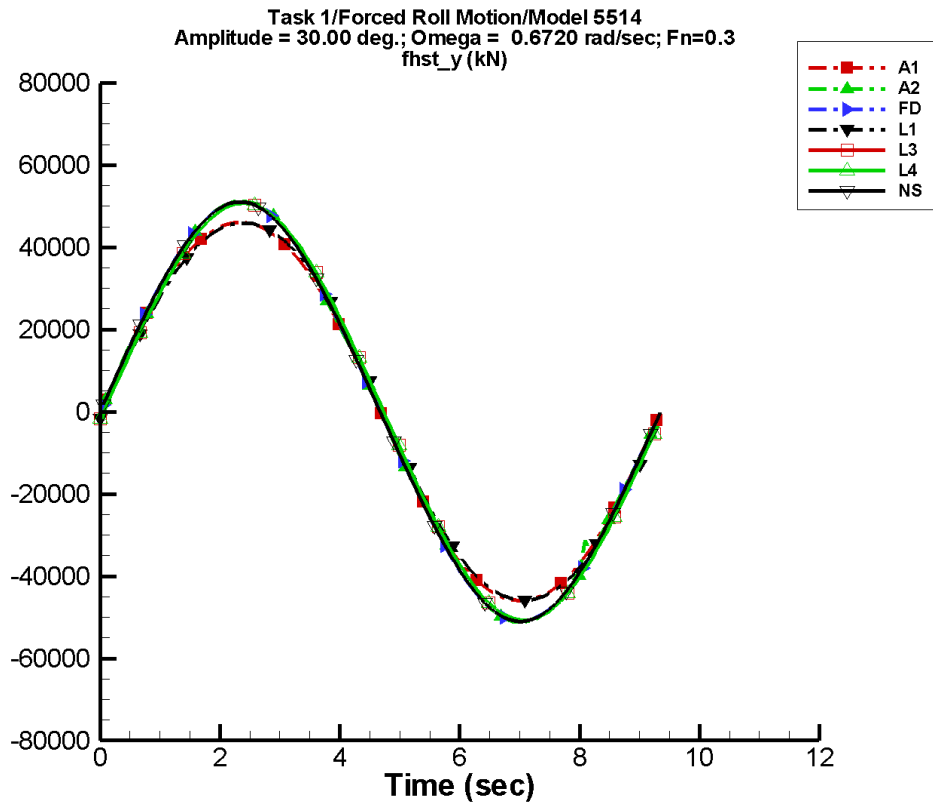
Table D-533. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	3.42	2.39E+04	0	8.13	44
A2	15.1	2.38E+04	0	41.6	54
FD	-5.58	2.43E+04	0	10.3	-33
L1	4.61	2.38E+04	-2	7.86	25
L3	-3.88	2.42E+04	-2	8.24	-157
L4	-3.88	2.42E+04	-2	8.24	-157
NF	—	—	—	—	—
NS	-1.20E-03	2.43E+04	0	3.42E-03	54

Table D-534. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.38E+04	2.38E+04	-2.35E+04	2.35E+04
A2	-2.36E+04	2.36E+04	-2.33E+04	2.33E+04
FD	-2.44E+04	2.44E+04	-2.42E+04	2.41E+04
L1	-2.38E+04	2.38E+04	-2.37E+04	2.37E+04
L3	-2.43E+04	2.43E+04	-2.42E+04	2.42E+04
L4	-2.43E+04	2.43E+04	-2.42E+04	2.42E+04
NF	—	—	—	—
NS	-2.43E+04	2.43E+04	-2.41E+04	2.41E+04

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-268. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

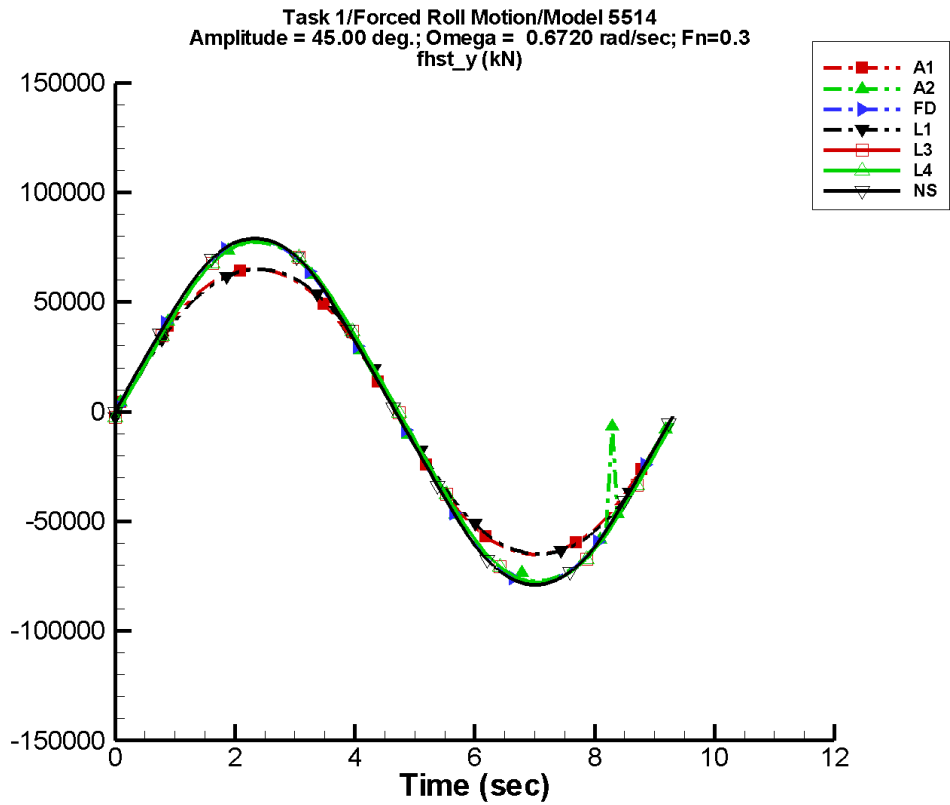
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	27.1	4.65E+04	0	64.2	44
A2	16.5	5.00E+04	0	257.	-164
FD	-54.8	5.03E+04	0	102.	-34
L1	33.7	4.65E+04	-2	62.2	25
L3	-41.4	5.00E+04	-2	80.5	-157
L4	-41.4	5.00E+04	-2	80.5	-157
NF	—	—	—	—	—
NS	8.55E-03	5.02E+04	0	1.96E-02	14

Table D-536. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E+04	4.60E+04	-4.55E+04	4.55E+04
A2	-5.12E+04	5.12E+04	-5.06E+04	5.06E+04
FD	-5.09E+04	5.09E+04	-5.06E+04	5.03E+04
L1	-4.59E+04	4.59E+04	-4.57E+04	4.57E+04
L3	-5.07E+04	5.07E+04	-5.05E+04	5.05E+04
L4	-5.07E+04	5.07E+04	-5.05E+04	5.05E+04
NF	—	—	—	—
NS	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-269. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

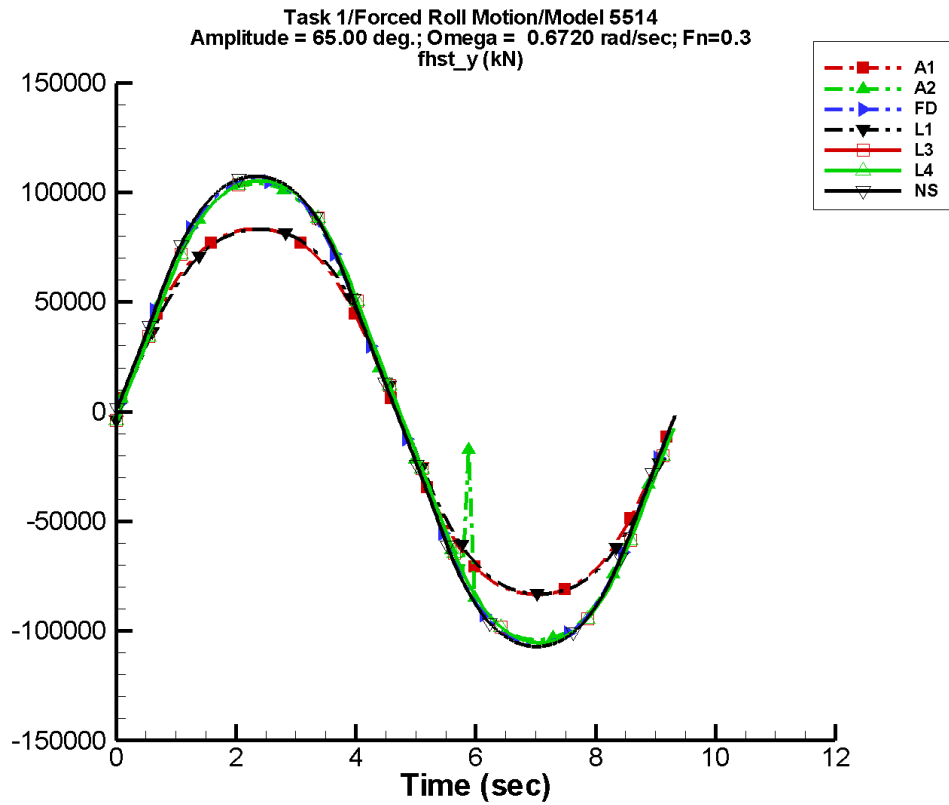
Table D-537. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	89.7	6.69E+04	0	212.	44
A2	454.	7.62E+04	0	983.	-172
FD	-87.4	7.76E+04	0	182.	-47
L1	110.	6.68E+04	-2	206.	25
L3	-72.3	7.72E+04	-2	157.	-137
L4	-72.3	7.72E+04	-2	157.	-137
NF	—	—	—	—	—
NS	4.08E-02	7.82E+04	0	7.47E-02	-93

Table D-538. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.50E+04	6.50E+04	-6.44E+04	6.44E+04
A2	-7.73E+04	7.74E+04	-7.62E+04	7.65E+04
FD	-7.82E+04	7.82E+04	-7.78E+04	7.73E+04
L1	-6.49E+04	6.49E+04	-6.47E+04	6.47E+04
L3	-7.79E+04	7.79E+04	-7.76E+04	7.76E+04
L4	-7.79E+04	7.79E+04	-7.76E+04	7.76E+04
NF	—	—	—	—
NS	-7.90E+04	7.90E+04	-7.89E+04	7.89E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-270. Time history of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

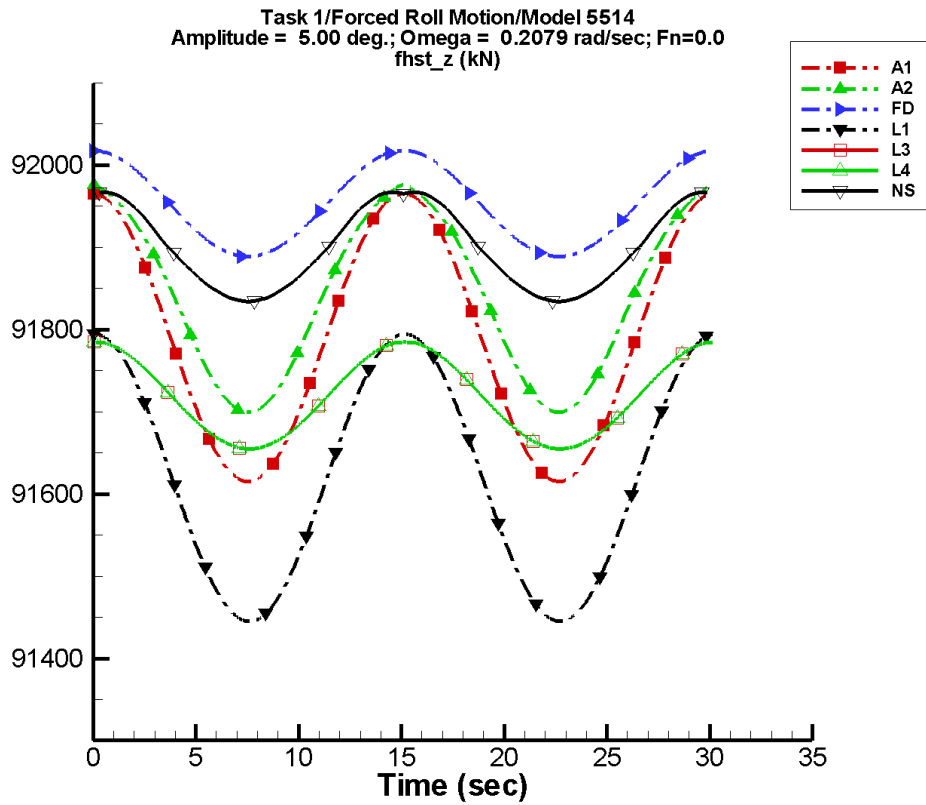
Table D-539. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	259.	8.86E+04	0	616.	45
A2	703.	1.06E+05	-1	1.47E+03	-1
FD	127.	1.09E+05	0	250.	174
L1	315.	8.86E+04	-2	595.	26
L3	97.6	1.09E+05	-2	248.	-22
L4	97.6	1.09E+05	-2	248.	-22
NF	—	—	—	—	—
NS	70.5	1.10E+05	0	83.0	-90

Table D-540. Minimum and maximum of  $F_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.33E+04	8.33E+04	-8.28E+04	8.28E+04
A2	-1.04E+05	1.04E+05	-1.04E+05	1.03E+05
FD	-1.06E+05	1.06E+05	-1.06E+05	1.05E+05
L1	-8.32E+04	8.32E+04	-8.30E+04	8.30E+04
L3	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
L4	-1.05E+05	1.05E+05	-1.05E+05	1.05E+05
NF	—	—	—	—
NS	-1.07E+05	1.07E+05	-1.07E+05	1.07E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-271. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

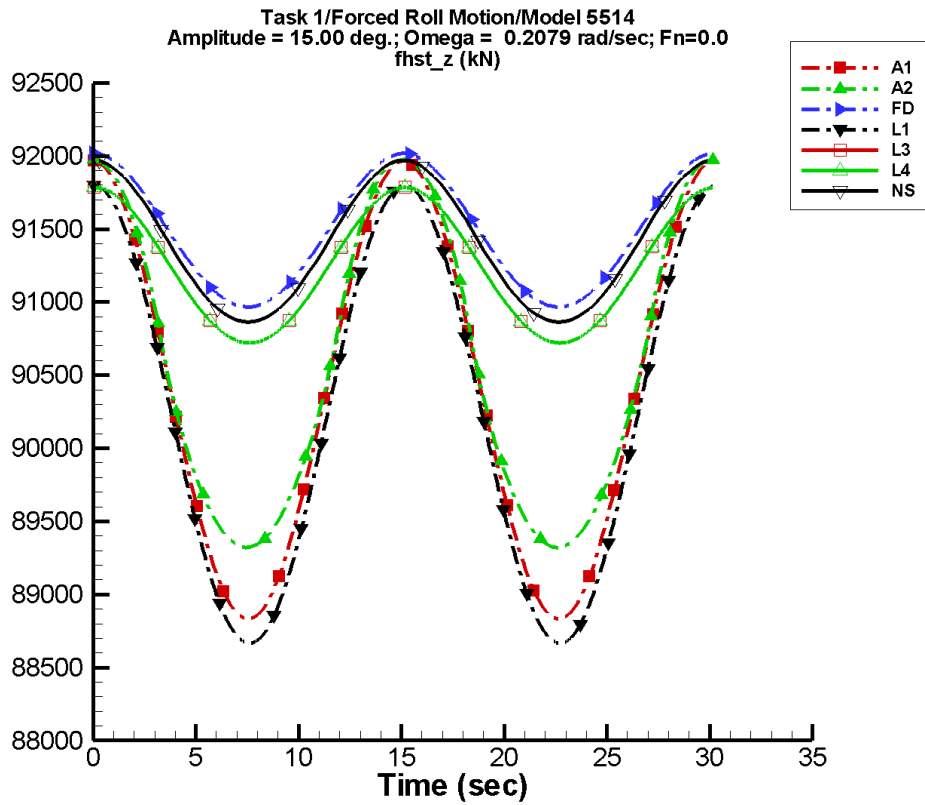
Table D–541. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	2.50E-03	-147	175.	90
A2	9.18E+04	8.01E-02	38	135.	90
FD	9.20E+04	2.84E-02	-164	64.4	90
L1	9.16E+04	6.44E-02	-3	175.	89
L3	9.17E+04	4.82E-02	135	64.8	89
L4	9.17E+04	4.82E-02	135	64.8	89
NF	—	—	—	—	—
NS	9.19E+04	1.12E-02	152	68.3	90

Table D–542. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.17E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-272. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

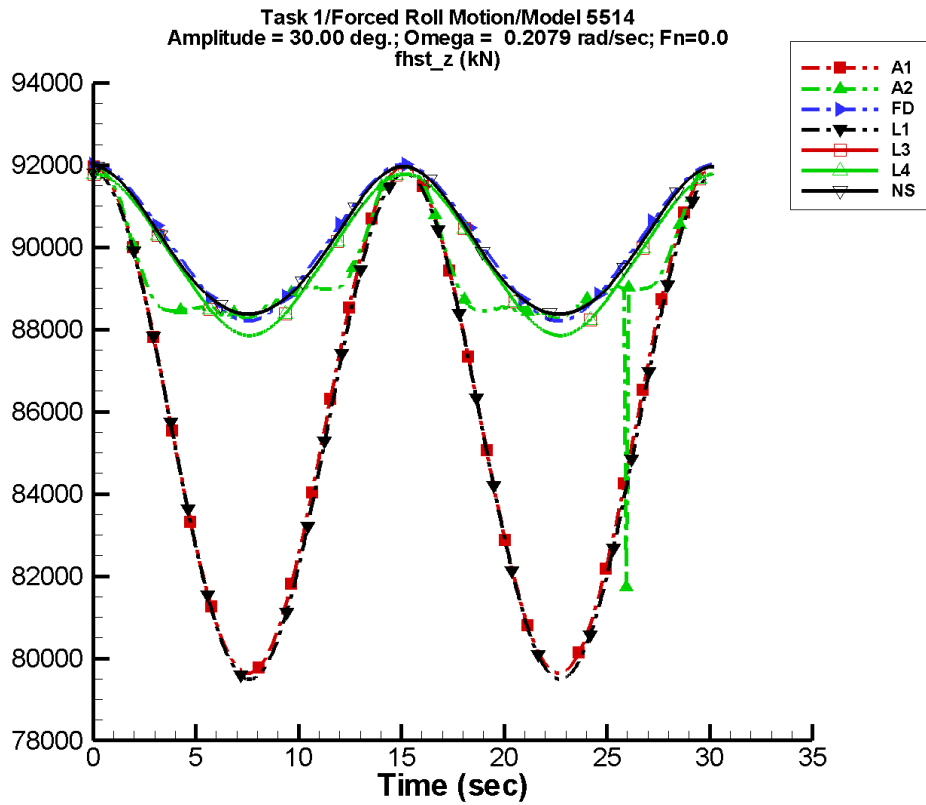
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	1.22E-02	-113	1.57E+03	90
A2	9.06E+04	1.66	-159	1.37E+03	91
FD	9.15E+04	0.293	-168	524.	90
L1	9.02E+04	0.137	100	1.56E+03	89
L3	9.12E+04	0.826	117	530.	89
L4	9.12E+04	0.826	117	530.	89
NF	—	—	—	—	—
NS	9.14E+04	4.69E-03	50	553.	90

Table D-544. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.88E+04	9.20E+04	8.88E+04	9.20E+04
A2	8.93E+04	9.20E+04	8.93E+04	9.20E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.07E+04	9.18E+04	9.07E+04	9.18E+04
NF	—	—	—	—
NS	9.09E+04	9.20E+04	9.09E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-273. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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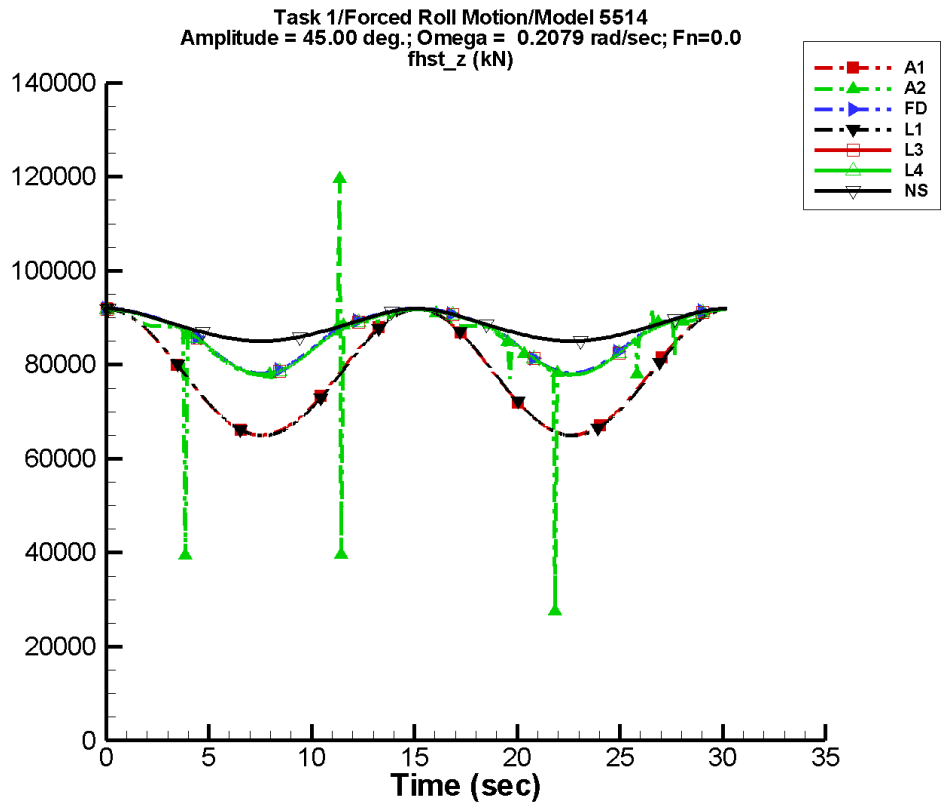
Table D-545. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	0.475	-162	6.16E+03	90
A2	8.94E+04	33.8	-50	1.52E+03	98
FD	9.01E+04	0.318	91	1.86E+03	90
L1	8.56E+04	2.57	119	6.15E+03	89
L3	8.98E+04	2.38	112	1.92E+03	89
L4	8.98E+04	2.38	112	1.92E+03	89
NF	—	—	—	—	—
NS	9.00E+04	1.26E-02	153	1.78E+03	90

Table D-546. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.96E+04	9.20E+04	7.97E+04	9.20E+04
A2	8.17E+04	9.20E+04	8.80E+04	9.20E+04
FD	8.82E+04	9.20E+04	8.82E+04	9.20E+04
L1	7.95E+04	9.18E+04	7.95E+04	9.18E+04
L3	8.79E+04	9.18E+04	8.79E+04	9.18E+04
L4	8.79E+04	9.18E+04	8.79E+04	9.18E+04
NF	—	—	—	—
NS	8.84E+04	9.20E+04	8.84E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-274. Time history of  $F_z^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

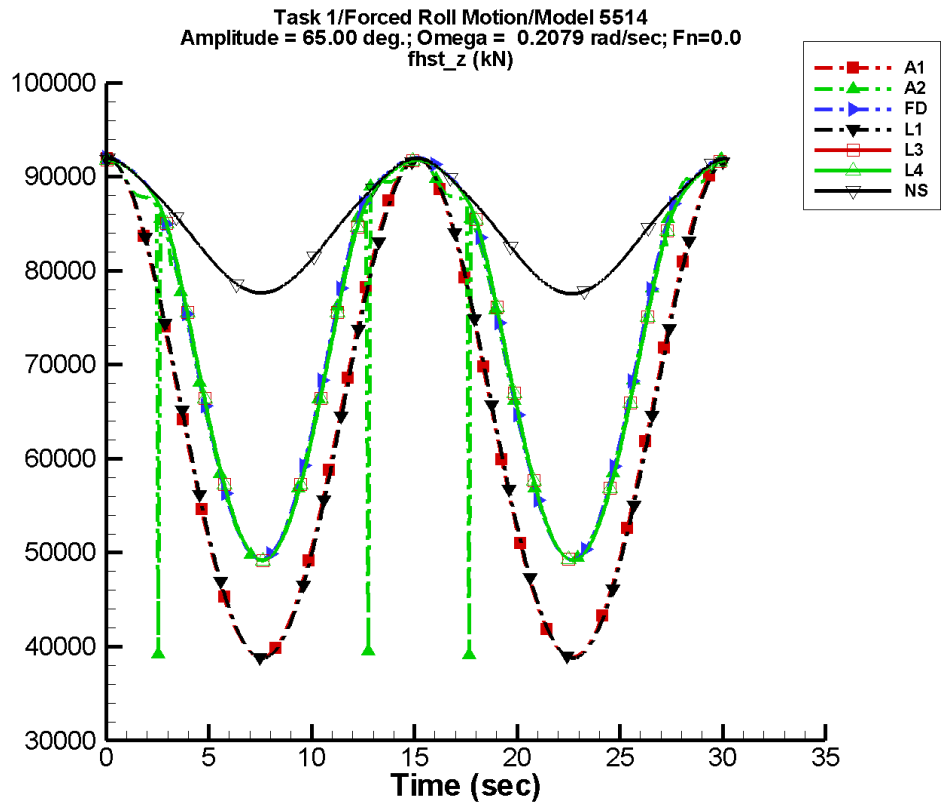
Table D-547. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.83E+04	2.36	-161	1.35E+04	90
A2	8.53E+04	269.	0	6.68E+03	94
FD	8.62E+04	29.8	11	6.65E+03	89
L1	7.82E+04	12.9	120	1.34E+04	89
L3	8.60E+04	77.7	-59	6.77E+03	89
L4	8.60E+04	77.7	-59	6.77E+03	89
NF	—	—	—	—	—
NS	8.83E+04	3.81E-02	-32	3.36E+03	90

Table D-548. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.50E+04	9.20E+04	6.51E+04	9.20E+04
A2	2.76E+04	1.20E+05	7.17E+04	9.20E+04
FD	7.82E+04	9.20E+04	7.82E+04	9.20E+04
L1	6.49E+04	9.18E+04	6.49E+04	9.18E+04
L3	7.79E+04	9.18E+04	7.79E+04	9.18E+04
L4	7.79E+04	9.18E+04	7.79E+04	9.18E+04
NF	—	—	—	—
NS	8.50E+04	9.20E+04	8.51E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-275. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

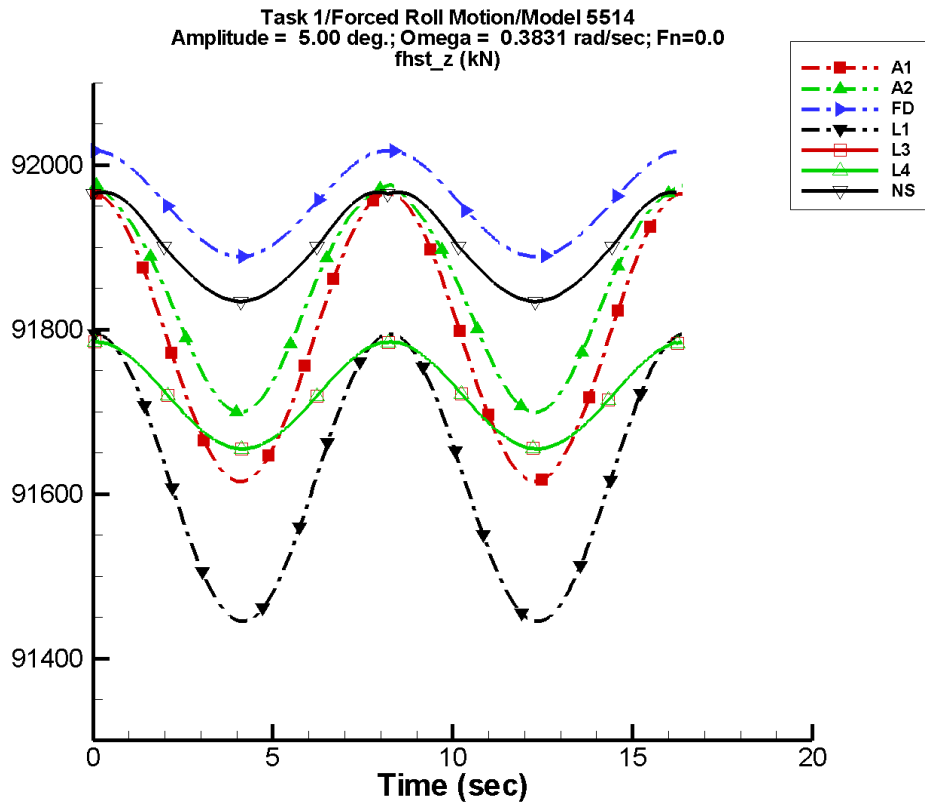
Table D–549. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.47E+04	9.91	-161	2.65E+04	90
A2	7.29E+04	391.	95	2.11E+04	91
FD	7.37E+04	68.3	3	2.19E+04	89
L1	6.45E+04	54.2	119	2.64E+04	89
L3	7.36E+04	271.	-61	2.21E+04	89
L4	7.36E+04	271.	-61	2.21E+04	89
NF	—	—	—	—	—
NS	8.47E+04	36.9	0	6.94E+03	90

Table D–550. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.89E+04	9.20E+04	3.90E+04	9.20E+04
A2	3.91E+04	9.20E+04	4.94E+04	9.19E+04
FD	4.93E+04	9.20E+04	4.94E+04	9.21E+04
L1	3.88E+04	9.18E+04	3.88E+04	9.18E+04
L3	4.92E+04	9.18E+04	4.92E+04	9.18E+04
L4	4.92E+04	9.18E+04	4.92E+04	9.18E+04
NF	—	—	—	—
NS	7.75E+04	9.20E+04	7.76E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-276. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

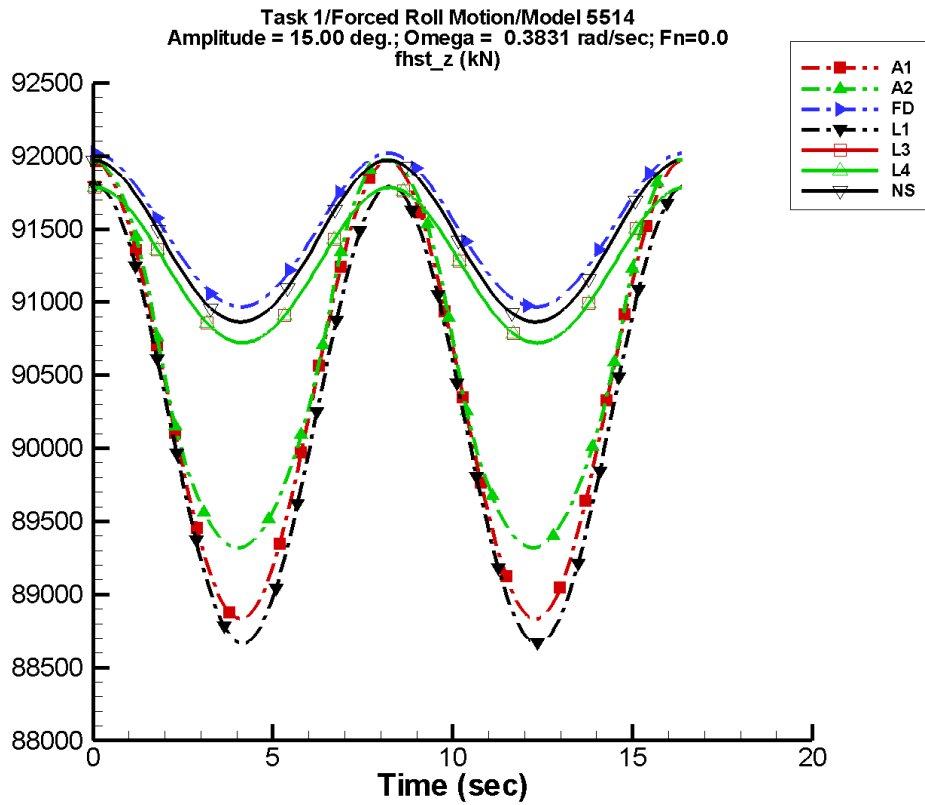
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	1.16E-02	168	175.	90
A2	9.18E+04	6.19E-02	26	135.	91
FD	9.20E+04	3.60E-02	106	64.3	90
L1	9.16E+04	1.65E-02	20	175.	87
L3	9.17E+04	3.75E-02	161	64.9	87
L4	9.17E+04	3.75E-02	161	64.9	87
NF	—	—	—	—	—
NS	9.19E+04	1.06E-02	52	68.3	90

Table D-552. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.17E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-277. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

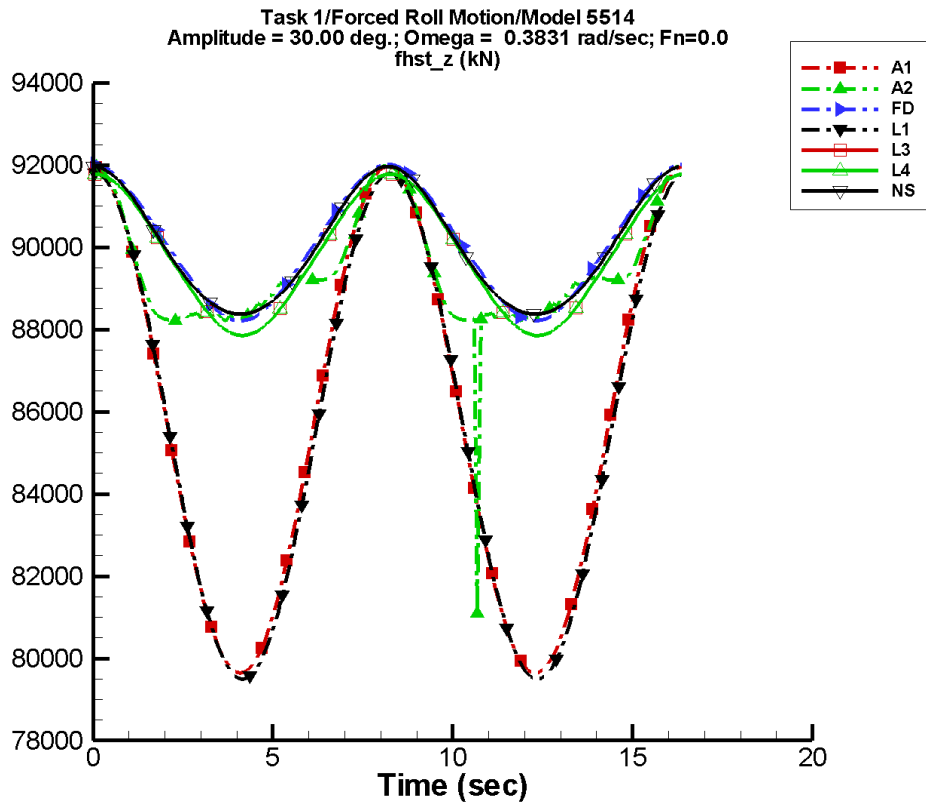
Table D-553. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	2.04E-02	-99	1.57E+03	90
A2	9.06E+04	0.955	-129	1.37E+03	91
FD	9.15E+04	0.588	120	523.	90
L1	9.02E+04	0.145	169	1.56E+03	87
L3	9.12E+04	0.554	162	531.	87
L4	9.12E+04	0.554	162	531.	87
NF	—	—	—	—	—
NS	9.14E+04	1.33E-02	52	553.	90

Table D-554. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.88E+04	9.20E+04	8.88E+04	9.20E+04
A2	8.93E+04	9.20E+04	8.93E+04	9.20E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.07E+04	9.18E+04	9.07E+04	9.18E+04
NF	—	—	—	—
NS	9.09E+04	9.20E+04	9.09E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-278. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

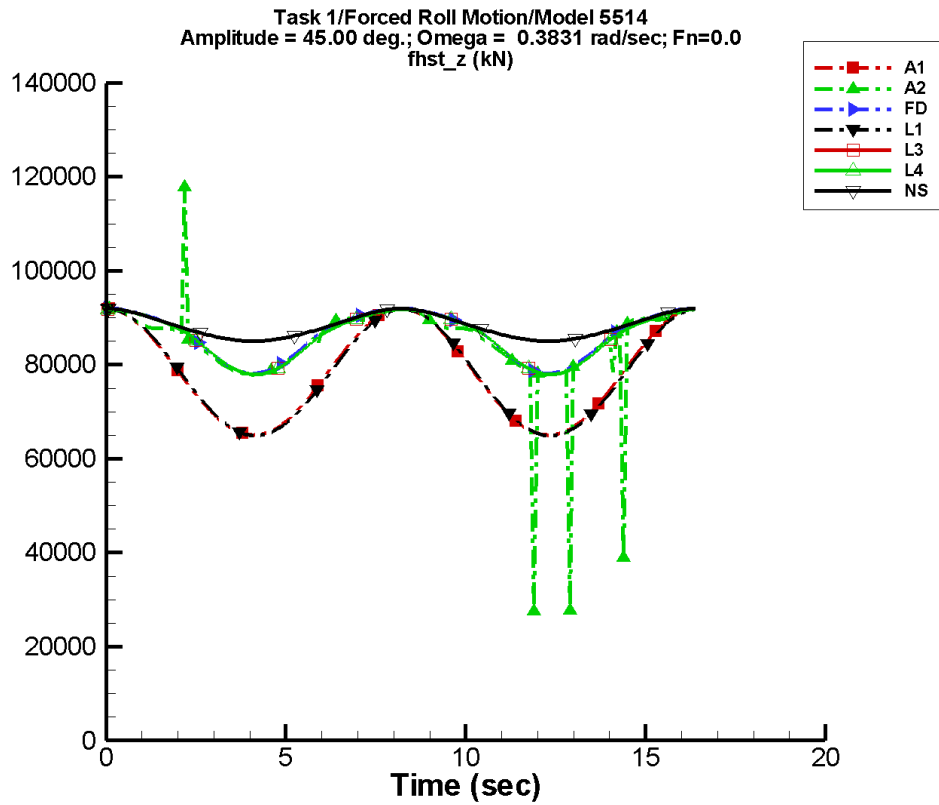
Table D-555. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	0.324	-96	6.16E+03	90
A2	8.94E+04	88.9	41	1.61E+03	109
FD	9.01E+04	0.322	-40	1.86E+03	90
L1	8.56E+04	1.75	165	6.15E+03	87
L3	8.98E+04	2.50	-164	1.92E+03	87
L4	8.98E+04	2.50	-164	1.92E+03	87
NF	—	—	—	—	—
NS	9.00E+04	6.33E-03	-152	1.78E+03	90

Table D-556. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.96E+04	9.20E+04	7.96E+04	9.19E+04
A2	8.11E+04	9.20E+04	8.73E+04	9.19E+04
FD	8.82E+04	9.20E+04	8.82E+04	9.20E+04
L1	7.95E+04	9.18E+04	7.95E+04	9.18E+04
L3	8.79E+04	9.18E+04	8.79E+04	9.18E+04
L4	8.79E+04	9.18E+04	8.79E+04	9.18E+04
NF	—	—	—	—
NS	8.84E+04	9.20E+04	8.84E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-279. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

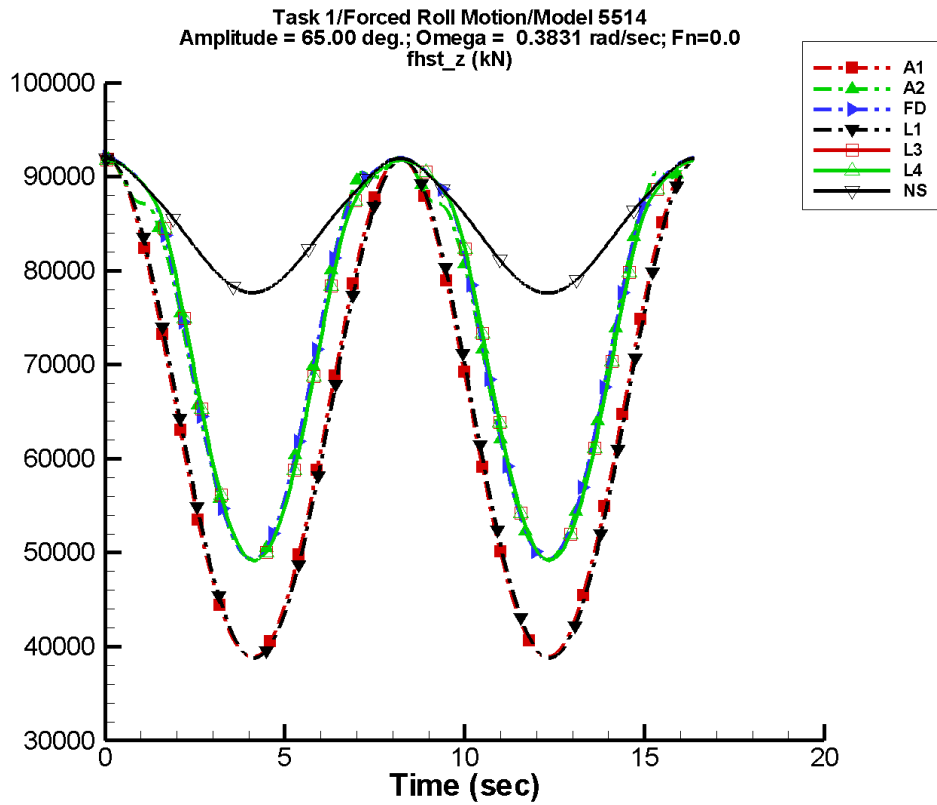
Table D-557. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.83E+04	1.56	-97	1.35E+04	90
A2	8.47E+04	1.87E+03	-14	7.49E+03	87
FD	8.63E+04	70.1	-59	6.75E+03	90
L1	7.82E+04	7.89	162	1.35E+04	87
L3	8.60E+04	45.0	-27	6.63E+03	87
L4	8.60E+04	45.0	-27	6.63E+03	87
NF	—	—	—	—	—
NS	8.83E+04	4.71E-02	172	3.36E+03	90

Table D-558. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.50E+04	9.20E+04	6.50E+04	9.19E+04
A2	2.76E+04	1.18E+05	7.22E+04	9.19E+04
FD	7.82E+04	9.20E+04	7.83E+04	9.20E+04
L1	6.49E+04	9.18E+04	6.50E+04	9.18E+04
L3	7.79E+04	9.18E+04	7.80E+04	9.18E+04
L4	7.79E+04	9.18E+04	7.80E+04	9.18E+04
NF	—	—	—	—
NS	8.50E+04	9.20E+04	8.51E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-280. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

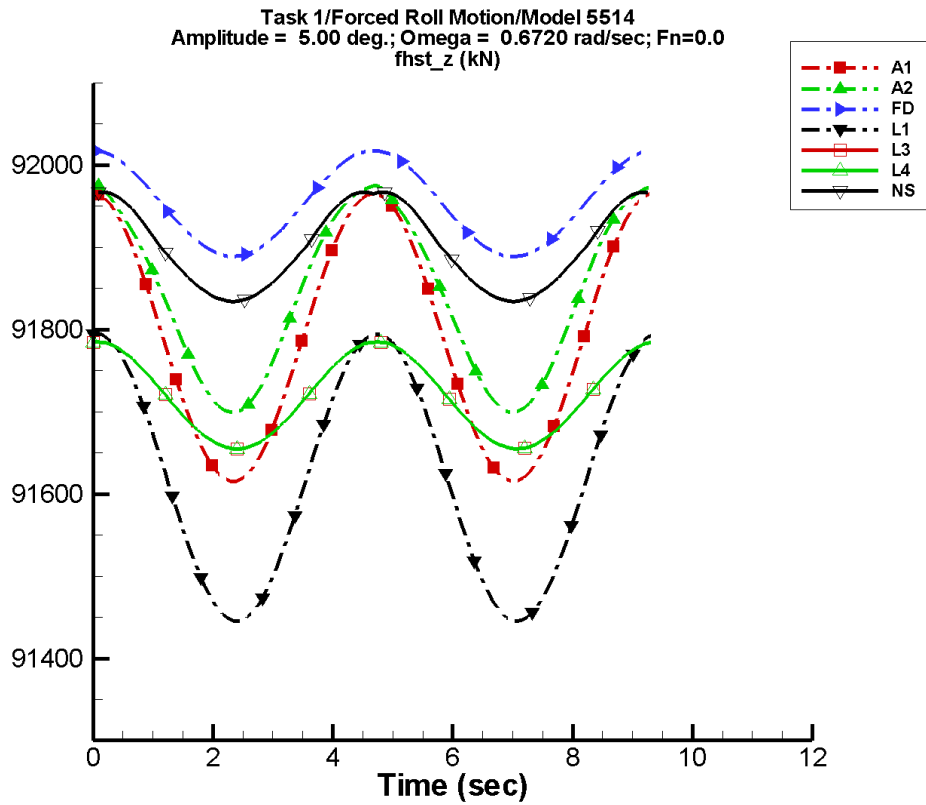
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.47E+04	6.54	-97	2.65E+04	90
A2	7.33E+04	20.9	-10	2.15E+04	91
FD	7.38E+04	138.	-61	2.21E+04	90
L1	6.45E+04	33.0	162	2.65E+04	87
L3	7.35E+04	171.	-9	2.17E+04	87
L4	7.35E+04	171.	-9	2.17E+04	87
NF	—	—	—	—	—
NS	8.47E+04	24.3	-2	6.92E+03	90

Table D-560. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.89E+04	9.20E+04	3.88E+04	9.18E+04
A2	4.92E+04	9.20E+04	4.92E+04	9.17E+04
FD	4.93E+04	9.20E+04	4.97E+04	9.19E+04
L1	3.88E+04	9.18E+04	3.89E+04	9.18E+04
L3	4.92E+04	9.18E+04	4.93E+04	9.18E+04
L4	4.92E+04	9.18E+04	4.93E+04	9.18E+04
NF	—	—	—	—
NS	7.76E+04	9.20E+04	7.76E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-281. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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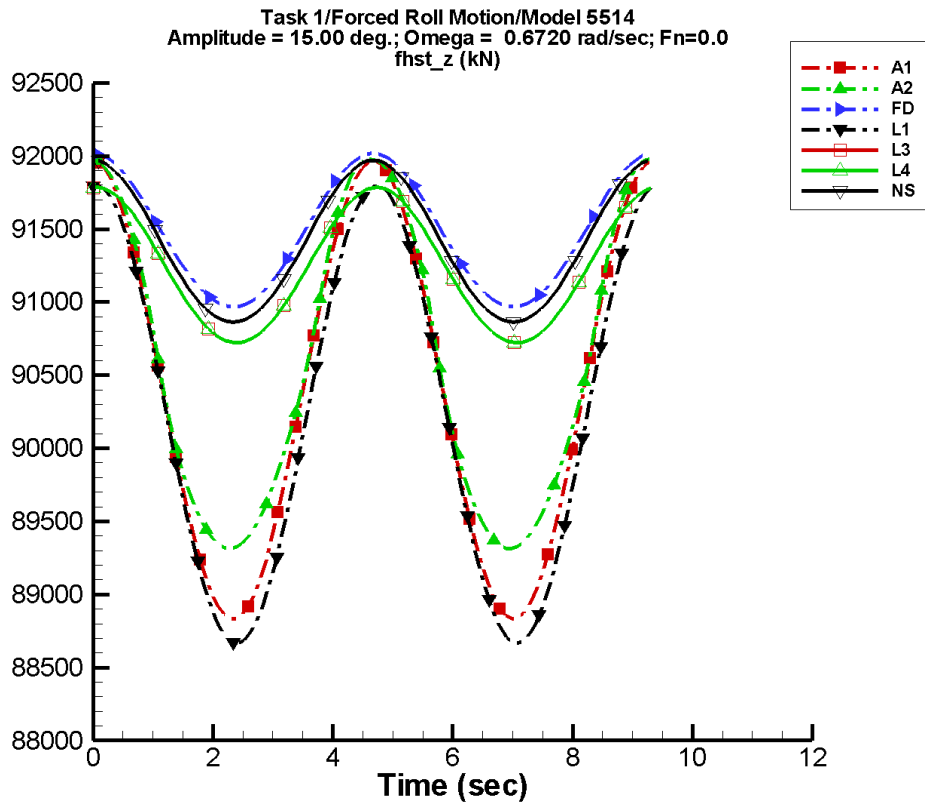
Table D-561. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	2.62E-02	-43	175.	90
A2	9.18E+04	0.486	0	135.	92
FD	9.20E+04	5.69E-02	154	64.4	90
L1	9.16E+04	9.82E-03	177	175.	85
L3	9.17E+04	3.95E-02	174	64.9	85
L4	9.17E+04	3.95E-02	174	64.9	85
NF	—	—	—	—	—
NS	9.19E+04	4.61E-03	-54	68.3	90

Table D-562. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.17E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

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

Figure D-282. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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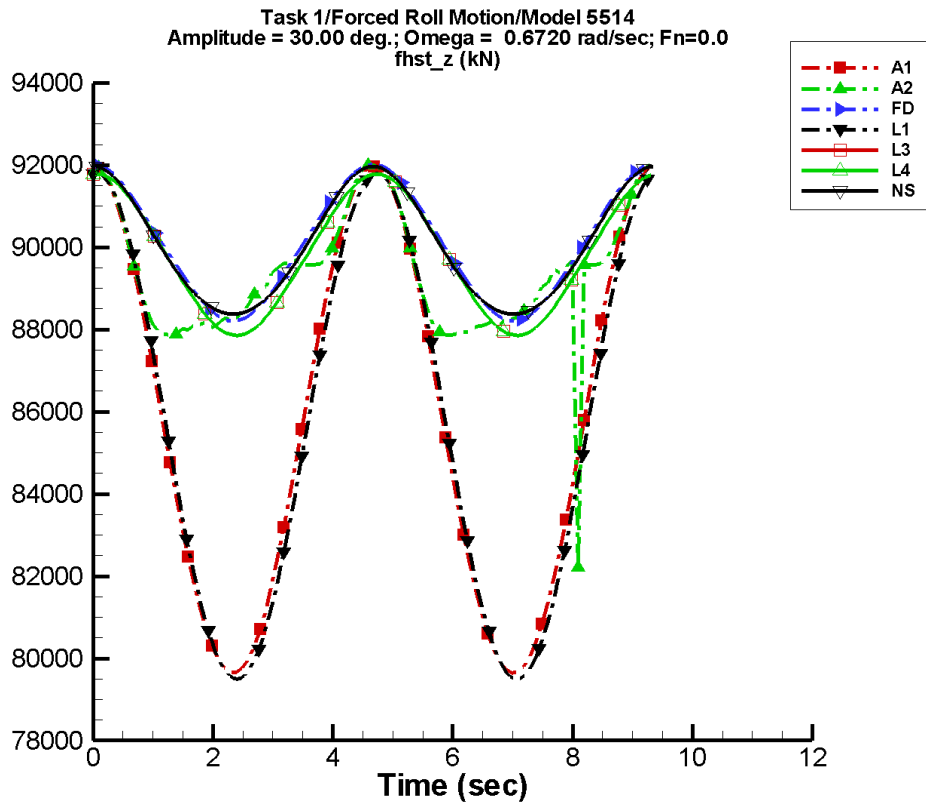
Table D-563. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	0.149	-166	1.57E+03	90
A2	9.06E+04	7.93	-176	1.38E+03	91
FD	9.15E+04	0.851	150	523.	90
L1	9.02E+04	0.266	175	1.56E+03	85
L3	9.12E+04	0.825	179	531.	85
L4	9.12E+04	0.825	179	531.	85
NF	—	—	—	—	—
NS	9.14E+04	2.34E-02	-29	553.	90

Table D-564. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.88E+04	9.20E+04	8.89E+04	9.19E+04
A2	8.93E+04	9.20E+04	8.94E+04	9.19E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.07E+04	9.18E+04	9.07E+04	9.18E+04
NF	—	—	—	—
NS	9.09E+04	9.20E+04	9.09E+04	9.20E+04

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

Figure D-283. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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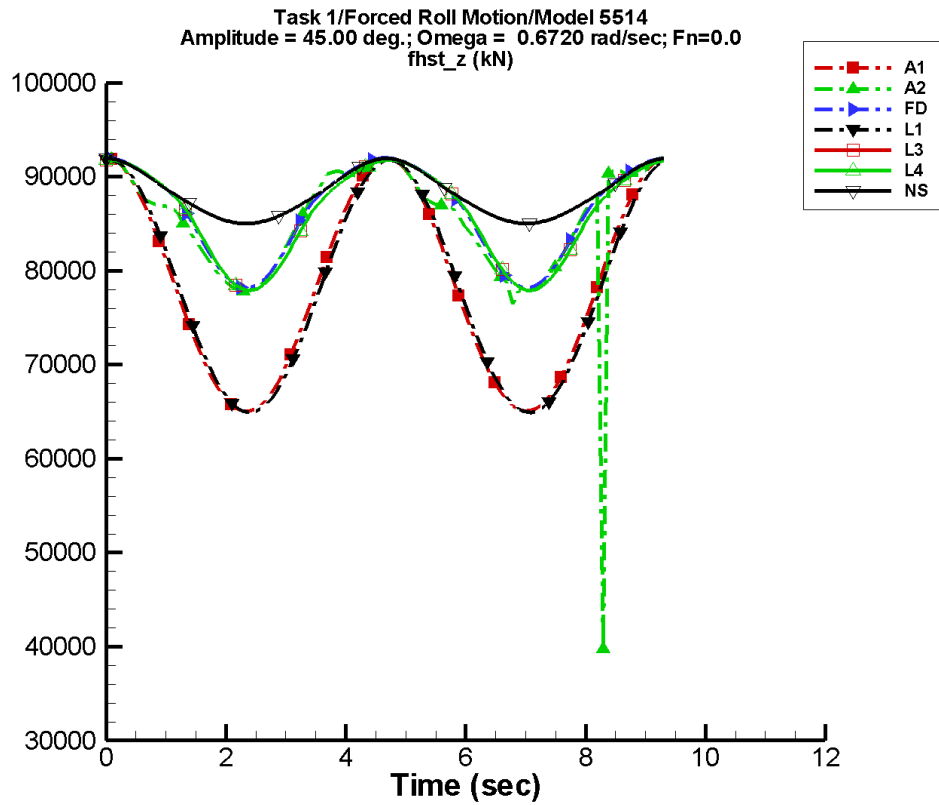
Table D-565. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	2.23	-170	6.16E+03	90
A2	8.94E+04	120.	-52	1.70E+03	110
FD	9.01E+04	0.295	-14	1.86E+03	90
L1	8.56E+04	2.90	179	6.15E+03	85
L3	8.98E+04	0.863	175	1.92E+03	85
L4	8.98E+04	0.863	175	1.92E+03	85
NF	—	—	—	—	—
NS	9.00E+04	1.65E-02	80	1.78E+03	90

Table D-566. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.96E+04	9.20E+04	7.99E+04	9.18E+04
A2	8.22E+04	9.20E+04	8.79E+04	9.17E+04
FD	8.82E+04	9.20E+04	8.83E+04	9.20E+04
L1	7.95E+04	9.18E+04	7.96E+04	9.18E+04
L3	8.79E+04	9.18E+04	8.79E+04	9.18E+04
L4	8.79E+04	9.18E+04	8.79E+04	9.18E+04
NF	—	—	—	—
NS	8.84E+04	9.20E+04	8.84E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-284. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

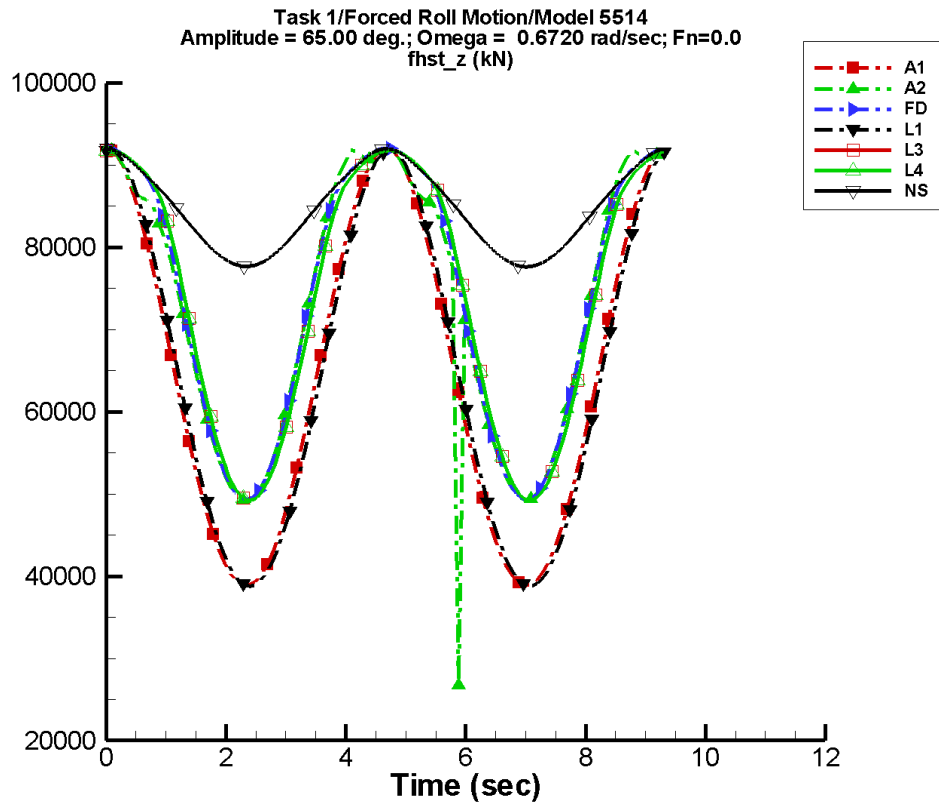
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.83E+04	11.1	-170	1.35E+04	90
A2	8.51E+04	1.07E+03	-44	6.36E+03	91
FD	8.62E+04	96.0	-29	6.72E+03	89
L1	7.82E+04	13.1	179	1.35E+04	85
L3	8.60E+04	86.3	1	6.60E+03	84
L4	8.60E+04	86.3	1	6.60E+03	84
NF	—	—	—	—	—
NS	8.83E+04	1.99E-02	16	3.36E+03	90

Table D-568. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.50E+04	9.20E+04	6.56E+04	9.15E+04
A2	3.97E+04	9.20E+04	7.80E+04	9.19E+04
FD	7.82E+04	9.20E+04	7.86E+04	9.19E+04
L1	6.49E+04	9.18E+04	6.51E+04	9.18E+04
L3	7.79E+04	9.18E+04	7.81E+04	9.18E+04
L4	7.79E+04	9.18E+04	7.81E+04	9.18E+04
NF	—	—	—	—
NS	8.50E+04	9.20E+04	8.51E+04	9.19E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-285. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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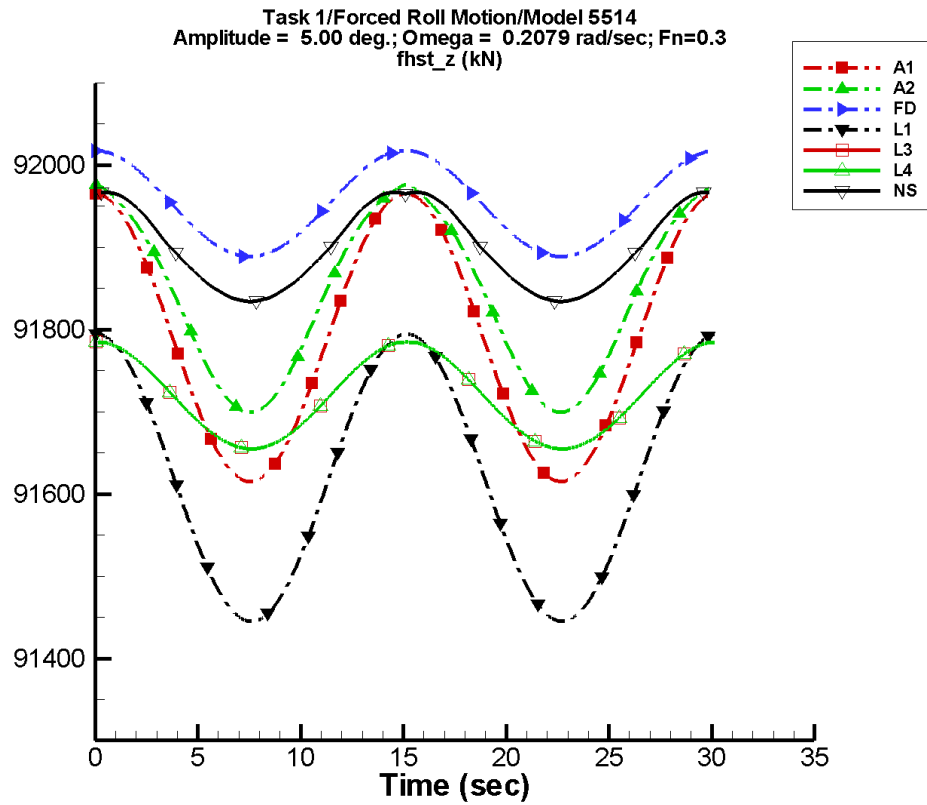
Table D-569. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.47E+04	46.8	-171	2.66E+04	90
A2	7.29E+04	1.22E+03	36	2.15E+04	95
FD	7.37E+04	210.	-30	2.20E+04	89
L1	6.45E+04	53.3	179	2.65E+04	86
L3	7.36E+04	226.	0	2.16E+04	85
L4	7.36E+04	226.	0	2.16E+04	85
NF	—	—	—	—	—
NS	8.47E+04	23.5	0	6.92E+03	90

Table D-570. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.89E+04	9.20E+04	4.00E+04	9.11E+04
A2	2.67E+04	9.20E+04	5.05E+04	9.15E+04
FD	4.93E+04	9.20E+04	5.03E+04	9.19E+04
L1	3.88E+04	9.18E+04	3.92E+04	9.18E+04
L3	4.92E+04	9.18E+04	4.97E+04	9.18E+04
L4	4.92E+04	9.18E+04	4.97E+04	9.18E+04
NF	—	—	—	—
NS	7.76E+04	9.20E+04	7.76E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-286. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

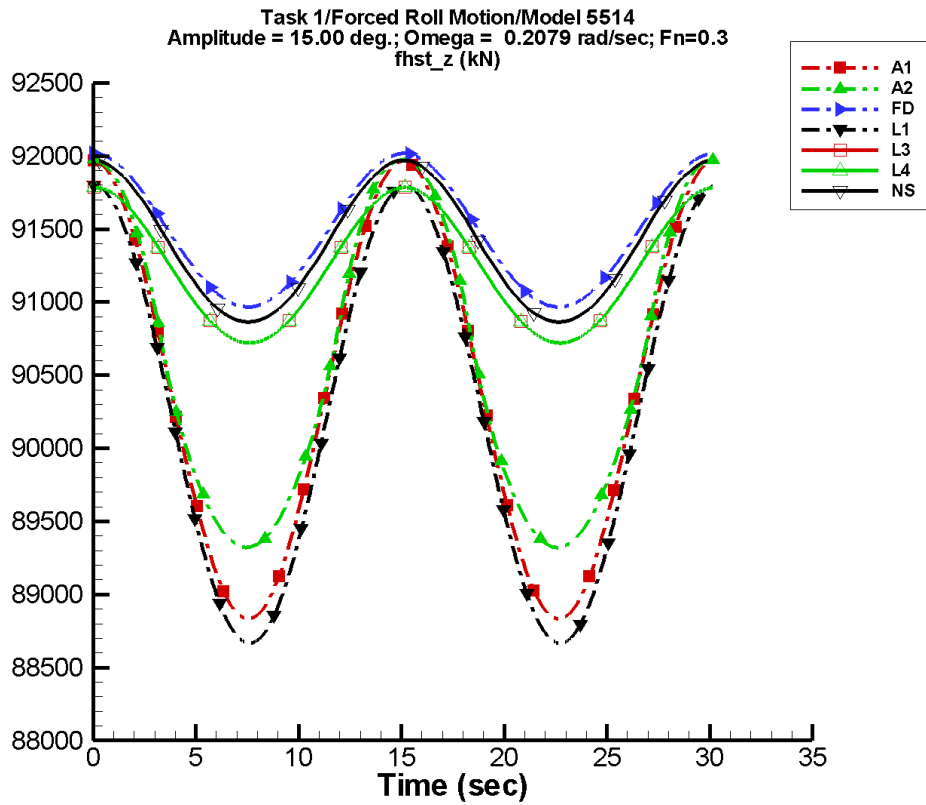
Table D-571. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	2.50E-03	-147	175.	90
A2	9.18E+04	0.122	16	135.	91
FD	9.20E+04	2.51E-02	-167	64.4	90
L1	9.16E+04	6.44E-02	-3	175.	89
L3	9.17E+04	4.37E-02	134	64.8	89
L4	9.17E+04	4.37E-02	134	64.8	89
NF	—	—	—	—	—
NS	9.19E+04	1.12E-02	152	68.3	90

Table D-572. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.17E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-287. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

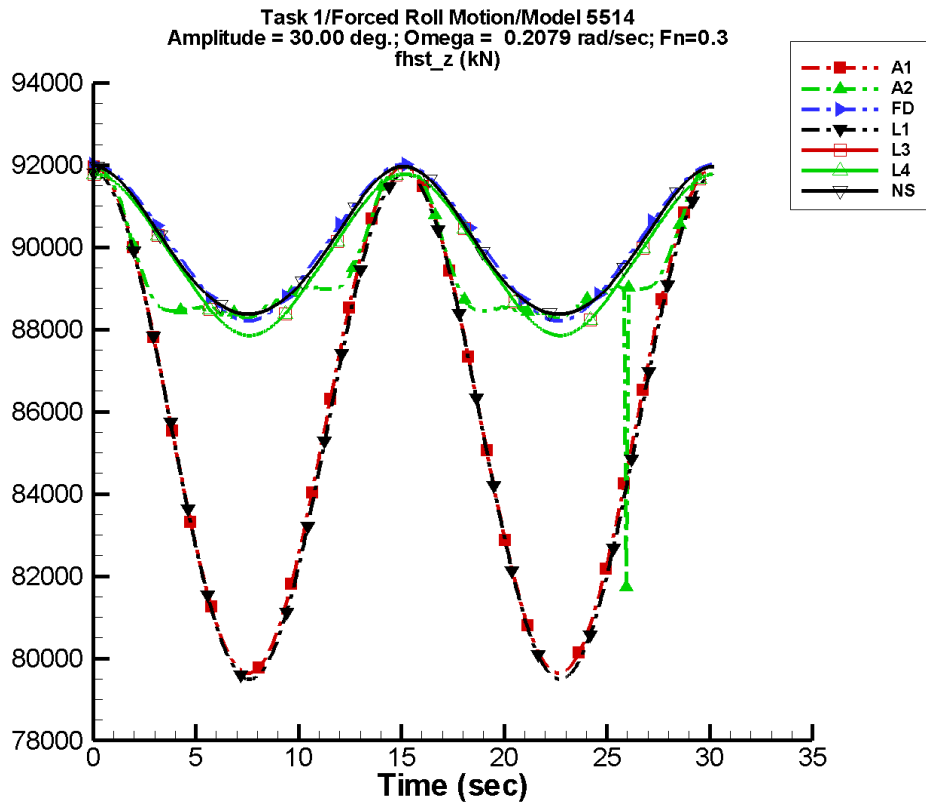
Table D-573. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	1.22E-02	-113	1.57E+03	90
A2	9.06E+04	1.66	-159	1.37E+03	91
FD	9.15E+04	0.298	-168	524.	90
L1	9.02E+04	0.137	100	1.56E+03	89
L3	9.12E+04	0.831	118	530.	89
L4	9.12E+04	0.831	118	530.	89
NF	—	—	—	—	—
NS	9.14E+04	4.69E-03	50	553.	90

Table D-574. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.88E+04	9.20E+04	8.88E+04	9.20E+04
A2	8.93E+04	9.20E+04	8.93E+04	9.20E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.07E+04	9.18E+04	9.07E+04	9.18E+04
NF	—	—	—	—
NS	9.09E+04	9.20E+04	9.09E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-288. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

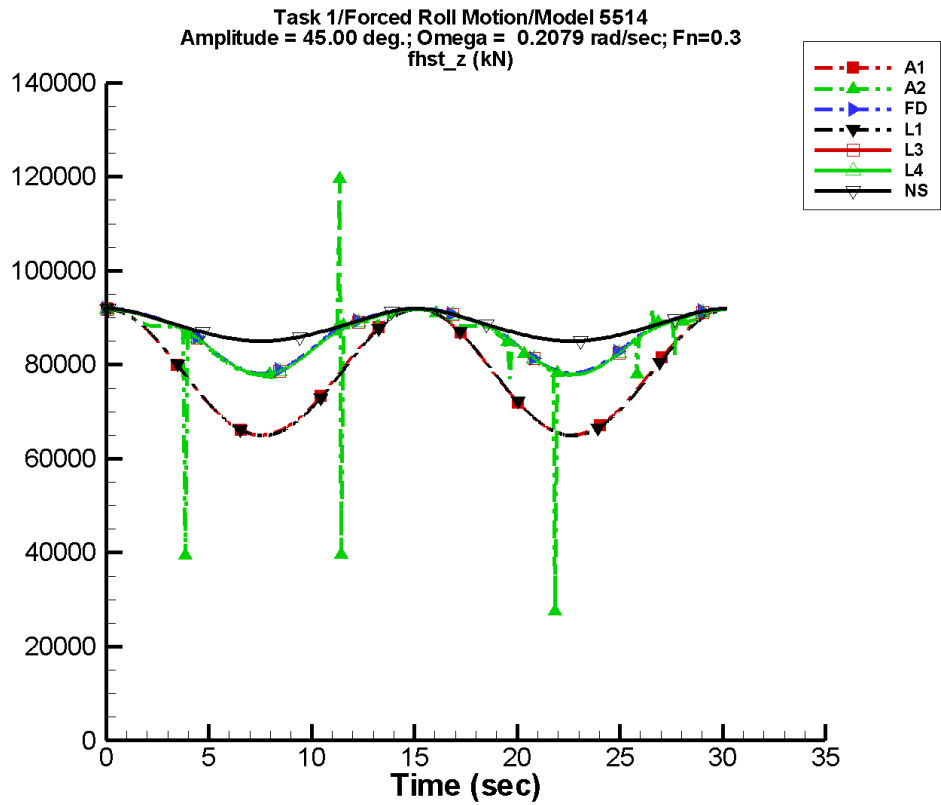
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	0.475	-162	6.16E+03	90
A2	8.94E+04	33.8	-50	1.52E+03	98
FD	9.01E+04	0.318	91	1.86E+03	90
L1	8.56E+04	2.57	119	6.15E+03	89
L3	8.98E+04	2.36	112	1.92E+03	89
L4	8.98E+04	2.36	112	1.92E+03	89
NF	—	—	—	—	—
NS	9.00E+04	1.26E-02	153	1.78E+03	90

Table D-576. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.96E+04	9.20E+04	7.97E+04	9.20E+04
A2	8.17E+04	9.20E+04	8.80E+04	9.20E+04
FD	8.82E+04	9.20E+04	8.82E+04	9.20E+04
L1	7.95E+04	9.18E+04	7.95E+04	9.18E+04
L3	8.79E+04	9.18E+04	8.79E+04	9.18E+04
L4	8.79E+04	9.18E+04	8.79E+04	9.18E+04
NF	—	—	—	—
NS	8.84E+04	9.20E+04	8.84E+04	9.19E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-289. Time history of  $F_z^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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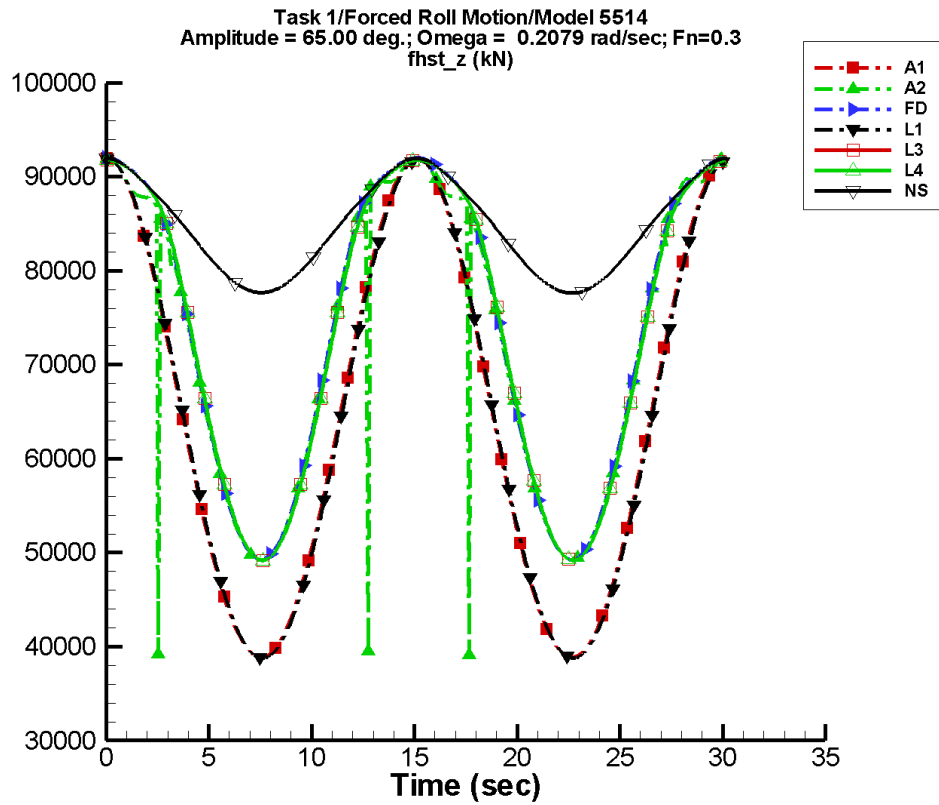
Table D-577. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.83E+04	2.36	-161	1.35E+04	90
A2	8.53E+04	269.	0	6.68E+03	94
FD	8.62E+04	29.8	11	6.65E+03	89
L1	7.82E+04	12.9	120	1.34E+04	89
L3	8.60E+04	77.7	-59	6.77E+03	89
L4	8.60E+04	77.7	-59	6.77E+03	89
NF	—	—	—	—	—
NS	8.83E+04	3.81E-02	-32	3.36E+03	90

Table D-578. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.50E+04	9.20E+04	6.51E+04	9.20E+04
A2	2.76E+04	1.20E+05	7.17E+04	9.20E+04
FD	7.82E+04	9.20E+04	7.82E+04	9.20E+04
L1	6.49E+04	9.18E+04	6.49E+04	9.18E+04
L3	7.79E+04	9.18E+04	7.79E+04	9.18E+04
L4	7.79E+04	9.18E+04	7.79E+04	9.18E+04
NF	—	—	—	—
NS	8.50E+04	9.20E+04	8.51E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-290. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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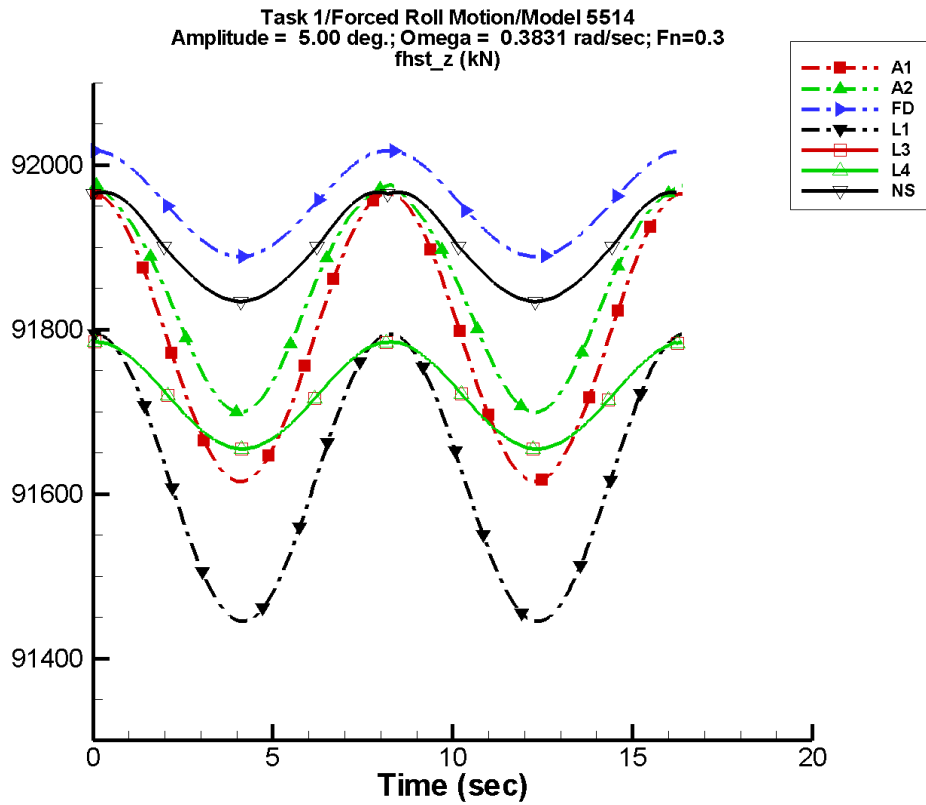
Table D-579. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.47E+04	9.91	-161	2.65E+04	90
A2	7.29E+04	391.	95	2.11E+04	91
FD	7.37E+04	68.3	3	2.19E+04	89
L1	6.45E+04	54.2	119	2.64E+04	89
L3	7.36E+04	271.	-61	2.21E+04	89
L4	7.36E+04	271.	-61	2.21E+04	89
NF	—	—	—	—	—
NS	8.47E+04	24.0	-2	6.92E+03	90

Table D-580. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.89E+04	9.20E+04	3.90E+04	9.20E+04
A2	3.91E+04	9.20E+04	4.94E+04	9.19E+04
FD	4.93E+04	9.20E+04	4.94E+04	9.21E+04
L1	3.88E+04	9.18E+04	3.88E+04	9.18E+04
L3	4.92E+04	9.18E+04	4.92E+04	9.18E+04
L4	4.92E+04	9.18E+04	4.92E+04	9.18E+04
NF	—	—	—	—
NS	7.76E+04	9.20E+04	7.76E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-291. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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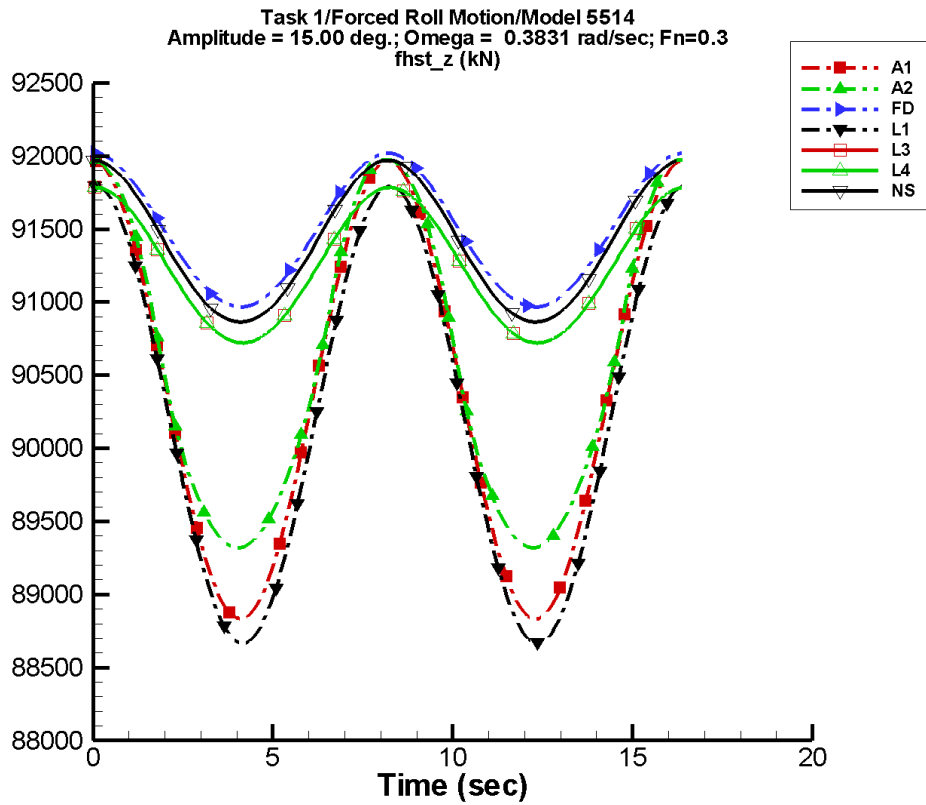
Table D–581. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	1.16E-02	168	175.	90
A2	9.18E+04	6.19E-02	26	135.	91
FD	9.20E+04	3.25E-02	100	64.3	90
L1	9.16E+04	1.65E-02	20	175.	87
L3	9.17E+04	3.66E-02	169	64.9	87
L4	9.17E+04	3.66E-02	169	64.9	87
NF	—	—	—	—	—
NS	9.19E+04	1.06E-02	52	68.3	90

Table D–582. Minimum and maximum of of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.17E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04

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

Figure D-292. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

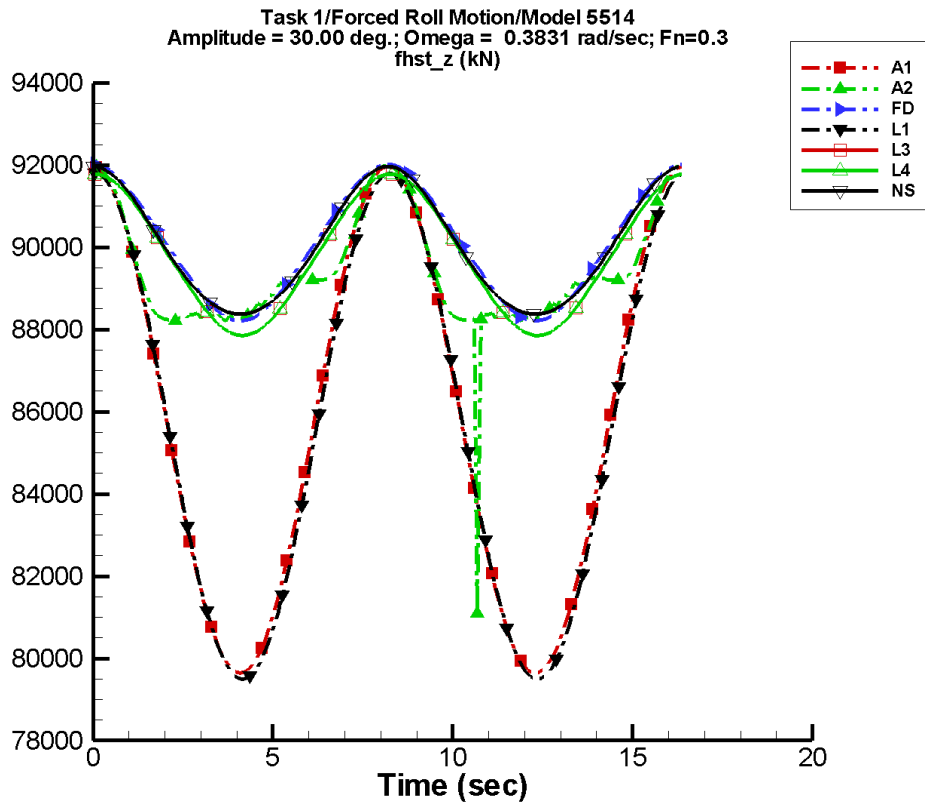
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	2.04E-02	-99	1.57E+03	90
A2	9.06E+04	0.955	-129	1.37E+03	91
FD	9.15E+04	0.588	120	523.	90
L1	9.02E+04	0.145	169	1.56E+03	87
L3	9.12E+04	0.565	163	531.	87
L4	9.12E+04	0.565	163	531.	87
NF	—	—	—	—	—
NS	9.14E+04	1.33E-02	52	553.	90

Table D–584. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.88E+04	9.20E+04	8.88E+04	9.20E+04
A2	8.93E+04	9.20E+04	8.93E+04	9.20E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.07E+04	9.18E+04	9.07E+04	9.18E+04
NF	—	—	—	—
NS	9.09E+04	9.20E+04	9.09E+04	9.20E+04



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

Figure D-293. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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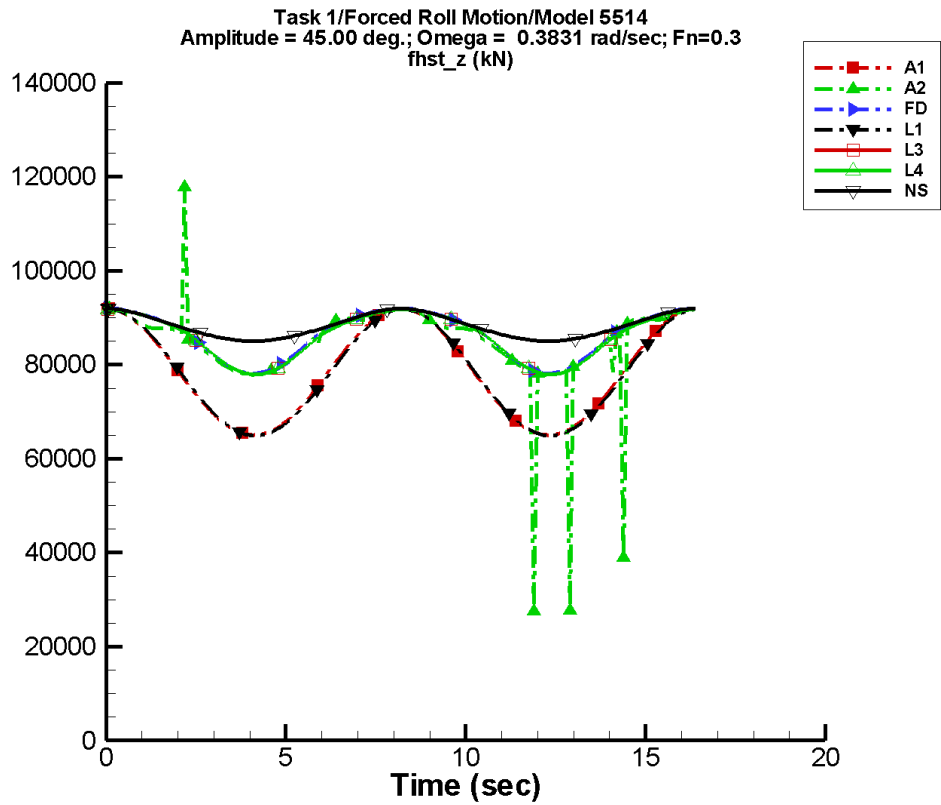
Table D–585. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	0.324	-96	6.16E+03	90
A2	8.94E+04	88.9	41	1.61E+03	109
FD	9.01E+04	0.324	-40	1.86E+03	90
L1	8.56E+04	1.75	165	6.15E+03	87
L3	8.98E+04	2.49	-164	1.92E+03	87
L4	8.98E+04	2.49	-164	1.92E+03	87
NF	—	—	—	—	—
NS	9.00E+04	6.33E-03	-152	1.78E+03	90

Table D–586. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.96E+04	9.20E+04	7.96E+04	9.19E+04
A2	8.11E+04	9.20E+04	8.73E+04	9.19E+04
FD	8.82E+04	9.20E+04	8.82E+04	9.20E+04
L1	7.95E+04	9.18E+04	7.95E+04	9.18E+04
L3	8.79E+04	9.18E+04	8.79E+04	9.18E+04
L4	8.79E+04	9.18E+04	8.79E+04	9.18E+04
NF	—	—	—	—
NS	8.84E+04	9.20E+04	8.84E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-294. Time history of  $F_z^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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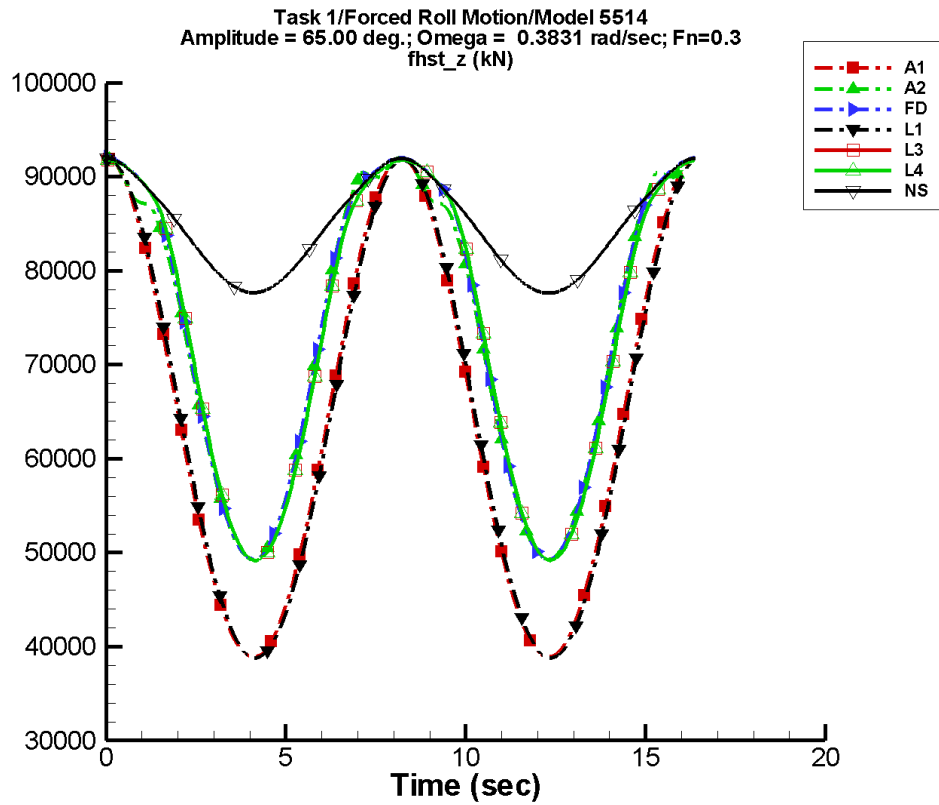
Table D-587. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.83E+04	1.56	-97	1.35E+04	90
A2	8.47E+04	1.87E+03	-14	7.49E+03	87
FD	8.63E+04	70.1	-59	6.75E+03	90
L1	7.82E+04	7.89	162	1.35E+04	87
L3	8.60E+04	45.0	-27	6.63E+03	87
L4	8.60E+04	45.0	-27	6.63E+03	87
NF	—	—	—	—	—
NS	8.83E+04	4.71E-02	172	3.36E+03	90

Table D-588. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.50E+04	9.20E+04	6.50E+04	9.19E+04
A2	2.76E+04	1.18E+05	7.22E+04	9.19E+04
FD	7.82E+04	9.20E+04	7.83E+04	9.20E+04
L1	6.49E+04	9.18E+04	6.50E+04	9.18E+04
L3	7.79E+04	9.18E+04	7.80E+04	9.18E+04
L4	7.79E+04	9.18E+04	7.80E+04	9.18E+04
NF	—	—	—	—
NS	8.50E+04	9.20E+04	8.51E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-295. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

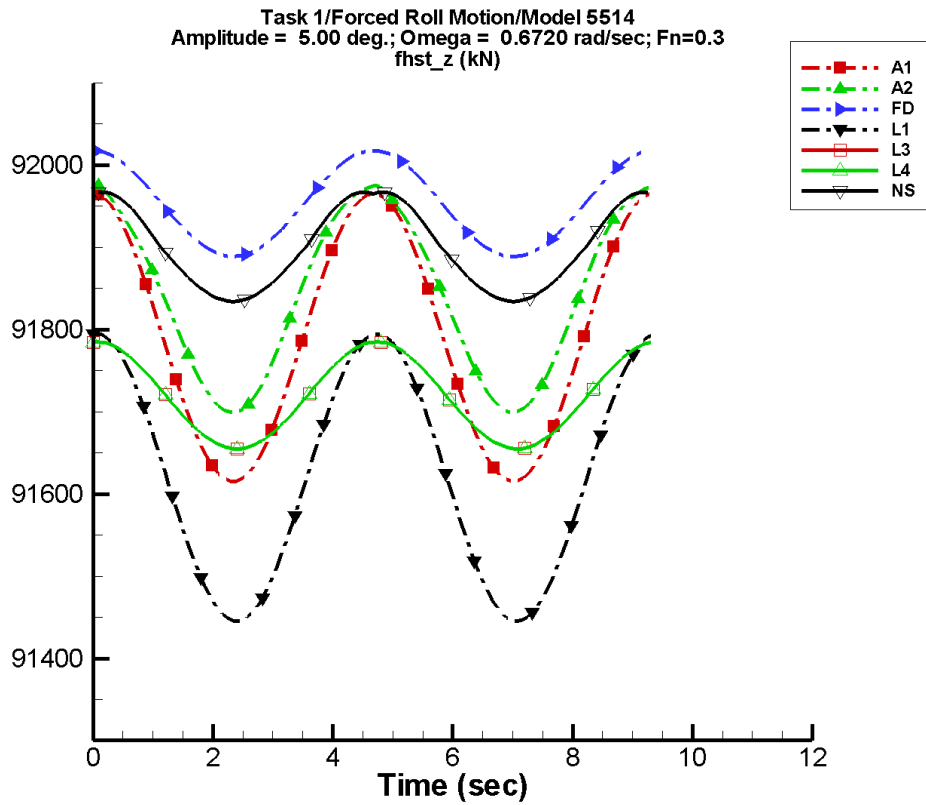
Table D–589. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.47E+04	6.54	-97	2.65E+04	90
A2	7.33E+04	20.9	-10	2.15E+04	91
FD	7.38E+04	138.	-61	2.21E+04	90
L1	6.45E+04	33.0	162	2.65E+04	87
L3	7.35E+04	171.	-9	2.17E+04	87
L4	7.35E+04	171.	-9	2.17E+04	87
NF	—	—	—	—	—
NS	8.47E+04	24.3	-2	6.92E+03	90

Table D–590. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.89E+04	9.20E+04	3.88E+04	9.18E+04
A2	4.92E+04	9.20E+04	4.92E+04	9.17E+04
FD	4.93E+04	9.20E+04	4.97E+04	9.19E+04
L1	3.88E+04	9.18E+04	3.89E+04	9.18E+04
L3	4.92E+04	9.18E+04	4.93E+04	9.18E+04
L4	4.92E+04	9.18E+04	4.93E+04	9.18E+04
NF	—	—	—	—
NS	7.76E+04	9.20E+04	7.76E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-296. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

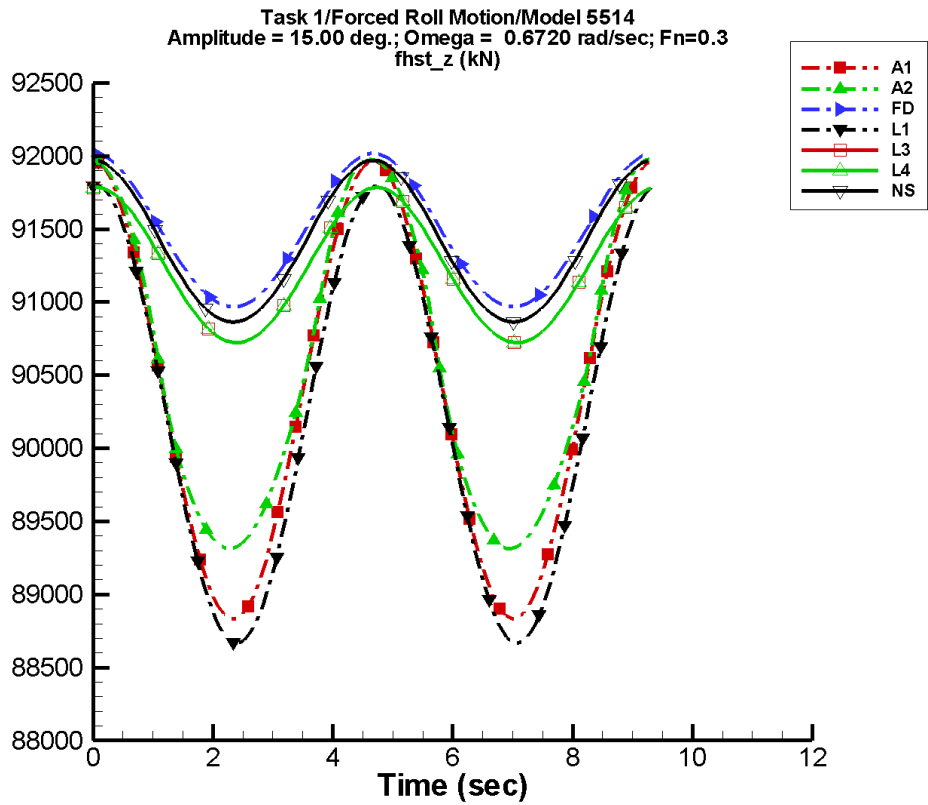
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.18E+04	2.62E-02	-43	175.	90
A2	9.18E+04	0.486	0	135.	92
FD	9.20E+04	5.57E-02	153	64.4	90
L1	9.16E+04	9.82E-03	177	175.	85
L3	9.17E+04	2.78E-02	174	64.9	85
L4	9.17E+04	2.78E-02	174	64.9	85
NF	—	—	—	—	—
NS	9.19E+04	4.61E-03	-54	68.3	90

Table D–592. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	9.16E+04	9.20E+04	9.16E+04	9.20E+04
A2	9.17E+04	9.20E+04	9.17E+04	9.20E+04
FD	9.19E+04	9.20E+04	9.19E+04	9.20E+04
L1	9.14E+04	9.18E+04	9.14E+04	9.18E+04
L3	9.17E+04	9.18E+04	9.17E+04	9.18E+04
L4	9.17E+04	9.18E+04	9.17E+04	9.18E+04
NF	—	—	—	—
NS	9.18E+04	9.20E+04	9.18E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-297. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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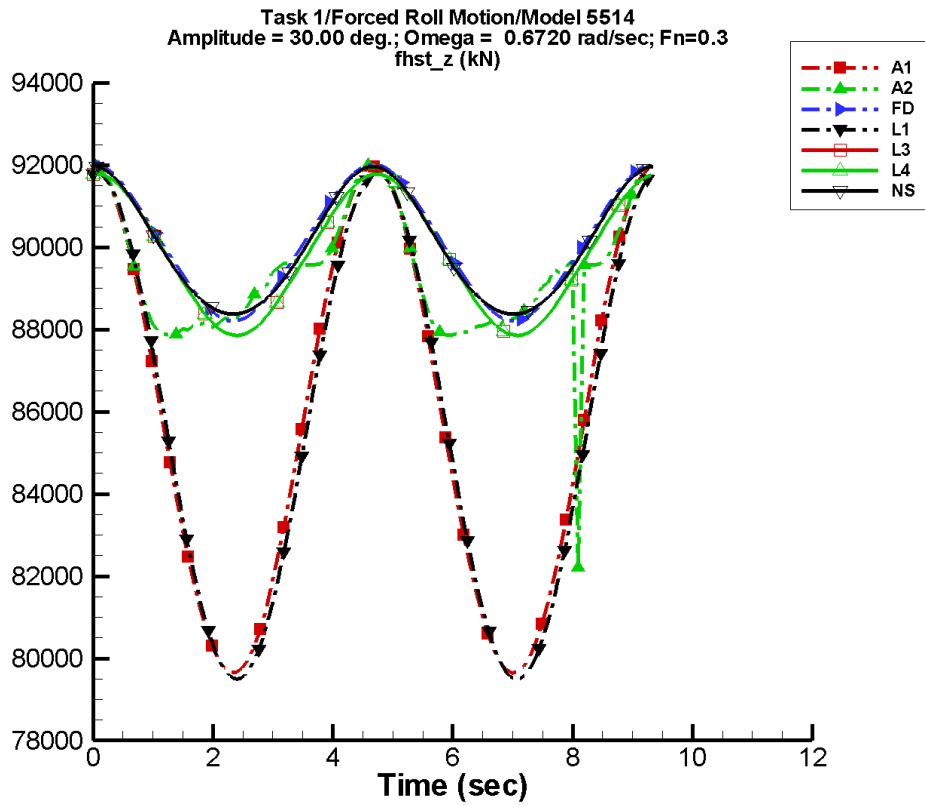
Table D-593. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.04E+04	0.149	-166	1.57E+03	90
A2	9.06E+04	7.93	-176	1.38E+03	91
FD	9.15E+04	0.851	150	523.	90
L1	9.02E+04	0.266	175	1.56E+03	85
L3	9.12E+04	0.815	179	531.	85
L4	9.12E+04	0.815	179	531.	85
NF	—	—	—	—	—
NS	9.14E+04	2.34E-02	-29	553.	90

Table D-594. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	8.88E+04	9.20E+04	8.89E+04	9.19E+04
A2	8.93E+04	9.20E+04	8.94E+04	9.19E+04
FD	9.10E+04	9.20E+04	9.10E+04	9.20E+04
L1	8.87E+04	9.18E+04	8.87E+04	9.18E+04
L3	9.07E+04	9.18E+04	9.07E+04	9.18E+04
L4	9.07E+04	9.18E+04	9.07E+04	9.18E+04
NF	—	—	—	—
NS	9.09E+04	9.20E+04	9.09E+04	9.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-298. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

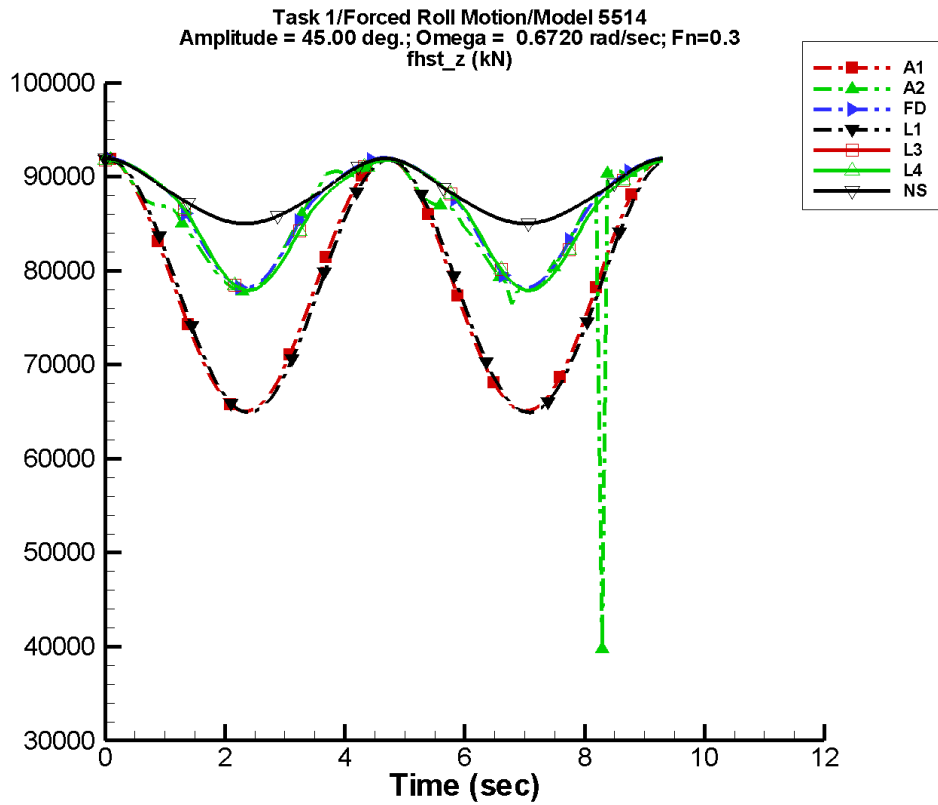
Table D-595. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.58E+04	2.23	-170	6.16E+03	90
A2	8.94E+04	120.	-52	1.70E+03	110
FD	9.01E+04	0.295	-14	1.86E+03	90
L1	8.56E+04	2.90	179	6.15E+03	85
L3	8.98E+04	0.859	175	1.92E+03	85
L4	8.98E+04	0.859	175	1.92E+03	85
NF	—	—	—	—	—
NS	9.00E+04	1.65E-02	80	1.78E+03	90

Table D-596. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	7.96E+04	9.20E+04	7.99E+04	9.18E+04
A2	8.22E+04	9.20E+04	8.79E+04	9.17E+04
FD	8.82E+04	9.20E+04	8.83E+04	9.20E+04
L1	7.95E+04	9.18E+04	7.96E+04	9.18E+04
L3	8.79E+04	9.18E+04	8.79E+04	9.18E+04
L4	8.79E+04	9.18E+04	8.79E+04	9.18E+04
NF	—	—	—	—
NS	8.84E+04	9.20E+04	8.84E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-299. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

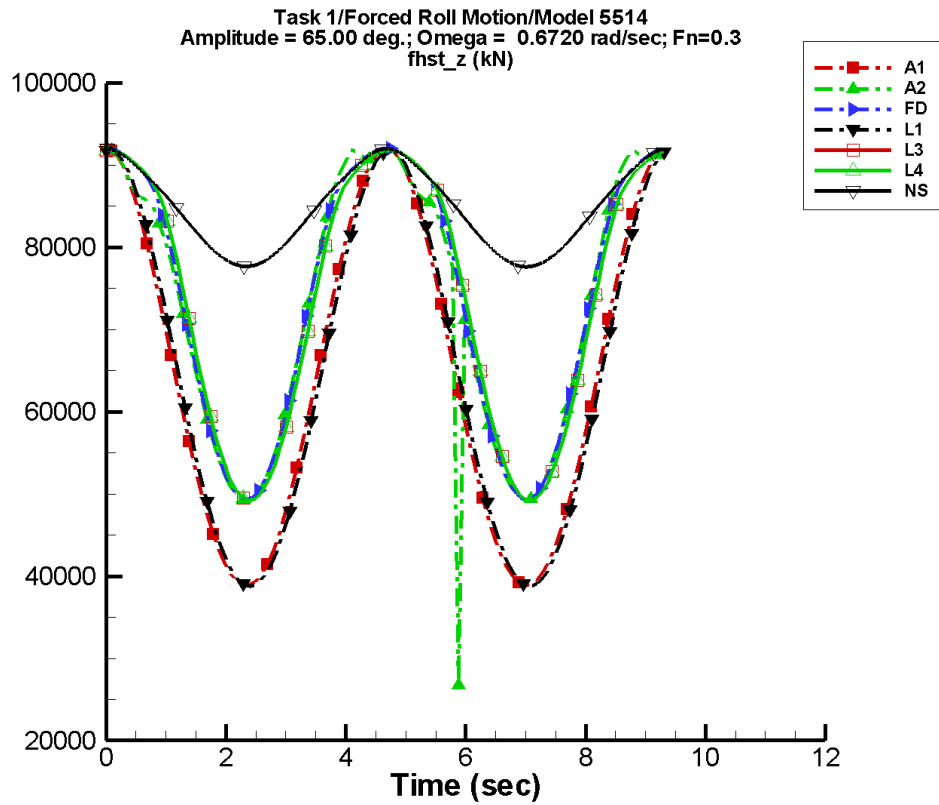
Table D-597. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.83E+04	11.1	-170	1.35E+04	90
A2	8.51E+04	1.07E+03	-44	6.36E+03	91
FD	8.62E+04	96.0	-29	6.72E+03	89
L1	7.82E+04	13.1	179	1.35E+04	85
L3	8.60E+04	86.3	1	6.60E+03	84
L4	8.60E+04	86.3	1	6.60E+03	84
NF	—	—	—	—	—
NS	8.83E+04	1.99E-02	16	3.36E+03	90

Table D-598. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	6.50E+04	9.20E+04	6.56E+04	9.15E+04
A2	3.97E+04	9.20E+04	7.80E+04	9.19E+04
FD	7.82E+04	9.20E+04	7.86E+04	9.19E+04
L1	6.49E+04	9.18E+04	6.51E+04	9.18E+04
L3	7.79E+04	9.18E+04	7.81E+04	9.18E+04
L4	7.79E+04	9.18E+04	7.81E+04	9.18E+04
NF	—	—	—	—
NS	8.50E+04	9.20E+04	8.51E+04	9.19E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-300. Time history of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

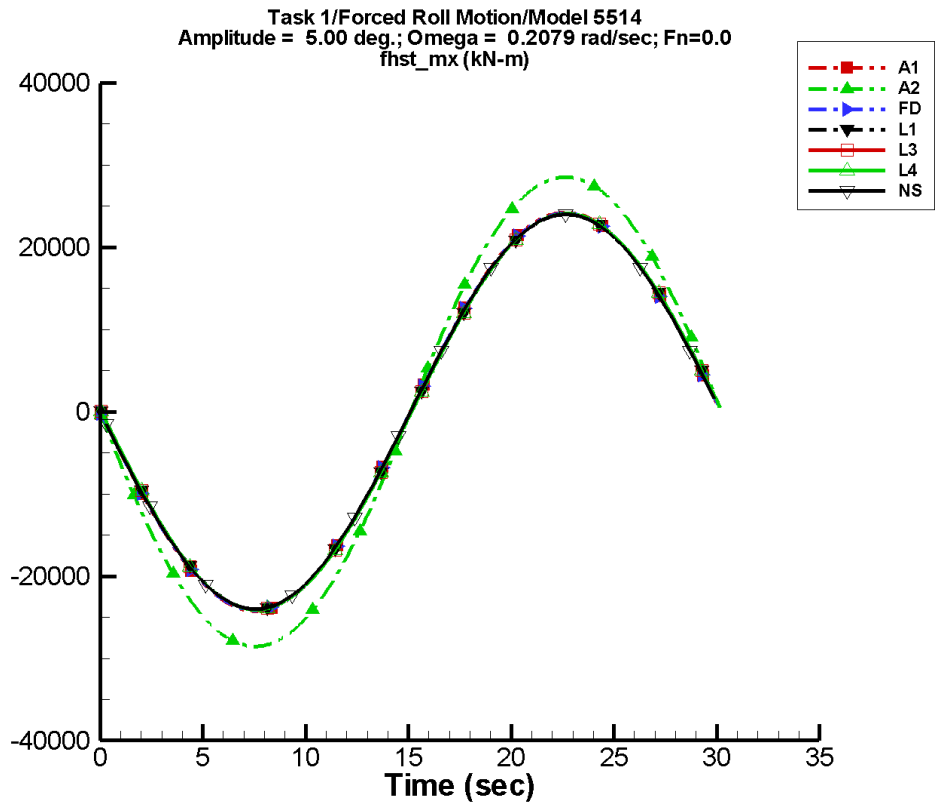
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	6.47E+04	46.8	-171	2.66E+04	90
A2	7.29E+04	1.22E+03	36	2.15E+04	95
FD	7.37E+04	210.	-30	2.20E+04	89
L1	6.45E+04	53.3	179	2.65E+04	86
L3	7.36E+04	226.	0	2.16E+04	85
L4	7.36E+04	226.	0	2.16E+04	85
NF	—	—	—	—	—
NS	8.47E+04	23.5	0	6.92E+03	90

Table D-600. Minimum and maximum of  $F_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	3.89E+04	9.20E+04	4.00E+04	9.11E+04
A2	2.67E+04	9.20E+04	5.05E+04	9.15E+04
FD	4.93E+04	9.20E+04	5.03E+04	9.19E+04
L1	3.88E+04	9.18E+04	3.92E+04	9.18E+04
L3	4.92E+04	9.18E+04	4.97E+04	9.18E+04
L4	4.92E+04	9.18E+04	4.97E+04	9.18E+04
NF	—	—	—	—
NS	7.76E+04	9.20E+04	7.76E+04	9.20E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-301. Time history of  $M_x^{hst}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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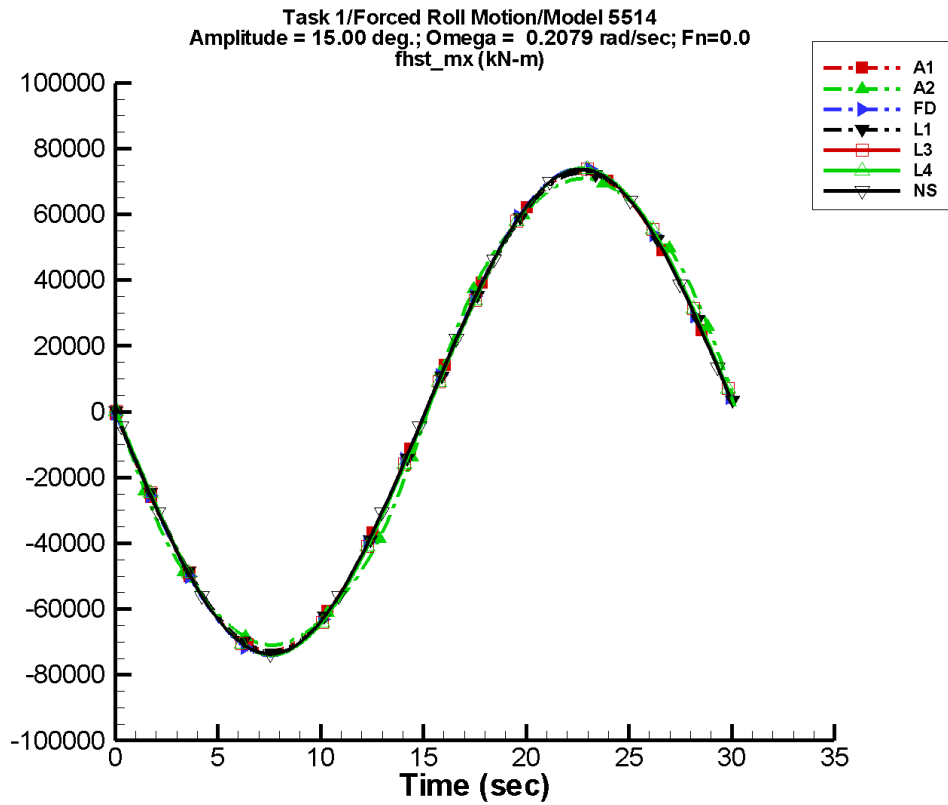
Table D-601. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	1.99E-02	2.42E+04	180	2.44E-02	157
A2	-11.9	2.89E+04	-180	63.8	-116
FD	0.255	2.41E+04	180	1.14	54
L1	0.426	2.40E+04	179	1.60	87
L3	1.64	2.41E+04	179	6.13	86
L4	1.64	2.41E+04	179	6.13	86
NF	—	—	—	—	—
NS	-1.63E-03	2.40E+04	-180	2.32E-03	175

Table D-602. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.42E+04	2.42E+04	-2.42E+04	2.42E+04
A2	-2.85E+04	2.85E+04	-2.86E+04	2.85E+04
FD	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
L1	-2.40E+04	2.40E+04	-2.40E+04	2.40E+04
L3	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
L4	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
NF	—	—	—	—
NS	-2.40E+04	2.40E+04	-2.38E+04	2.38E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-302. Time history of  $M_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

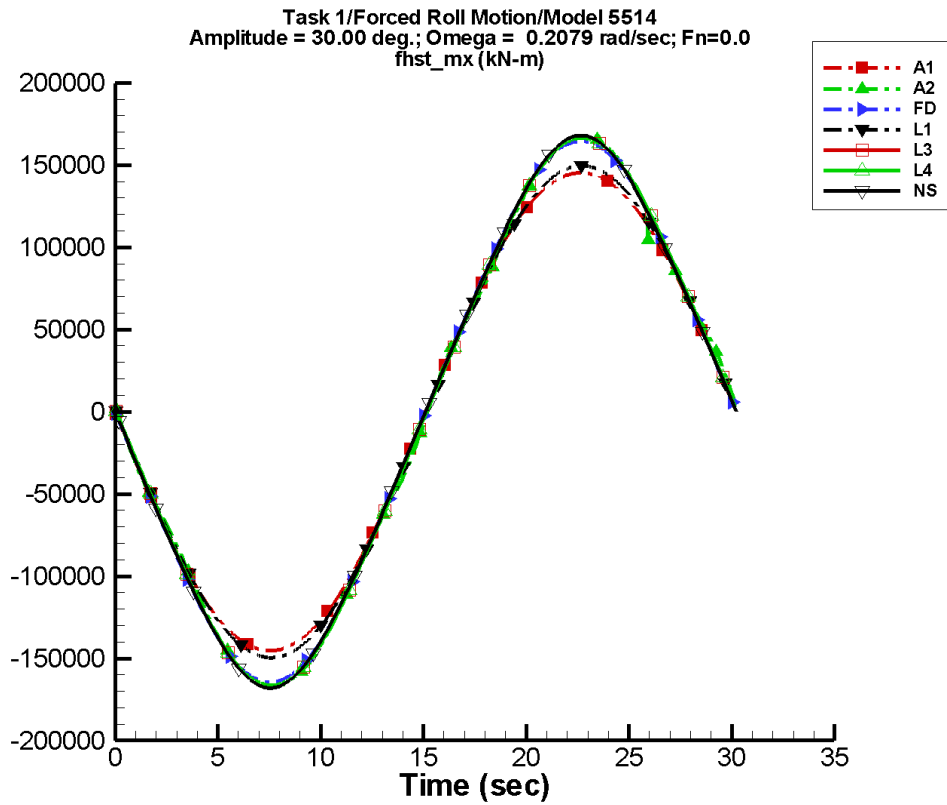
Table D-603. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	5.54E-02	7.26E+04	180	7.25E-02	162
A2	-117.	7.32E+04	179	587.	-116
FD	13.9	7.36E+04	180	70.6	56
L1	10.9	7.25E+04	179	42.9	87
L3	28.1	7.35E+04	179	110.	87
L4	28.1	7.35E+04	179	110.	87
NF	—	—	—	—	—
NS	-1.99E-03	7.32E+04	-180	7.14E-03	-127

Table D-604. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.26E+04	7.26E+04	-7.27E+04	7.26E+04
A2	-7.09E+04	7.09E+04	-7.09E+04	7.09E+04
FD	-7.41E+04	7.41E+04	-7.40E+04	7.40E+04
L1	-7.27E+04	7.27E+04	-7.26E+04	7.26E+04
L3	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
L4	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
NF	—	—	—	—
NS	-7.37E+04	7.37E+04	-7.29E+04	7.29E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-303. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

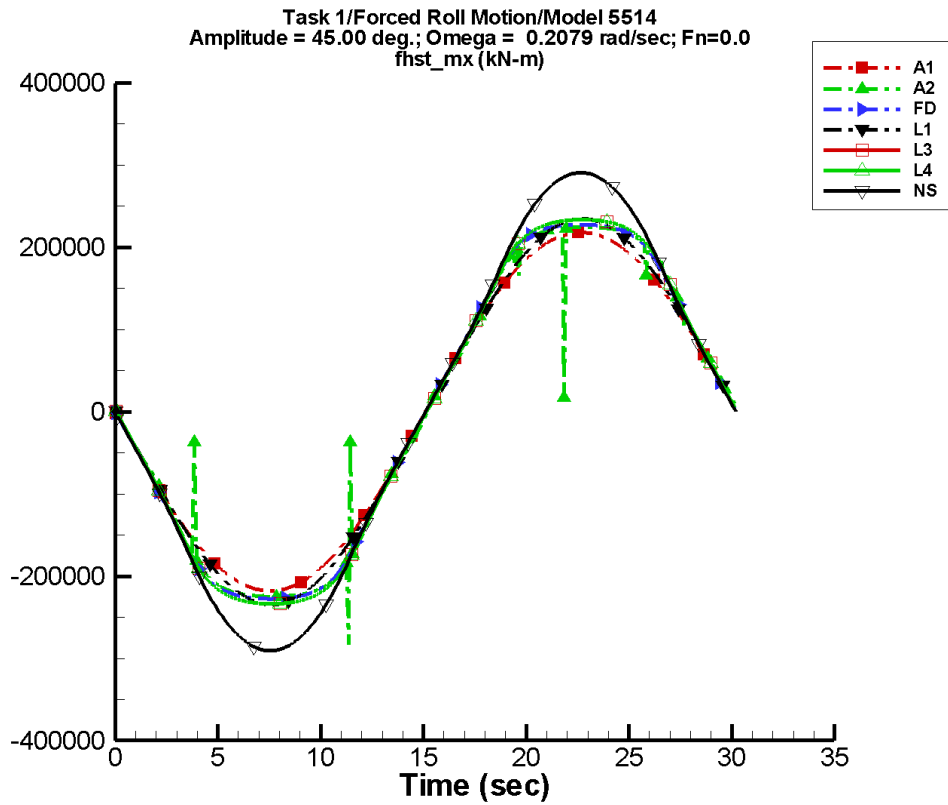
Table D-605. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.110	1.45E+05	180	0.141	163
A2	25.9	1.60E+05	179	1.03E+03	41
FD	156.	1.59E+05	180	798.	57
L1	86.0	1.48E+05	179	339.	87
L3	365.	1.60E+05	179	1.44E+03	87
L4	365.	1.60E+05	179	1.44E+03	87
NF	—	—	—	—	—
NS	4.52E-04	1.60E+05	-180	7.14E-03	-133

Table D-606. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.45E+05	1.45E+05	-1.45E+05	1.45E+05
A2	-1.67E+05	1.67E+05	-1.67E+05	1.67E+05
FD	-1.65E+05	1.64E+05	-1.64E+05	1.64E+05
L1	-1.50E+05	1.50E+05	-1.50E+05	1.50E+05
L3	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
L4	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
NF	—	—	—	—
NS	-1.68E+05	1.68E+05	-1.67E+05	1.67E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-304. Time history of  $M_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

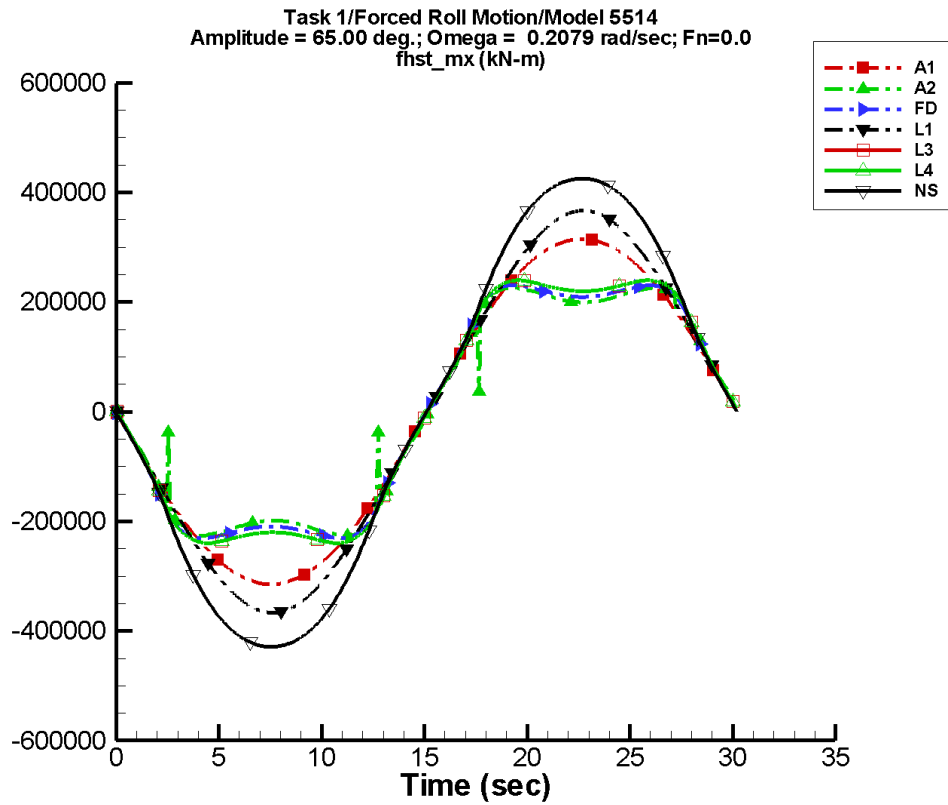
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.189	2.18E+05	180	0.226	157
A2	-646.	2.34E+05	179	1.46E+03	120
FD	34.7	2.38E+05	180	555.	155
L1	284.	2.30E+05	179	1.12E+03	87
L3	86.6	2.43E+05	179	180.	66
L4	86.6	2.43E+05	179	180.	66
NF	—	—	—	—	—
NS	-0.722	2.75E+05	-180	1.18	91

Table D-608. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.18E+05	-2.18E+05	2.18E+05
A2	-2.83E+05	2.25E+05	-2.25E+05	2.27E+05
FD	-2.27E+05	2.27E+05	-2.28E+05	2.27E+05
L1	-2.35E+05	2.35E+05	-2.35E+05	2.35E+05
L3	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
L4	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
NF	—	—	—	—
NS	-2.91E+05	2.91E+05	-2.90E+05	2.90E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-305. Time history of  $M_x^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

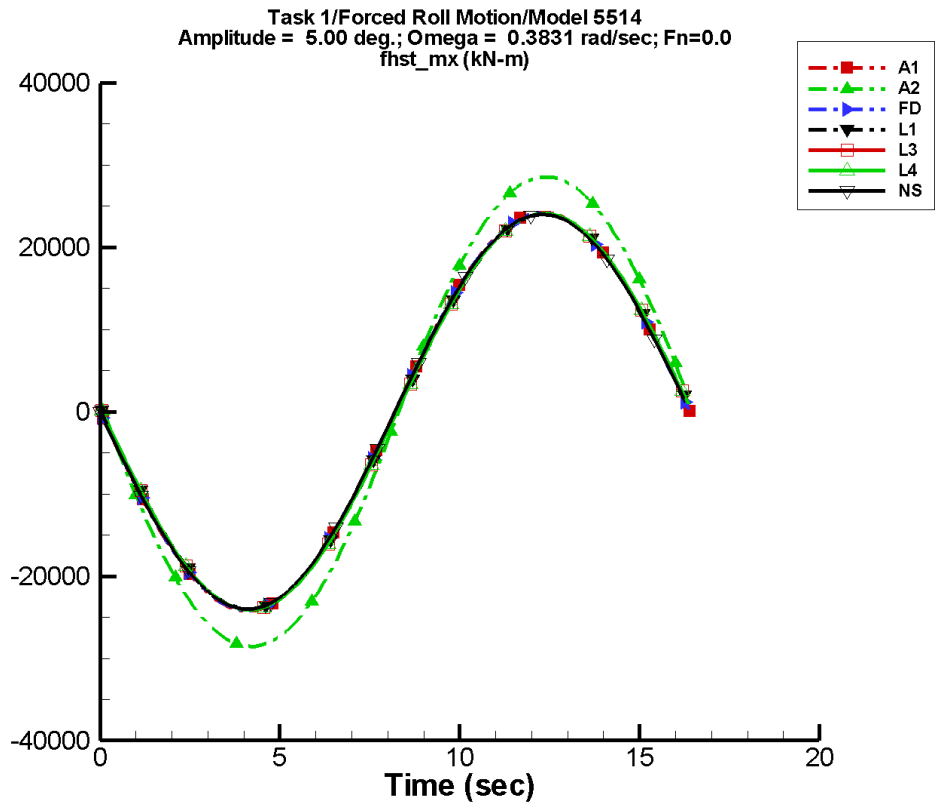
Table D-609. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.262	3.15E+05	180	0.310	156
A2	-722.	2.52E+05	180	7.77E+03	-135
FD	-1.13E+03	2.61E+05	-179	6.68E+03	-129
L1	824.	3.53E+05	179	3.24E+03	87
L3	-2.64E+03	2.71E+05	179	1.06E+04	-92
L4	-2.64E+03	2.71E+05	179	1.06E+04	-92
NF	—	—	—	—	—
NS	-850.	4.21E+05	180	1.05E+03	90

Table D-610. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.15E+05	3.15E+05	-3.15E+05	3.14E+05
A2	-2.27E+05	2.27E+05	-2.26E+05	2.26E+05
FD	-2.31E+05	2.31E+05	-2.30E+05	2.30E+05
L1	-3.67E+05	3.67E+05	-3.67E+05	3.67E+05
L3	-2.40E+05	2.40E+05	-2.40E+05	2.40E+05
L4	-2.40E+05	2.40E+05	-2.40E+05	2.40E+05
NF	—	—	—	—
NS	-4.29E+05	4.25E+05	-4.29E+05	4.25E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-306. Time history of  $M_x^{hst}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

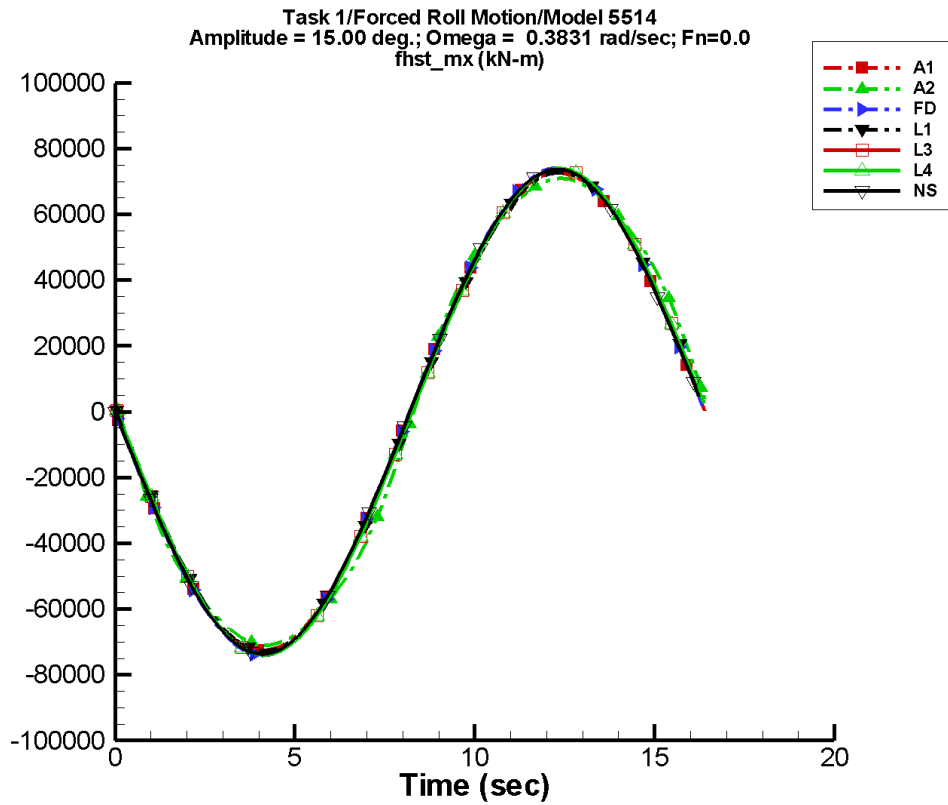
Table D-611. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.36E-03	2.42E+04	-180	1.26E-03	145
A2	-11.2	2.89E+04	178	64.1	-120
FD	0.295	2.41E+04	180	1.60	81
L1	0.247	2.40E+04	179	0.747	28
L3	1.54	2.41E+04	179	3.10	41
L4	1.54	2.41E+04	179	3.10	41
NF	—	—	—	—	—
NS	-4.64E-04	2.40E+04	180	3.73E-03	176

Table D-612. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.42E+04	2.42E+04	-2.43E+04	2.41E+04
A2	-2.85E+04	2.85E+04	-2.86E+04	2.84E+04
FD	-2.41E+04	2.41E+04	-2.41E+04	2.40E+04
L1	-2.40E+04	2.40E+04	-2.40E+04	2.40E+04
L3	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
L4	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
NF	—	—	—	—
NS	-2.40E+04	2.40E+04	-2.38E+04	2.38E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-307. Time history of  $M_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

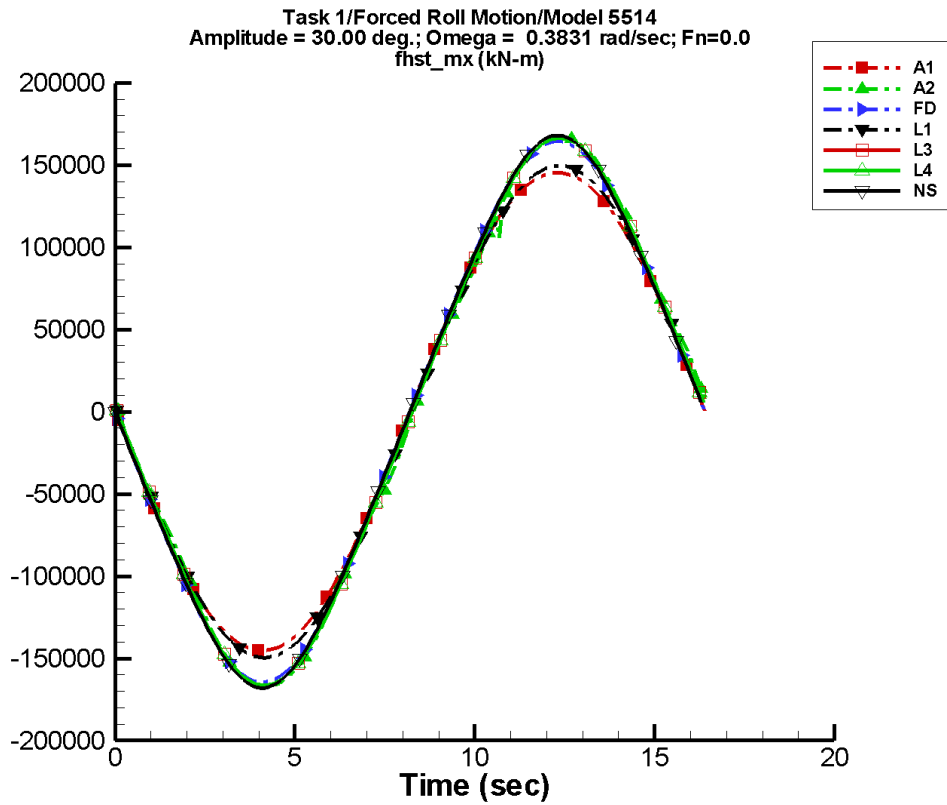
Table D-613. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.24E-03	7.26E+04	-180	9.49E-03	-42
A2	-110.	7.31E+04	178	601.	-118
FD	14.5	7.36E+04	180	96.9	76
L1	9.88	7.25E+04	179	20.1	28
L3	26.6	7.35E+04	179	51.7	31
L4	26.6	7.35E+04	179	51.7	31
NF	—	—	—	—	—
NS	5.78E-03	7.32E+04	180	8.83E-03	167

Table D-614. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.26E+04	7.26E+04	-7.28E+04	7.24E+04
A2	-7.09E+04	7.09E+04	-7.10E+04	7.07E+04
FD	-7.41E+04	7.41E+04	-7.38E+04	7.38E+04
L1	-7.27E+04	7.27E+04	-7.26E+04	7.26E+04
L3	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
L4	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
NF	—	—	—	—
NS	-7.37E+04	7.37E+04	-7.29E+04	7.29E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-308. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

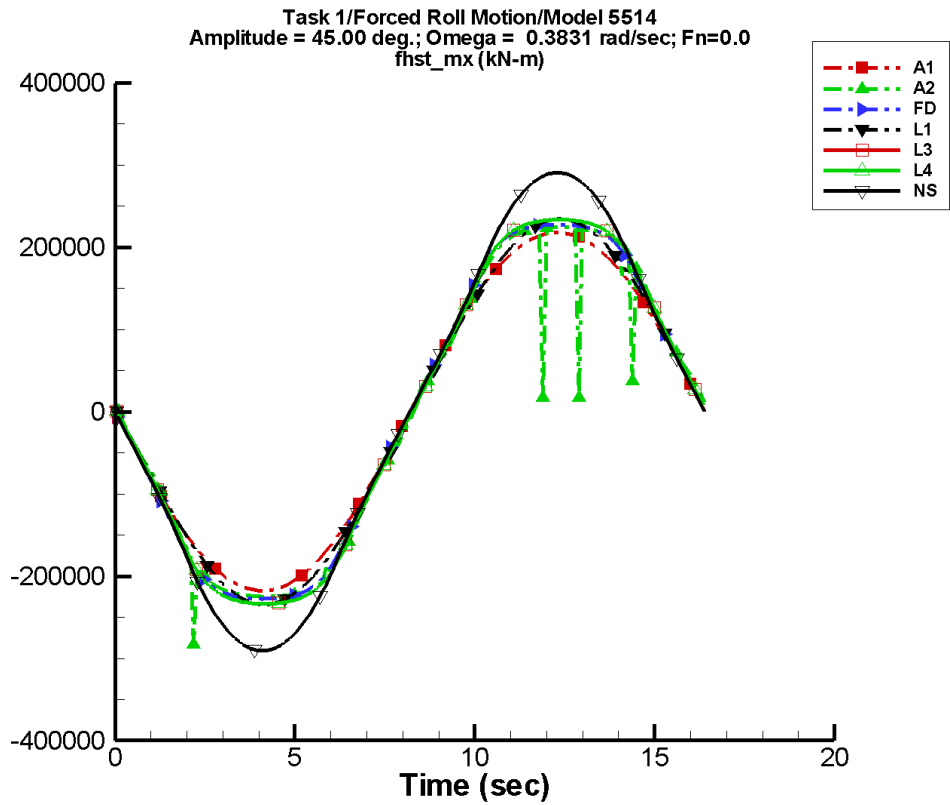
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.30E-02	1.45E+05	-180	1.36E-02	-91
A2	-41.7	1.60E+05	178	896.	56
FD	158.	1.59E+05	180	1.08E+03	76
L1	82.2	1.48E+05	179	159.	28
L3	352.	1.60E+05	178	675.	26
L4	352.	1.60E+05	178	675.	26
NF	—	—	—	—	—
NS	-1.08E-03	1.60E+05	180	4.25E-03	1

Table D-616. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.45E+05	1.45E+05	-1.46E+05	1.45E+05
A2	-1.67E+05	1.67E+05	-1.67E+05	1.66E+05
FD	-1.64E+05	1.64E+05	-1.64E+05	1.64E+05
L1	-1.50E+05	1.50E+05	-1.49E+05	1.49E+05
L3	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
L4	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
NF	—	—	—	—
NS	-1.68E+05	1.68E+05	-1.67E+05	1.67E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-309. Time history of  $M_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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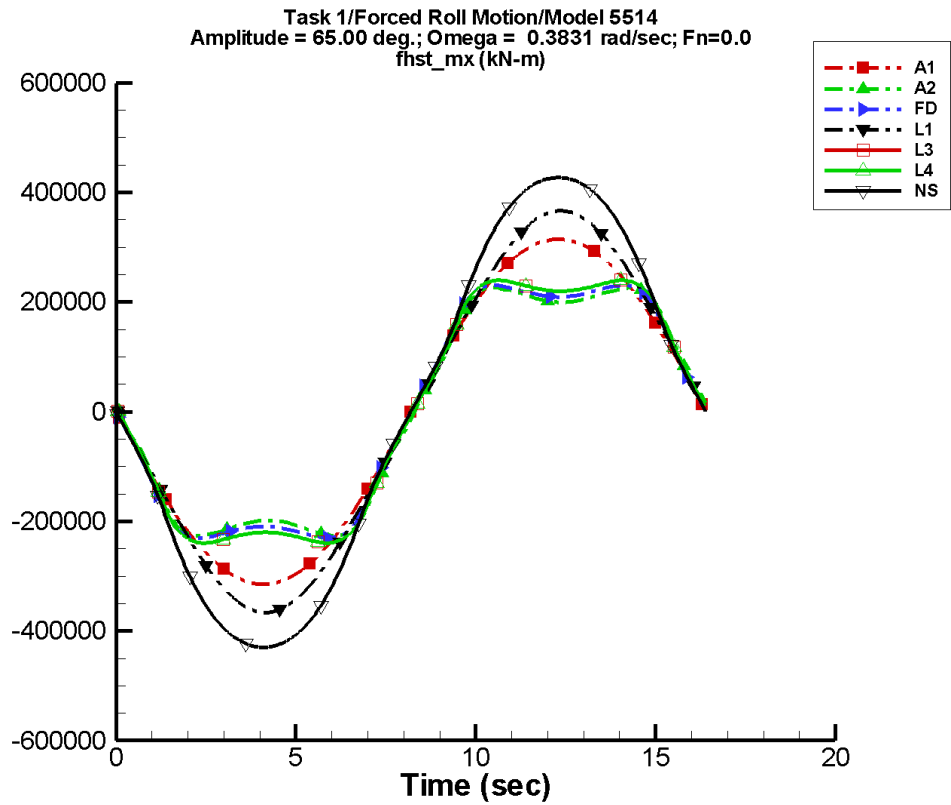
Table D-617. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.91E-02	2.18E+05	-180	3.03E-03	-9
A2	-3.89E+03	2.30E+05	178	4.54E+03	81
FD	-125.	2.38E+05	180	461.	-68
L1	276.	2.30E+05	179	526.	29
L3	185.	2.43E+05	179	511.	74
L4	185.	2.43E+05	179	511.	74
NF	—	—	—	—	—
NS	0.993	2.75E+05	-180	1.57	-90

Table D-618. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.18E+05	-2.19E+05	2.17E+05
A2	-2.83E+05	2.25E+05	-2.26E+05	2.15E+05
FD	-2.27E+05	2.27E+05	-2.27E+05	2.27E+05
L1	-2.35E+05	2.35E+05	-2.34E+05	2.34E+05
L3	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
L4	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
NF	—	—	—	—
NS	-2.91E+05	2.91E+05	-2.90E+05	2.90E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-310. Time history of  $M_x^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

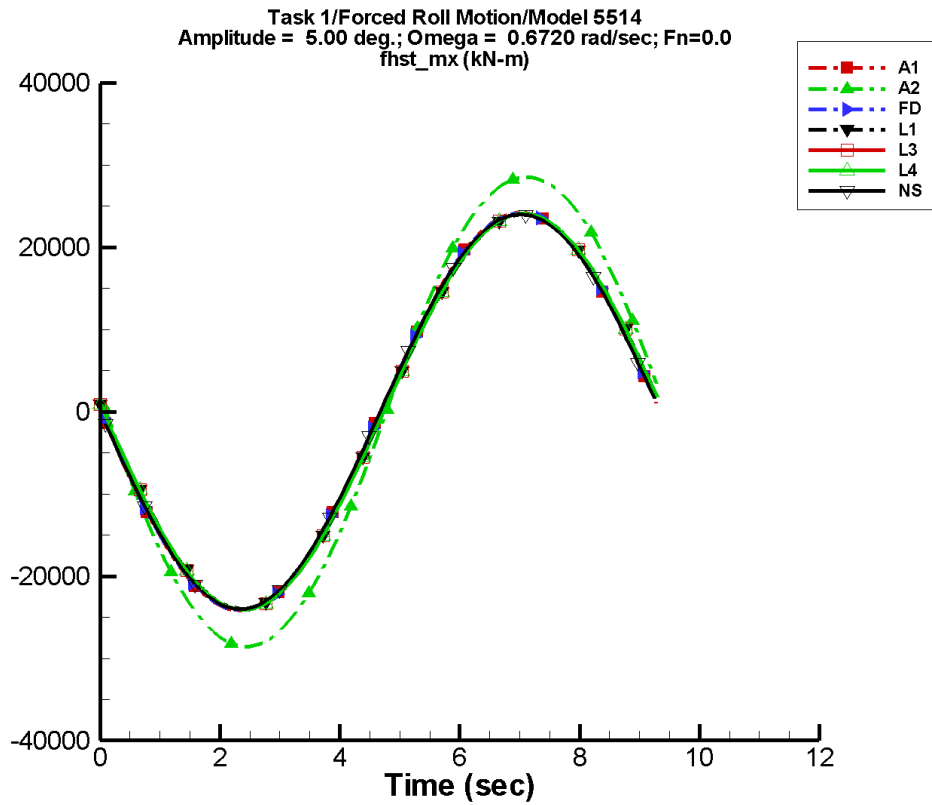
Table D–619. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.96E-02	3.15E+05	-180	3.08E-03	174
A2	-740.	2.53E+05	179	7.95E+03	-129
FD	-1.28E+03	2.60E+05	-179	9.34E+03	-104
L1	801.	3.53E+05	178	1.53E+03	29
L3	-2.44E+03	2.74E+05	180	4.88E+03	-165
L4	-2.44E+03	2.74E+05	180	4.88E+03	-165
NF	—	—	—	—	—
NS	-657.	4.22E+05	180	776.	90

Table D–620. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.15E+05	3.15E+05	-3.16E+05	3.14E+05
A2	-2.27E+05	2.27E+05	-2.24E+05	2.24E+05
FD	-2.31E+05	2.31E+05	-2.29E+05	2.29E+05
L1	-3.67E+05	3.67E+05	-3.66E+05	3.66E+05
L3	-2.40E+05	2.40E+05	-2.39E+05	2.39E+05
L4	-2.40E+05	2.40E+05	-2.39E+05	2.39E+05
NF	—	—	—	—
NS	-4.30E+05	4.27E+05	-4.30E+05	4.27E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-311. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

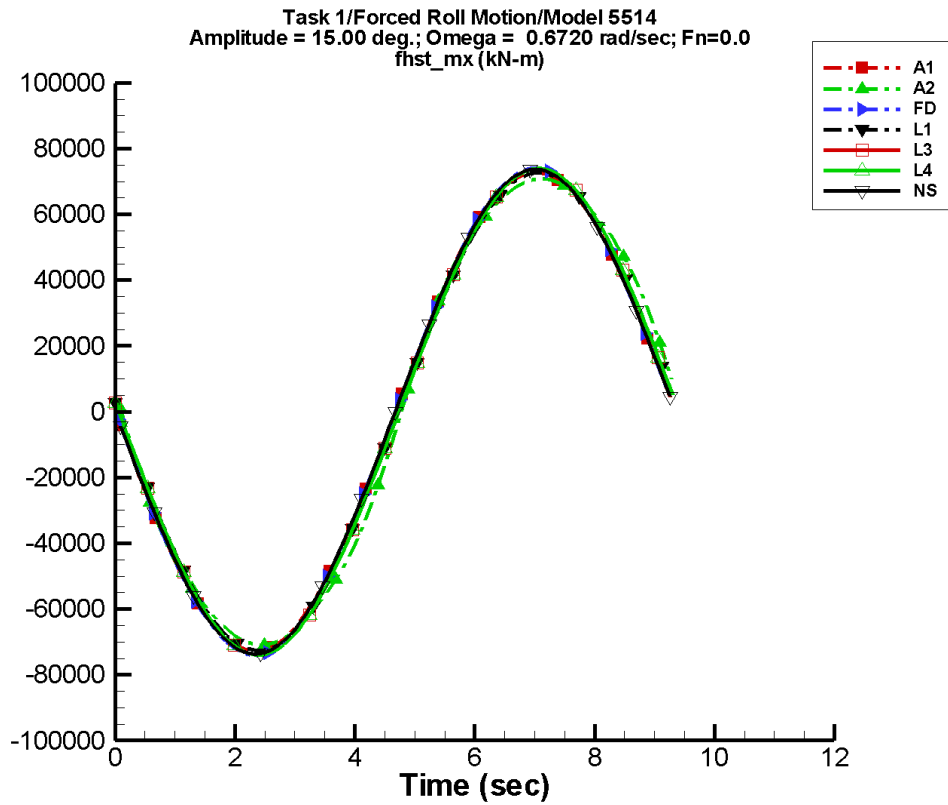
Table D–621. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	2.47E-02	2.42E+04	180	4.27E-02	162
A2	-20.7	2.89E+04	176	47.0	-140
FD	0.689	2.41E+04	180	1.13	148
L1	-3.69E-02	2.40E+04	178	0.777	23
L3	1.16	2.41E+04	178	3.09	42
L4	1.16	2.41E+04	178	3.09	42
NF	—	—	—	—	—
NS	1.73E-03	2.40E+04	-180	1.97E-03	-128

Table D–622. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.42E+04	2.42E+04	-2.39E+04	2.39E+04
A2	-2.85E+04	2.85E+04	-2.82E+04	2.82E+04
FD	-2.41E+04	2.41E+04	-2.39E+04	2.40E+04
L1	-2.40E+04	2.40E+04	-2.39E+04	2.39E+04
L3	-2.41E+04	2.41E+04	-2.40E+04	2.40E+04
L4	-2.41E+04	2.41E+04	-2.40E+04	2.40E+04
NF	—	—	—	—
NS	-2.40E+04	2.40E+04	-2.38E+04	2.38E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-312. Time history of  $M_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

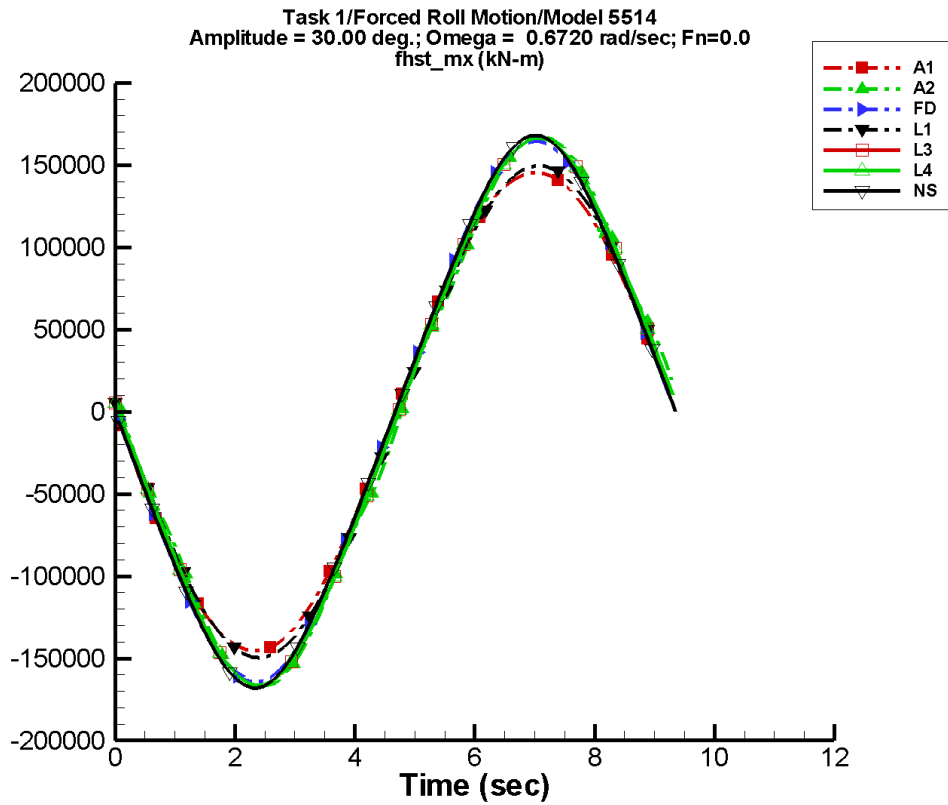
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	6.91E-02	7.26E+04	180	0.125	164
A2	-183.	7.33E+04	176	462.	-133
FD	37.1	7.36E+04	180	68.6	148
L1	9.48	7.25E+04	178	20.7	25
L3	26.6	7.35E+04	178	52.8	27
L4	26.6	7.35E+04	178	52.8	27
NF	—	—	—	—	—
NS	5.54E-03	7.32E+04	180	1.03E-02	-140

Table D-624. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.26E+04	7.26E+04	-7.18E+04	7.18E+04
A2	-7.09E+04	7.09E+04	-7.01E+04	7.01E+04
FD	-7.41E+04	7.41E+04	-7.32E+04	7.37E+04
L1	-7.27E+04	7.27E+04	-7.24E+04	7.23E+04
L3	-7.40E+04	7.39E+04	-7.36E+04	7.36E+04
L4	-7.40E+04	7.39E+04	-7.36E+04	7.36E+04
NF	—	—	—	—
NS	-7.37E+04	7.37E+04	-7.29E+04	7.29E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-313. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

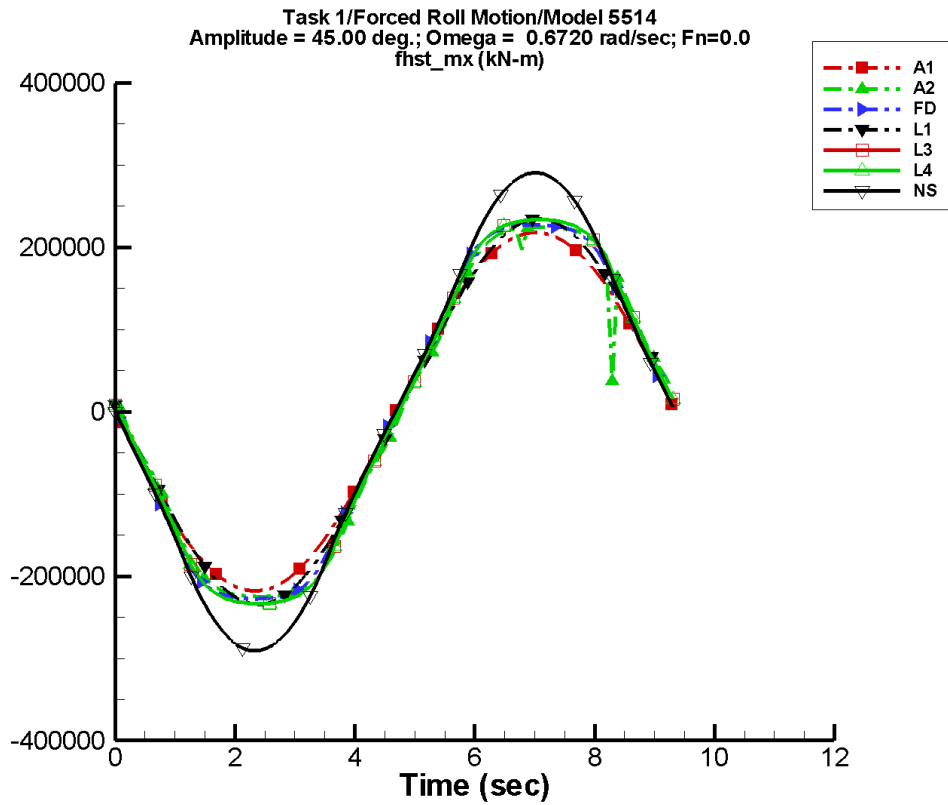
Table D–625. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.138	1.45E+05	180	0.256	161
A2	76.7	1.59E+05	176	1.13E+03	10
FD	406.	1.60E+05	180	766.	146
L1	83.1	1.48E+05	178	163.	25
L3	362.	1.60E+05	177	696.	22
L4	362.	1.60E+05	177	696.	22
NF	—	—	—	—	—
NS	-2.46E-02	1.60E+05	180	6.33E-02	-169

Table D–626. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.45E+05	1.45E+05	-1.44E+05	1.44E+05
A2	-1.67E+05	1.67E+05	-1.65E+05	1.65E+05
FD	-1.64E+05	1.64E+05	-1.62E+05	1.63E+05
L1	-1.50E+05	1.50E+05	-1.49E+05	1.49E+05
L3	-1.66E+05	1.66E+05	-1.65E+05	1.65E+05
L4	-1.66E+05	1.66E+05	-1.65E+05	1.65E+05
NF	—	—	—	—
NS	-1.68E+05	1.68E+05	-1.67E+05	1.67E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-314. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

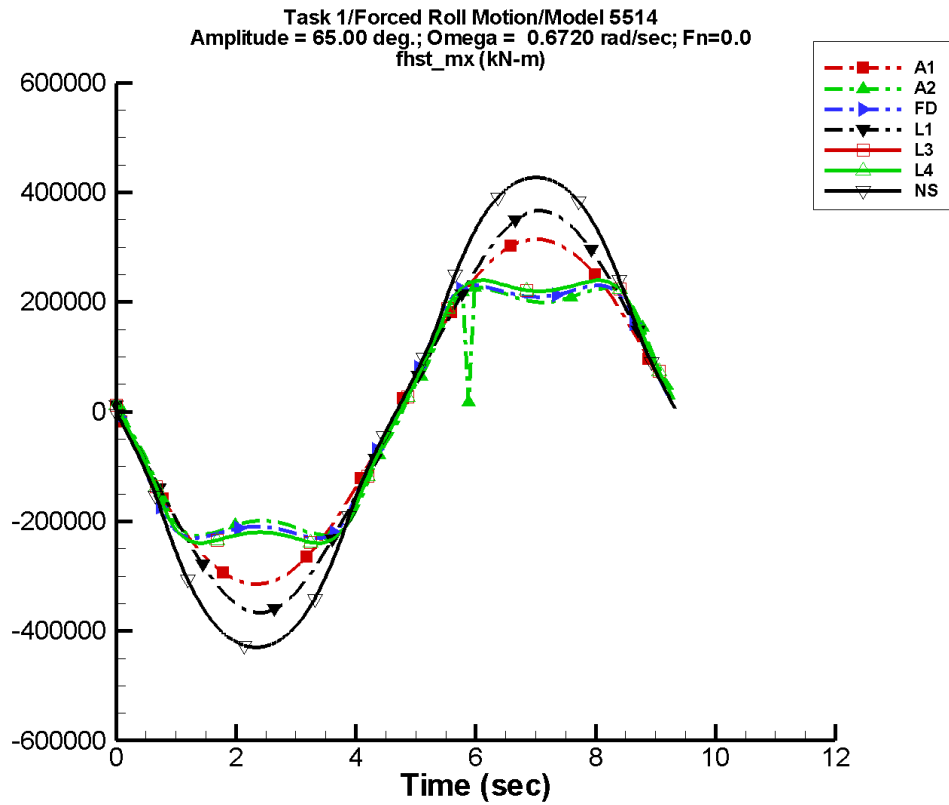
Table D–627. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.227	2.18E+05	180	0.368	163
A2	-2.05E+03	2.35E+05	177	2.34E+03	28
FD	-229.	2.38E+05	-180	651.	33
L1	280.	2.30E+05	178	540.	25
L3	-42.8	2.43E+05	178	838.	109
L4	-42.8	2.43E+05	178	838.	109
NF	—	—	—	—	—
NS	-0.385	2.75E+05	-180	0.594	85

Table D–628. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.18E+05	-2.15E+05	2.15E+05
A2	-2.25E+05	2.25E+05	-2.24E+05	2.24E+05
FD	-2.27E+05	2.27E+05	-2.27E+05	2.28E+05
L1	-2.35E+05	2.35E+05	-2.34E+05	2.34E+05
L3	-2.34E+05	2.34E+05	-2.33E+05	2.33E+05
L4	-2.34E+05	2.34E+05	-2.33E+05	2.33E+05
NF	—	—	—	—
NS	-2.91E+05	2.91E+05	-2.90E+05	2.90E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-315. Time history of  $M_x^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

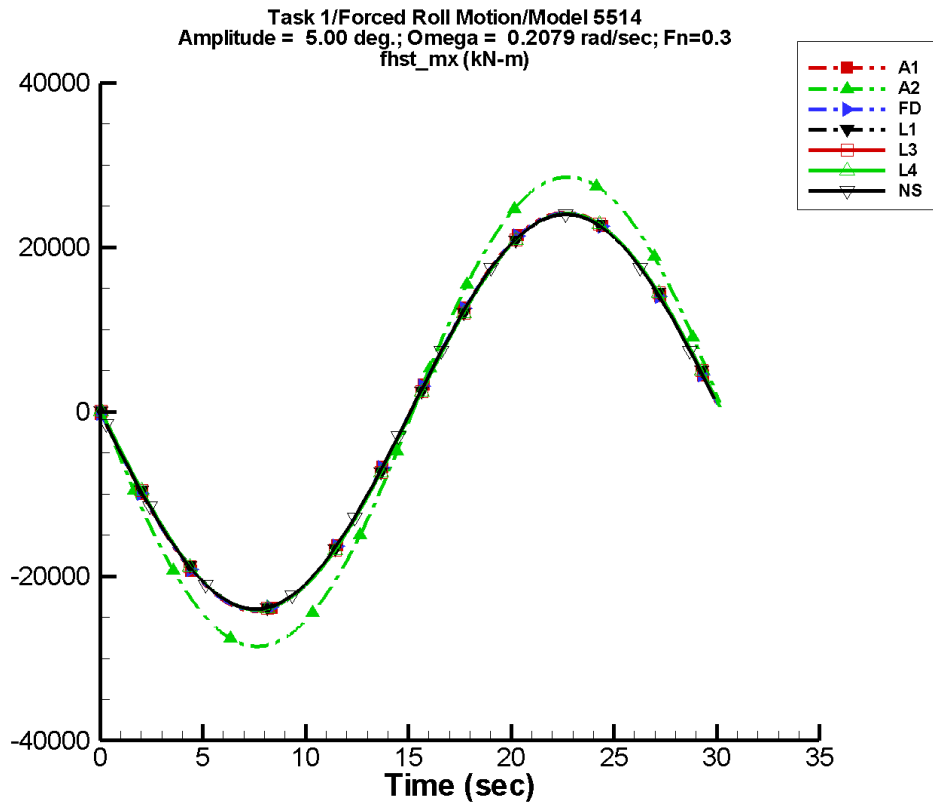
Table D–629. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.308	3.15E+05	180	0.522	163
A2	-4.48E+03	2.53E+05	176	9.67E+03	-170
FD	-3.44E+03	2.57E+05	-179	6.55E+03	-29
L1	815.	3.53E+05	177	1.56E+03	26
L3	-2.66E+03	2.74E+05	179	5.29E+03	-171
L4	-2.66E+03	2.74E+05	179	5.29E+03	-171
NF	—	—	—	—	—
NS	-643.	4.22E+05	180	752.	90

Table D–630. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.15E+05	3.15E+05	-3.11E+05	3.11E+05
A2	-2.27E+05	2.27E+05	-2.22E+05	2.22E+05
FD	-2.31E+05	2.31E+05	-2.27E+05	2.27E+05
L1	-3.67E+05	3.67E+05	-3.65E+05	3.65E+05
L3	-2.40E+05	2.40E+05	-2.40E+05	2.38E+05
L4	-2.40E+05	2.40E+05	-2.40E+05	2.38E+05
NF	—	—	—	—
NS	-4.30E+05	4.27E+05	-4.30E+05	4.27E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-316. Time history of  $M_x^{hst}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

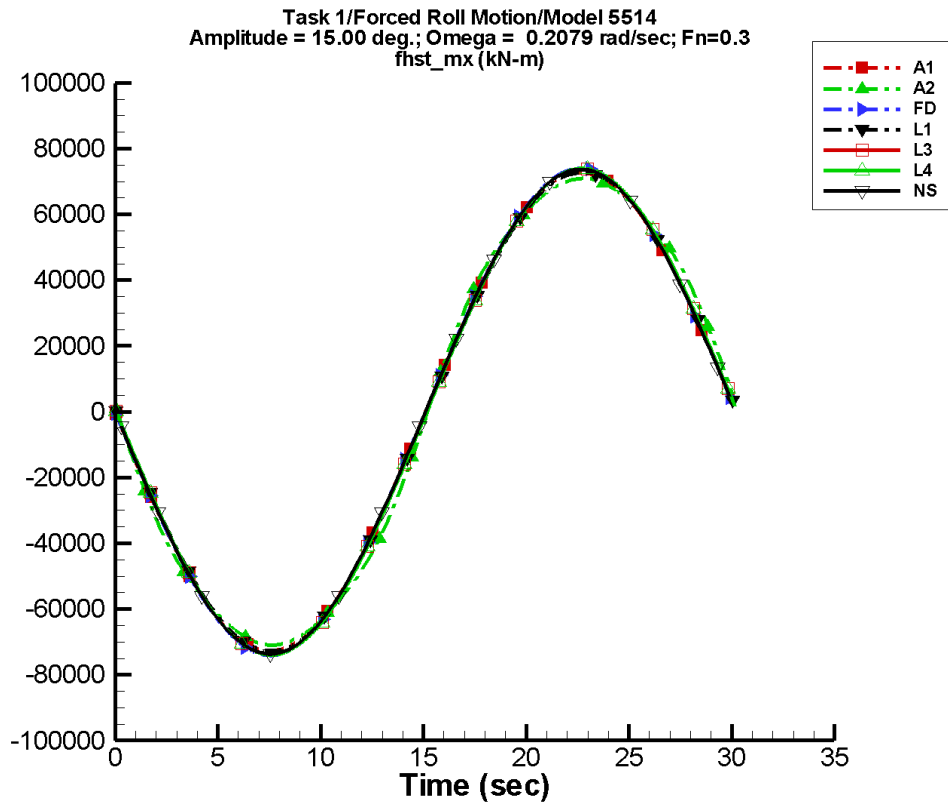
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	1.99E-02	2.42E+04	180	2.44E-02	157
A2	-12.2	2.89E+04	179	62.0	-119
FD	0.253	2.41E+04	180	1.14	54
L1	0.426	2.40E+04	179	1.60	87
L3	1.64	2.41E+04	179	6.12	86
L4	1.64	2.41E+04	179	6.12	86
NF	—	—	—	—	—
NS	-1.63E-03	2.40E+04	-180	2.32E-03	175

Table D-632. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.42E+04	2.42E+04	-2.42E+04	2.42E+04
A2	-2.85E+04	2.85E+04	-2.85E+04	2.85E+04
FD	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
L1	-2.40E+04	2.40E+04	-2.40E+04	2.40E+04
L3	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
L4	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
NF	—	—	—	—
NS	-2.40E+04	2.40E+04	-2.38E+04	2.38E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-317. Time history of  $M_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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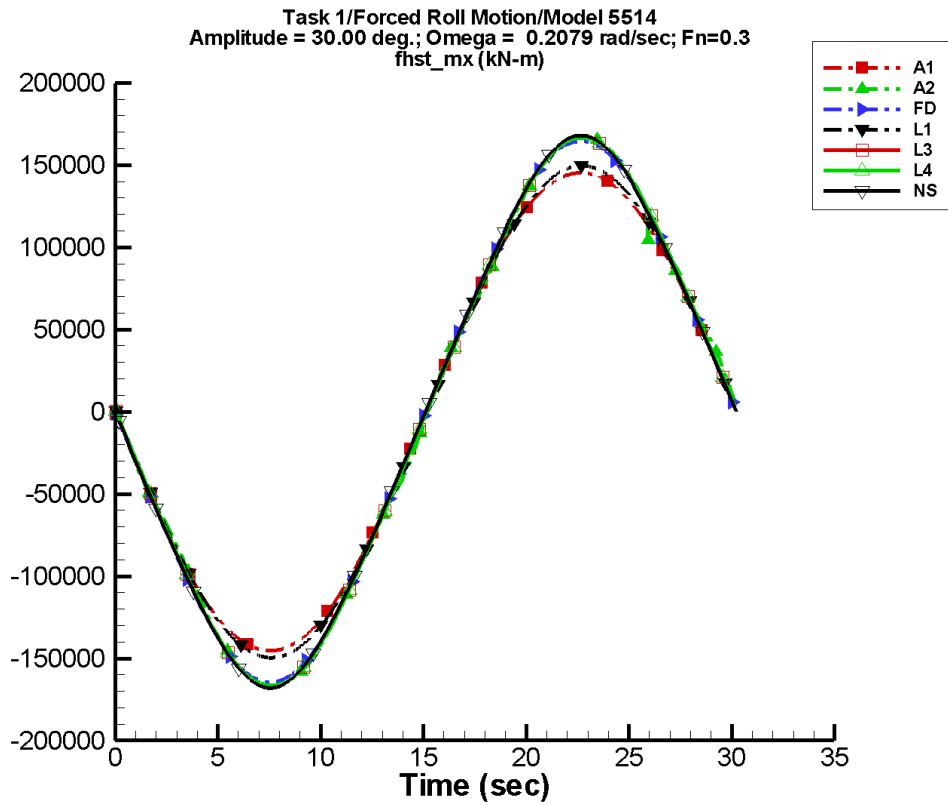
Table D-633. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	5.54E-02	7.26E+04	180	7.25E-02	162
A2	-117.	7.32E+04	179	587.	-116
FD	13.9	7.36E+04	180	70.6	56
L1	10.9	7.25E+04	179	42.9	87
L3	28.1	7.35E+04	179	110.	87
L4	28.1	7.35E+04	179	110.	87
NF	—	—	—	—	—
NS	-1.99E-03	7.32E+04	-180	7.14E-03	-127

Table D-634. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.26E+04	7.26E+04	-7.27E+04	7.26E+04
A2	-7.09E+04	7.09E+04	-7.09E+04	7.09E+04
FD	-7.41E+04	7.41E+04	-7.40E+04	7.40E+04
L1	-7.27E+04	7.27E+04	-7.26E+04	7.26E+04
L3	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
L4	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
NF	—	—	—	—
NS	-7.37E+04	7.37E+04	-7.29E+04	7.29E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-318. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

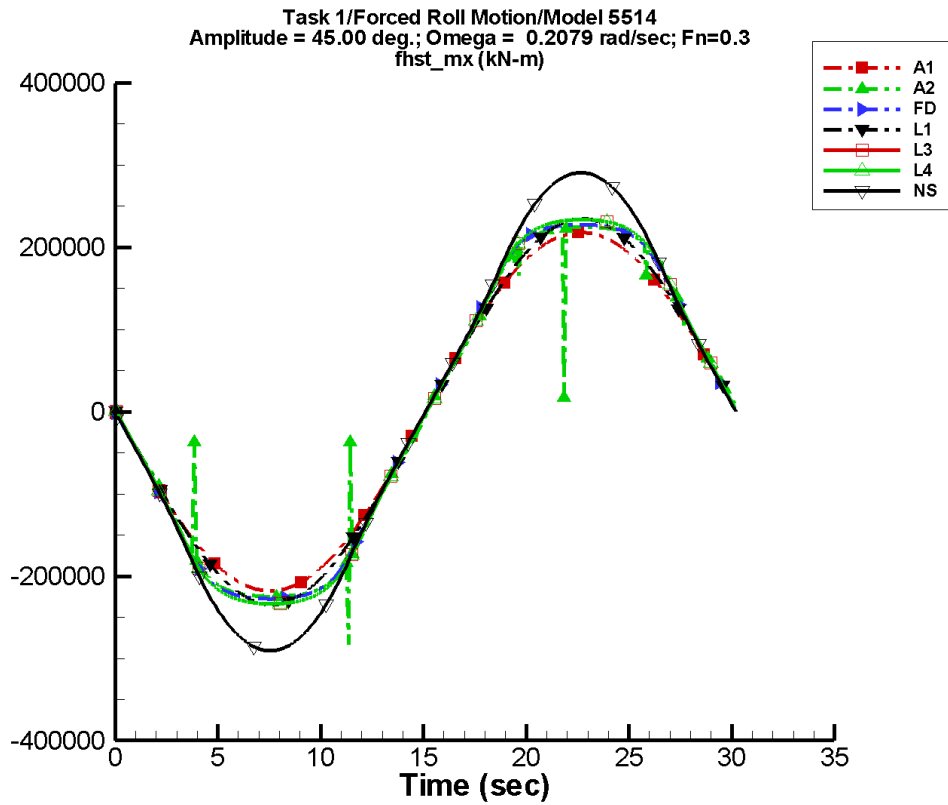
Table D–635. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.110	1.45E+05	180	0.141	163
A2	25.9	1.60E+05	179	1.03E+03	41
FD	156.	1.59E+05	180	798.	57
L1	86.0	1.48E+05	179	339.	87
L3	365.	1.60E+05	179	1.44E+03	87
L4	365.	1.60E+05	179	1.44E+03	87
NF	—	—	—	—	—
NS	4.52E-04	1.60E+05	-180	7.14E-03	-133

Table D–636. Minimum and maximum of of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.45E+05	1.45E+05	-1.45E+05	1.45E+05
A2	-1.67E+05	1.67E+05	-1.67E+05	1.67E+05
FD	-1.65E+05	1.64E+05	-1.64E+05	1.64E+05
L1	-1.50E+05	1.50E+05	-1.50E+05	1.50E+05
L3	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
L4	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
NF	—	—	—	—
NS	-1.68E+05	1.68E+05	-1.67E+05	1.67E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-319. Time history of  $M_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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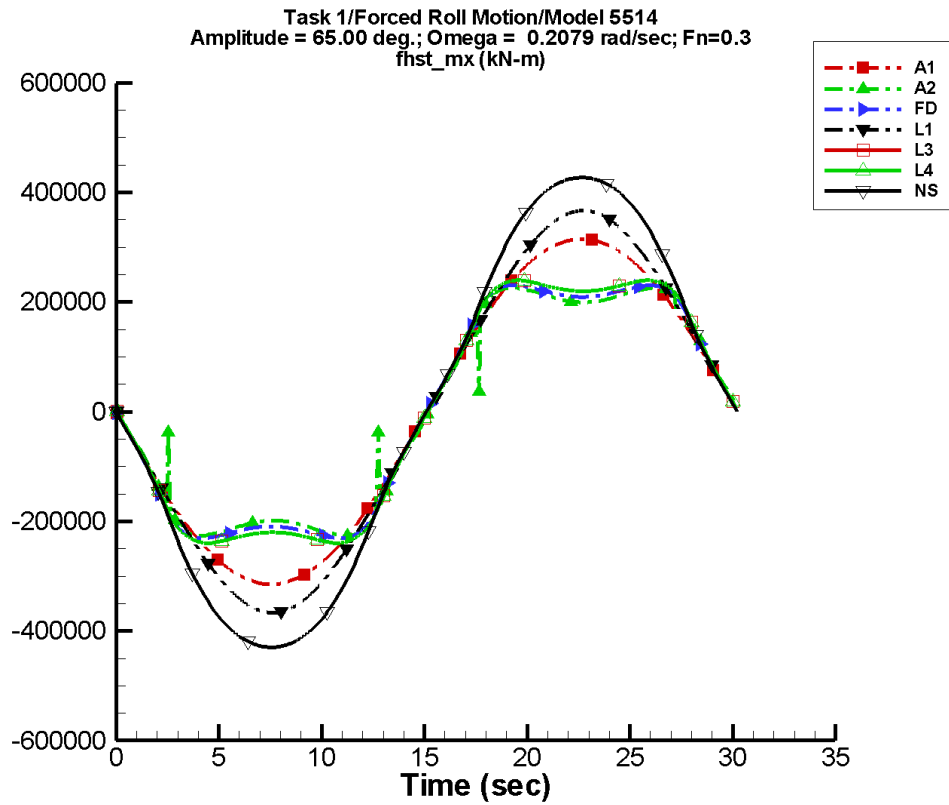
Table D-637. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.189	2.18E+05	180	0.226	157
A2	-646.	2.34E+05	179	1.46E+03	120
FD	34.7	2.38E+05	180	555.	155
L1	284.	2.30E+05	179	1.12E+03	87
L3	86.6	2.43E+05	179	180.	66
L4	86.6	2.43E+05	179	180.	66
NF	—	—	—	—	—
NS	-0.722	2.75E+05	-180	1.18	91

Table D-638. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.18E+05	-2.18E+05	2.18E+05
A2	-2.83E+05	2.25E+05	-2.25E+05	2.27E+05
FD	-2.27E+05	2.27E+05	-2.28E+05	2.27E+05
L1	-2.35E+05	2.35E+05	-2.35E+05	2.35E+05
L3	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
L4	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
NF	—	—	—	—
NS	-2.91E+05	2.91E+05	-2.90E+05	2.90E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-320. Time history of  $M_x^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

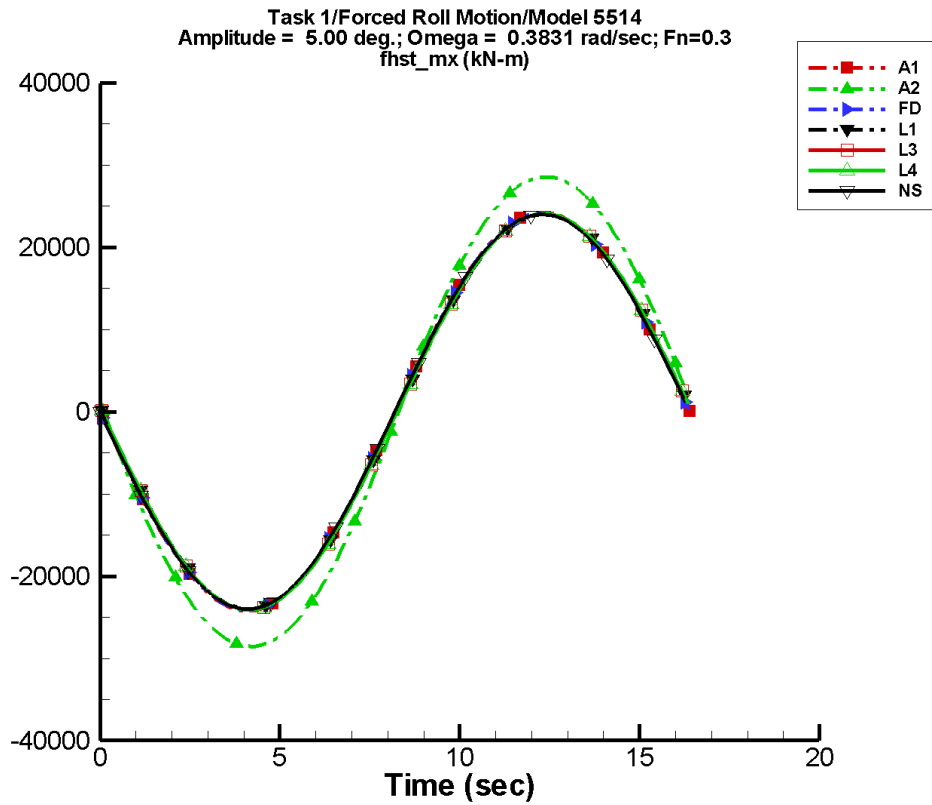
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.262	3.15E+05	180	0.310	156
A2	-722.	2.52E+05	180	7.77E+03	-135
FD	-1.13E+03	2.61E+05	-179	6.68E+03	-129
L1	824.	3.53E+05	179	3.24E+03	87
L3	-2.64E+03	2.71E+05	179	1.06E+04	-92
L4	-2.64E+03	2.71E+05	179	1.06E+04	-92
NF	—	—	—	—	—
NS	-651.	4.22E+05	180	769.	90

Table D-640. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.15E+05	3.15E+05	-3.15E+05	3.14E+05
A2	-2.27E+05	2.27E+05	-2.26E+05	2.26E+05
FD	-2.31E+05	2.31E+05	-2.30E+05	2.30E+05
L1	-3.67E+05	3.67E+05	-3.67E+05	3.67E+05
L3	-2.40E+05	2.40E+05	-2.40E+05	2.40E+05
L4	-2.40E+05	2.40E+05	-2.40E+05	2.40E+05
NF	—	—	—	—
NS	-4.30E+05	4.27E+05	-4.30E+05	4.27E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-321. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

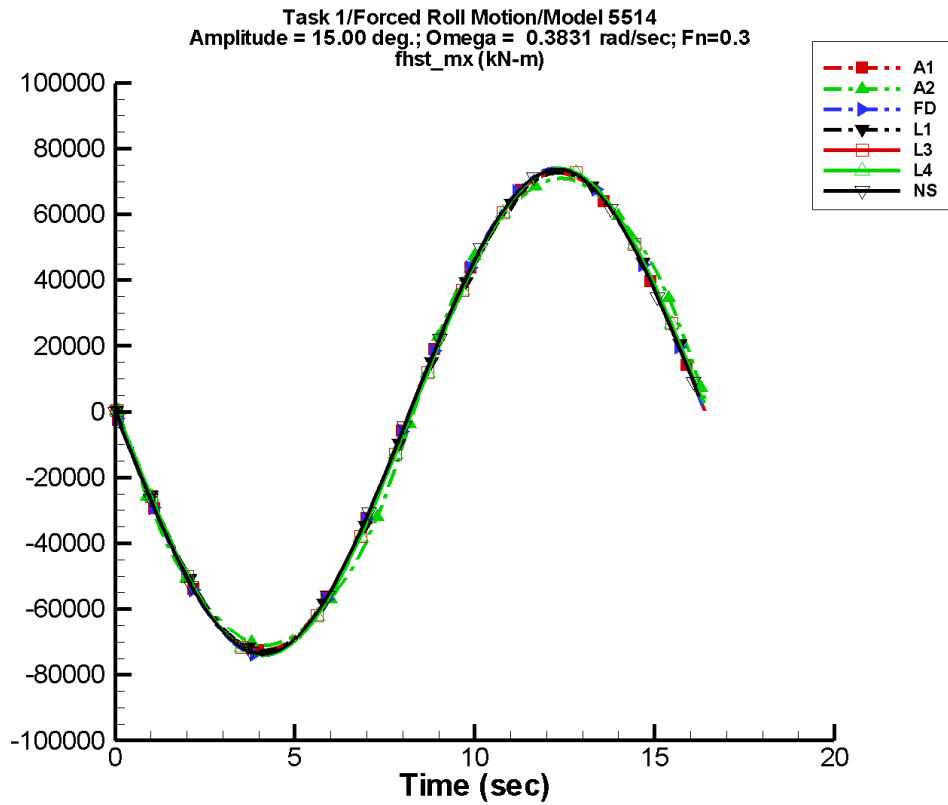
Table D-641. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.36E-03	2.42E+04	-180	1.26E-03	145
A2	-11.2	2.89E+04	178	64.1	-120
FD	0.293	2.41E+04	180	1.60	81
L1	0.247	2.40E+04	179	0.747	28
L3	1.54	2.41E+04	179	3.11	42
L4	1.54	2.41E+04	179	3.11	42
NF	—	—	—	—	—
NS	-4.64E-04	2.40E+04	180	3.73E-03	176

Table D-642. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.42E+04	2.42E+04	-2.43E+04	2.41E+04
A2	-2.85E+04	2.85E+04	-2.86E+04	2.84E+04
FD	-2.41E+04	2.41E+04	-2.41E+04	2.40E+04
L1	-2.40E+04	2.40E+04	-2.40E+04	2.40E+04
L3	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
L4	-2.41E+04	2.41E+04	-2.41E+04	2.41E+04
NF	—	—	—	—
NS	-2.40E+04	2.40E+04	-2.38E+04	2.38E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-322. Time history of  $M_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

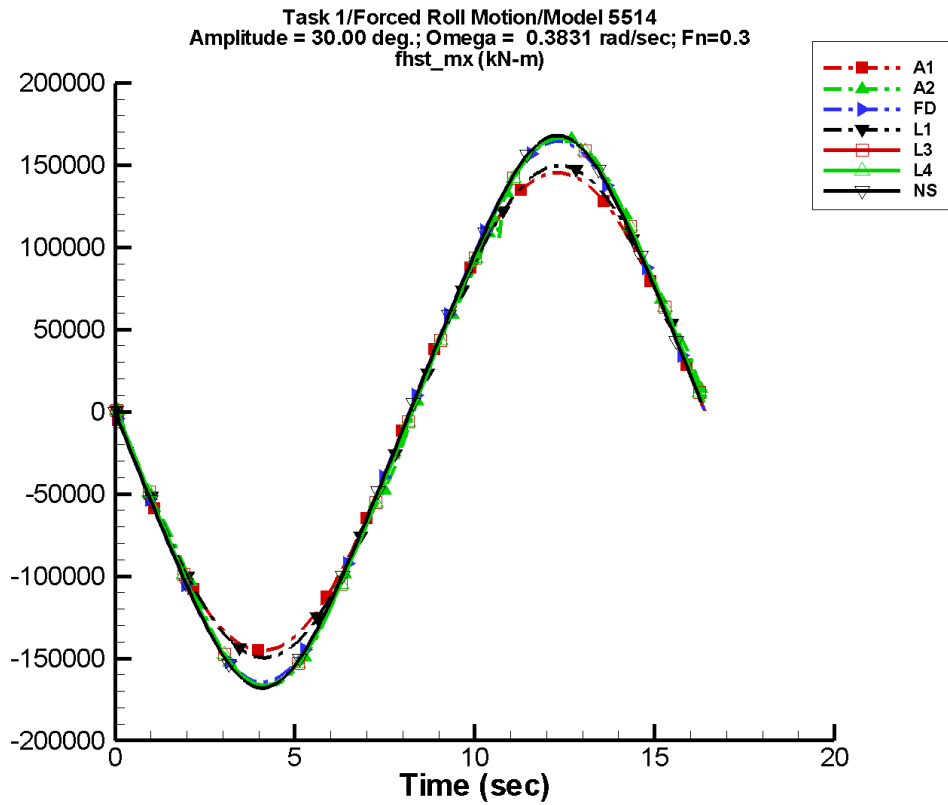
Table D-643. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.24E-03	7.26E+04	-180	9.49E-03	-42
A2	-110.	7.31E+04	178	601.	-118
FD	14.5	7.36E+04	180	96.9	76
L1	9.88	7.25E+04	179	20.1	28
L3	26.6	7.35E+04	179	51.6	31
L4	26.6	7.35E+04	179	51.6	31
NF	—	—	—	—	—
NS	5.78E-03	7.32E+04	180	8.83E-03	167

Table D-644. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.26E+04	7.26E+04	-7.28E+04	7.24E+04
A2	-7.09E+04	7.09E+04	-7.10E+04	7.07E+04
FD	-7.41E+04	7.41E+04	-7.38E+04	7.38E+04
L1	-7.27E+04	7.27E+04	-7.26E+04	7.26E+04
L3	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
L4	-7.40E+04	7.40E+04	-7.39E+04	7.39E+04
NF	—	—	—	—
NS	-7.37E+04	7.37E+04	-7.29E+04	7.29E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-323. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

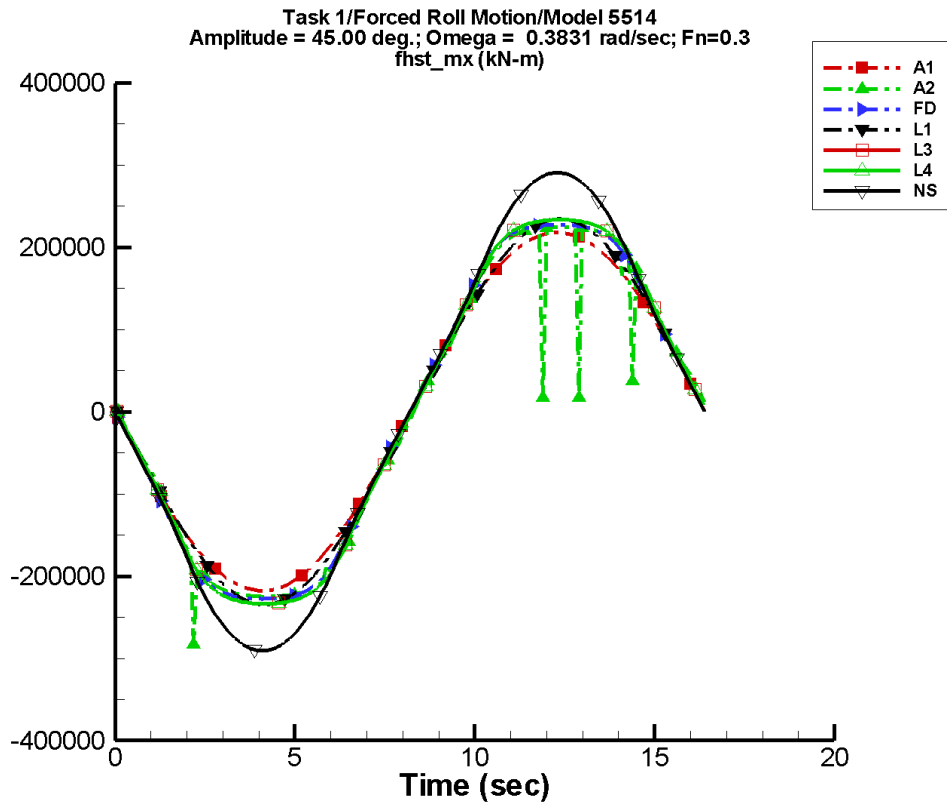
Table D-645. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.30E-02	1.45E+05	-180	1.36E-02	-91
A2	-41.7	1.60E+05	178	896.	56
FD	158.	1.59E+05	180	1.08E+03	76
L1	82.2	1.48E+05	179	159.	28
L3	352.	1.60E+05	178	675.	26
L4	352.	1.60E+05	178	675.	26
NF	—	—	—	—	—
NS	-1.08E-03	1.60E+05	180	4.25E-03	1

Table D-646. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.45E+05	1.45E+05	-1.46E+05	1.45E+05
A2	-1.67E+05	1.67E+05	-1.67E+05	1.66E+05
FD	-1.64E+05	1.64E+05	-1.64E+05	1.64E+05
L1	-1.50E+05	1.50E+05	-1.49E+05	1.49E+05
L3	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
L4	-1.66E+05	1.66E+05	-1.66E+05	1.66E+05
NF	—	—	—	—
NS	-1.68E+05	1.68E+05	-1.67E+05	1.67E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-324. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

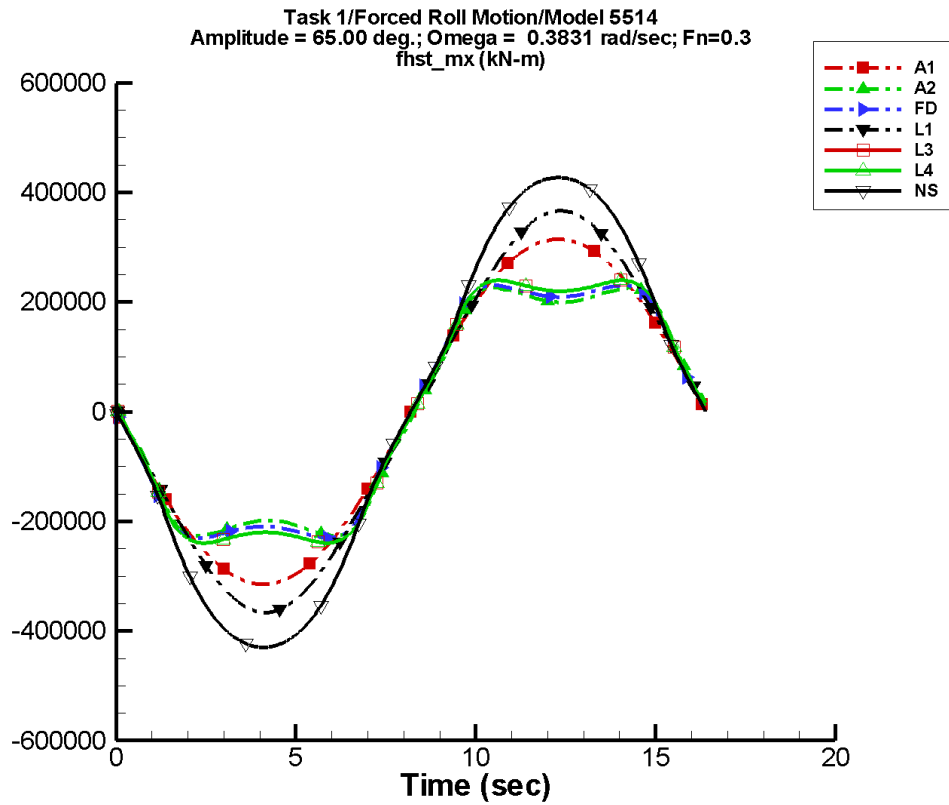
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.91E-02	2.18E+05	-180	3.03E-03	-9
A2	-3.89E+03	2.30E+05	178	4.54E+03	81
FD	-125.	2.38E+05	180	461.	-68
L1	276.	2.30E+05	179	526.	29
L3	185.	2.43E+05	179	511.	74
L4	185.	2.43E+05	179	511.	74
NF	—	—	—	—	—
NS	0.993	2.75E+05	-180	1.57	-90

Table D-648. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.18E+05	-2.19E+05	2.17E+05
A2	-2.83E+05	2.25E+05	-2.26E+05	2.15E+05
FD	-2.27E+05	2.27E+05	-2.27E+05	2.27E+05
L1	-2.35E+05	2.35E+05	-2.34E+05	2.34E+05
L3	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
L4	-2.34E+05	2.34E+05	-2.34E+05	2.34E+05
NF	—	—	—	—
NS	-2.91E+05	2.91E+05	-2.90E+05	2.90E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-325. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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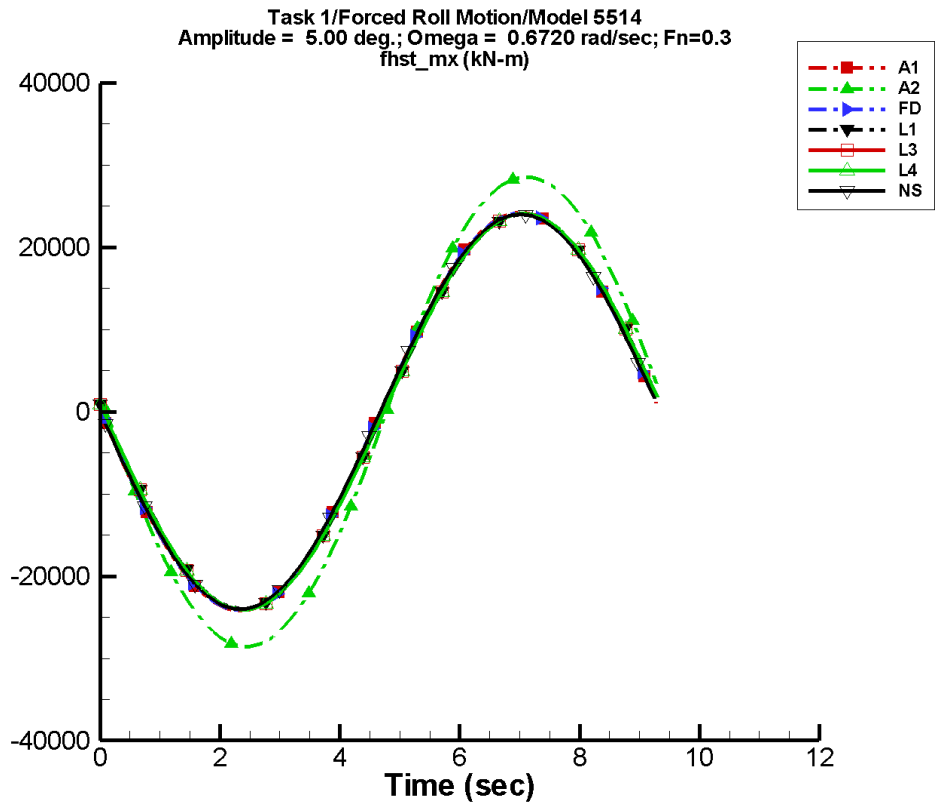
Table D-649. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.96E-02	3.15E+05	-180	3.08E-03	174
A2	-740.	2.53E+05	179	7.95E+03	-129
FD	-1.28E+03	2.60E+05	-179	9.34E+03	-104
L1	801.	3.53E+05	178	1.53E+03	29
L3	-2.44E+03	2.74E+05	180	4.88E+03	-165
L4	-2.44E+03	2.74E+05	180	4.88E+03	-165
NF	—	—	—	—	—
NS	-657.	4.22E+05	180	776.	90

Table D-650. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.15E+05	3.15E+05	-3.16E+05	3.14E+05
A2	-2.27E+05	2.27E+05	-2.24E+05	2.24E+05
FD	-2.31E+05	2.31E+05	-2.29E+05	2.29E+05
L1	-3.67E+05	3.67E+05	-3.66E+05	3.66E+05
L3	-2.40E+05	2.40E+05	-2.39E+05	2.39E+05
L4	-2.40E+05	2.40E+05	-2.39E+05	2.39E+05
NF	—	—	—	—
NS	-4.30E+05	4.27E+05	-4.30E+05	4.27E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-326. Time history of  $M_x^{hst}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

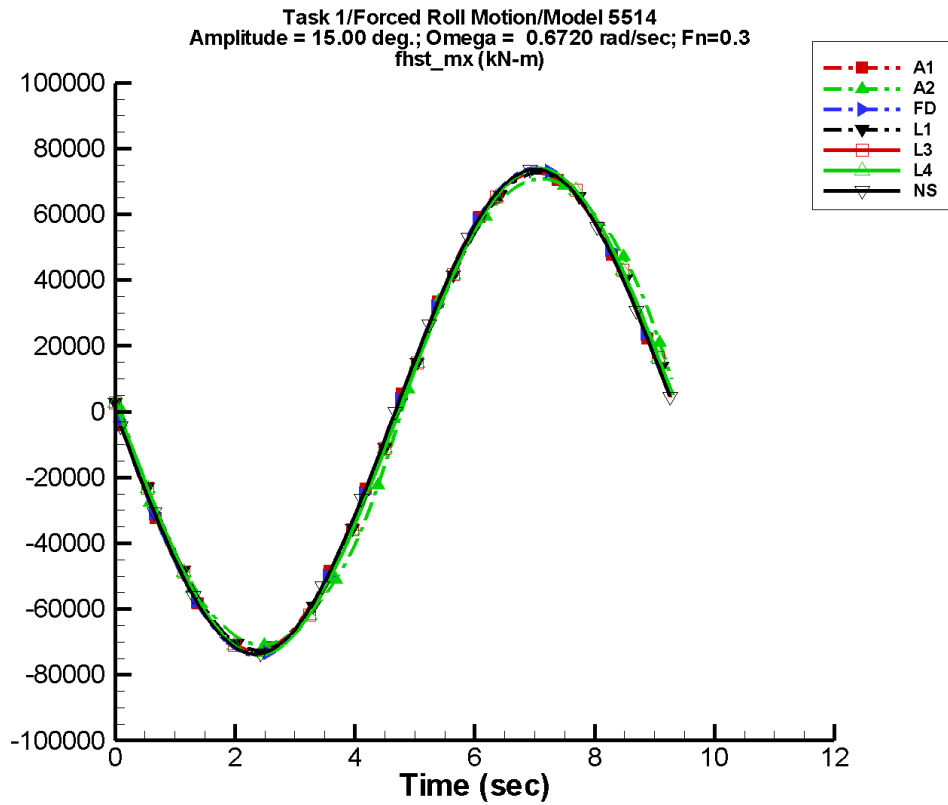
Table D–651. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	2.47E-02	2.42E+04	180	4.27E-02	162
A2	-20.7	2.89E+04	176	47.0	-140
FD	0.690	2.41E+04	180	1.13	148
L1	-3.69E-02	2.40E+04	178	0.777	23
L3	1.16	2.41E+04	178	3.09	42
L4	1.16	2.41E+04	178	3.09	42
NF	—	—	—	—	—
NS	1.73E-03	2.40E+04	-180	1.97E-03	-128

Table D–652. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.42E+04	2.42E+04	-2.39E+04	2.39E+04
A2	-2.85E+04	2.85E+04	-2.82E+04	2.82E+04
FD	-2.41E+04	2.41E+04	-2.39E+04	2.40E+04
L1	-2.40E+04	2.40E+04	-2.39E+04	2.39E+04
L3	-2.41E+04	2.41E+04	-2.40E+04	2.40E+04
L4	-2.41E+04	2.41E+04	-2.40E+04	2.40E+04
NF	—	—	—	—
NS	-2.40E+04	2.40E+04	-2.38E+04	2.38E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-327. Time history of  $M_x^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

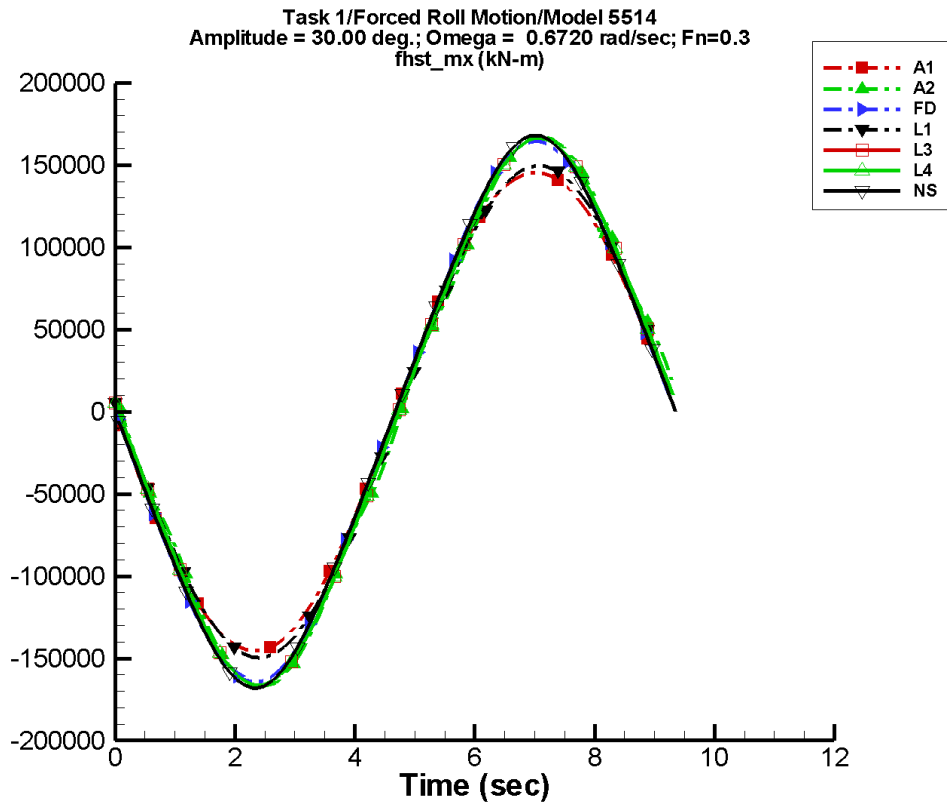
Table D-653. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	6.91E-02	7.26E+04	180	0.125	164
A2	-183.	7.33E+04	176	462.	-133
FD	37.1	7.36E+04	180	68.6	148
L1	9.48	7.25E+04	178	20.7	25
L3	26.6	7.35E+04	178	52.8	27
L4	26.6	7.35E+04	178	52.8	27
NF	—	—	—	—	—
NS	5.54E-03	7.32E+04	180	1.03E-02	-140

Table D-654. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.26E+04	7.26E+04	-7.18E+04	7.18E+04
A2	-7.09E+04	7.09E+04	-7.01E+04	7.01E+04
FD	-7.41E+04	7.41E+04	-7.32E+04	7.37E+04
L1	-7.27E+04	7.27E+04	-7.24E+04	7.23E+04
L3	-7.40E+04	7.39E+04	-7.36E+04	7.36E+04
L4	-7.40E+04	7.39E+04	-7.36E+04	7.36E+04
NF	—	—	—	—
NS	-7.37E+04	7.37E+04	-7.29E+04	7.29E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-328. Time history of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

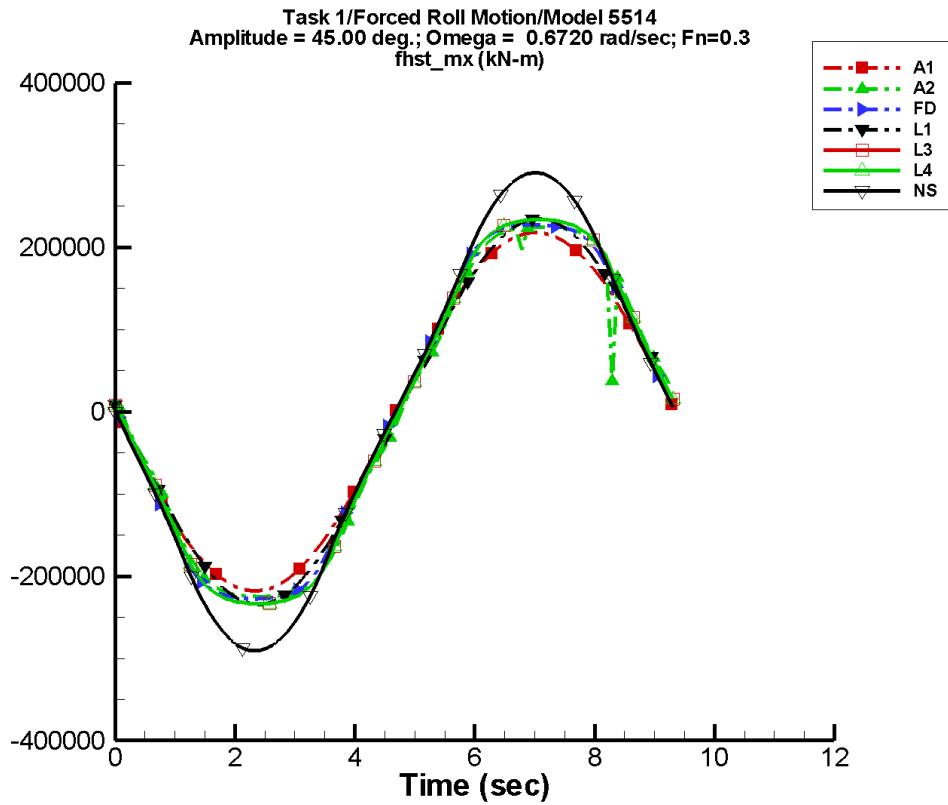
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.138	1.45E+05	180	0.256	161
A2	76.7	1.59E+05	176	1.13E+03	10
FD	406.	1.60E+05	180	766.	146
L1	83.1	1.48E+05	178	163.	25
L3	362.	1.60E+05	177	696.	22
L4	362.	1.60E+05	177	696.	22
NF	—	—	—	—	—
NS	-2.46E-02	1.60E+05	180	6.33E-02	-169

Table D-656. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.45E+05	1.45E+05	-1.44E+05	1.44E+05
A2	-1.67E+05	1.67E+05	-1.65E+05	1.65E+05
FD	-1.64E+05	1.64E+05	-1.62E+05	1.63E+05
L1	-1.50E+05	1.50E+05	-1.49E+05	1.49E+05
L3	-1.66E+05	1.66E+05	-1.65E+05	1.65E+05
L4	-1.66E+05	1.66E+05	-1.65E+05	1.65E+05
NF	—	—	—	—
NS	-1.68E+05	1.68E+05	-1.67E+05	1.67E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-329. Time history of  $M_x^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

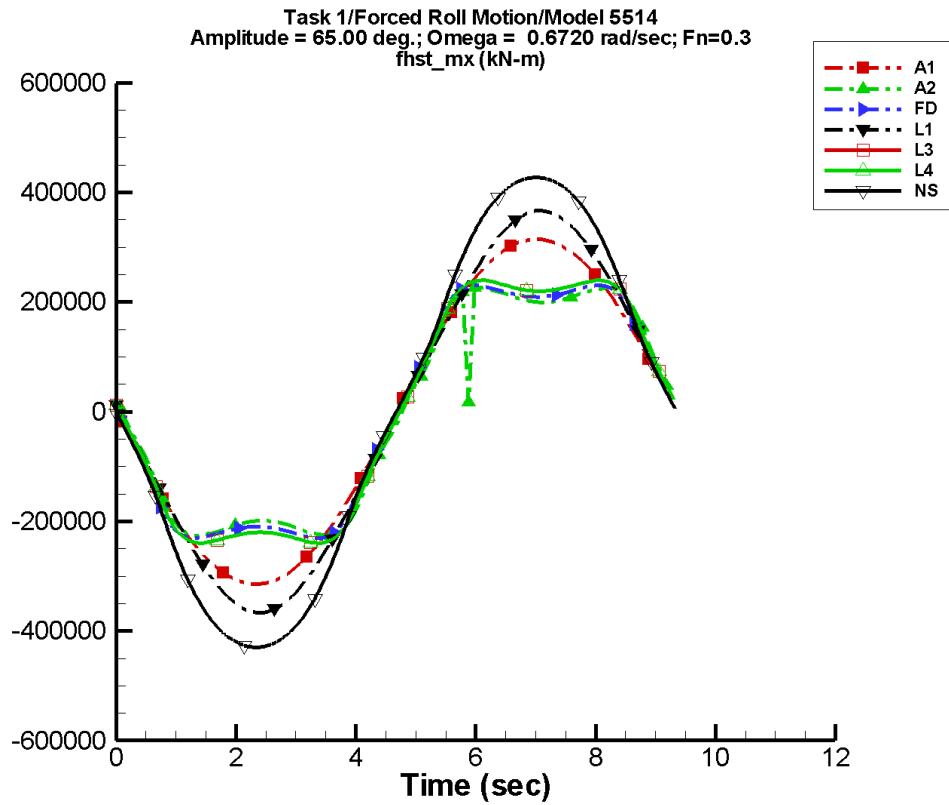
Table D-657. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.227	2.18E+05	180	0.368	163
A2	-2.05E+03	2.35E+05	177	2.34E+03	28
FD	-229.	2.38E+05	-180	651.	33
L1	280.	2.30E+05	178	540.	25
L3	-42.8	2.43E+05	178	838.	109
L4	-42.8	2.43E+05	178	838.	109
NF	—	—	—	—	—
NS	-0.385	2.75E+05	-180	0.594	85

Table D-658. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.18E+05	-2.15E+05	2.15E+05
A2	-2.25E+05	2.25E+05	-2.24E+05	2.24E+05
FD	-2.27E+05	2.27E+05	-2.27E+05	2.28E+05
L1	-2.35E+05	2.35E+05	-2.34E+05	2.34E+05
L3	-2.34E+05	2.34E+05	-2.33E+05	2.33E+05
L4	-2.34E+05	2.34E+05	-2.33E+05	2.33E+05
NF	—	—	—	—
NS	-2.91E+05	2.91E+05	-2.90E+05	2.90E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-330. Time history of  $M_x^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

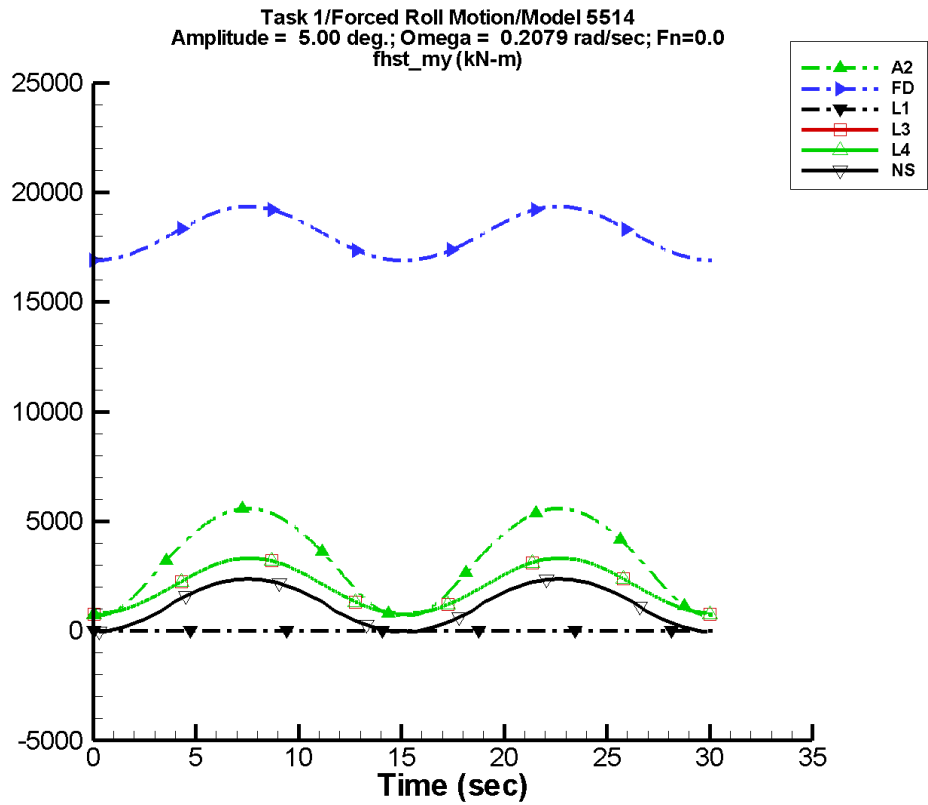
Table D-659. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.308	3.15E+05	180	0.522	163
A2	-4.48E+03	2.53E+05	176	9.67E+03	-170
FD	-3.44E+03	2.57E+05	-179	6.55E+03	-29
L1	815.	3.53E+05	177	1.56E+03	26
L3	-2.66E+03	2.74E+05	179	5.29E+03	-171
L4	-2.66E+03	2.74E+05	179	5.29E+03	-171
NF	—	—	—	—	—
NS	-643.	4.22E+05	180	752.	90

Table D-660. Minimum and maximum of  $M_x^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.15E+05	3.15E+05	-3.11E+05	3.11E+05
A2	-2.27E+05	2.27E+05	-2.22E+05	2.22E+05
FD	-2.31E+05	2.31E+05	-2.27E+05	2.27E+05
L1	-3.67E+05	3.67E+05	-3.65E+05	3.65E+05
L3	-2.40E+05	2.40E+05	-2.40E+05	2.38E+05
L4	-2.40E+05	2.40E+05	-2.40E+05	2.38E+05
NF	—	—	—	—
NS	-4.30E+05	4.27E+05	-4.30E+05	4.27E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-331. Time history of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

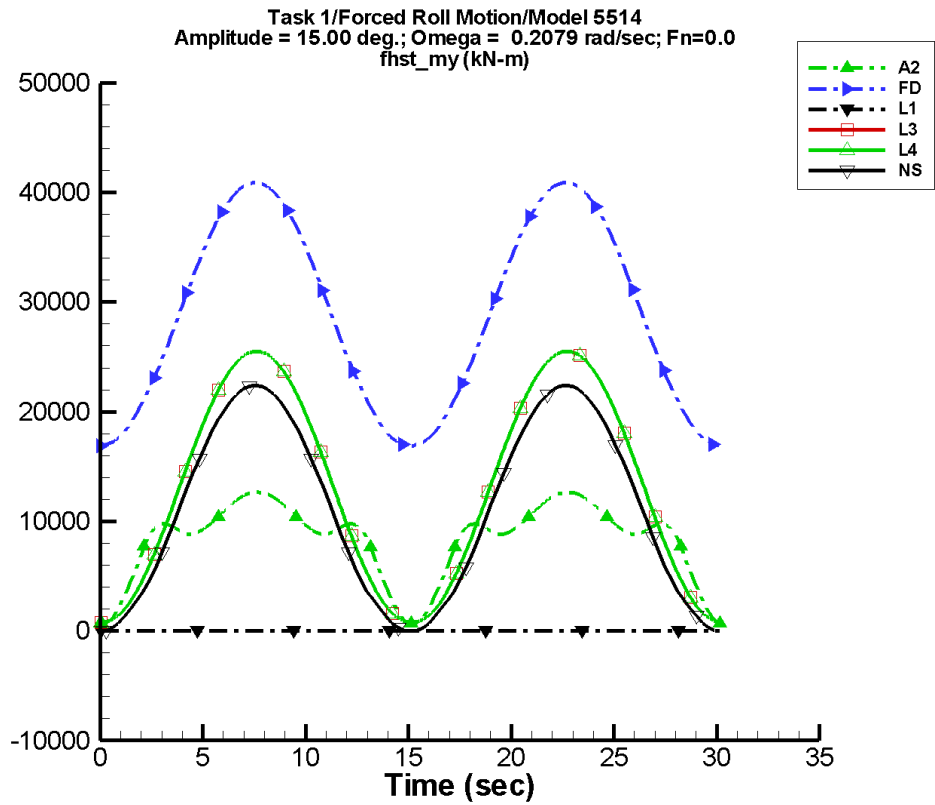
Table D-661. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.26E+03	1.82	22	2.47E+03	-90
FD	1.81E+04	0.735	-176	1.24E+03	-90
L1	-2.69E-07	4.72E-03	179	1.08E-06	-93
L3	2.03E+03	1.85	118	1.28E+03	-91
L4	2.03E+03	1.85	118	1.28E+03	-91
NF	—	—	—	—	—
NS	1.18E+03	1.09E-02	-77	1.23E+03	-90

Table D-662. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	5.59E+03	711.	5.58E+03
FD	1.69E+04	1.94E+04	1.69E+04	1.94E+04
L1	-4.71E-03	4.71E-03	-4.71E-03	4.71E-03
L3	756.	3.32E+03	758.	3.32E+03
L4	756.	3.32E+03	758.	3.32E+03
NF	—	—	—	—
NS	-25.9	2.36E+03	5.85	2.32E+03

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-332. Time history of  $M_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

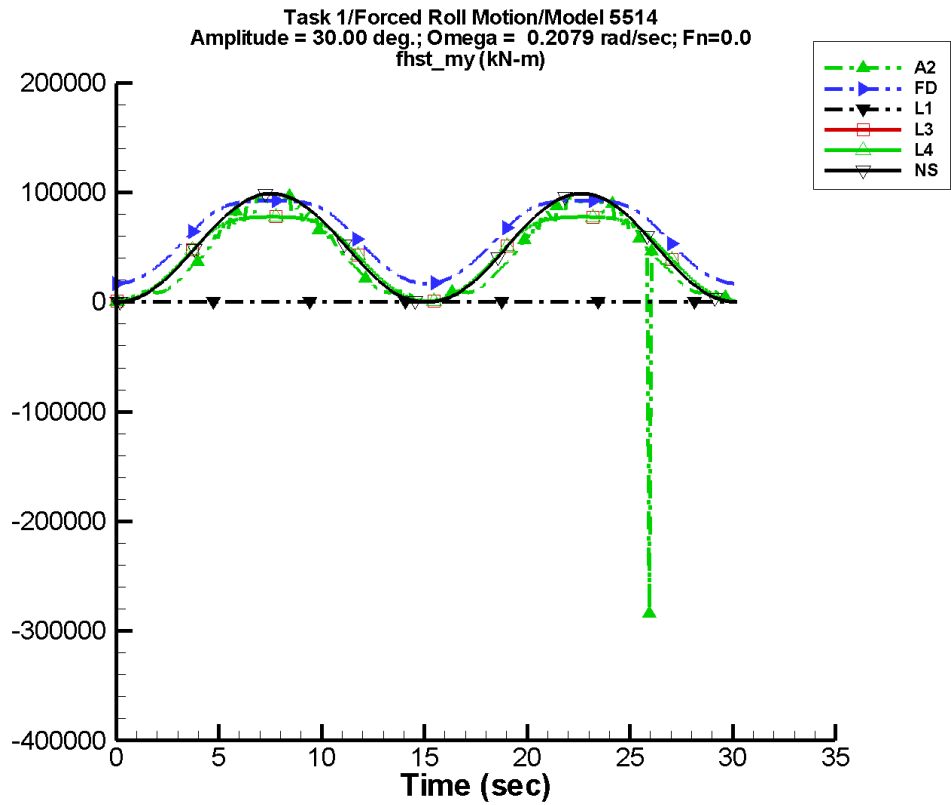
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	8.28E+03	33.0	-45	4.25E+03	-91
FD	2.87E+04	3.65	-177	1.21E+04	-90
L1	-7.33E-06	1.38E-02	179	2.89E-05	-93
L3	1.30E+04	7.61	118	1.24E+04	-91
L4	1.30E+04	7.61	118	1.24E+04	-91
NF	—	—	—	—	—
NS	1.10E+04	9.48E-03	123	1.12E+04	-90

Table D-664. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	1.27E+04	706.	1.26E+04
FD	1.69E+04	4.09E+04	1.69E+04	4.08E+04
L1	-1.37E-02	1.37E-02	-1.37E-02	1.37E-02
L3	758.	2.55E+04	780.	2.55E+04
L4	758.	2.55E+04	780.	2.55E+04
NF	—	—	—	—
NS	-0.124	2.24E+04	211.	2.19E+04



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Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-333. Time history of  $M_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

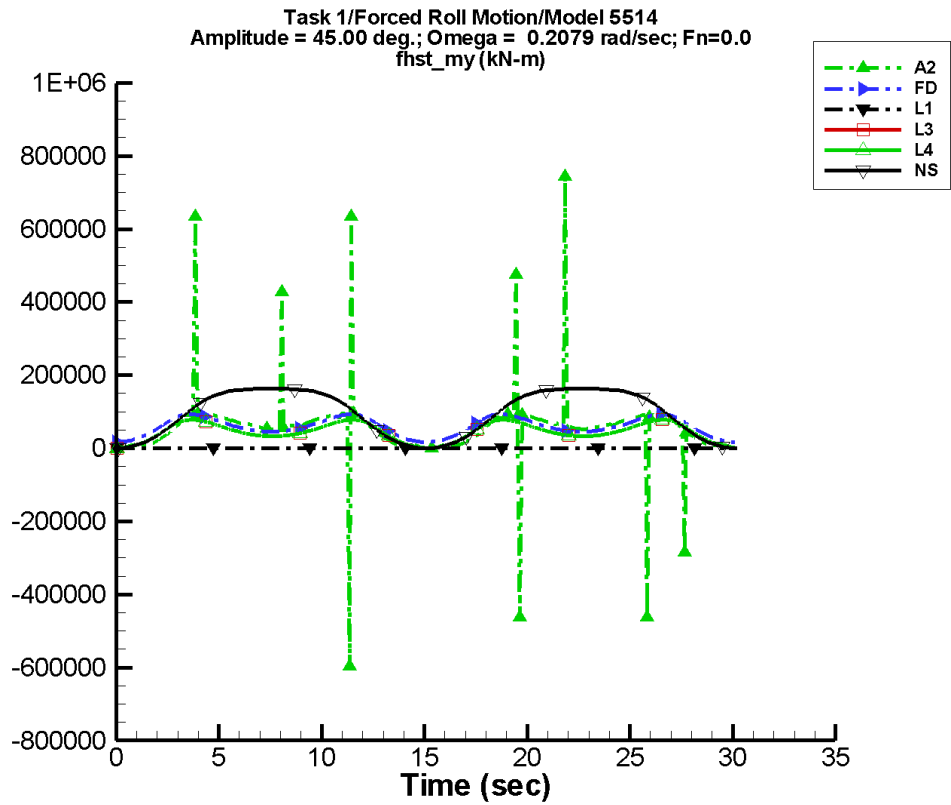
Table D-665. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	4.11E+04	2.02E+03	-44	4.51E+04	-90
FD	6.01E+04	141.	12	4.00E+04	-89
L1	-5.74E-05	2.55E-02	179	2.26E-04	-93
L3	4.48E+04	331.	-58	4.00E+04	-91
L4	4.48E+04	331.	-58	4.00E+04	-91
NF	—	—	—	—	—
NS	4.85E+04	8.84E-03	113	5.00E+04	-90

Table D-666. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.84E+05	9.66E+04	612.	9.33E+04
FD	1.69E+04	9.27E+04	1.68E+04	9.28E+04
L1	-2.46E-02	2.46E-02	-2.46E-02	2.46E-02
L3	763.	7.77E+04	819.	7.77E+04
L4	763.	7.77E+04	819.	7.77E+04
NF	—	—	—	—
NS	-0.377	9.89E+04	293.	9.82E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-334. Time history of  $M_y^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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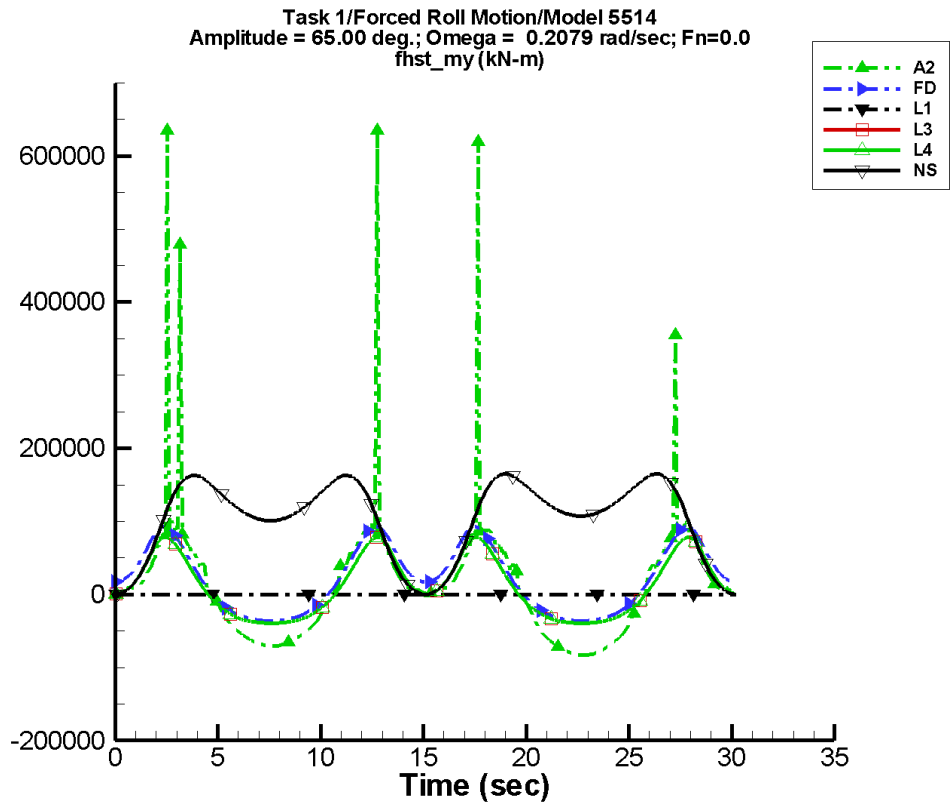
Table D-667. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	5.33E+04	4.03E+03	-38	3.73E+04	-76
FD	5.86E+04	632.	5	1.23E+04	-78
L1	-1.87E-04	3.31E-02	179	7.38E-04	-93
L3	4.52E+04	2.34E+03	-61	1.10E+04	-92
L4	4.52E+04	2.34E+03	-61	1.10E+04	-92
NF	—	—	—	—	—
NS	9.49E+04	0.901	8	8.56E+04	-90

Table D-668. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-5.97E+05	7.43E+05	731.	1.64E+05
FD	1.69E+04	9.30E+04	1.71E+04	9.22E+04
L1	-3.01E-02	3.01E-02	-3.01E-02	3.01E-02
L3	758.	7.81E+04	903.	7.78E+04
L4	758.	7.81E+04	903.	7.78E+04
NF	—	—	—	—
NS	-0.522	1.63E+05	291.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-335. Time history of  $M_y^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

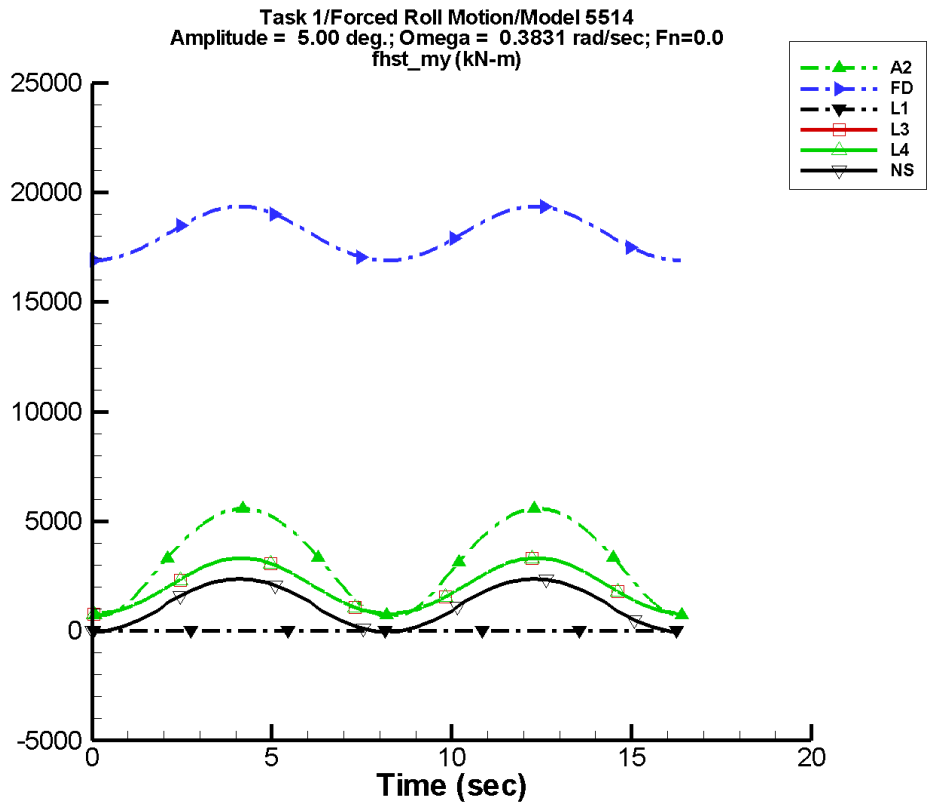
Table D-669. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	1.17E+04	5.88E+03	-24	6.16E+04	83
FD	2.14E+04	540.	-12	4.84E+04	87
L1	-5.28E-04	3.44E-02	180	2.08E-03	-93
L3	1.22E+04	2.96E+03	-64	4.48E+04	88
L4	1.22E+04	2.96E+03	-64	4.48E+04	88
NF	—	—	—	—	—
NS	1.03E+05	2.29E+03	180	4.68E+04	-90

Table D-670. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.33E+04	6.35E+05	-8.28E+04	1.77E+05
FD	-3.63E+04	9.30E+04	-3.62E+04	9.05E+04
L1	-3.04E-02	3.04E-02	-3.04E-02	3.04E-02
L3	-3.94E+04	7.81E+04	-3.93E+04	7.72E+04
L4	-3.94E+04	7.81E+04	-3.93E+04	7.72E+04
NF	—	—	—	—
NS	-18.2	1.65E+05	288.	1.64E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-336. Time history of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

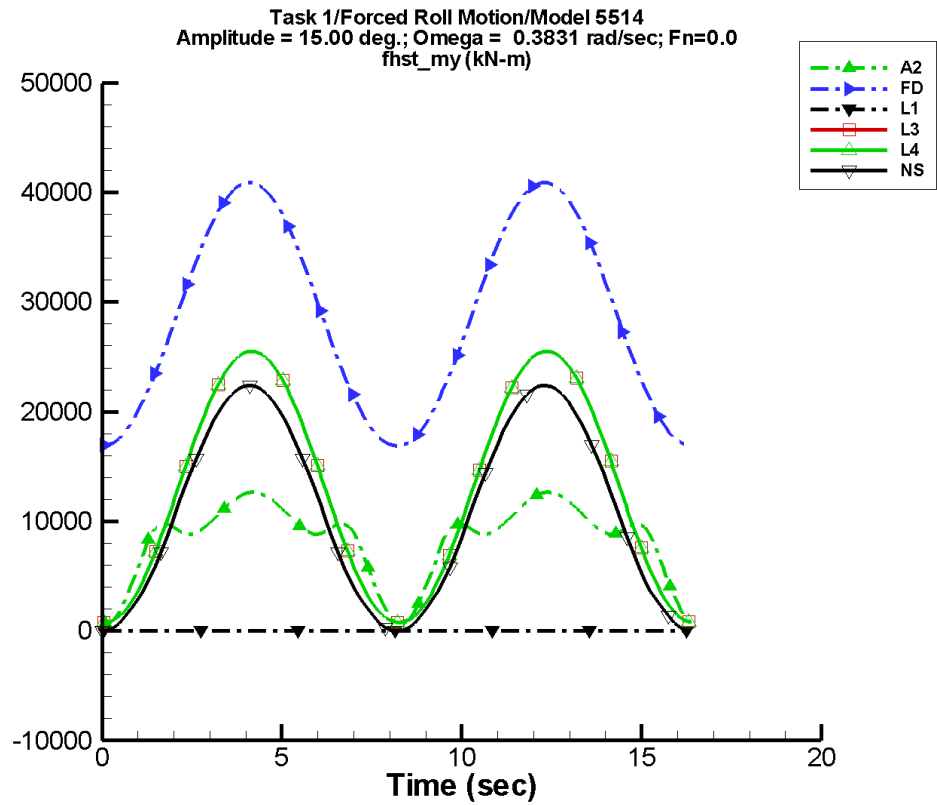
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.26E+03	1.40	13	2.47E+03	-94
FD	1.81E+04	1.35	121	1.24E+03	-90
L1	-2.93E-07	4.72E-03	179	5.05E-07	-152
L3	2.03E+03	1.12	178	1.28E+03	-93
L4	2.03E+03	1.12	178	1.28E+03	-93
NF	—	—	—	—	—
NS	1.18E+03	8.23E-03	-11	1.23E+03	-90

Table D-672. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	5.59E+03	703.	5.58E+03
FD	1.69E+04	1.94E+04	1.69E+04	1.93E+04
L1	-4.71E-03	4.71E-03	-4.71E-03	4.71E-03
L3	756.	3.32E+03	764.	3.31E+03
L4	756.	3.32E+03	764.	3.31E+03
NF	—	—	—	—
NS	-25.9	2.36E+03	5.86	2.32E+03



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-337. Time history of  $M_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

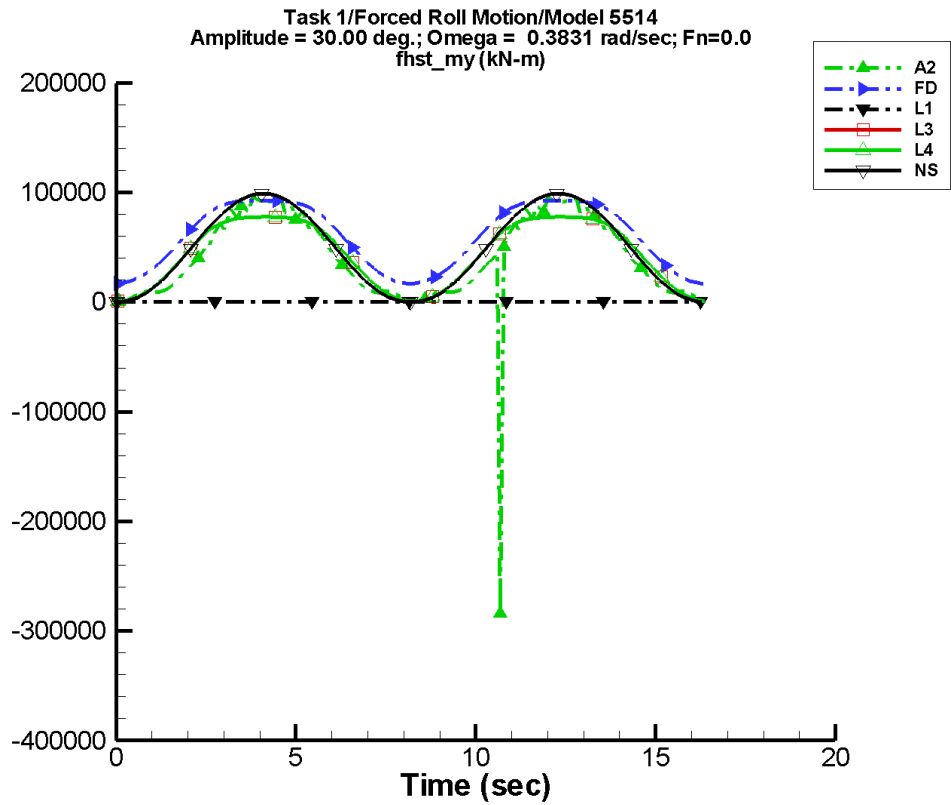
Table D-673. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	8.28E+03	34.9	-48	4.25E+03	-93
FD	2.87E+04	8.20	120	1.21E+04	-90
L1	-7.24E-06	1.38E-02	179	1.35E-05	-152
L3	1.30E+04	5.53	165	1.24E+04	-93
L4	1.30E+04	5.53	165	1.24E+04	-93
NF	—	—	—	—	—
NS	1.10E+04	7.14E-03	22	1.12E+04	-90

Table D-674. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	725.	1.26E+04	823.	1.26E+04
FD	1.69E+04	4.09E+04	1.70E+04	4.07E+04
L1	-1.37E-02	1.37E-02	-1.37E-02	1.37E-02
L3	758.	2.55E+04	751.	2.54E+04
L4	758.	2.55E+04	751.	2.54E+04
NF	—	—	—	—
NS	-3.68E-02	2.24E+04	211.	2.19E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-338. Time history of  $M_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

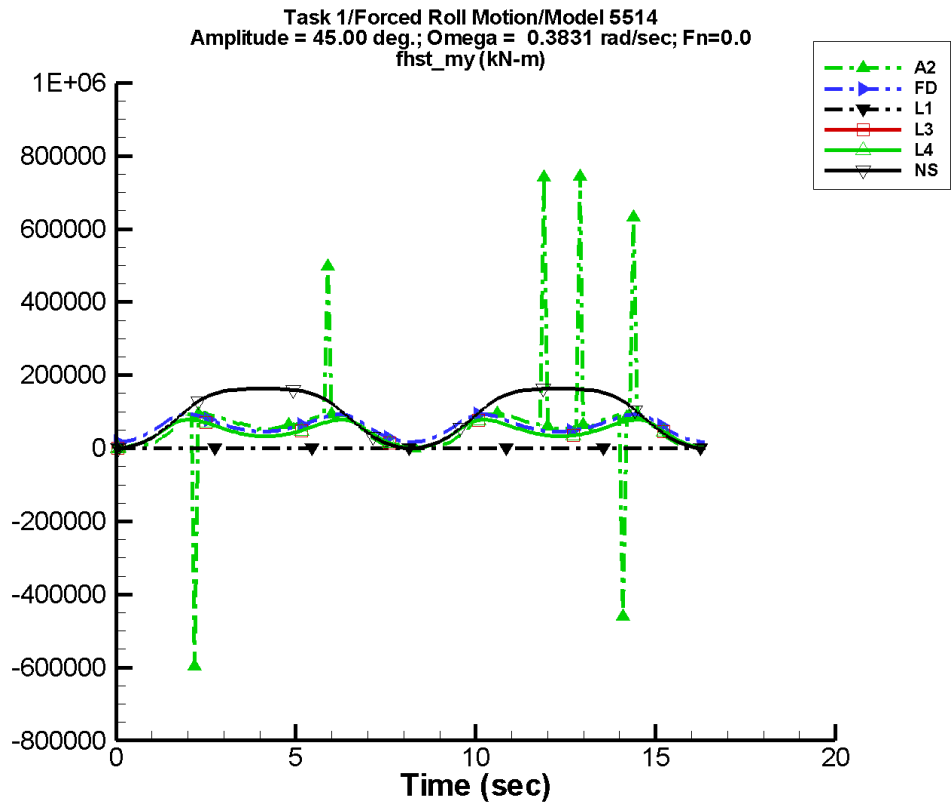
Table D-675. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	4.05E+04	4.29E+03	35	4.53E+04	-100
FD	6.02E+04	294.	-58	3.95E+04	-90
L1	-5.61E-05	2.56E-02	179	1.06E-04	-152
L3	4.47E+04	185.	-36	4.06E+04	-92
L4	4.47E+04	185.	-36	4.06E+04	-92
NF	—	—	—	—	—
NS	4.85E+04	1.39E-02	124	5.00E+04	-90

Table D-676. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.84E+05	9.58E+04	1.08E+03	9.23E+04
FD	1.69E+04	9.27E+04	1.73E+04	9.27E+04
L1	-2.46E-02	2.46E-02	-2.46E-02	2.46E-02
L3	757.	7.77E+04	695.	7.77E+04
L4	757.	7.77E+04	695.	7.77E+04
NF	—	—	—	—
NS	-0.112	9.89E+04	293.	9.82E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-339. Time history of  $M_y^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

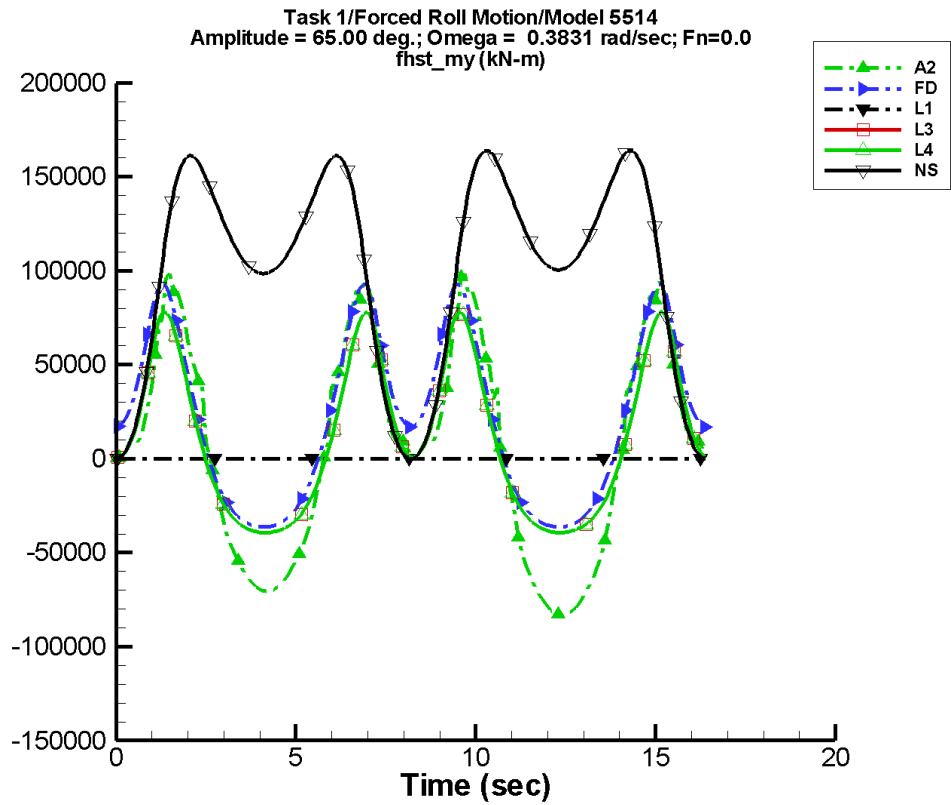
Table D-677. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	6.21E+04	1.57E+04	-166	4.45E+04	-102
FD	5.91E+04	1.42E+03	-60	9.94E+03	-86
L1	-1.83E-04	3.33E-02	179	3.47E-04	-151
L3	4.46E+04	1.49E+03	-12	1.52E+04	-85
L4	4.46E+04	1.49E+03	-12	1.52E+04	-85
NF	—	—	—	—	—
NS	9.49E+04	1.22	-170	8.56E+04	-90

Table D-678. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-5.97E+05	7.43E+05	-1.11E+03	1.50E+05
FD	1.69E+04	9.30E+04	1.80E+04	9.23E+04
L1	-3.01E-02	3.01E-02	-3.01E-02	3.01E-02
L3	757.	7.81E+04	745.	7.76E+04
L4	757.	7.81E+04	745.	7.76E+04
NF	—	—	—	—
NS	-0.245	1.63E+05	291.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-340. Time history of  $M_y^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

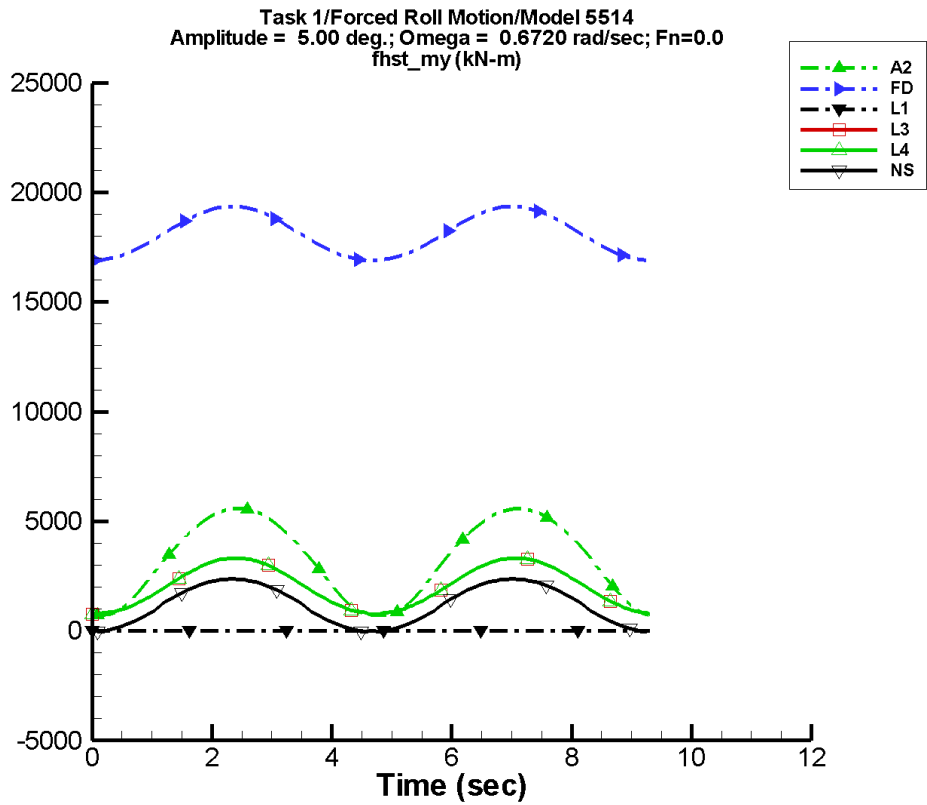
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	5.62E+03	4.59E+03	-8	5.64E+04	82
FD	2.16E+04	572.	-62	4.98E+04	88
L1	-5.16E-04	3.49E-02	-180	9.80E-04	-151
L3	1.14E+04	1.93E+03	-1	4.03E+04	83
L4	1.14E+04	1.93E+03	-1	4.03E+04	83
NF	—	—	—	—	—
NS	1.01E+05	1.49E+03	175	4.44E+04	-90

Table D-680. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.33E+04	9.87E+04	-8.17E+04	8.42E+04
FD	-3.63E+04	9.30E+04	-3.59E+04	8.46E+04
L1	-3.04E-02	3.04E-02	-3.03E-02	3.03E-02
L3	-3.94E+04	7.81E+04	-3.92E+04	7.51E+04
L4	-3.94E+04	7.81E+04	-3.92E+04	7.51E+04
NF	—	—	—	—
NS	-23.4	1.64E+05	215.	1.63E+05



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-341. Time history of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

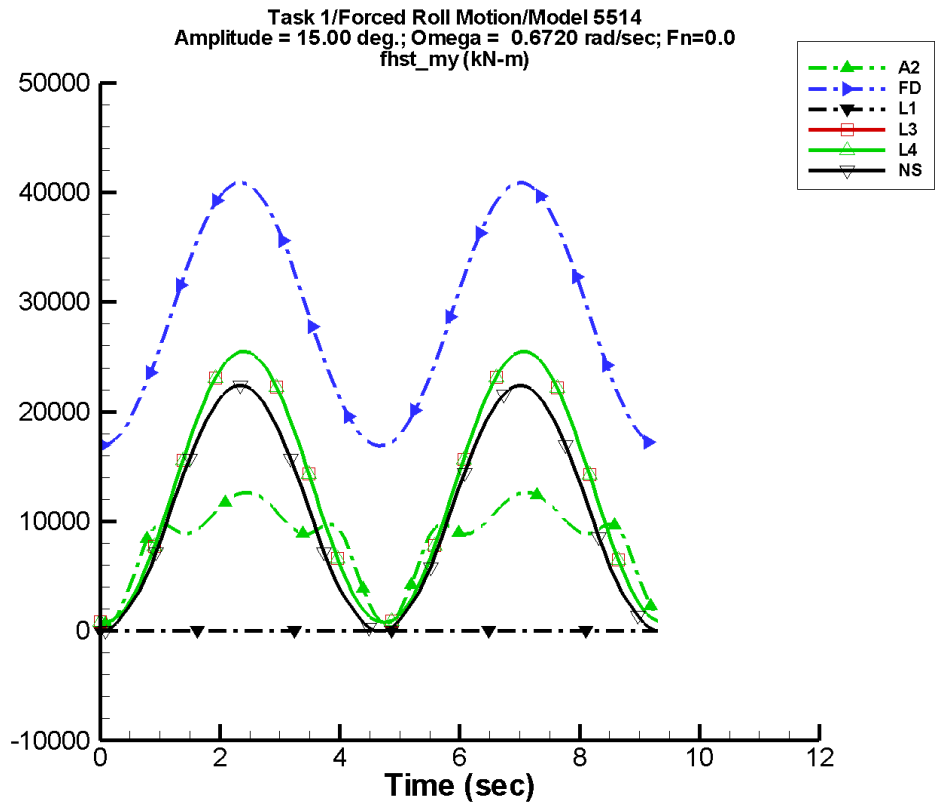
Table D–681. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.26E+03	10.1	-2	2.47E+03	-97
FD	1.81E+04	2.21	150	1.24E+03	-90
L1	-3.60E-07	4.72E-03	178	5.16E-07	-155
L3	2.03E+03	1.74	-179	1.27E+03	-95
L4	2.03E+03	1.74	-179	1.27E+03	-95
NF	—	—	—	—	—
NS	1.18E+03	9.84E-03	-15	1.23E+03	-90

Table D–682. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	5.59E+03	716.	5.49E+03
FD	1.69E+04	1.94E+04	1.69E+04	1.93E+04
L1	-4.71E-03	4.71E-03	-4.69E-03	4.69E-03
L3	758.	3.32E+03	773.	3.30E+03
L4	758.	3.32E+03	773.	3.30E+03
NF	—	—	—	—
NS	-25.9	2.36E+03	5.89	2.32E+03

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Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-342. Time history of  $M_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

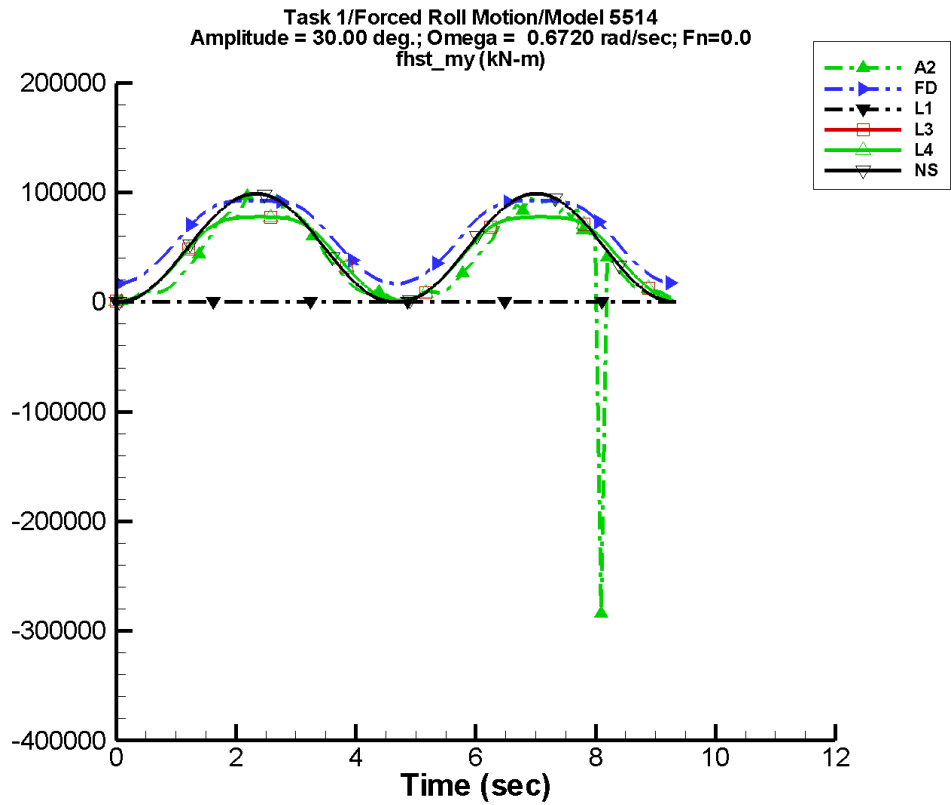
Table D-683. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	8.29E+03	63.4	-38	4.29E+03	-96
FD	2.87E+04	11.2	150	1.21E+04	-90
L1	-7.60E-06	1.38E-02	178	1.39E-05	-155
L3	1.30E+04	4.42	179	1.24E+04	-95
L4	1.30E+04	4.42	179	1.24E+04	-95
NF	—	—	—	—	—
NS	1.10E+04	1.38E-02	172	1.12E+04	-90

Table D-684. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	725.	1.26E+04	1.17E+03	1.23E+04
FD	1.69E+04	4.09E+04	1.71E+04	4.05E+04
L1	-1.37E-02	1.37E-02	-1.37E-02	1.37E-02
L3	757.	2.55E+04	767.	2.53E+04
L4	757.	2.55E+04	767.	2.53E+04
NF	—	—	—	—
NS	-0.114	2.24E+04	211.	2.19E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-343. Time history of  $M_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

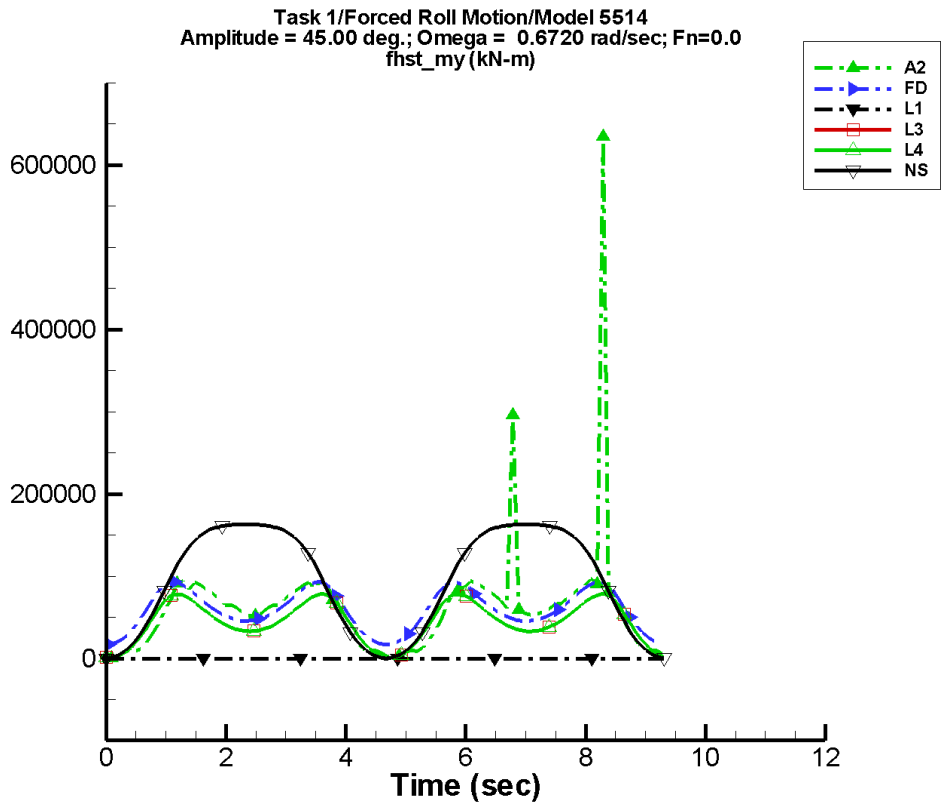
Table D-685. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.88E+04	6.94E+03	-44	4.40E+04	-90
FD	5.99E+04	443.	-29	3.96E+04	-89
L1	-5.79E-05	2.56E-02	178	1.09E-04	-155
L3	4.48E+04	378.	0	4.07E+04	-94
L4	4.48E+04	378.	0	4.07E+04	-94
NF	—	—	—	—	—
NS	4.85E+04	5.13E-02	68	5.00E+04	-90

Table D-686. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.84E+05	9.65E+04	-1.09E+03	9.36E+04
FD	1.69E+04	9.27E+04	1.80E+04	9.29E+04
L1	-2.46E-02	2.46E-02	-2.45E-02	2.45E-02
L3	757.	7.77E+04	785.	7.77E+04
L4	757.	7.77E+04	785.	7.77E+04
NF	—	—	—	—
NS	-0.191	9.89E+04	293.	9.82E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-344. Time history of  $M_y^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

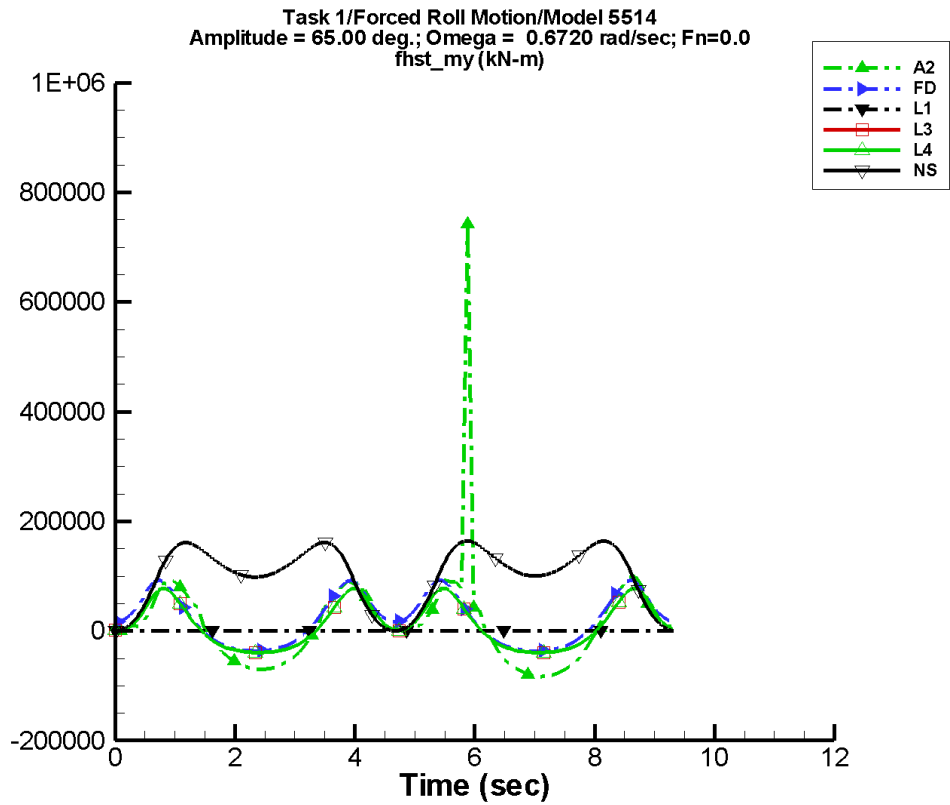
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	6.23E+04	1.26E+04	140	3.93E+04	-107
FD	5.79E+04	1.99E+03	-30	1.10E+04	-77
L1	-1.88E-04	3.33E-02	178	3.55E-04	-155
L3	4.49E+04	2.14E+03	0	1.57E+04	-84
L4	4.49E+04	2.14E+03	0	1.57E+04	-84
NF	—	—	—	—	—
NS	9.49E+04	0.490	21	8.56E+04	-90

Table D-688. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	726.	6.35E+05	926.	1.55E+05
FD	1.69E+04	9.30E+04	2.01E+04	8.48E+04
L1	-3.01E-02	3.01E-02	-3.01E-02	3.01E-02
L3	758.	7.81E+04	1.36E+03	7.52E+04
L4	758.	7.81E+04	1.36E+03	7.52E+04
NF	—	—	—	—
NS	-0.296	1.63E+05	291.	1.63E+05



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-345. Time history of  $M_y^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

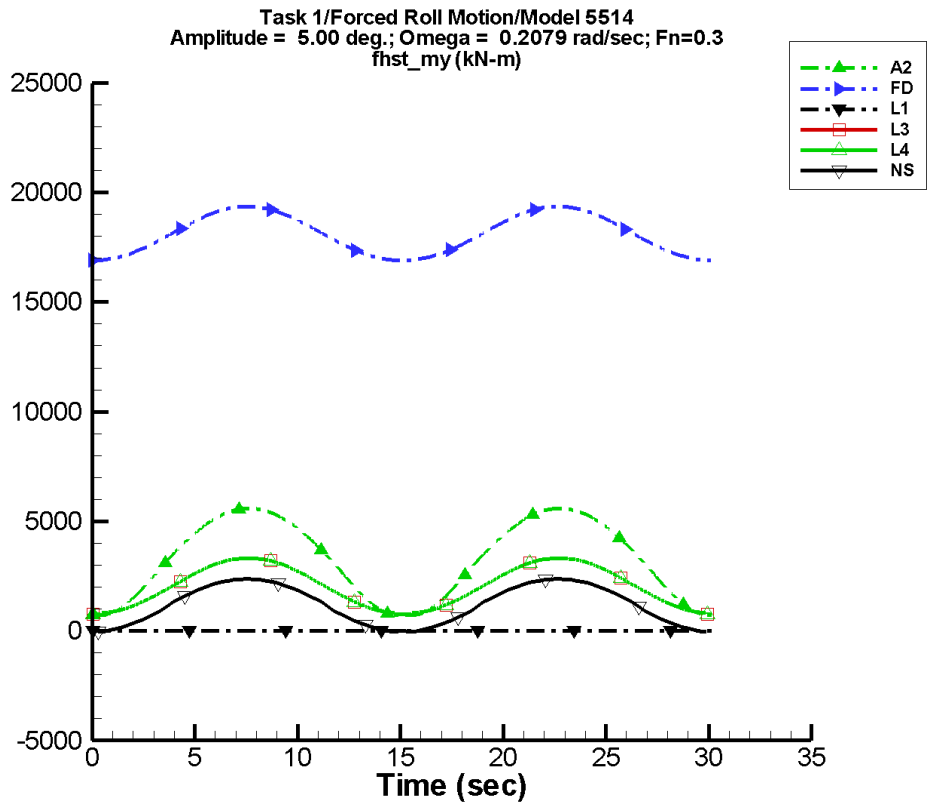
Table D-689. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	1.38E+04	1.26E+04	-113	5.79E+04	64
FD	2.12E+04	1.40E+03	-30	4.89E+04	88
L1	-5.26E-04	3.49E-02	179	1.00E-03	-154
L3	1.14E+04	1.75E+03	-4	4.04E+04	81
L4	1.14E+04	1.75E+03	-4	4.04E+04	81
NF	—	—	—	—	—
NS	1.01E+05	1.46E+03	-180	4.45E+04	-90

Table D-690. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.32E+04	7.43E+05	-8.20E+04	1.50E+05
FD	-3.63E+04	9.30E+04	-3.51E+04	7.15E+04
L1	-3.04E-02	3.04E-02	-3.02E-02	3.02E-02
L3	-3.93E+04	7.81E+04	-3.89E+04	6.91E+04
L4	-3.93E+04	7.81E+04	-3.89E+04	6.91E+04
NF	—	—	—	—
NS	-23.3	1.64E+05	216.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-346. Time history of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

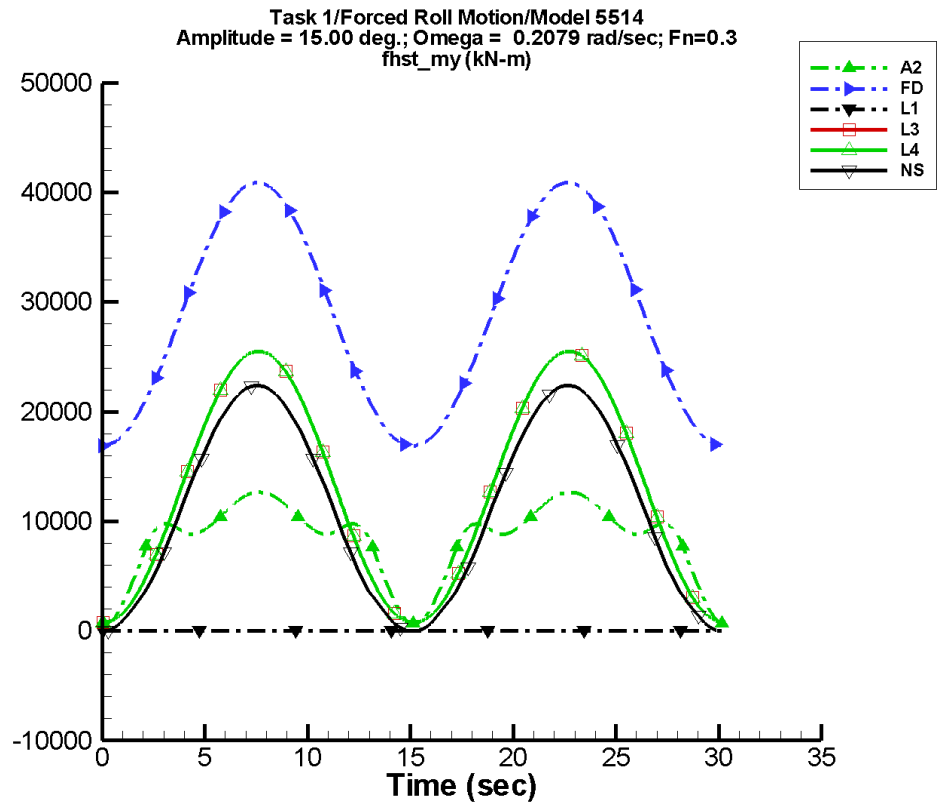
Table D-691. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.26E+03	2.39	6	2.47E+03	-92
FD	1.81E+04	0.732	-176	1.24E+03	-90
L1	-2.69E-07	4.72E-03	179	1.08E-06	-93
L3	2.03E+03	1.97	118	1.28E+03	-91
L4	2.03E+03	1.97	118	1.28E+03	-91
NF	—	—	—	—	—
NS	1.18E+03	1.09E-02	-77	1.23E+03	-90

Table D-692. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	5.59E+03	711.	5.58E+03
FD	1.69E+04	1.94E+04	1.69E+04	1.94E+04
L1	-4.71E-03	4.71E-03	-4.71E-03	4.71E-03
L3	756.	3.32E+03	759.	3.32E+03
L4	756.	3.32E+03	759.	3.32E+03
NF	—	—	—	—
NS	-25.9	2.36E+03	5.85	2.32E+03

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-347. Time history of  $M_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

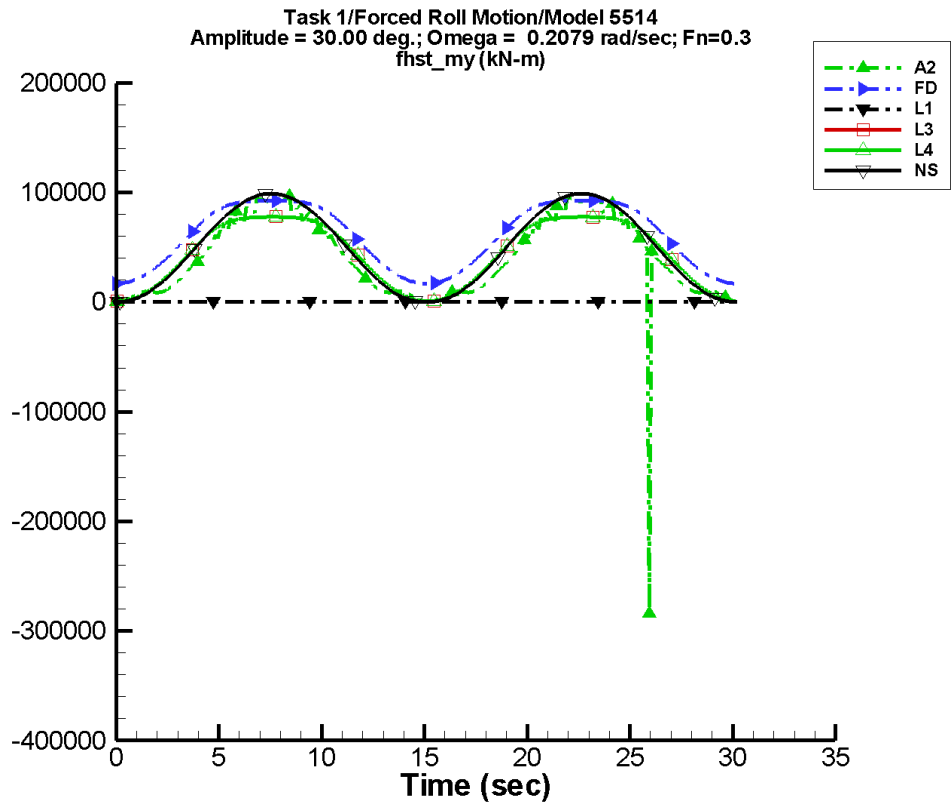
Table D-693. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	8.28E+03	33.0	-45	4.25E+03	-91
FD	2.87E+04	3.66	-177	1.21E+04	-90
L1	-7.33E-06	1.38E-02	179	2.89E-05	-93
L3	1.30E+04	7.70	118	1.24E+04	-91
L4	1.30E+04	7.70	118	1.24E+04	-91
NF	—	—	—	—	—
NS	1.10E+04	9.48E-03	123	1.12E+04	-90

Table D-694. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	1.27E+04	706.	1.26E+04
FD	1.69E+04	4.09E+04	1.69E+04	4.08E+04
L1	-1.37E-02	1.37E-02	-1.37E-02	1.37E-02
L3	759.	2.55E+04	780.	2.55E+04
L4	759.	2.55E+04	780.	2.55E+04
NF	—	—	—	—
NS	-0.124	2.24E+04	211.	2.19E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-348. Time history of  $M_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

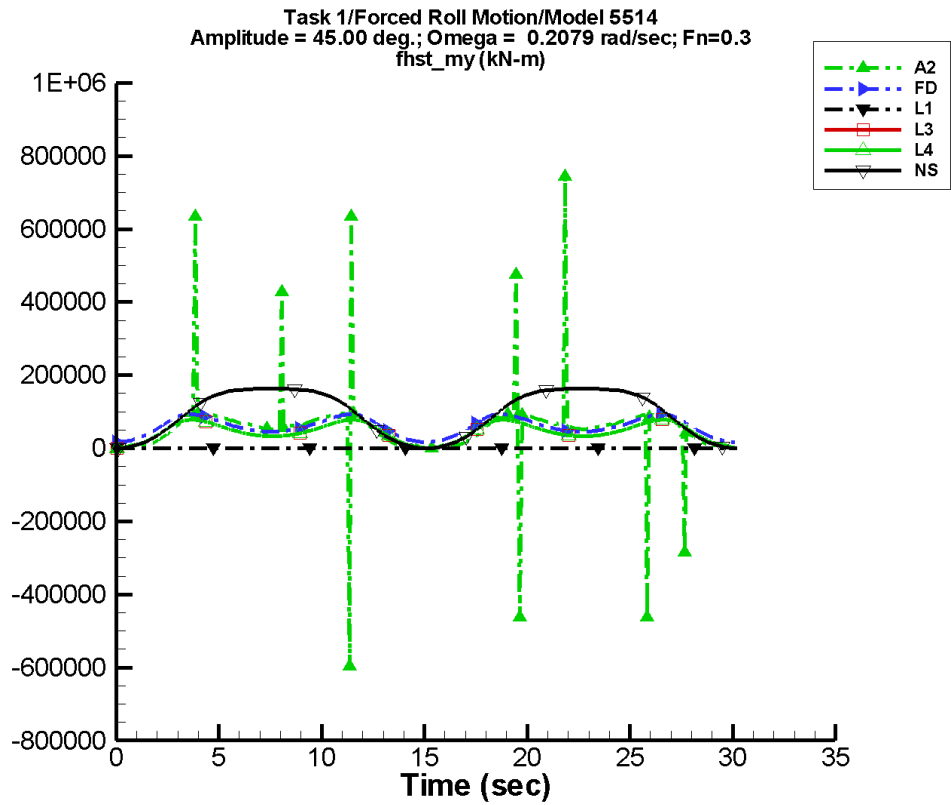
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	4.11E+04	2.02E+03	-44	4.51E+04	-90
FD	6.01E+04	141.	12	4.00E+04	-89
L1	-5.74E-05	2.55E-02	179	2.26E-04	-93
L3	4.48E+04	331.	-58	4.00E+04	-91
L4	4.48E+04	331.	-58	4.00E+04	-91
NF	—	—	—	—	—
NS	4.85E+04	8.84E-03	113	5.00E+04	-90

Table D-696. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.84E+05	9.66E+04	612.	9.33E+04
FD	1.69E+04	9.27E+04	1.68E+04	9.28E+04
L1	-2.46E-02	2.46E-02	-2.46E-02	2.46E-02
L3	763.	7.77E+04	819.	7.77E+04
L4	763.	7.77E+04	819.	7.77E+04
NF	—	—	—	—
NS	-0.377	9.89E+04	293.	9.82E+04



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-349. Time history of  $M_y^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

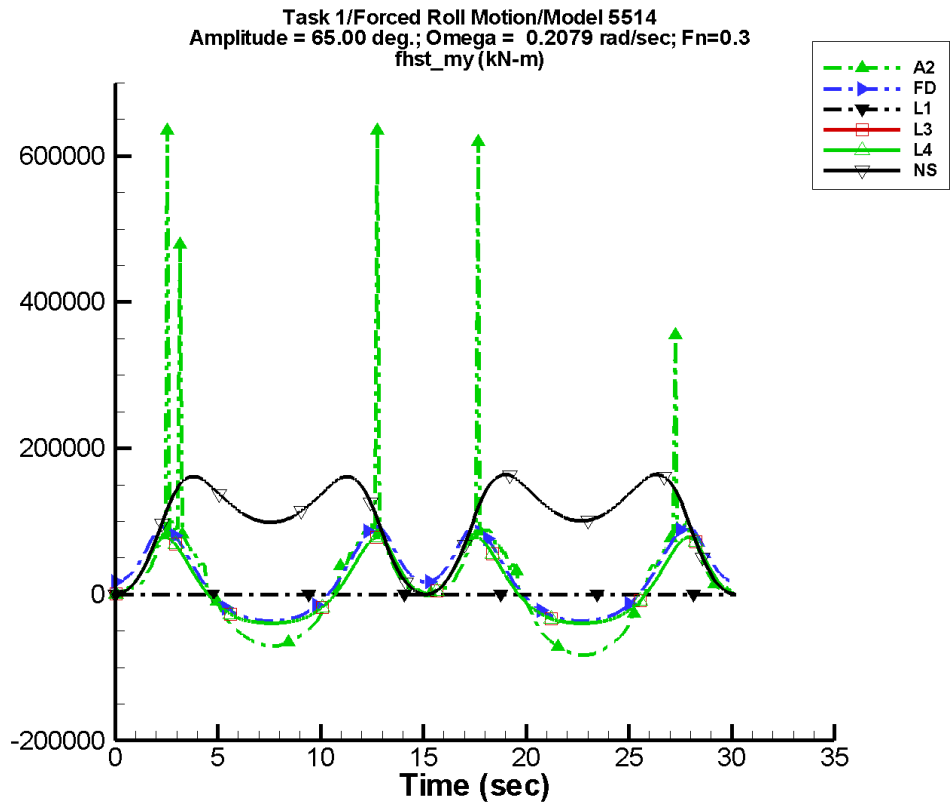
Table D-697. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	5.33E+04	4.03E+03	-38	3.73E+04	-76
FD	5.86E+04	632.	5	1.23E+04	-78
L1	-1.87E-04	3.31E-02	179	7.38E-04	-93
L3	4.52E+04	2.34E+03	-61	1.10E+04	-92
L4	4.52E+04	2.34E+03	-61	1.10E+04	-92
NF	—	—	—	—	—
NS	9.49E+04	0.901	8	8.56E+04	-90

Table D-698. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-5.97E+05	7.43E+05	731.	1.64E+05
FD	1.69E+04	9.30E+04	1.71E+04	9.22E+04
L1	-3.01E-02	3.01E-02	-3.01E-02	3.01E-02
L3	758.	7.81E+04	903.	7.78E+04
L4	758.	7.81E+04	903.	7.78E+04
NF	—	—	—	—
NS	-0.522	1.63E+05	291.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-350. Time history of  $M_y^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

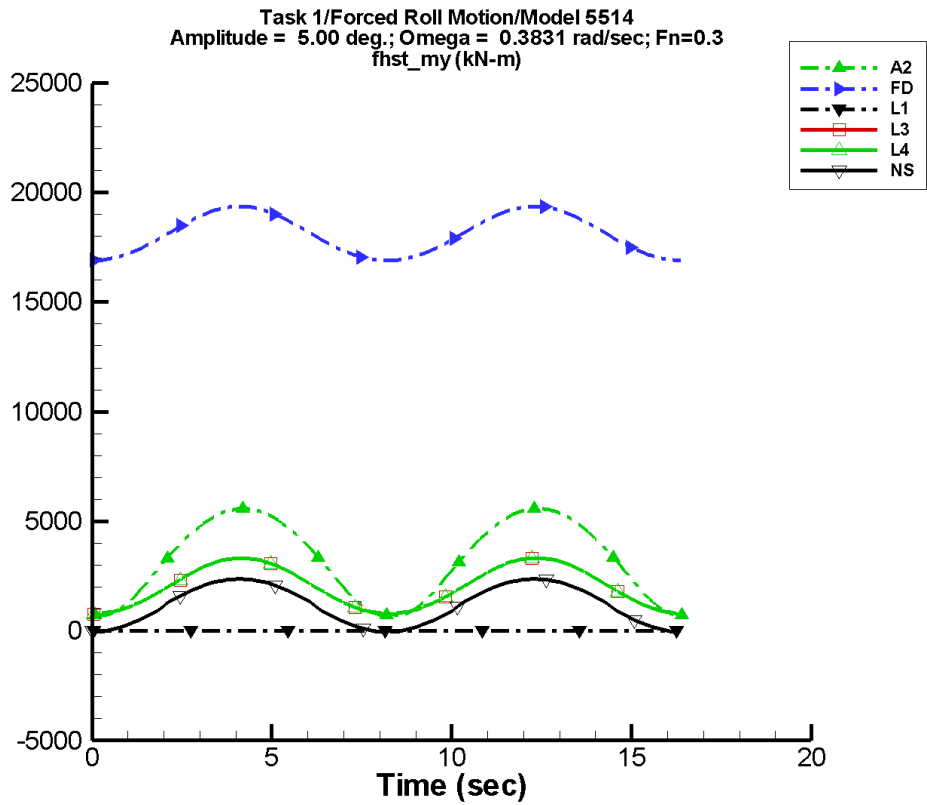
Table D-699. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	1.17E+04	5.88E+03	-24	6.16E+04	83
FD	2.14E+04	540.	-12	4.84E+04	87
L1	-5.28E-04	3.44E-02	180	2.08E-03	-93
L3	1.22E+04	2.96E+03	-64	4.48E+04	88
L4	1.22E+04	2.96E+03	-64	4.48E+04	88
NF	—	—	—	—	—
NS	1.01E+05	1.48E+03	175	4.44E+04	-90

Table D-700. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.33E+04	6.35E+05	-8.28E+04	1.77E+05
FD	-3.63E+04	9.30E+04	-3.62E+04	9.05E+04
L1	-3.04E-02	3.04E-02	-3.04E-02	3.04E-02
L3	-3.94E+04	7.81E+04	-3.93E+04	7.72E+04
L4	-3.94E+04	7.81E+04	-3.93E+04	7.72E+04
NF	—	—	—	—
NS	-23.3	1.64E+05	216.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-351. Time history of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

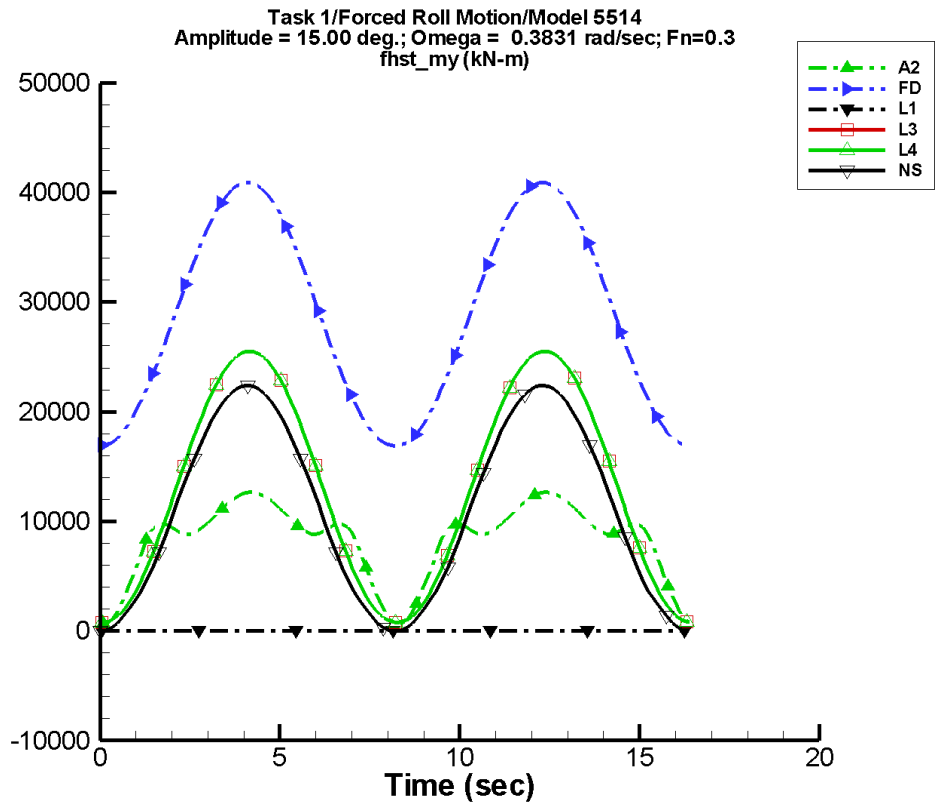
Table D-701. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.26E+03	1.40	13	2.47E+03	-94
FD	1.81E+04	1.34	121	1.24E+03	-90
L1	-2.93E-07	4.72E-03	179	5.05E-07	-152
L3	2.03E+03	1.11	180	1.28E+03	-93
L4	2.03E+03	1.11	180	1.28E+03	-93
NF	—	—	—	—	—
NS	1.18E+03	8.23E-03	-11	1.23E+03	-90

Table D-702. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	5.59E+03	703.	5.58E+03
FD	1.69E+04	1.94E+04	1.69E+04	1.93E+04
L1	-4.71E-03	4.71E-03	-4.71E-03	4.71E-03
L3	756.	3.32E+03	764.	3.31E+03
L4	756.	3.32E+03	764.	3.31E+03
NF	—	—	—	—
NS	-25.9	2.36E+03	5.86	2.32E+03

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-352. Time history of  $M_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

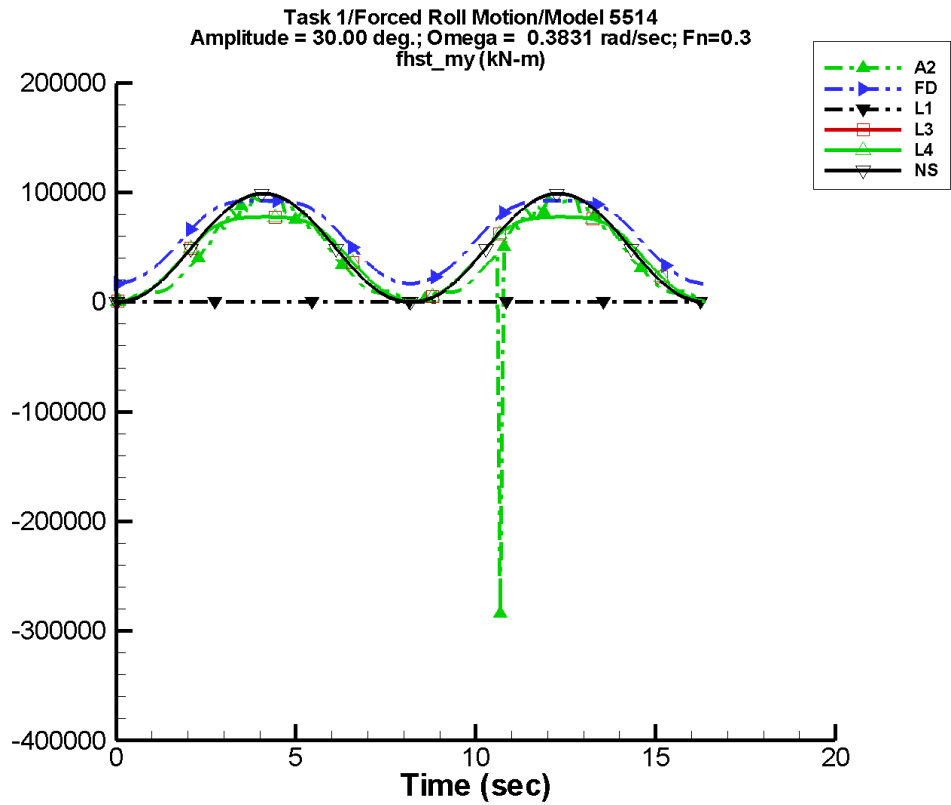
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	8.28E+03	34.9	-48	4.25E+03	-93
FD	2.87E+04	8.20	120	1.21E+04	-90
L1	-7.24E-06	1.38E-02	179	1.35E-05	-152
L3	1.30E+04	5.54	166	1.24E+04	-93
L4	1.30E+04	5.54	166	1.24E+04	-93
NF	—	—	—	—	—
NS	1.10E+04	7.14E-03	22	1.12E+04	-90

Table D-704. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	725.	1.26E+04	823.	1.26E+04
FD	1.69E+04	4.09E+04	1.70E+04	4.07E+04
L1	-1.37E-02	1.37E-02	-1.37E-02	1.37E-02
L3	757.	2.55E+04	752.	2.54E+04
L4	757.	2.55E+04	752.	2.54E+04
NF	—	—	—	—
NS	-3.68E-02	2.24E+04	211.	2.19E+04



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-353. Time history of  $M_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

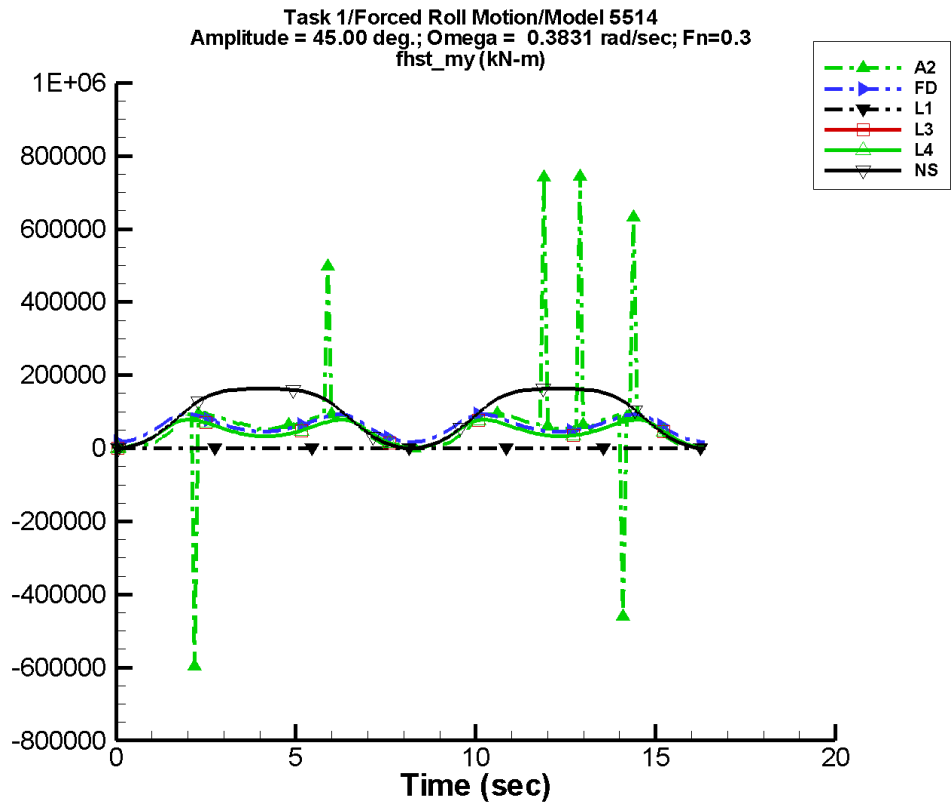
Table D-705. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	4.05E+04	4.29E+03	35	4.53E+04	-100
FD	6.02E+04	294.	-58	3.95E+04	-90
L1	-5.61E-05	2.56E-02	179	1.06E-04	-152
L3	4.47E+04	185.	-36	4.06E+04	-92
L4	4.47E+04	185.	-36	4.06E+04	-92
NF	—	—	—	—	—
NS	4.85E+04	1.39E-02	124	5.00E+04	-90

Table D-706. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.84E+05	9.58E+04	1.08E+03	9.23E+04
FD	1.69E+04	9.27E+04	1.73E+04	9.27E+04
L1	-2.46E-02	2.46E-02	-2.46E-02	2.46E-02
L3	758.	7.77E+04	696.	7.77E+04
L4	758.	7.77E+04	696.	7.77E+04
NF	—	—	—	—
NS	-0.112	9.89E+04	293.	9.82E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-354. Time history of  $M_y^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

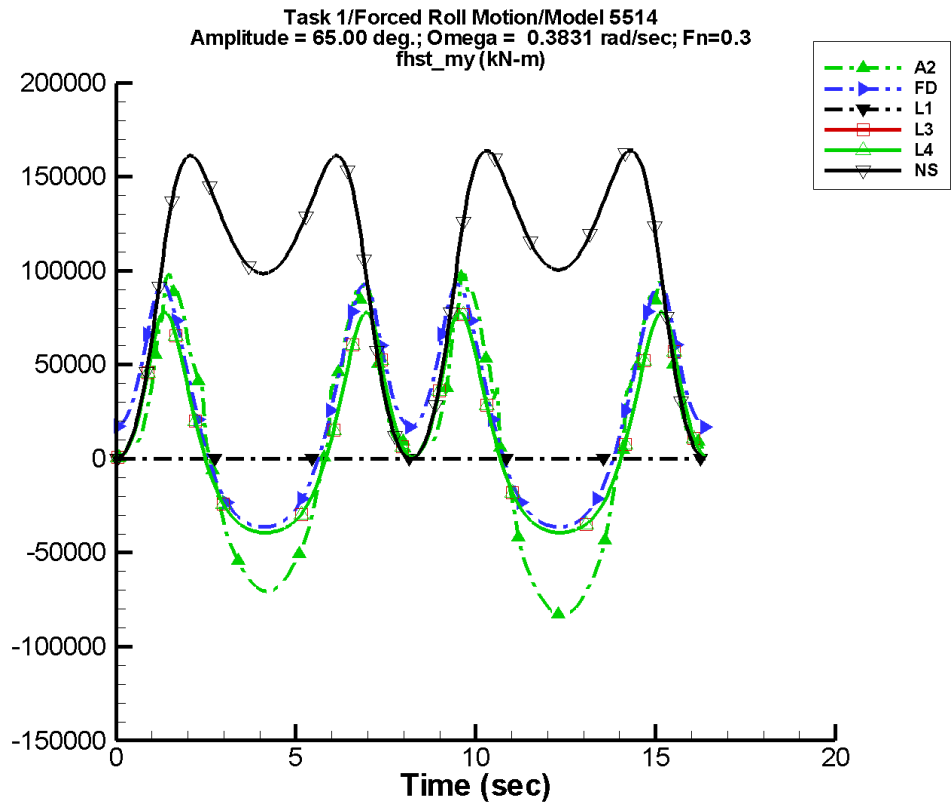
Table D-707. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	6.21E+04	1.57E+04	-166	4.45E+04	-102
FD	5.91E+04	1.42E+03	-60	9.94E+03	-86
L1	-1.83E-04	3.33E-02	179	3.47E-04	-151
L3	4.46E+04	1.49E+03	-12	1.52E+04	-85
L4	4.46E+04	1.49E+03	-12	1.52E+04	-85
NF	—	—	—	—	—
NS	9.49E+04	1.22	-170	8.56E+04	-90

Table D-708. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-5.97E+05	7.43E+05	-1.11E+03	1.50E+05
FD	1.69E+04	9.30E+04	1.80E+04	9.23E+04
L1	-3.01E-02	3.01E-02	-3.01E-02	3.01E-02
L3	759.	7.81E+04	745.	7.76E+04
L4	759.	7.81E+04	745.	7.76E+04
NF	—	—	—	—
NS	-0.245	1.63E+05	291.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-355. Time history of  $M_y^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

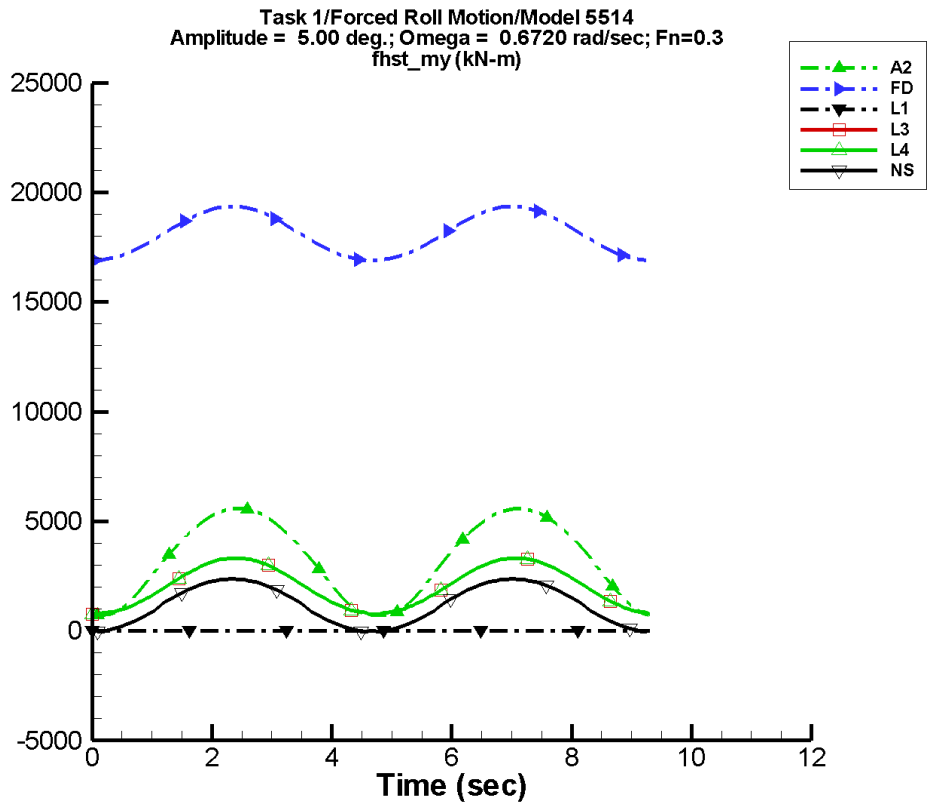
Table D-709. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	5.62E+03	4.59E+03	-8	5.64E+04	82
FD	2.16E+04	572.	-62	4.98E+04	88
L1	-5.16E-04	3.49E-02	-180	9.80E-04	-151
L3	1.14E+04	1.93E+03	-1	4.03E+04	83
L4	1.14E+04	1.93E+03	-1	4.03E+04	83
NF	—	—	—	—	—
NS	1.01E+05	1.49E+03	175	4.44E+04	-90

Table D-710. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.33E+04	9.87E+04	-8.17E+04	8.42E+04
FD	-3.63E+04	9.30E+04	-3.59E+04	8.46E+04
L1	-3.04E-02	3.04E-02	-3.03E-02	3.03E-02
L3	-3.94E+04	7.81E+04	-3.92E+04	7.51E+04
L4	-3.94E+04	7.81E+04	-3.92E+04	7.51E+04
NF	—	—	—	—
NS	-23.4	1.64E+05	215.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-356. Time history of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

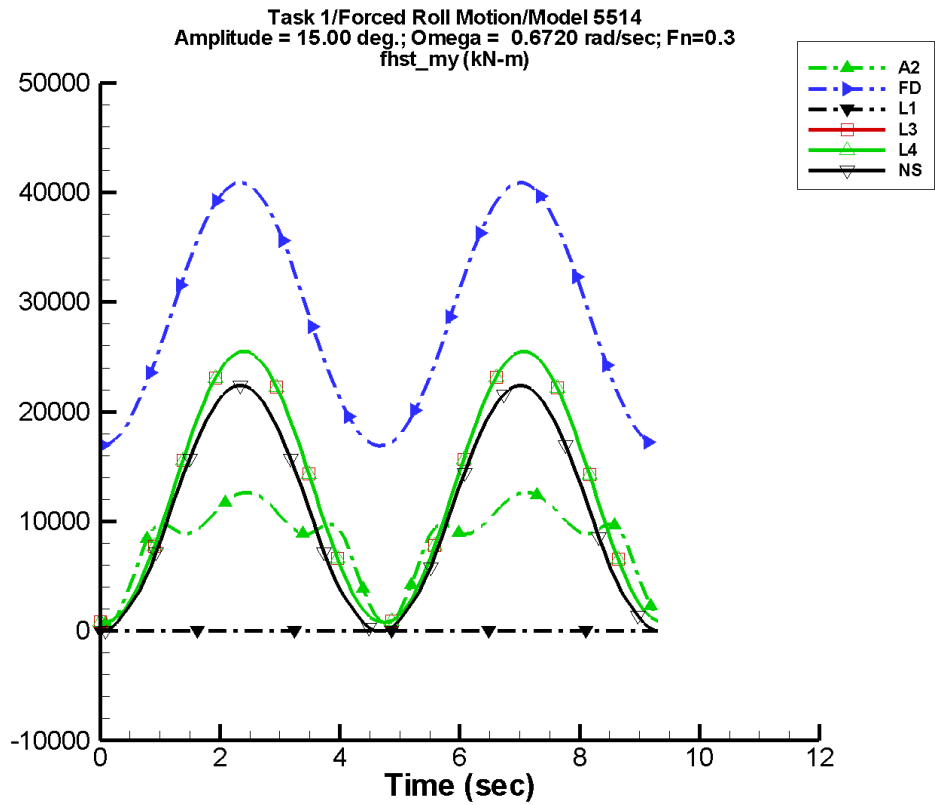
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.26E+03	10.1	-2	2.47E+03	-97
FD	1.81E+04	2.22	149	1.24E+03	-90
L1	-3.60E-07	4.72E-03	178	5.16E-07	-155
L3	2.03E+03	1.77	-178	1.27E+03	-95
L4	2.03E+03	1.77	-178	1.27E+03	-95
NF	—	—	—	—	—
NS	1.18E+03	9.84E-03	-15	1.23E+03	-90

Table D-712. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	724.	5.59E+03	716.	5.49E+03
FD	1.69E+04	1.94E+04	1.69E+04	1.93E+04
L1	-4.71E-03	4.71E-03	-4.69E-03	4.69E-03
L3	759.	3.32E+03	773.	3.30E+03
L4	759.	3.32E+03	773.	3.30E+03
NF	—	—	—	—
NS	-25.9	2.36E+03	5.89	2.32E+03



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-357. Time history of  $M_y^{hst}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

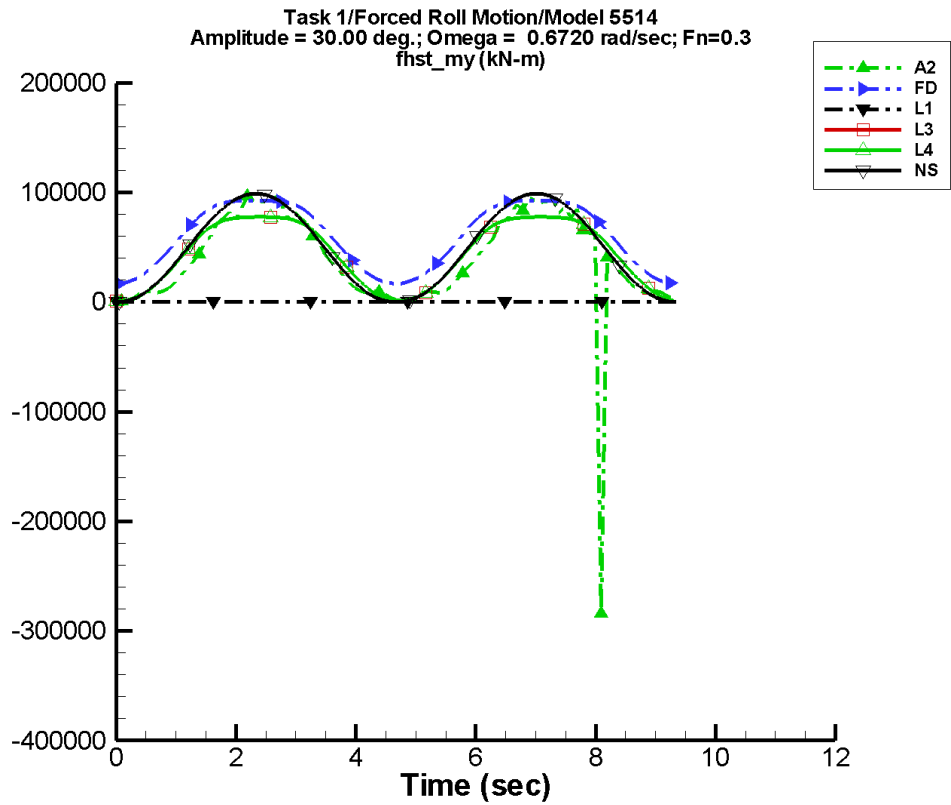
Table D-713. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	8.29E+03	63.4	-38	4.29E+03	-96
FD	2.87E+04	11.2	150	1.21E+04	-90
L1	-7.60E-06	1.38E-02	178	1.39E-05	-155
L3	1.30E+04	4.43	179	1.24E+04	-95
L4	1.30E+04	4.43	179	1.24E+04	-95
NF	—	—	—	—	—
NS	1.10E+04	1.38E-02	172	1.12E+04	-90

Table D-714. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	725.	1.26E+04	1.17E+03	1.23E+04
FD	1.69E+04	4.09E+04	1.71E+04	4.05E+04
L1	-1.37E-02	1.37E-02	-1.37E-02	1.37E-02
L3	756.	2.55E+04	767.	2.53E+04
L4	756.	2.55E+04	767.	2.53E+04
NF	—	—	—	—
NS	-0.114	2.24E+04	211.	2.19E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-358. Time history of  $M_y^{hst}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

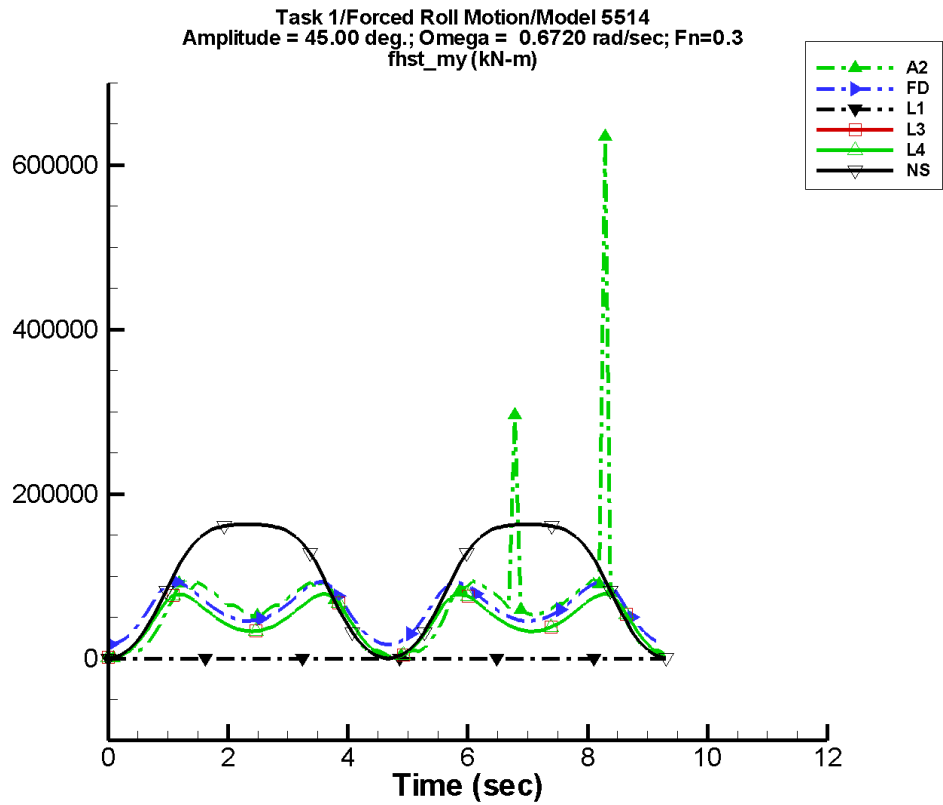
Table D-715. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	3.88E+04	6.94E+03	-44	4.40E+04	-90
FD	5.99E+04	443.	-29	3.96E+04	-89
L1	-5.79E-05	2.56E-02	178	1.09E-04	-155
L3	4.48E+04	378.	0	4.07E+04	-94
L4	4.48E+04	378.	0	4.07E+04	-94
NF	—	—	—	—	—
NS	4.85E+04	5.13E-02	68	5.00E+04	-90

Table D-716. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.84E+05	9.65E+04	-1.09E+03	9.36E+04
FD	1.69E+04	9.27E+04	1.80E+04	9.29E+04
L1	-2.46E-02	2.46E-02	-2.45E-02	2.45E-02
L3	757.	7.77E+04	785.	7.77E+04
L4	757.	7.77E+04	785.	7.77E+04
NF	—	—	—	—
NS	-0.191	9.89E+04	293.	9.82E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-359. Time history of  $M_y^{hst}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

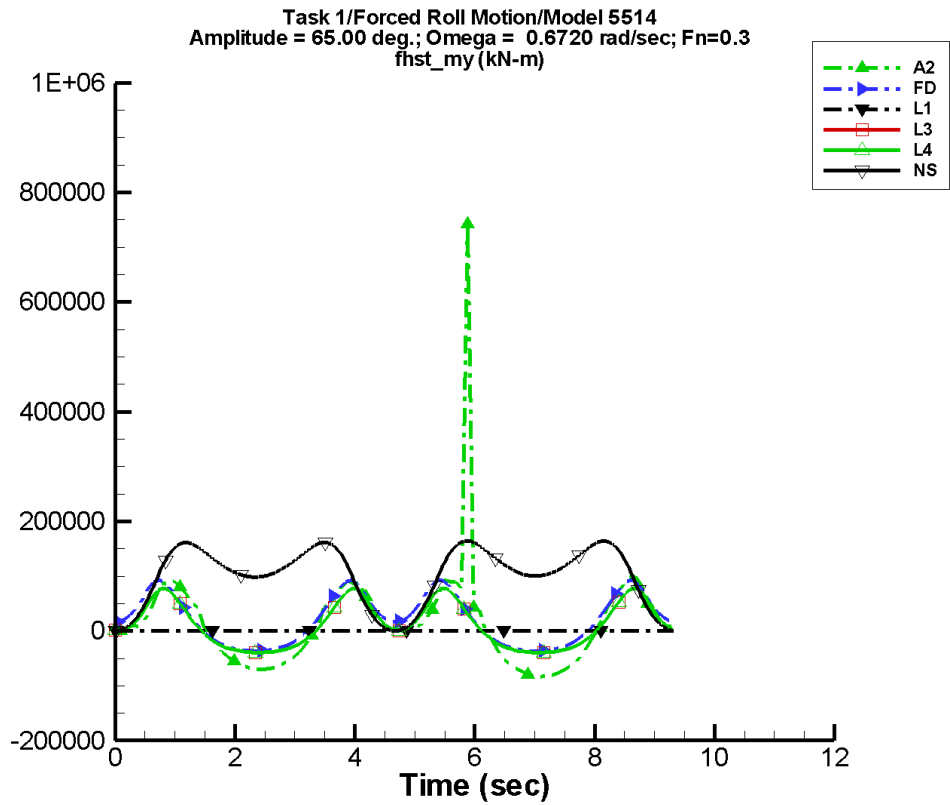
Table D-717. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	6.23E+04	1.26E+04	140	3.93E+04	-107
FD	5.79E+04	1.99E+03	-30	1.10E+04	-77
L1	-1.88E-04	3.33E-02	178	3.55E-04	-155
L3	4.49E+04	2.14E+03	0	1.57E+04	-84
L4	4.49E+04	2.14E+03	0	1.57E+04	-84
NF	—	—	—	—	—
NS	9.49E+04	0.490	21	8.56E+04	-90

Table D-718. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	726.	6.35E+05	926.	1.55E+05
FD	1.69E+04	9.30E+04	2.01E+04	8.48E+04
L1	-3.01E-02	3.01E-02	-3.01E-02	3.01E-02
L3	758.	7.81E+04	1.36E+03	7.52E+04
L4	758.	7.81E+04	1.36E+03	7.52E+04
NF	—	—	—	—
NS	-0.296	1.63E+05	291.	1.63E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-360. Time history of  $M_y^{hst}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

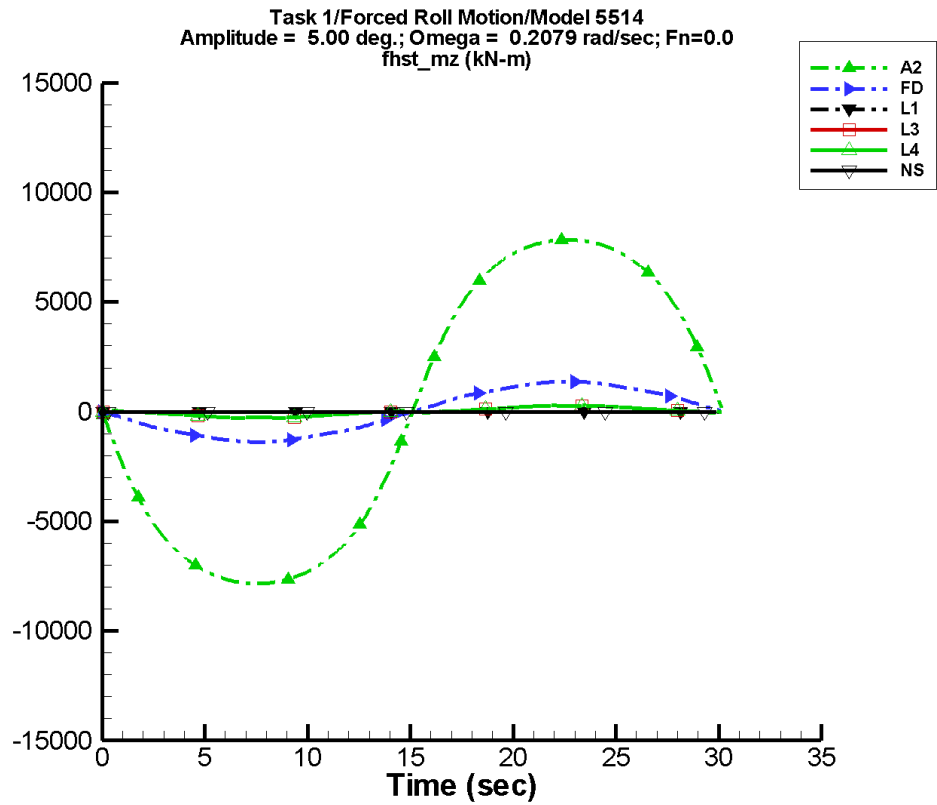
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	1.38E+04	1.26E+04	-113	5.79E+04	64
FD	2.12E+04	1.40E+03	-30	4.89E+04	88
L1	-5.26E-04	3.49E-02	179	1.00E-03	-154
L3	1.14E+04	1.75E+03	-4	4.04E+04	81
L4	1.14E+04	1.75E+03	-4	4.04E+04	81
NF	—	—	—	—	—
NS	1.01E+05	1.46E+03	-180	4.45E+04	-90

Table D-720. Minimum and maximum of  $M_y^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.32E+04	7.43E+05	-8.20E+04	1.50E+05
FD	-3.63E+04	9.30E+04	-3.51E+04	7.15E+04
L1	-3.04E-02	3.04E-02	-3.02E-02	3.02E-02
L3	-3.93E+04	7.81E+04	-3.89E+04	6.91E+04
L4	-3.93E+04	7.81E+04	-3.89E+04	6.91E+04
NF	—	—	—	—
NS	-23.3	1.64E+05	216.	1.63E+05



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-361. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

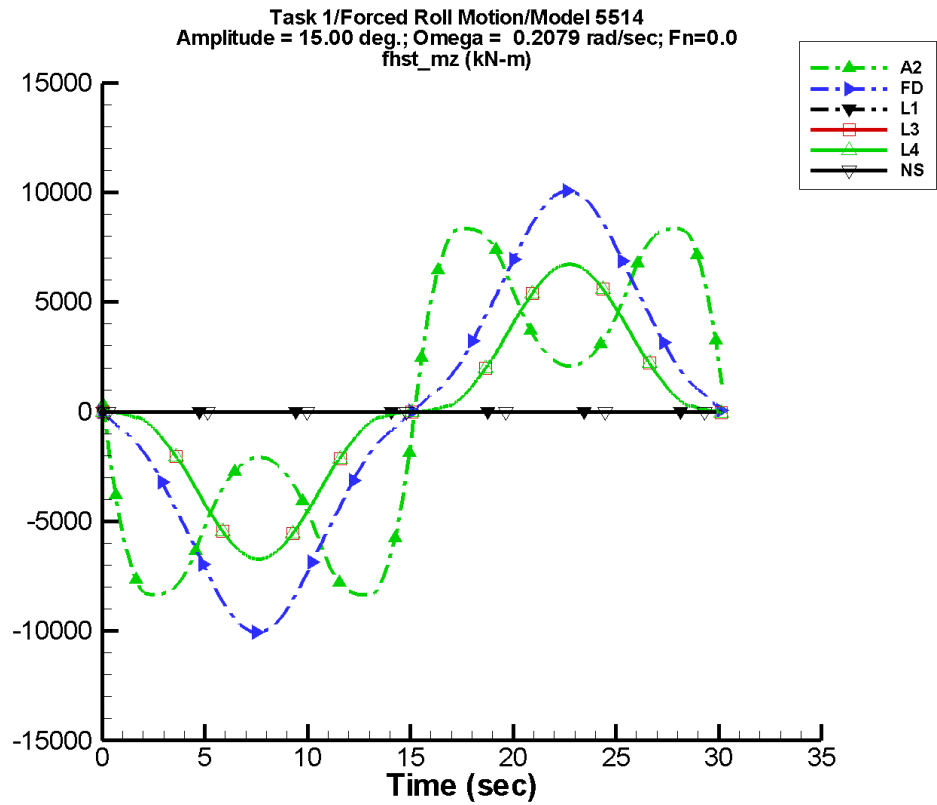
Table D-721. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-24.0	8.50E+03	-179	132.	-117
FD	5.82E-02	1.35E+03	180	0.976	-48
L1	2.06E-04	4.40E-09	-69	2.06E-04	-91
L3	3.98	230.	179	15.1	87
L4	3.98	230.	179	15.1	87
NF	—	—	—	—	—
NS	-3.17E-04	1.07E-02	160	1.84E-03	-90

Table D-722. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-7.84E+03	7.84E+03	-7.85E+03	7.83E+03
FD	-1.38E+03	1.38E+03	-1.38E+03	1.38E+03
L1	4.35E-10	4.12E-04	2.60E-07	4.12E-04
L3	-286.	286.	-279.	279.
L4	-286.	286.	-279.	279.
NF	—	—	—	—
NS	-7.01E-02	7.20E-02	-2.57E-02	2.18E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-362. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

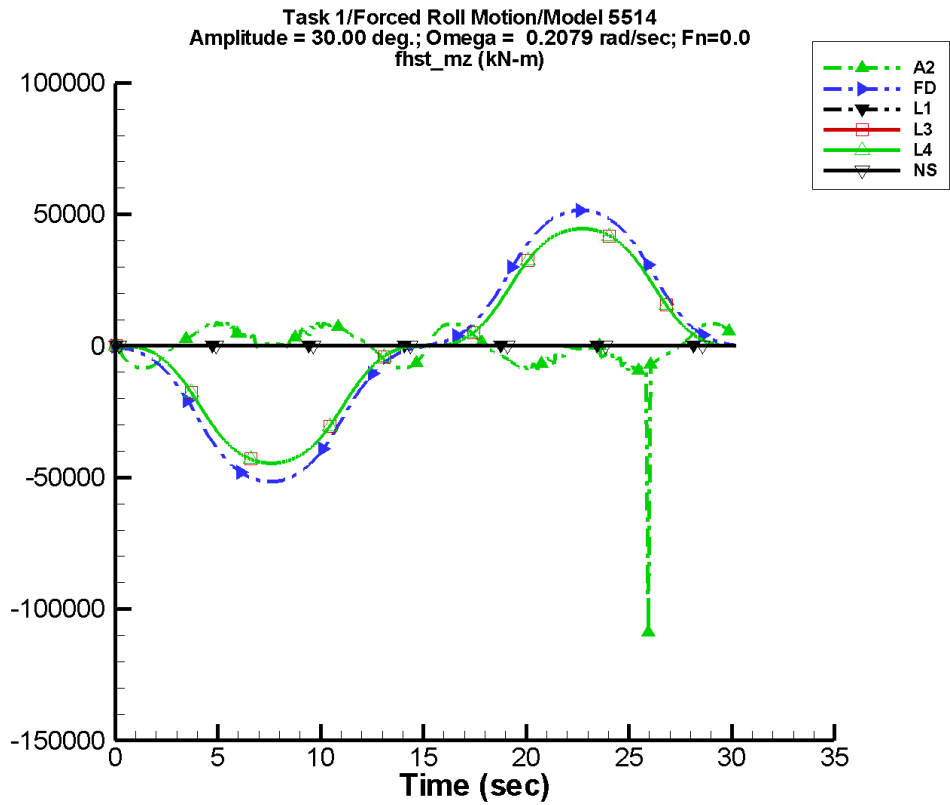
Table D-723. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-170.	6.43E+03	-176	861.	-119
FD	48.1	8.37E+03	179	242.	57
L1	1.84E-03	3.85E-07	-60	1.84E-03	-91
L3	102.	5.02E+03	179	401.	87
L4	102.	5.02E+03	179	401.	87
NF	—	—	—	—	—
NS	2.07E-04	9.92E-03	-178	4.11E-03	69

Table D-724. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.35E+03	8.35E+03	-8.34E+03	8.34E+03
FD	-1.01E+04	1.01E+04	-1.00E+04	1.00E+04
L1	3.91E-09	3.67E-03	2.34E-06	3.67E-03
L3	-6.72E+03	6.72E+03	-6.71E+03	6.71E+03
L4	-6.72E+03	6.72E+03	-6.71E+03	6.71E+03
NF	—	—	—	—
NS	-6.88E-02	8.35E-02	-2.71E-02	3.00E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-363. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

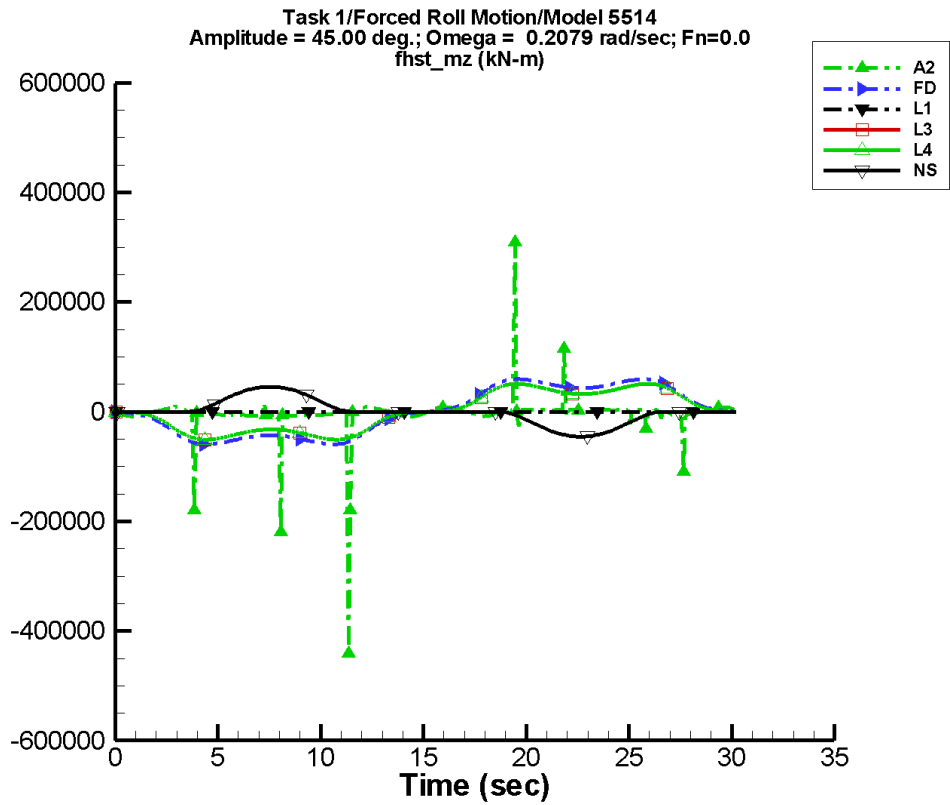
Table D-725. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-607.	4.28E+03	-15	860.	-46
FD	328.	4.34E+04	179	1.64E+03	61
L1	7.18E-03	6.06E-06	-60	7.09E-03	-91
L3	660.	3.64E+04	179	2.57E+03	87
L4	660.	3.64E+04	179	2.57E+03	87
NF	—	—	—	—	—
NS	-8.48E-04	2.54E-03	25	4.74E-03	17

Table D-726. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.09E+05	9.23E+03	-2.11E+04	8.35E+03
FD	-5.16E+04	5.16E+04	-5.15E+04	5.15E+04
L1	1.56E-08	1.42E-02	9.36E-06	1.42E-02
L3	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
L4	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
NF	—	—	—	—
NS	-0.136	9.53E-02	-2.55E-02	3.78E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-364. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

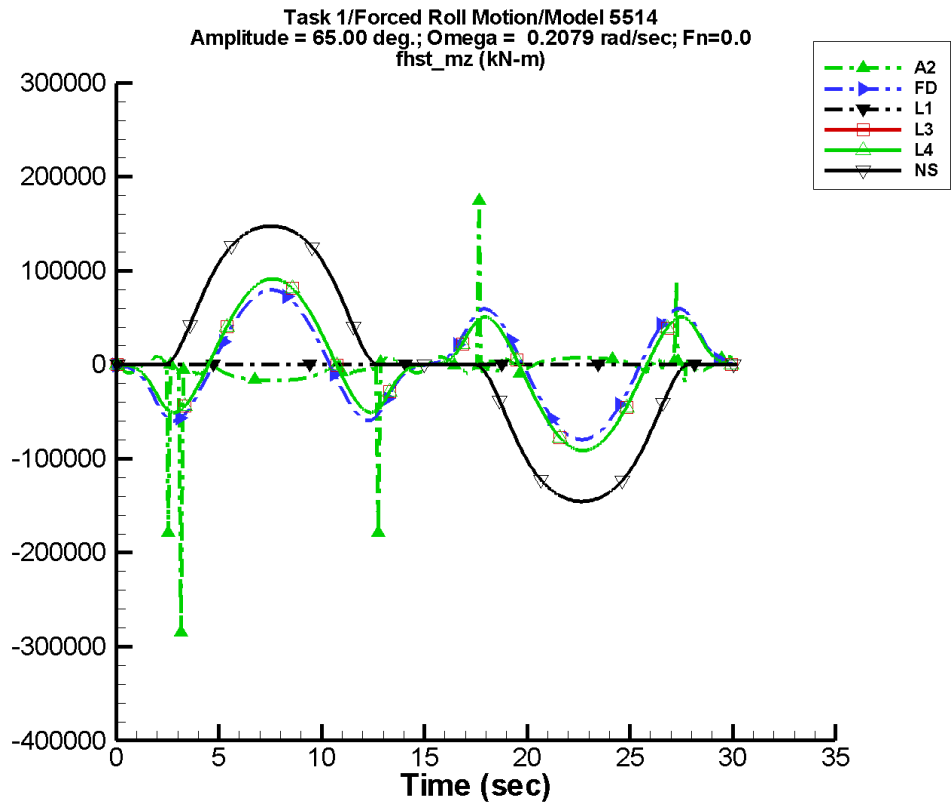
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-2.95E+03	8.77E+03	177	6.85E+03	4
FD	74.9	5.78E+04	180	853.	162
L1	1.55E-02	3.00E-05	-60	1.50E-02	-91
L3	-114.	4.70E+04	179	691.	-83
L4	-114.	4.70E+04	179	691.	-83
NF	—	—	—	—	—
NS	-0.694	2.49E+04	0	1.01	90

Table D-728. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-4.41E+05	3.10E+05	-8.27E+04	3.95E+04
FD	-5.95E+04	5.95E+04	-5.92E+04	5.92E+04
L1	3.52E-08	3.01E-02	2.11E-05	3.01E-02
L3	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04
L4	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04
NF	—	—	—	—
NS	-4.56E+04	4.55E+04	-4.52E+04	4.52E+04



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-365. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

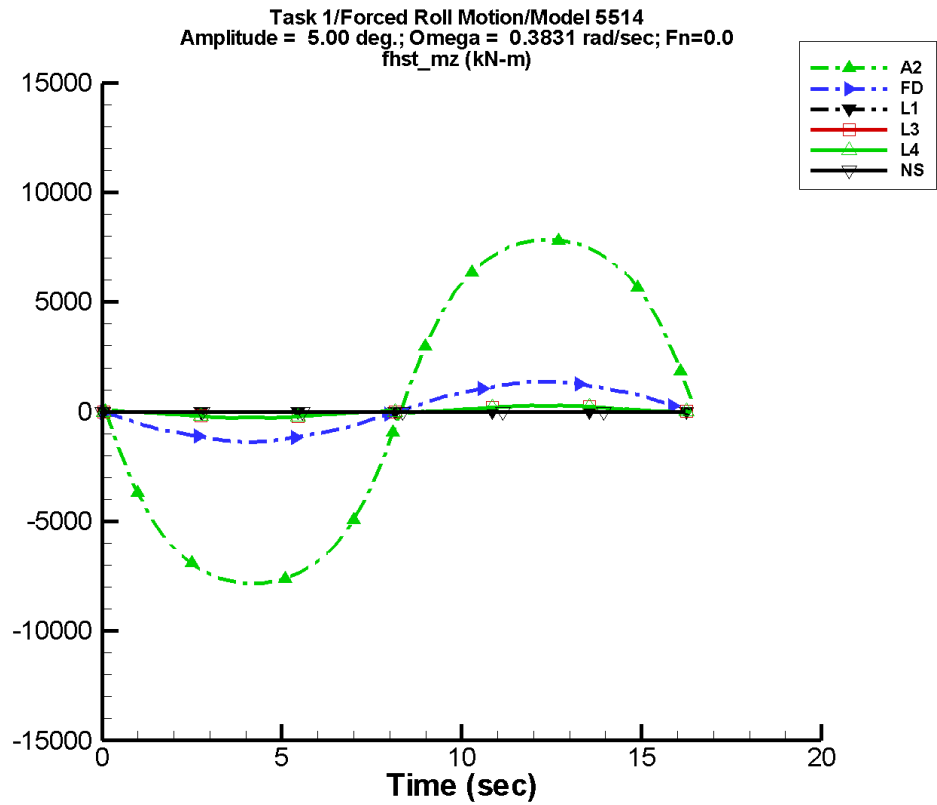
Table D-729. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-2.85E+03	9.26E+03	-176	2.00E+03	86
FD	-1.35E+03	1.86E+04	-15	8.12E+03	-129
L1	2.96E-02	1.24E-04	-61	2.77E-02	-91
L3	-3.34E+03	3.10E+04	0	1.33E+04	-92
L4	-3.34E+03	3.10E+04	0	1.33E+04	-92
NF	—	—	—	—	—
NS	663.	1.12E+05	0	694.	-90

Table D-730. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.85E+05	1.75E+05	-4.75E+04	2.01E+04
FD	-7.96E+04	7.96E+04	-7.91E+04	7.91E+04
L1	7.37E-08	5.57E-02	4.42E-05	5.57E-02
L3	-9.15E+04	9.15E+04	-9.13E+04	9.13E+04
L4	-9.15E+04	9.15E+04	-9.13E+04	9.13E+04
NF	—	—	—	—
NS	-1.45E+05	1.48E+05	-1.45E+05	1.48E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-366. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

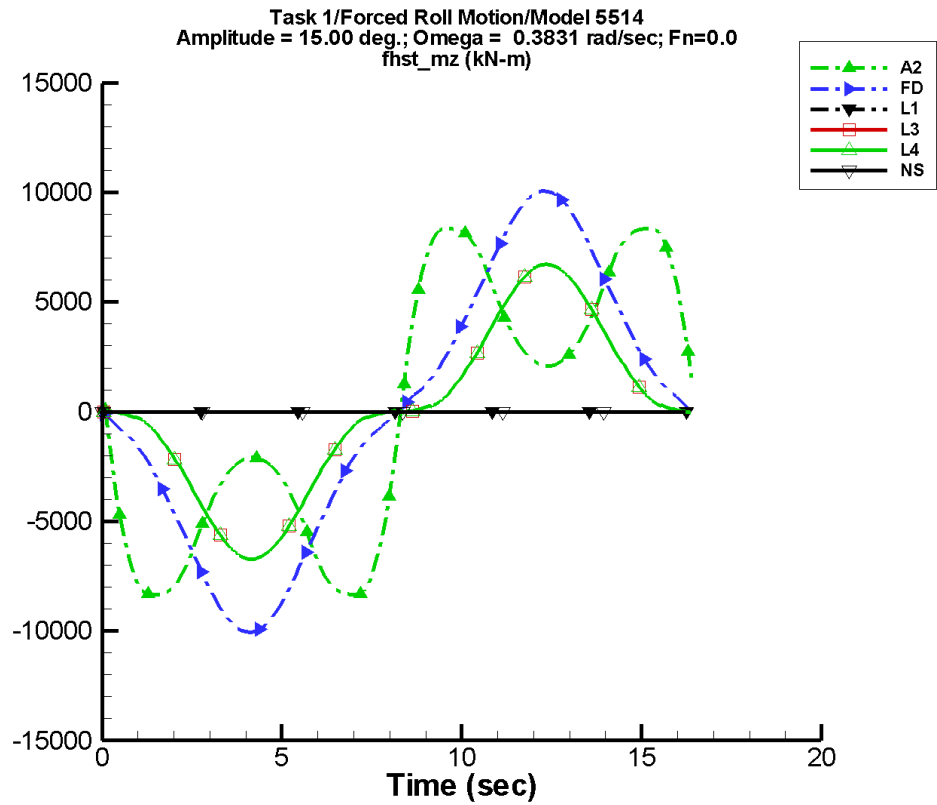
Table D-731. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-22.5	8.50E+03	178	133.	-121
FD	0.534	1.35E+03	-180	1.25	155
L1	2.06E-04	7.64E-09	-7	2.06E-04	-93
L3	4.35	227.	177	7.46	39
L4	4.35	227.	177	7.46	39
NF	—	—	—	—	—
NS	-7.88E-04	5.55E-03	172	2.06E-03	-20

Table D-732. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-7.84E+03	7.84E+03	-7.86E+03	7.82E+03
FD	-1.38E+03	1.38E+03	-1.37E+03	1.37E+03
L1	3.27E-09	4.12E-04	-2.35E-07	4.11E-04
L3	-284.	286.	-272.	275.
L4	-284.	286.	-272.	275.
NF	—	—	—	—
NS	-7.12E-02	8.43E-02	-3.12E-02	1.69E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-367. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

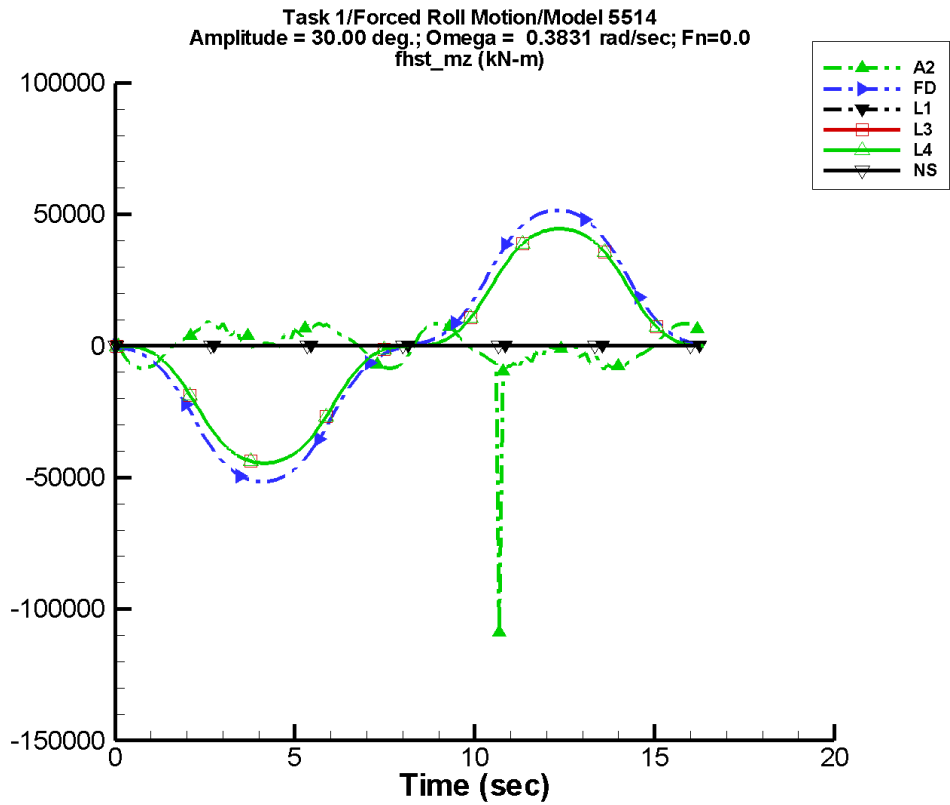
Table D-733. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-155.	6.40E+03	-177	890.	-120
FD	48.7	8.40E+03	179	330.	76
L1	1.84E-03	2.94E-07	-14	1.84E-03	-93
L3	98.2	4.93E+03	177	187.	28
L4	98.2	4.93E+03	177	187.	28
NF	—	—	—	—	—
NS	1.28E-04	6.47E-03	-157	1.75E-03	-29

Table D-734. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.34E+03	8.35E+03	-8.30E+03	8.30E+03
FD	-1.01E+04	1.01E+04	-9.97E+03	9.97E+03
L1	2.93E-08	3.67E-03	-2.08E-06	3.66E-03
L3	-6.72E+03	6.72E+03	-6.69E+03	6.69E+03
L4	-6.72E+03	6.72E+03	-6.69E+03	6.69E+03
NF	—	—	—	—
NS	-7.90E-02	8.66E-02	-2.72E-02	2.51E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-368. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

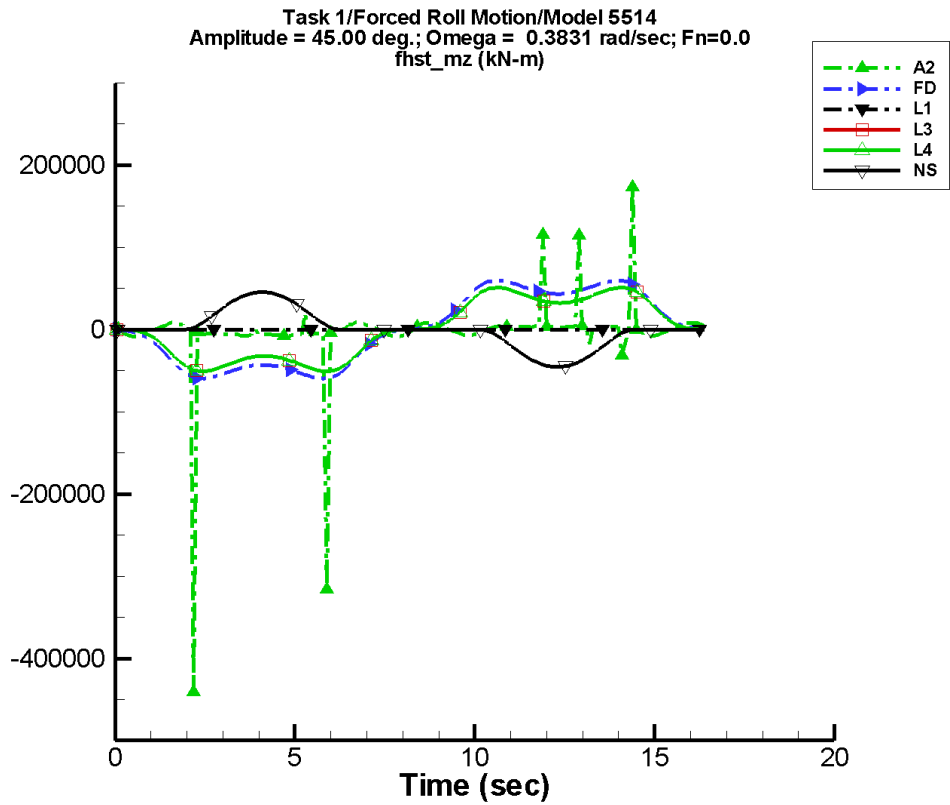
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-857.	4.62E+03	0	1.19E+03	-161
FD	306.	4.37E+04	179	2.16E+03	75
L1	7.18E-03	3.88E-06	-17	7.10E-03	-93
L3	665.	3.58E+04	177	1.27E+03	31
L4	665.	3.58E+04	177	1.27E+03	31
NF	—	—	—	—	—
NS	1.25E-03	5.18E-03	-13	4.36E-03	105

Table D-736. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.09E+05	9.75E+03	-2.05E+04	7.83E+03
FD	-5.16E+04	5.16E+04	-5.13E+04	5.13E+04
L1	1.17E-07	1.42E-02	-7.88E-06	1.42E-02
L3	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
L4	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
NF	—	—	—	—
NS	-8.72E-02	8.83E-02	-4.18E-02	3.34E-02



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-369. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

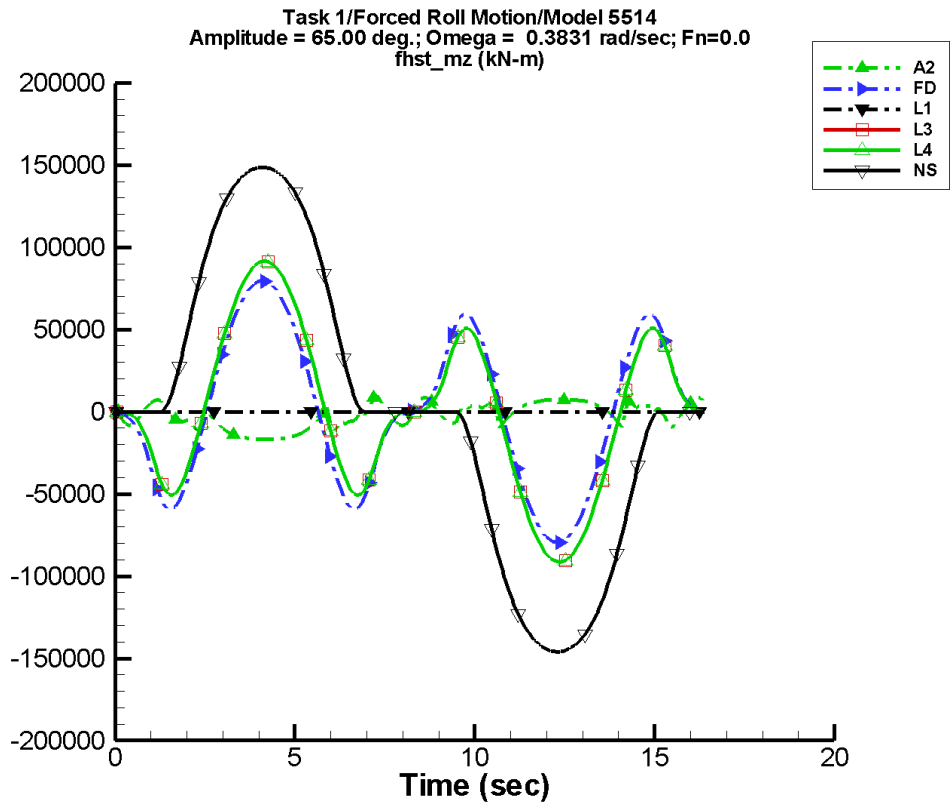
Table D-737. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-1.65E+03	1.11E+04	173	1.25E+03	-141
FD	-149.	5.78E+04	179	758.	-81
L1	1.55E-02	1.82E-05	-18	1.51E-02	-93
L3	12.7	4.71E+04	178	741.	119
L4	12.7	4.71E+04	178	741.	119
NF	—	—	—	—	—
NS	0.918	2.49E+04	0	1.34	-90

Table D-738. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-4.41E+05	1.73E+05	-5.95E+04	1.81E+04
FD	-5.95E+04	5.95E+04	-5.84E+04	5.84E+04
L1	2.65E-07	3.01E-02	-1.60E-05	3.00E-02
L3	-5.10E+04	5.10E+04	-5.04E+04	5.05E+04
L4	-5.10E+04	5.10E+04	-5.04E+04	5.05E+04
NF	—	—	—	—
NS	-4.55E+04	4.55E+04	-4.52E+04	4.52E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-370. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

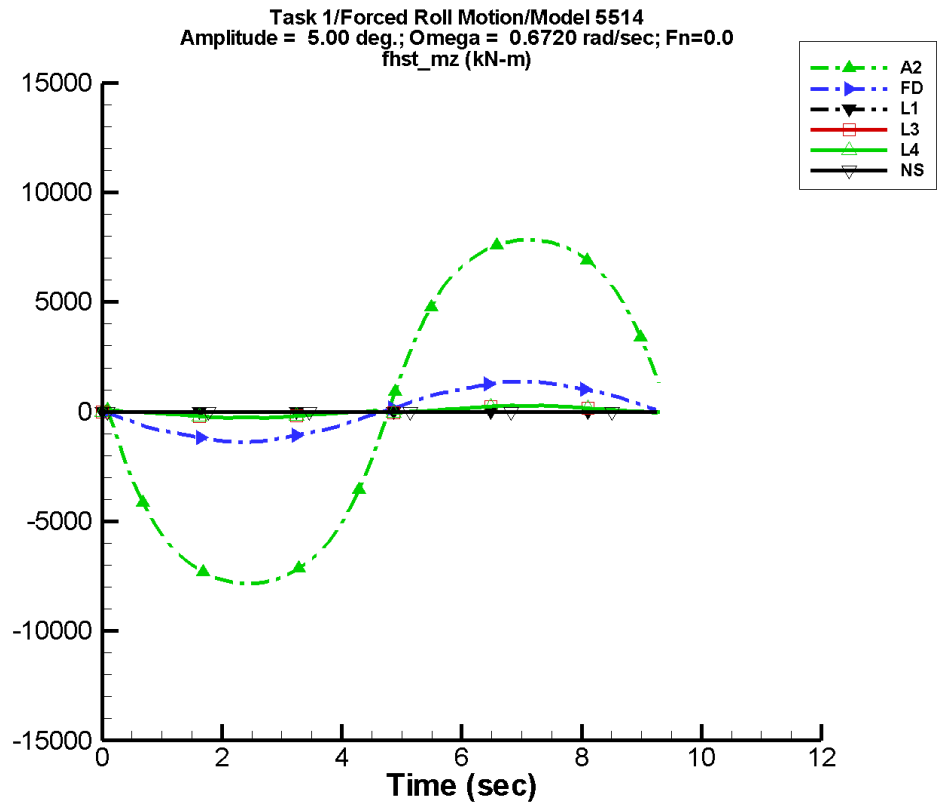
Table D-739. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-2.25E+03	7.16E+03	177	3.02E+03	77
FD	-1.49E+03	1.93E+04	-9	1.13E+04	-105
L1	2.96E-02	7.52E-05	-18	2.79E-02	-92
L3	-3.09E+03	2.82E+04	-12	6.21E+03	-164
L4	-3.09E+03	2.82E+04	-12	6.21E+03	-164
NF	—	—	—	—	—
NS	668.	1.13E+05	0	743.	-90

Table D-740. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.69E+04	9.79E+03	-1.67E+04	7.16E+03
FD	-7.96E+04	7.96E+04	-7.77E+04	7.77E+04
L1	5.53E-07	5.57E-02	-2.67E-05	5.56E-02
L3	-9.14E+04	9.14E+04	-9.08E+04	9.07E+04
L4	-9.14E+04	9.14E+04	-9.08E+04	9.07E+04
NF	—	—	—	—
NS	-1.46E+05	1.49E+05	-1.46E+05	1.48E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-371. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

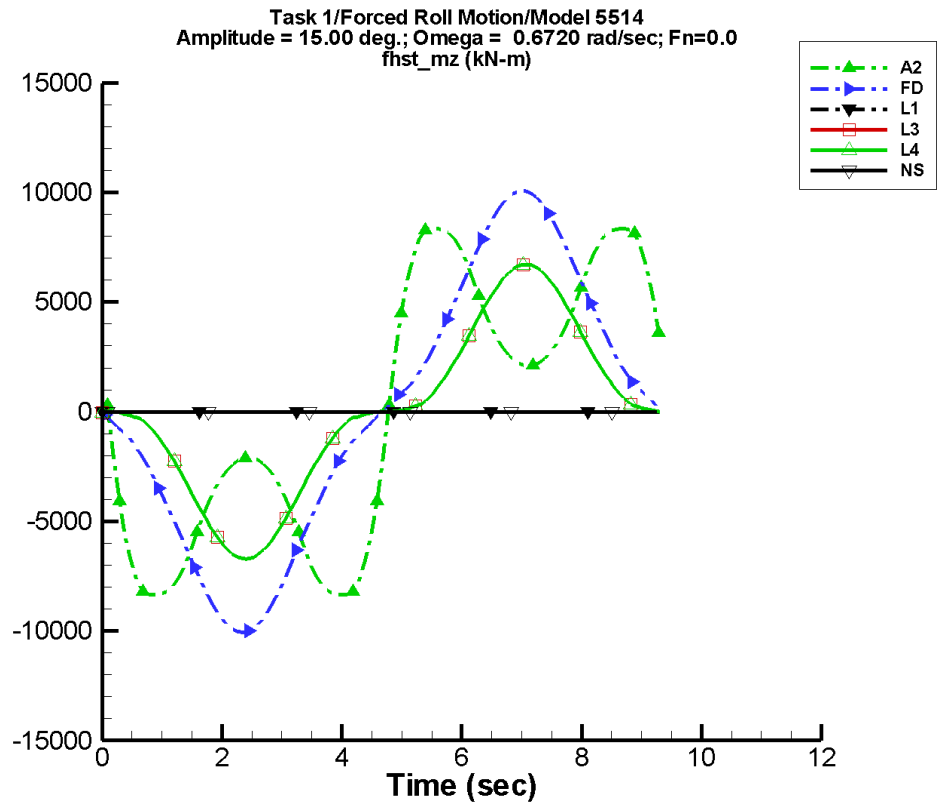
Table D-741. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-42.7	8.54E+03	177	97.3	-141
FD	0.549	1.35E+03	180	1.29	-135
L1	2.06E-04	1.94E-08	-3	2.06E-04	-95
L3	3.92	226.	176	7.47	39
L4	3.92	226.	176	7.47	39
NF	—	—	—	—	—
NS	-2.89E-04	1.07E-02	175	5.51E-03	-46

Table D-742. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-7.83E+03	7.83E+03	-7.79E+03	7.79E+03
FD	-1.38E+03	1.38E+03	-1.36E+03	1.37E+03
L1	5.72E-09	4.12E-04	1.80E-07	4.09E-04
L3	-283.	283.	-267.	268.
L4	-283.	283.	-267.	268.
NF	—	—	—	—
NS	-0.104	7.59E-02	-3.05E-02	2.54E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-372. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

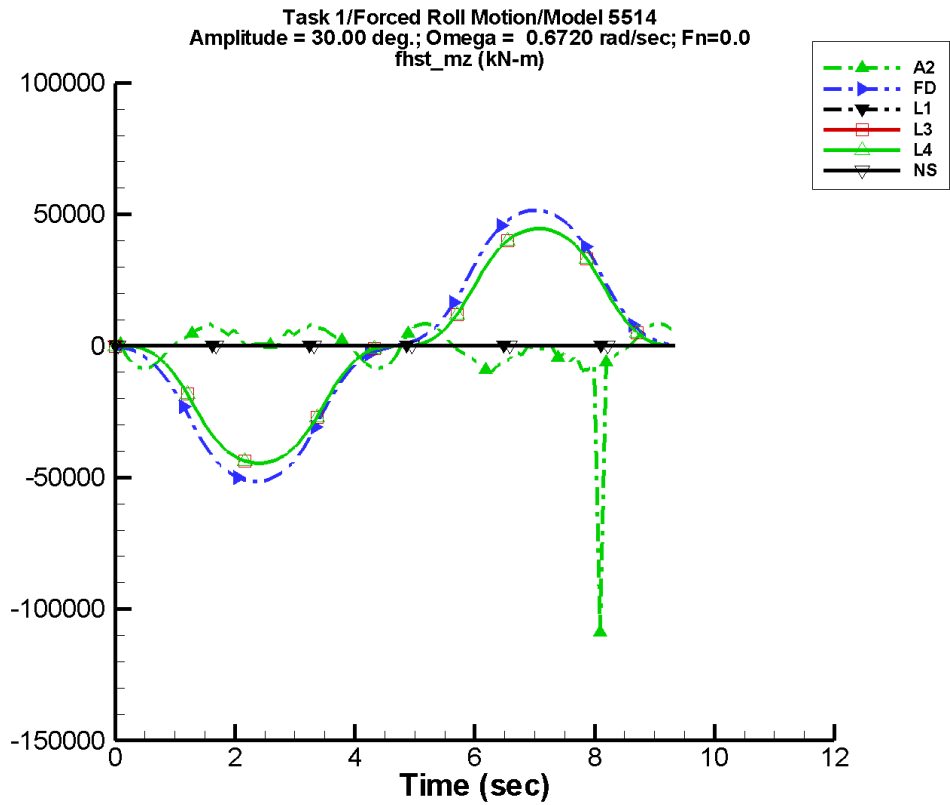
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-289.	6.68E+03	-179	650.	-140
FD	126.	8.48E+03	179	234.	147
L1	1.84E-03	5.04E-07	-1	1.84E-03	-95
L3	102.	4.92E+03	176	193.	24
L4	102.	4.92E+03	176	193.	24
NF	—	—	—	—	—
NS	-3.95E-03	5.37E-03	-166	3.11E-03	-120

Table D-744. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.35E+03	8.35E+03	-8.15E+03	8.15E+03
FD	-1.01E+04	1.01E+04	-9.78E+03	9.86E+03
L1	5.15E-08	3.67E-03	1.73E-06	3.64E-03
L3	-6.72E+03	6.72E+03	-6.63E+03	6.63E+03
L4	-6.72E+03	6.72E+03	-6.63E+03	6.63E+03
NF	—	—	—	—
NS	-7.34E-02	7.70E-02	-2.57E-02	1.85E-02



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-373. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

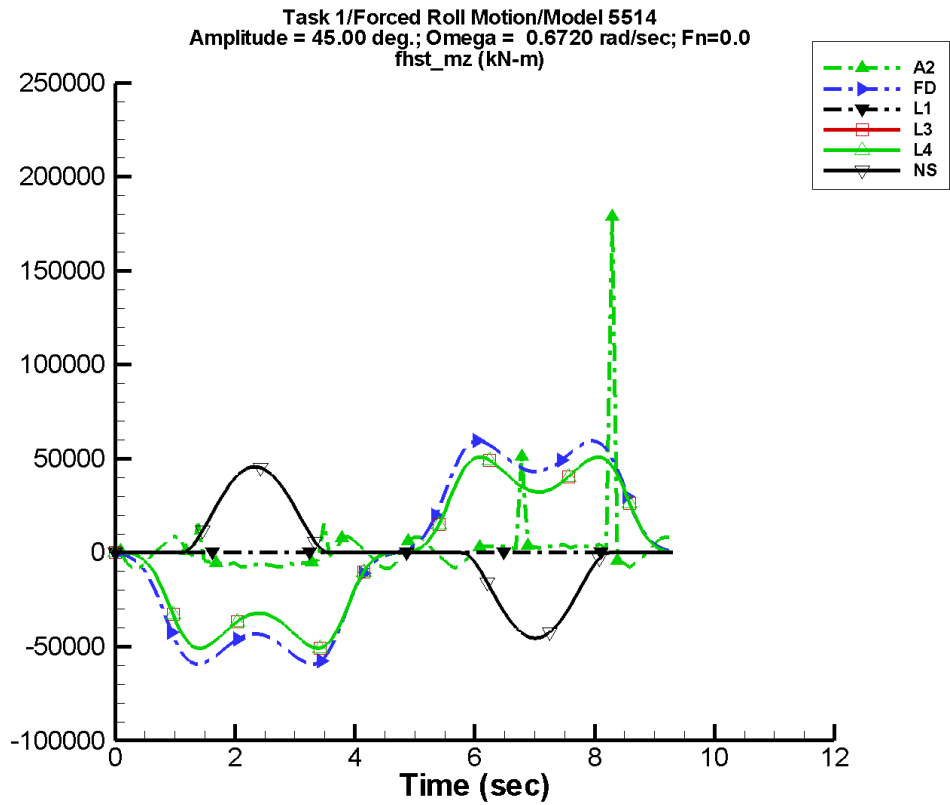
Table D-745. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-1.40E+03	5.50E+03	-23	1.99E+03	-11
FD	785.	4.40E+04	178	1.53E+03	141
L1	7.18E-03	6.29E-06	-1	7.10E-03	-95
L3	640.	3.59E+04	176	1.25E+03	31
L4	640.	3.59E+04	176	1.25E+03	31
NF	—	—	—	—	—
NS	-2.70E-05	4.10E-03	20	3.99E-03	121

Table D-746. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.09E+05	8.41E+03	-1.97E+04	7.70E+03
FD	-5.16E+04	5.16E+04	-5.08E+04	5.10E+04
L1	2.06E-07	1.42E-02	8.35E-06	1.41E-02
L3	-4.46E+04	4.45E+04	-4.43E+04	4.43E+04
L4	-4.46E+04	4.45E+04	-4.43E+04	4.43E+04
NF	—	—	—	—
NS	-0.103	8.20E-02	-4.05E-02	2.54E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-374. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

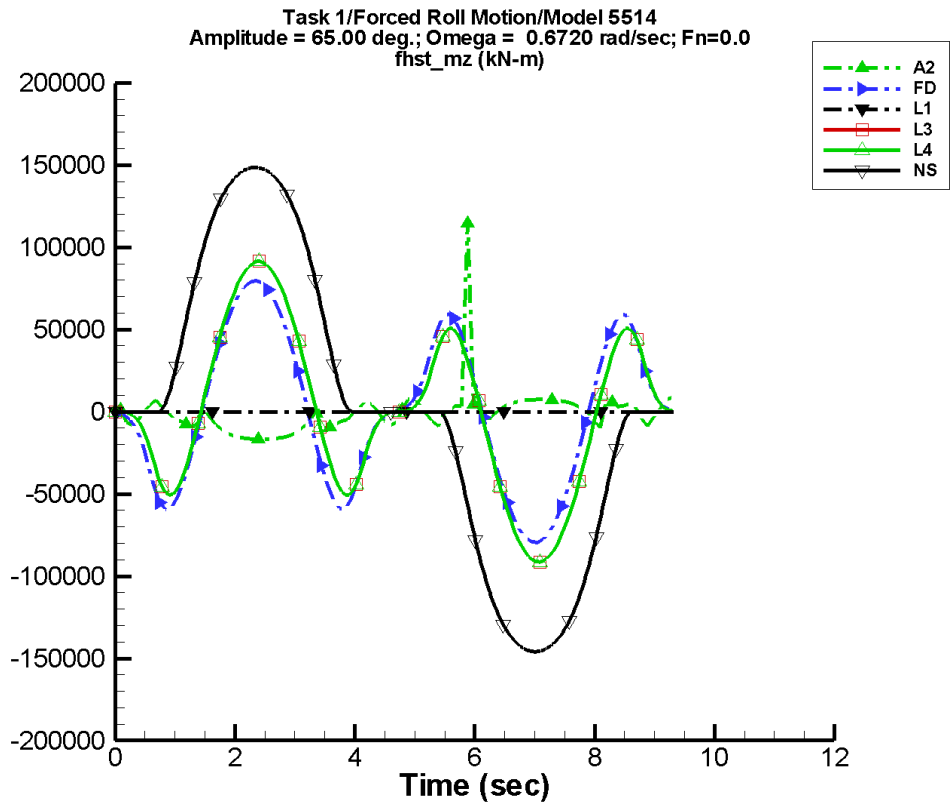
Table D-747. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	2.11E+03	6.35E+03	154	3.13E+03	-178
FD	-319.	5.69E+04	-180	950.	28
L1	1.55E-02	2.94E-05	-1	1.51E-02	-94
L3	-238.	4.76E+04	178	1.30E+03	130
L4	-238.	4.76E+04	178	1.30E+03	130
NF	—	—	—	—	—
NS	-0.384	2.49E+04	0	0.607	93

Table D-748. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.39E+03	1.79E+05	-6.71E+03	2.27E+04
FD	-5.95E+04	5.95E+04	-5.61E+04	5.61E+04
L1	4.63E-07	3.01E-02	2.41E-05	2.99E-02
L3	-5.09E+04	5.10E+04	-5.01E+04	4.96E+04
L4	-5.09E+04	5.10E+04	-5.01E+04	4.96E+04
NF	—	—	—	—
NS	-4.55E+04	4.55E+04	-4.52E+04	4.52E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-375. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

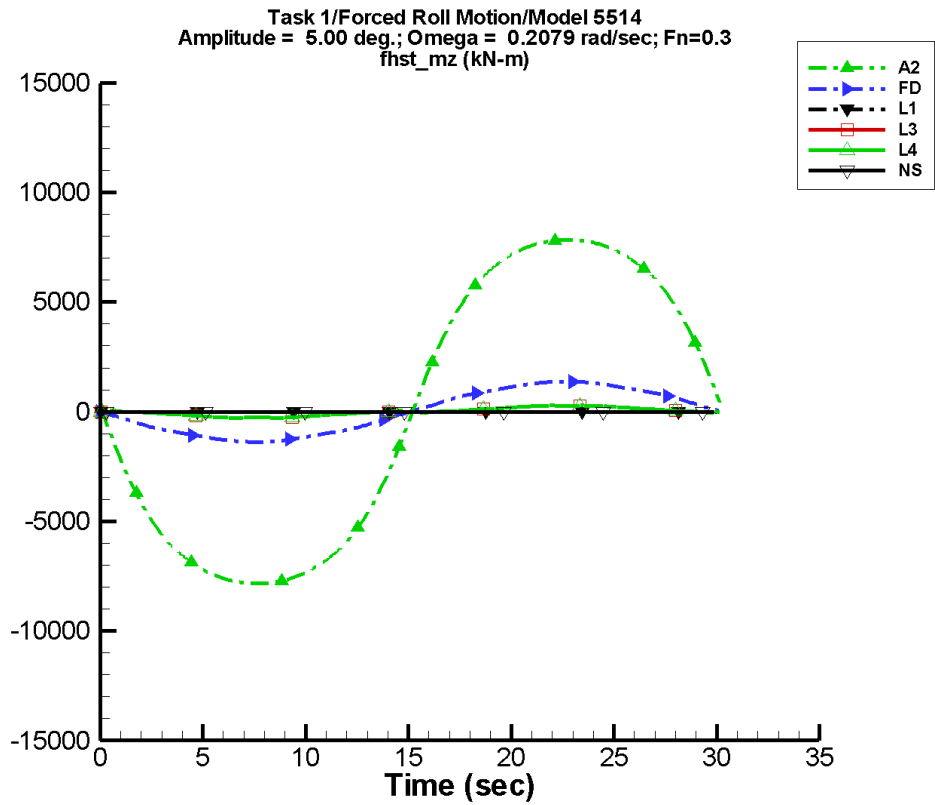
Table D-749. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-931.	8.90E+03	-173	3.84E+03	41
FD	-4.15E+03	2.31E+04	-18	7.94E+03	-29
L1	2.96E-02	1.19E-04	-1	2.80E-02	-94
L3	-3.27E+03	2.79E+04	-13	6.55E+03	-168
L4	-3.27E+03	2.79E+04	-13	6.55E+03	-168
NF	—	—	—	—	—
NS	677.	1.13E+05	0	748.	-90

Table D-750. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.68E+04	1.15E+05	-1.65E+04	1.54E+04
FD	-7.96E+04	7.96E+04	-7.47E+04	7.34E+04
L1	9.67E-07	5.57E-02	7.13E-05	5.54E-02
L3	-9.14E+04	9.14E+04	-8.92E+04	8.93E+04
L4	-9.14E+04	9.14E+04	-8.92E+04	8.93E+04
NF	—	—	—	—
NS	-1.46E+05	1.49E+05	-1.46E+05	1.48E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-376. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

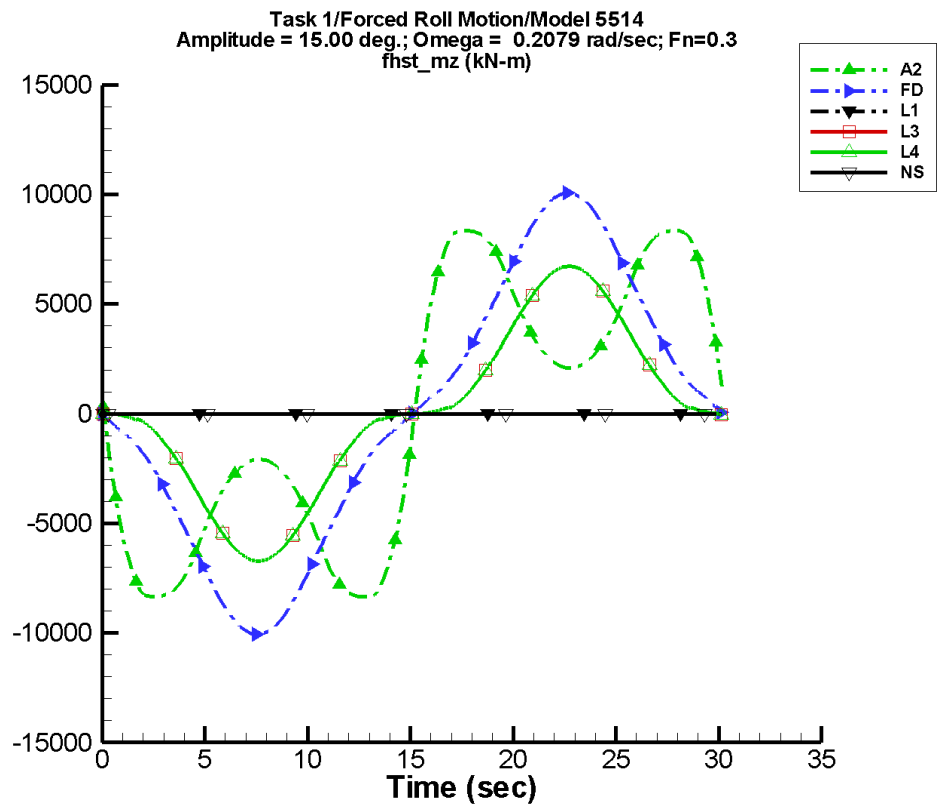
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-24.7	8.50E+03	179	129.	-120
FD	5.52E-02	1.35E+03	180	0.971	-48
L1	2.06E-04	4.40E-09	-69	2.06E-04	-91
L3	3.95	230.	179	15.1	87
L4	3.95	230.	179	15.1	87
NF	—	—	—	—	—
NS	-3.17E-04	1.07E-02	160	1.84E-03	-90

Table D-752. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-7.84E+03	7.84E+03	-7.84E+03	7.83E+03
FD	-1.38E+03	1.38E+03	-1.38E+03	1.38E+03
L1	4.35E-10	4.12E-04	2.60E-07	4.12E-04
L3	-287.	286.	-279.	279.
L4	-287.	286.	-279.	279.
NF	—	—	—	—
NS	-7.01E-02	7.20E-02	-2.57E-02	2.18E-02



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-377. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

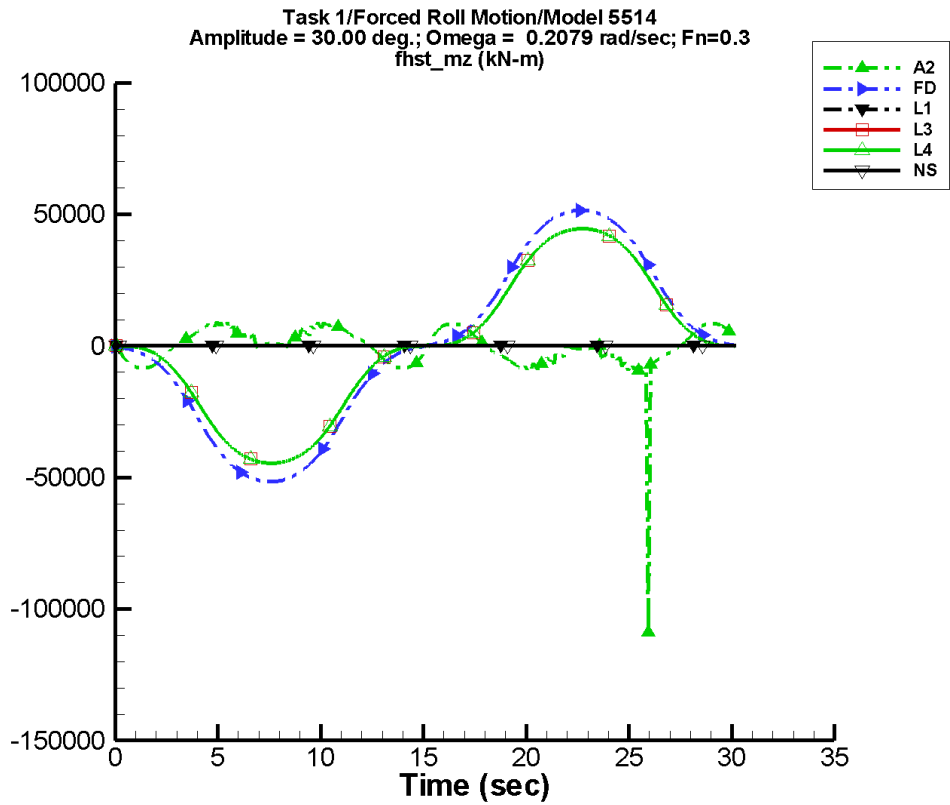
Table D-753. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-170.	6.43E+03	-176	861.	-119
FD	48.1	8.37E+03	179	242.	57
L1	1.84E-03	3.85E-07	-60	1.84E-03	-91
L3	102.	5.02E+03	179	401.	87
L4	102.	5.02E+03	179	401.	87
NF	—	—	—	—	—
NS	2.07E-04	9.92E-03	-178	4.11E-03	69

Table D-754. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.35E+03	8.35E+03	-8.34E+03	8.34E+03
FD	-1.01E+04	1.01E+04	-1.00E+04	1.00E+04
L1	3.91E-09	3.67E-03	2.34E-06	3.67E-03
L3	-6.72E+03	6.72E+03	-6.71E+03	6.71E+03
L4	-6.72E+03	6.72E+03	-6.71E+03	6.71E+03
NF	—	—	—	—
NS	-6.88E-02	8.35E-02	-2.71E-02	3.00E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-378. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

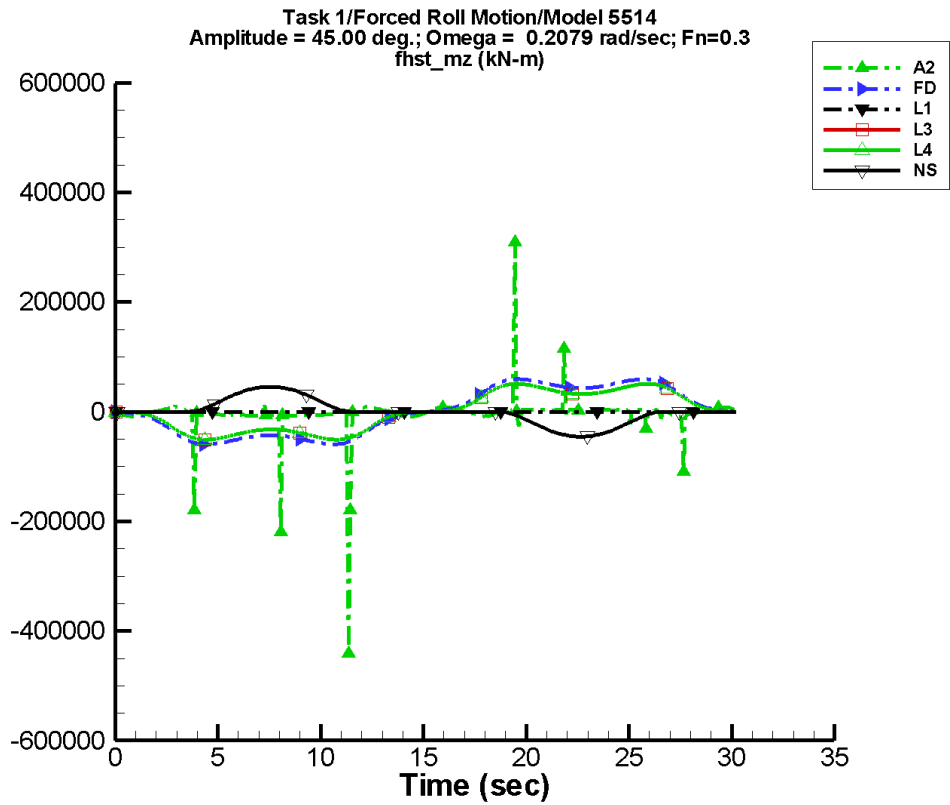
Table D-755. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-607.	4.28E+03	-15	860.	-46
FD	328.	4.34E+04	179	1.64E+03	61
L1	7.18E-03	6.06E-06	-60	7.09E-03	-91
L3	660.	3.64E+04	179	2.57E+03	87
L4	660.	3.64E+04	179	2.57E+03	87
NF	—	—	—	—	—
NS	-8.48E-04	2.54E-03	25	4.74E-03	17

Table D-756. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.09E+05	9.23E+03	-2.11E+04	8.35E+03
FD	-5.16E+04	5.16E+04	-5.15E+04	5.15E+04
L1	1.56E-08	1.42E-02	9.36E-06	1.42E-02
L3	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
L4	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
NF	—	—	—	—
NS	-0.136	9.53E-02	-2.55E-02	3.78E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-379. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

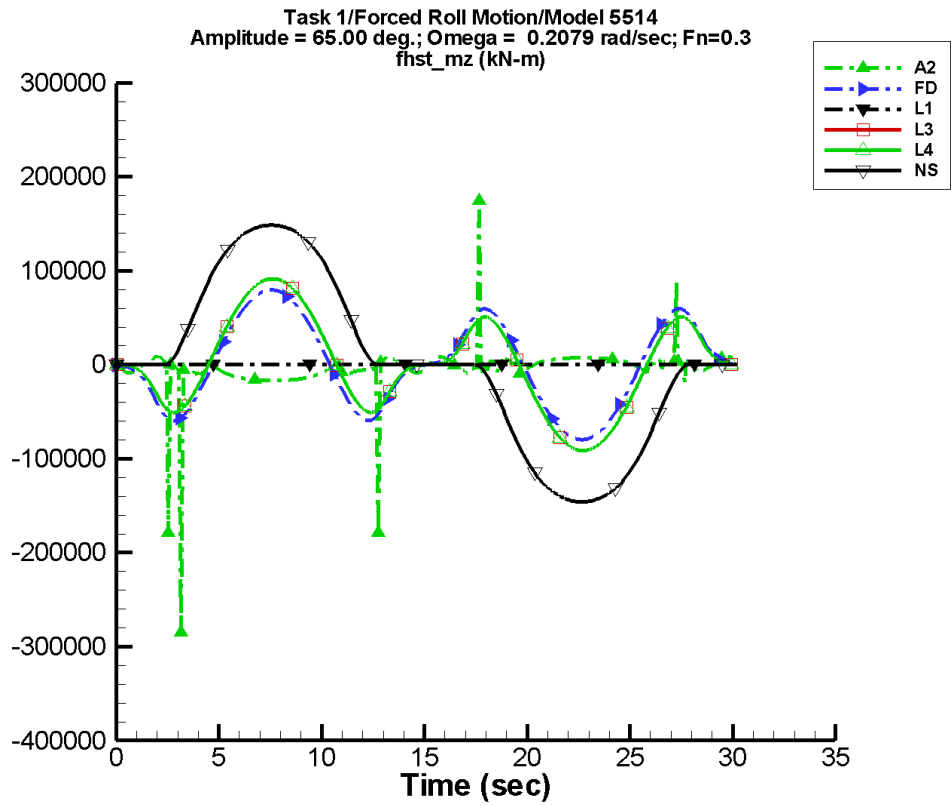
Table D-757. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-2.95E+03	8.77E+03	177	6.85E+03	4
FD	74.9	5.78E+04	180	853.	162
L1	1.55E-02	3.00E-05	-60	1.50E-02	-91
L3	-114.	4.70E+04	179	691.	-83
L4	-114.	4.70E+04	179	691.	-83
NF	—	—	—	—	—
NS	-0.694	2.49E+04	0	1.01	90

Table D-758. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-4.41E+05	3.10E+05	-8.27E+04	3.95E+04
FD	-5.95E+04	5.95E+04	-5.92E+04	5.92E+04
L1	3.52E-08	3.01E-02	2.11E-05	3.01E-02
L3	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04
L4	-5.10E+04	5.10E+04	-5.08E+04	5.08E+04
NF	—	—	—	—
NS	-4.56E+04	4.55E+04	-4.52E+04	4.52E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-380. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

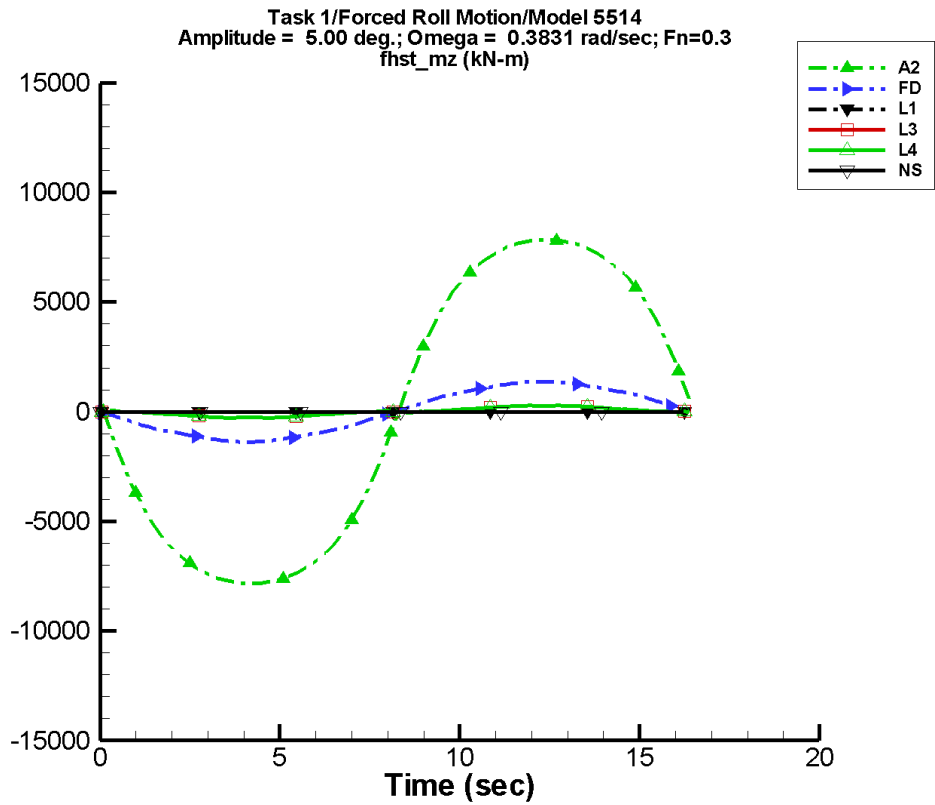
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-2.85E+03	9.26E+03	-176	2.00E+03	86
FD	-1.35E+03	1.86E+04	-15	8.12E+03	-129
L1	2.96E-02	1.24E-04	-61	2.77E-02	-91
L3	-3.34E+03	3.10E+04	0	1.33E+04	-92
L4	-3.34E+03	3.10E+04	0	1.33E+04	-92
NF	—	—	—	—	—
NS	670.	1.13E+05	0	746.	-90

Table D-760. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-2.85E+05	1.75E+05	-4.75E+04	2.01E+04
FD	-7.96E+04	7.96E+04	-7.91E+04	7.91E+04
L1	7.37E-08	5.57E-02	4.42E-05	5.57E-02
L3	-9.15E+04	9.15E+04	-9.13E+04	9.13E+04
L4	-9.15E+04	9.15E+04	-9.13E+04	9.13E+04
NF	—	—	—	—
NS	-1.46E+05	1.49E+05	-1.46E+05	1.48E+05



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-381. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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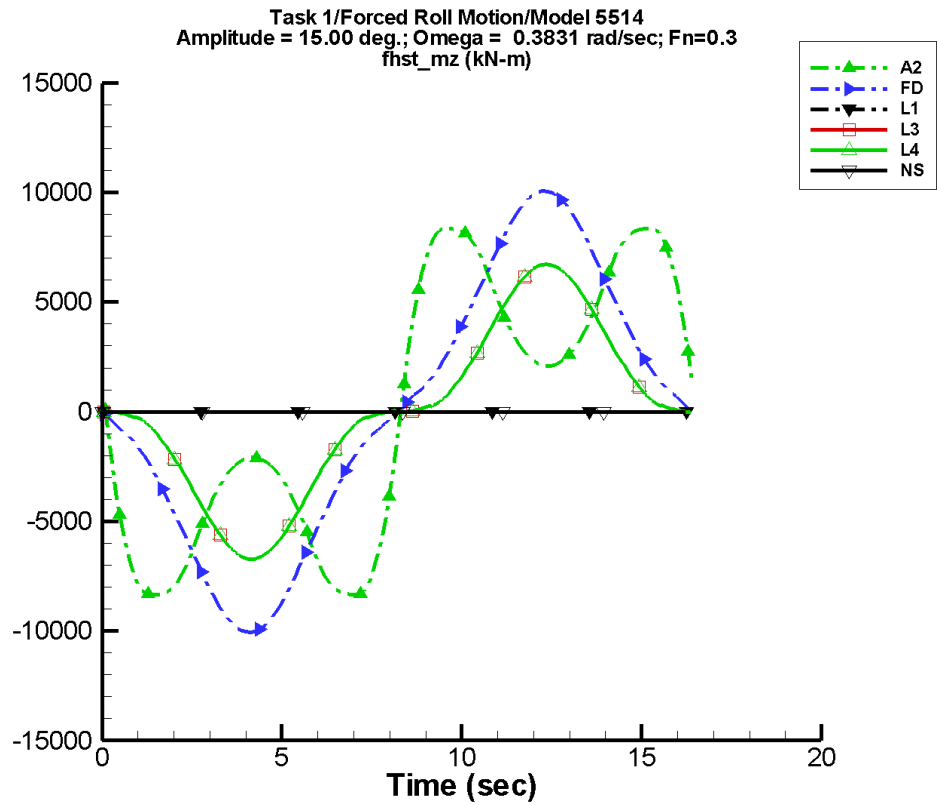
Table D-761. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-22.5	8.50E+03	178	133.	-121
FD	0.533	1.35E+03	-180	1.25	155
L1	2.06E-04	7.64E-09	-7	2.06E-04	-93
L3	4.30	227.	177	7.38	39
L4	4.30	227.	177	7.38	39
NF	—	—	—	—	—
NS	-7.88E-04	5.55E-03	172	2.06E-03	-20

Table D-762. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-7.84E+03	7.84E+03	-7.86E+03	7.82E+03
FD	-1.38E+03	1.38E+03	-1.37E+03	1.37E+03
L1	3.27E-09	4.12E-04	-2.35E-07	4.11E-04
L3	-284.	286.	-273.	276.
L4	-284.	286.	-273.	276.
NF	—	—	—	—
NS	-7.12E-02	8.43E-02	-3.12E-02	1.69E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-382. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

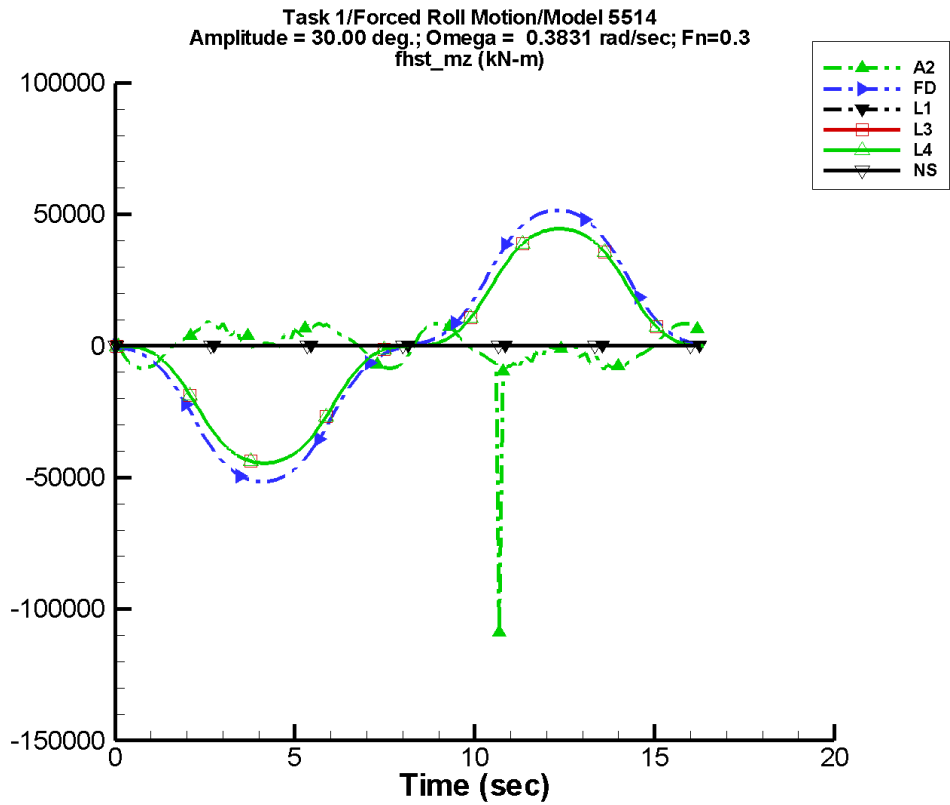
Table D-763. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-155.	6.40E+03	-177	890.	-120
FD	48.7	8.40E+03	179	330.	76
L1	1.84E-03	2.94E-07	-14	1.84E-03	-93
L3	98.2	4.93E+03	177	187.	28
L4	98.2	4.93E+03	177	187.	28
NF	—	—	—	—	—
NS	1.28E-04	6.47E-03	-157	1.75E-03	-29

Table D-764. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.34E+03	8.35E+03	-8.30E+03	8.30E+03
FD	-1.01E+04	1.01E+04	-9.97E+03	9.97E+03
L1	2.93E-08	3.67E-03	-2.08E-06	3.66E-03
L3	-6.72E+03	6.72E+03	-6.69E+03	6.69E+03
L4	-6.72E+03	6.72E+03	-6.69E+03	6.69E+03
NF	—	—	—	—
NS	-7.90E-02	8.66E-02	-2.72E-02	2.51E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-383. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

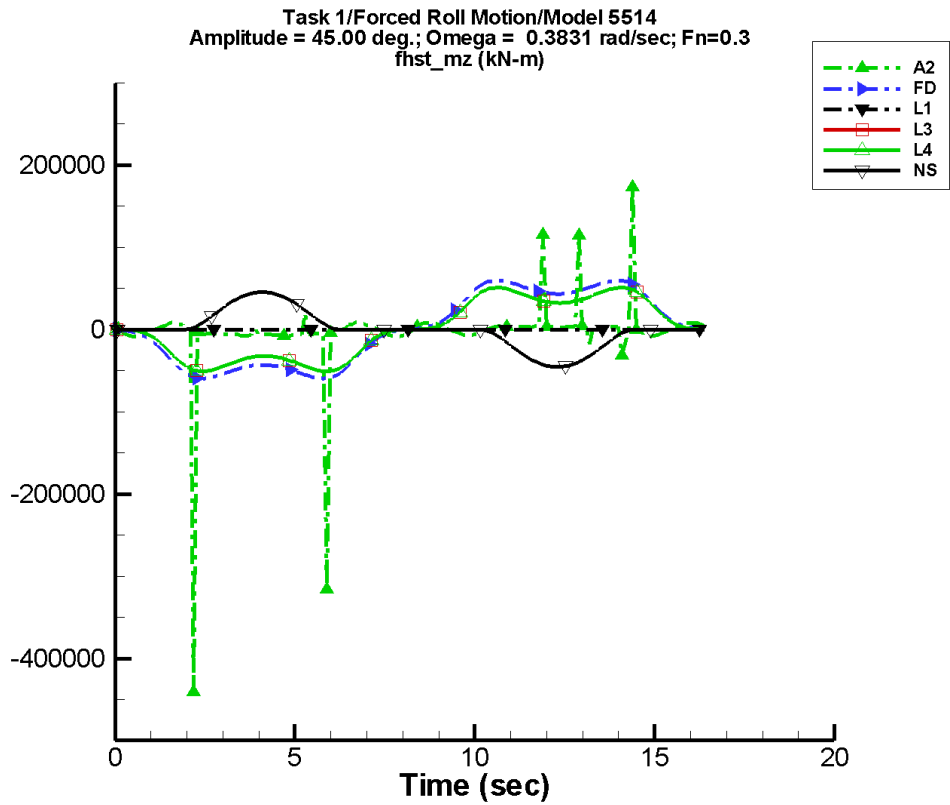
Table D-765. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-857.	4.62E+03	0	1.19E+03	-161
FD	306.	4.37E+04	179	2.16E+03	75
L1	7.18E-03	3.88E-06	-17	7.10E-03	-93
L3	665.	3.58E+04	177	1.27E+03	31
L4	665.	3.58E+04	177	1.27E+03	31
NF	—	—	—	—	—
NS	1.25E-03	5.18E-03	-13	4.36E-03	105

Table D-766. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.09E+05	9.75E+03	-2.05E+04	7.83E+03
FD	-5.16E+04	5.16E+04	-5.13E+04	5.13E+04
L1	1.17E-07	1.42E-02	-7.88E-06	1.42E-02
L3	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
L4	-4.46E+04	4.46E+04	-4.45E+04	4.45E+04
NF	—	—	—	—
NS	-8.72E-02	8.83E-02	-4.18E-02	3.34E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-384. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

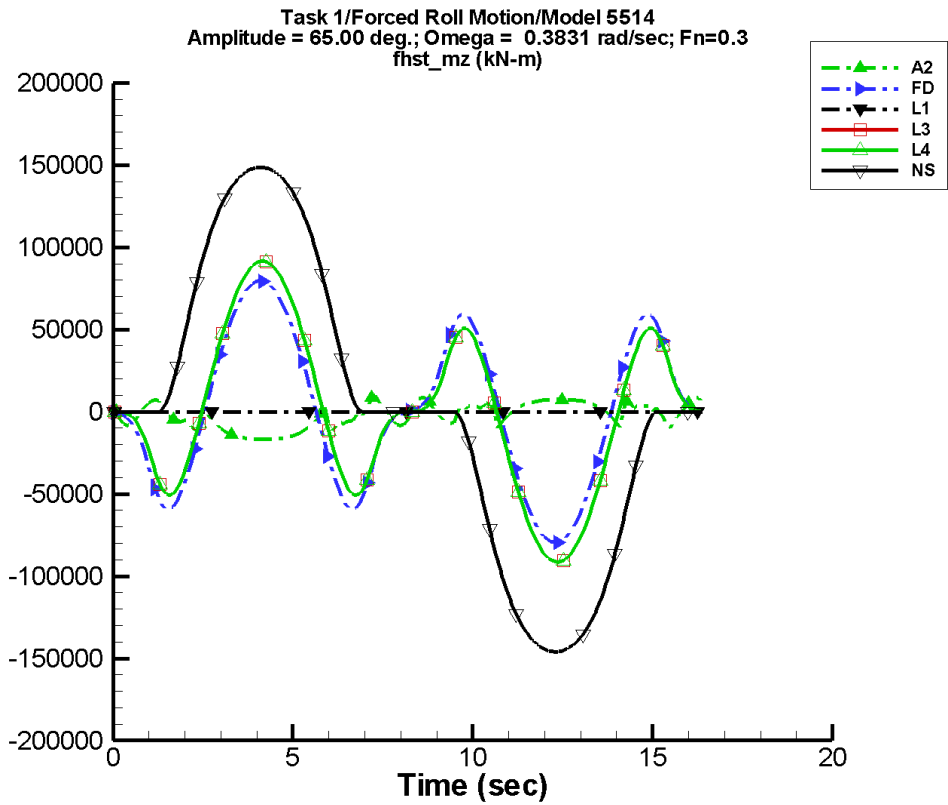
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-1.65E+03	1.11E+04	173	1.25E+03	-141
FD	-149.	5.78E+04	179	758.	-81
L1	1.55E-02	1.82E-05	-18	1.51E-02	-93
L3	12.8	4.71E+04	178	741.	119
L4	12.8	4.71E+04	178	741.	119
NF	—	—	—	—	—
NS	0.918	2.49E+04	0	1.34	-90

Table D-768. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-4.41E+05	1.73E+05	-5.95E+04	1.81E+04
FD	-5.95E+04	5.95E+04	-5.84E+04	5.84E+04
L1	2.65E-07	3.01E-02	-1.60E-05	3.00E-02
L3	-5.10E+04	5.10E+04	-5.04E+04	5.05E+04
L4	-5.10E+04	5.10E+04	-5.04E+04	5.05E+04
NF	—	—	—	—
NS	-4.55E+04	4.55E+04	-4.52E+04	4.52E+04



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-385. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

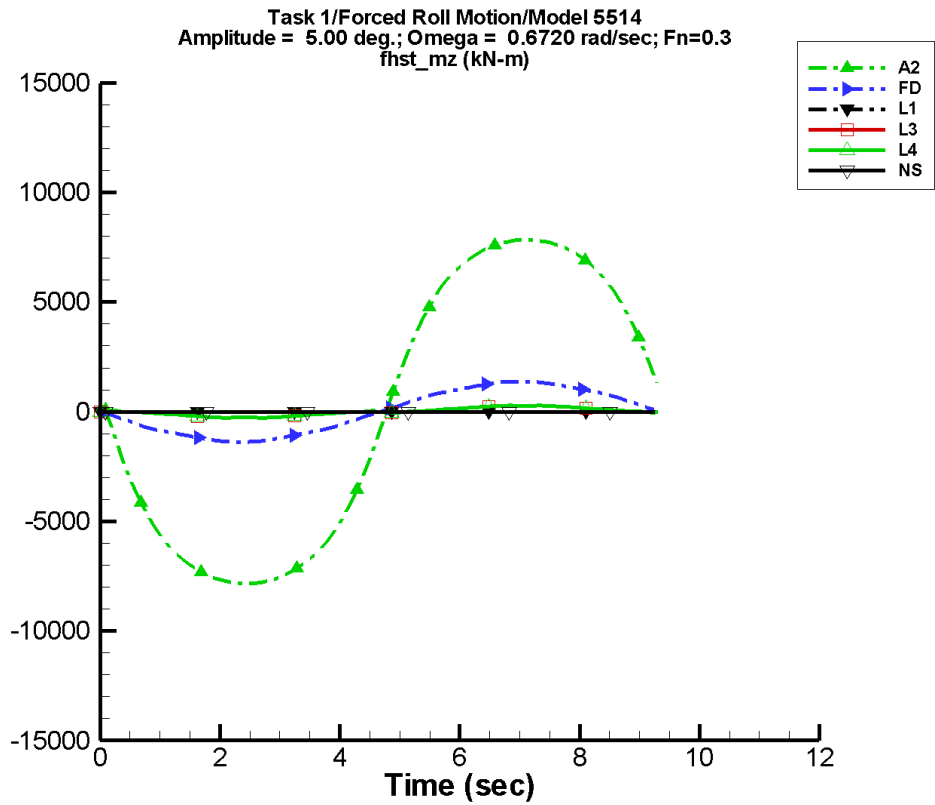
Table D-769. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-2.25E+03	7.16E+03	177	3.02E+03	77
FD	-1.49E+03	1.93E+04	-9	1.13E+04	-105
L1	2.96E-02	7.52E-05	-18	2.79E-02	-92
L3	-3.09E+03	2.82E+04	-12	6.21E+03	-164
L4	-3.09E+03	2.82E+04	-12	6.21E+03	-164
NF	—	—	—	—	—
NS	668.	1.13E+05	0	743.	-90

Table D-770. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.69E+04	9.79E+03	-1.67E+04	7.16E+03
FD	-7.96E+04	7.96E+04	-7.77E+04	7.77E+04
L1	5.53E-07	5.57E-02	-2.67E-05	5.56E-02
L3	-9.14E+04	9.14E+04	-9.08E+04	9.07E+04
L4	-9.14E+04	9.14E+04	-9.08E+04	9.07E+04
NF	—	—	—	—
NS	-1.46E+05	1.49E+05	-1.46E+05	1.48E+05

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-386. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

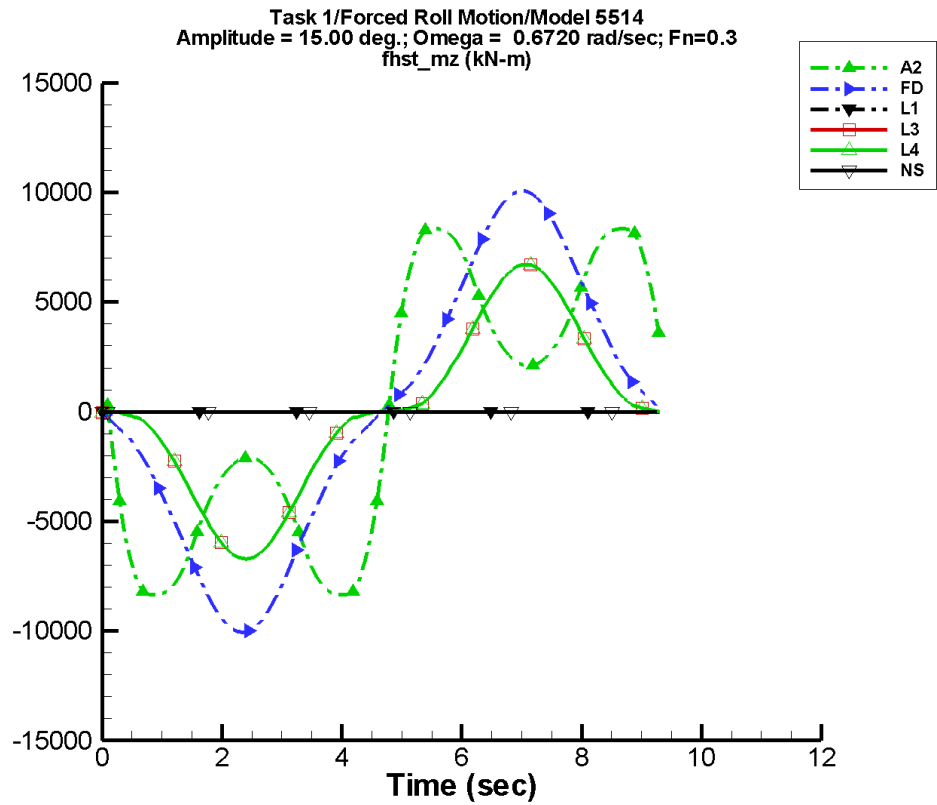
Table D-771. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-42.7	8.54E+03	177	97.3	-141
FD	0.552	1.35E+03	180	1.30	-135
L1	2.06E-04	1.94E-08	-3	2.06E-04	-95
L3	3.83	226.	176	7.46	39
L4	3.83	226.	176	7.46	39
NF	—	—	—	—	—
NS	-2.89E-04	1.07E-02	175	5.51E-03	-46

Table D-772. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-7.83E+03	7.83E+03	-7.79E+03	7.79E+03
FD	-1.38E+03	1.38E+03	-1.36E+03	1.37E+03
L1	5.72E-09	4.12E-04	1.80E-07	4.09E-04
L3	-284.	284.	-268.	268.
L4	-284.	284.	-268.	268.
NF	—	—	—	—
NS	-0.104	7.59E-02	-3.05E-02	2.54E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-387. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

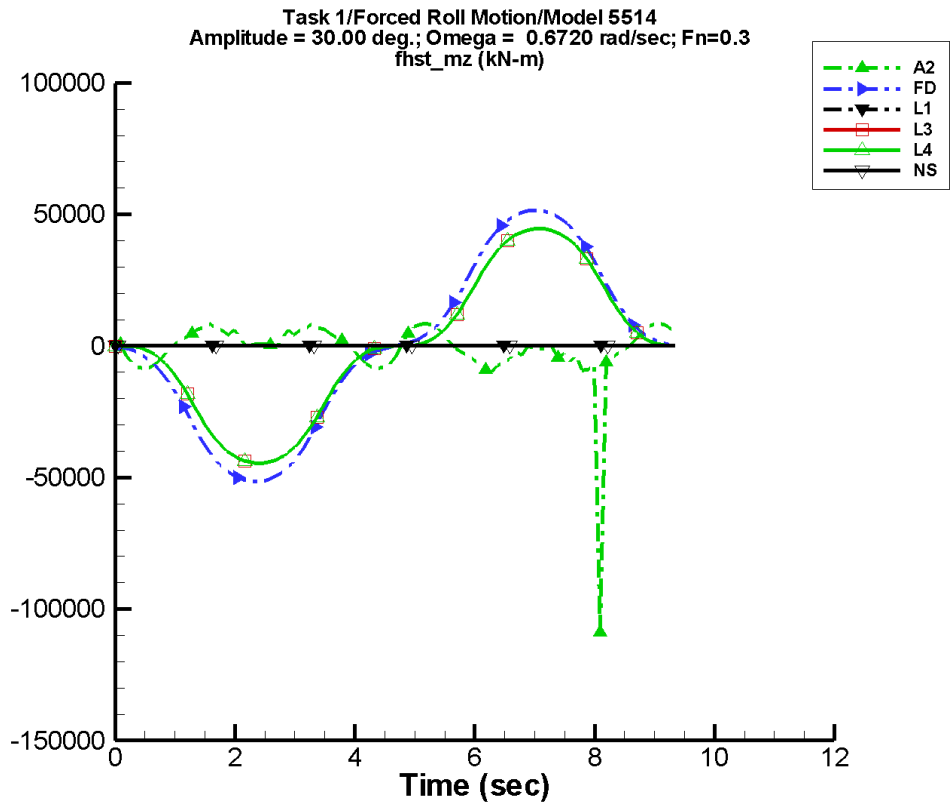
Table D-773. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-289.	6.68E+03	-179	650.	-140
FD	126.	8.48E+03	179	234.	147
L1	1.84E-03	5.04E-07	-1	1.84E-03	-95
L3	101.	4.92E+03	176	193.	24
L4	101.	4.92E+03	176	193.	24
NF	—	—	—	—	—
NS	-3.95E-03	5.37E-03	-166	3.11E-03	-120

Table D-774. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.35E+03	8.35E+03	-8.15E+03	8.15E+03
FD	-1.01E+04	1.01E+04	-9.78E+03	9.86E+03
L1	5.15E-08	3.67E-03	1.73E-06	3.64E-03
L3	-6.72E+03	6.72E+03	-6.63E+03	6.63E+03
L4	-6.72E+03	6.72E+03	-6.63E+03	6.63E+03
NF	—	—	—	—
NS	-7.34E-02	7.70E-02	-2.57E-02	1.85E-02

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-388. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

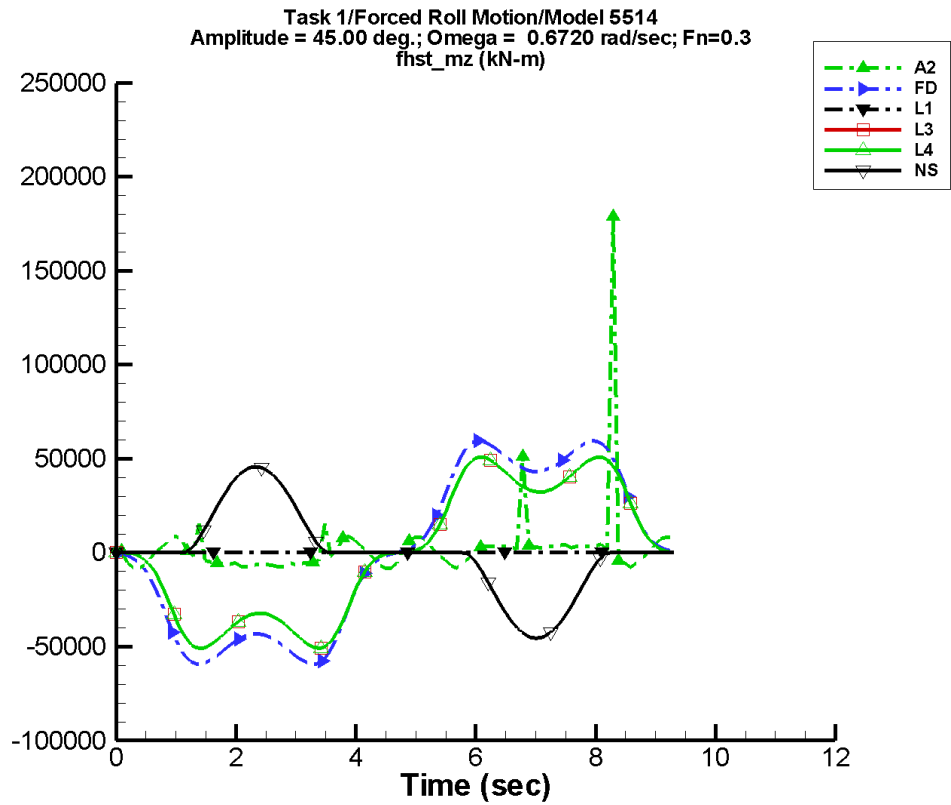
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-1.40E+03	5.50E+03	-23	1.99E+03	-11
FD	785.	4.40E+04	178	1.53E+03	141
L1	7.18E-03	6.29E-06	-1	7.10E-03	-95
L3	640.	3.59E+04	176	1.25E+03	31
L4	640.	3.59E+04	176	1.25E+03	31
NF	—	—	—	—	—
NS	-2.70E-05	4.10E-03	20	3.99E-03	121

Table D-776. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.09E+05	8.41E+03	-1.97E+04	7.70E+03
FD	-5.16E+04	5.16E+04	-5.08E+04	5.10E+04
L1	2.06E-07	1.42E-02	8.35E-06	1.41E-02
L3	-4.46E+04	4.45E+04	-4.43E+04	4.43E+04
L4	-4.46E+04	4.45E+04	-4.43E+04	4.43E+04
NF	—	—	—	—
NS	-0.103	8.20E-02	-4.05E-02	2.54E-02



TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-389. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

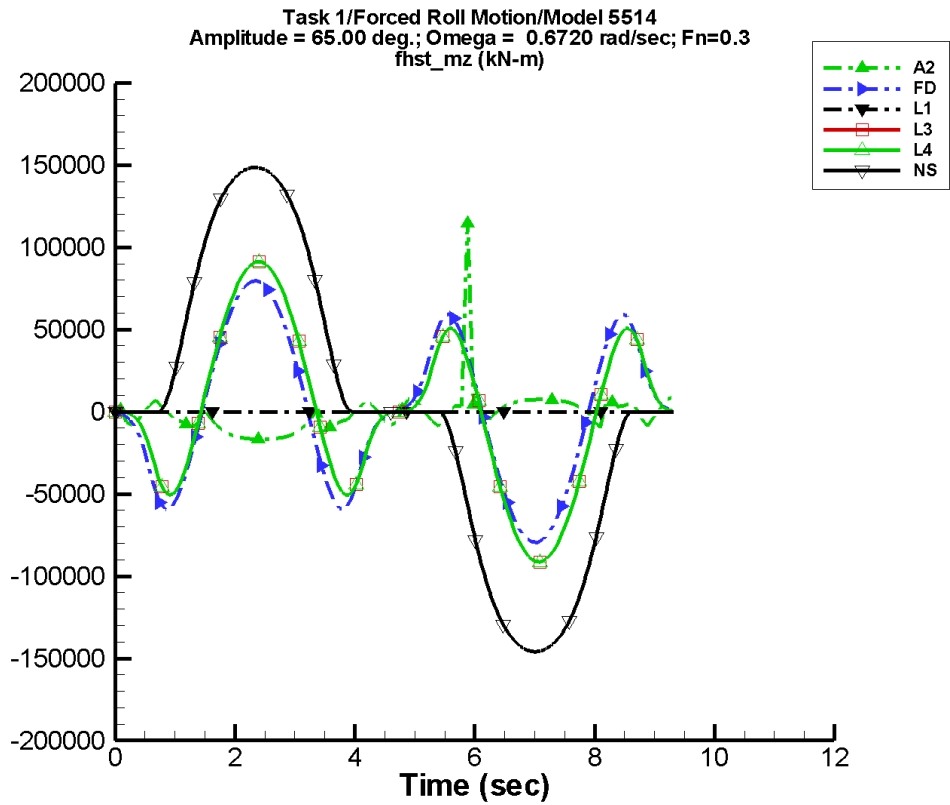
Table D-777. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	2.11E+03	6.35E+03	154	3.13E+03	-178
FD	-319.	5.69E+04	-180	950.	28
L1	1.55E-02	2.94E-05	-1	1.51E-02	-94
L3	-238.	4.76E+04	178	1.30E+03	130
L4	-238.	4.76E+04	178	1.30E+03	130
NF	—	—	—	—	—
NS	-0.384	2.49E+04	0	0.607	93

Table D-778. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-8.39E+03	1.79E+05	-6.71E+03	2.27E+04
FD	-5.95E+04	5.95E+04	-5.61E+04	5.61E+04
L1	4.63E-07	3.01E-02	2.41E-05	2.99E-02
L3	-5.09E+04	5.10E+04	-5.02E+04	4.96E+04
L4	-5.09E+04	5.10E+04	-5.02E+04	4.96E+04
NF	—	—	—	—
NS	-4.55E+04	4.55E+04	-4.52E+04	4.52E+04

TASK 1/ROLL MOTION/MODEL 5514



Data identically zero, insufficient, or not available from AEGIR-1 and NFA.

Figure D-390. Time history of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

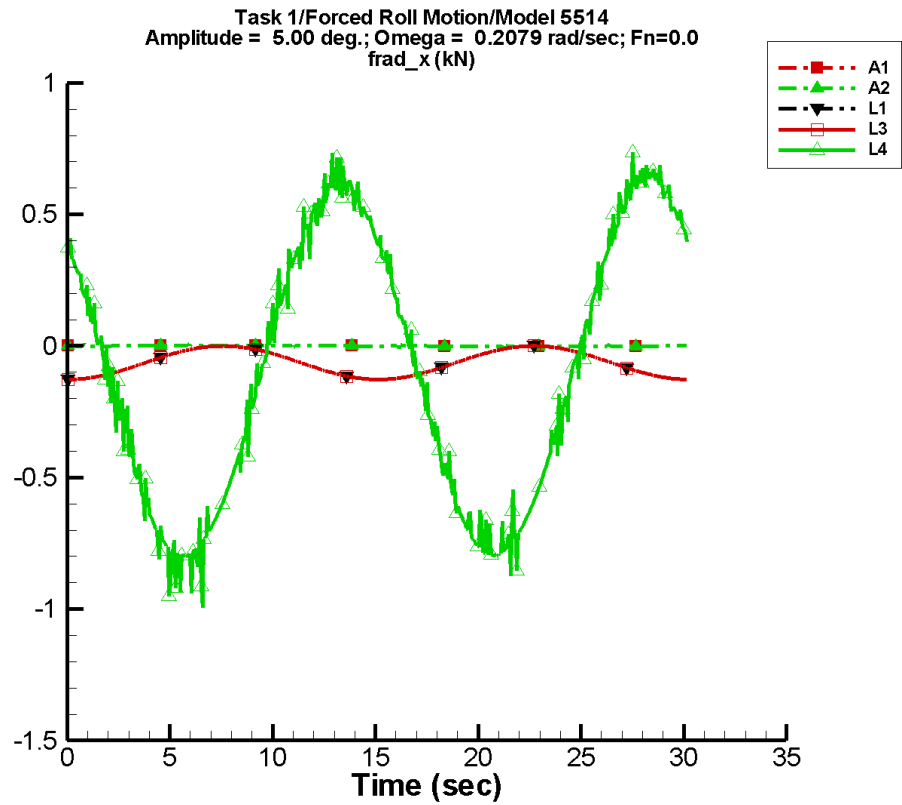
Table D-779. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	—	—	—	—	—
A2	-931.	8.90E+03	-173	3.84E+03	41
FD	-4.15E+03	2.31E+04	-18	7.94E+03	-29
L1	2.96E-02	1.19E-04	-1	2.80E-02	-94
L3	-3.27E+03	2.79E+04	-13	6.55E+03	-168
L4	-3.27E+03	2.79E+04	-13	6.55E+03	-168
NF	—	—	—	—	—
NS	677.	1.13E+05	0	748.	-90

Table D-780. Minimum and maximum of  $M_z^{\text{hst}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	—	—	—	—
A2	-1.68E+04	1.15E+05	-1.65E+04	1.54E+04
FD	-7.96E+04	7.96E+04	-7.47E+04	7.34E+04
L1	9.67E-07	5.57E-02	7.13E-05	5.54E-02
L3	-9.14E+04	9.14E+04	-8.92E+04	8.93E+04
L4	-9.14E+04	9.14E+04	-8.92E+04	8.93E+04
NF	—	—	—	—
NS	-1.46E+05	1.49E+05	-1.46E+05	1.48E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-391. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

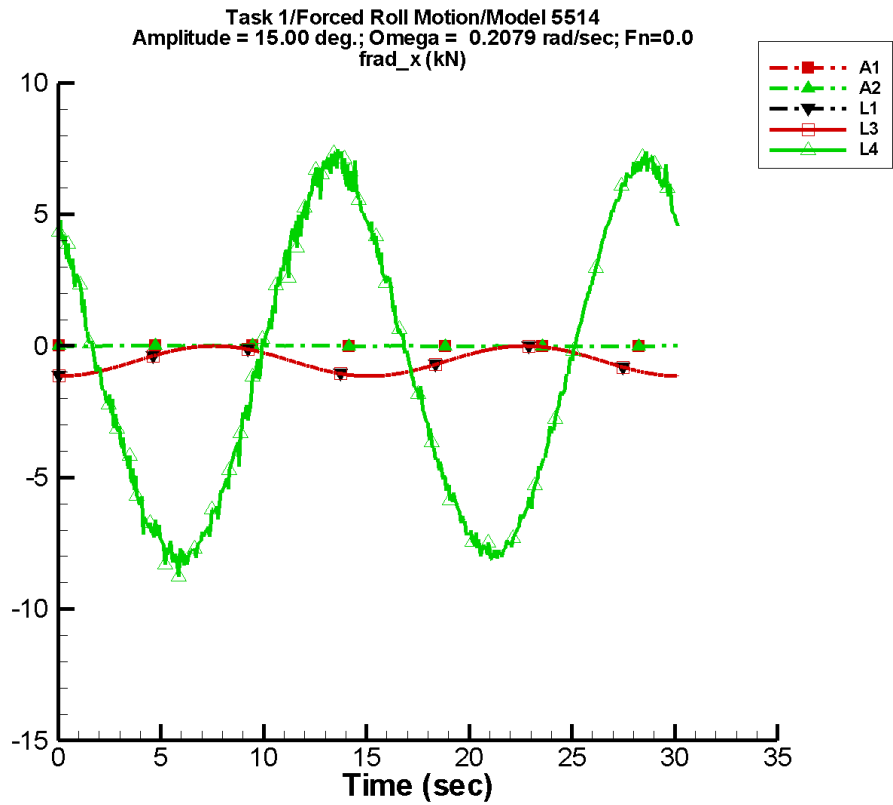
Table D-781. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.89E-05	1.58E-03	0	1.55E-05	44
A2	-1.89E-05	1.58E-03	0	1.55E-05	44
FD	—	—	—	—	—
L1	-6.37E-02	3.59E-05	177	6.38E-02	-91
L3	-6.37E-02	3.59E-05	177	6.38E-02	-91
L4	-9.13E-02	6.02E-03	155	0.707	134
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-782. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-9.40E-03	9.46E-03	-2.30E-03	2.32E-03
A2	-9.40E-03	9.46E-03	-2.30E-03	2.32E-03
FD	—	—	—	—
L1	-0.128	4.39E-05	-0.127	-5.54E-05
L3	-0.128	4.39E-05	-0.127	-5.54E-05
L4	-1.02	0.735	-0.828	0.653
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-392. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

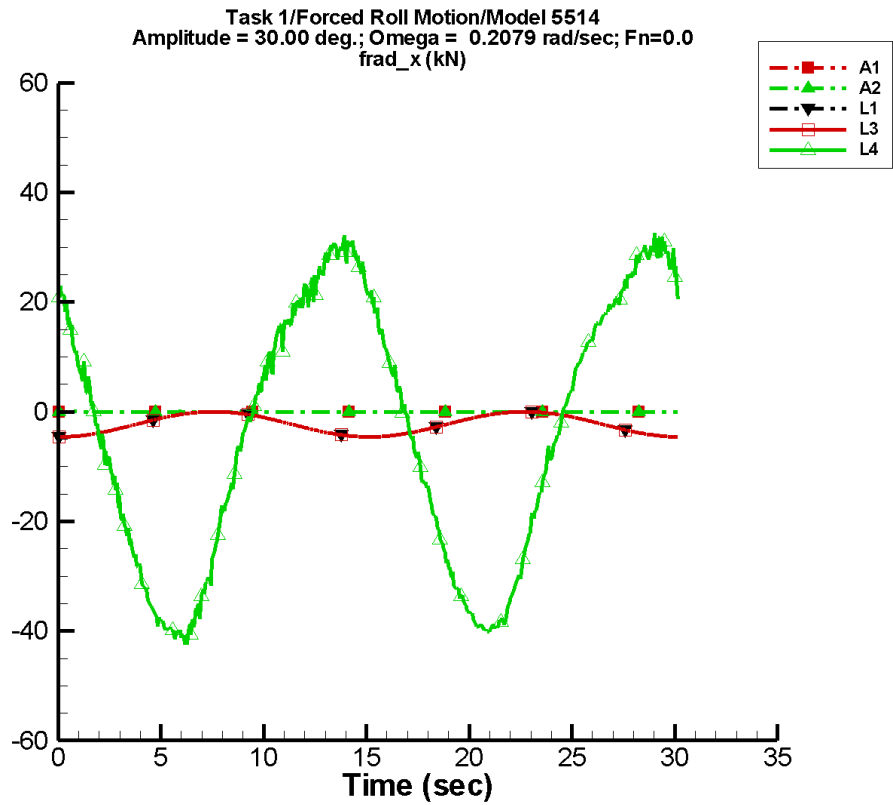
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-5.67E-05	4.73E-03	0	4.64E-05	44
A2	-5.67E-05	4.73E-03	0	4.64E-05	44
FD	—	—	—	—	—
L1	-0.574	1.16E-04	173	0.574	-91
L3	-0.574	1.16E-04	173	0.574	-91
L4	-0.812	7.93E-02	-129	7.29	130
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-784. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.82E-02	2.84E-02	-6.89E-03	6.95E-03
A2	-2.82E-02	2.84E-02	-6.89E-03	6.95E-03
FD	—	—	—	—
L1	-1.15	1.76E-04	-1.15	-7.28E-04
L3	-1.15	1.76E-04	-1.15	-7.28E-04
L4	-8.76	7.46	-8.11	7.16
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-393. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

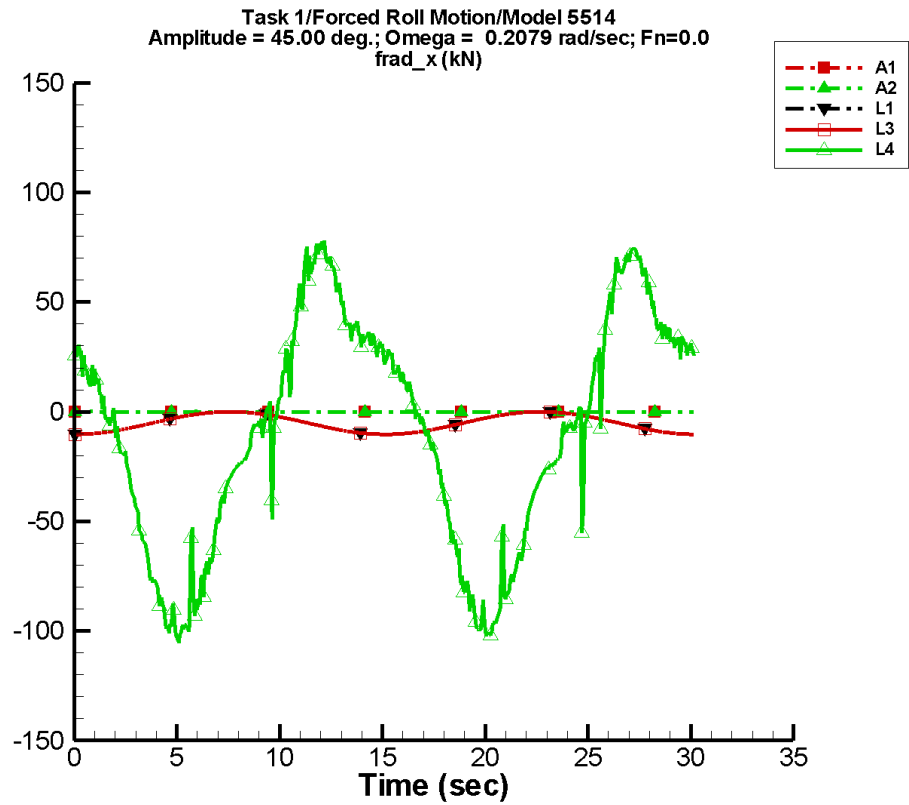
Table D-785. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.13E-04	9.47E-03	0	9.27E-05	44
A2	-1.13E-04	9.47E-03	0	9.27E-05	44
FD	—	—	—	—	—
L1	-2.29	2.54E-04	168	2.30	-91
L3	-2.29	2.54E-04	168	2.30	-91
L4	-3.50	0.141	141	33.5	134
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-786. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-5.64E-02	5.67E-02	-1.38E-02	1.39E-02
A2	-5.64E-02	5.67E-02	-1.38E-02	1.39E-02
FD	—	—	—	—
L1	-4.59	4.89E-04	-4.59	-3.13E-03
L3	-4.59	4.89E-04	-4.59	-3.13E-03
L4	-42.5	32.6	-41.0	30.4
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-394. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

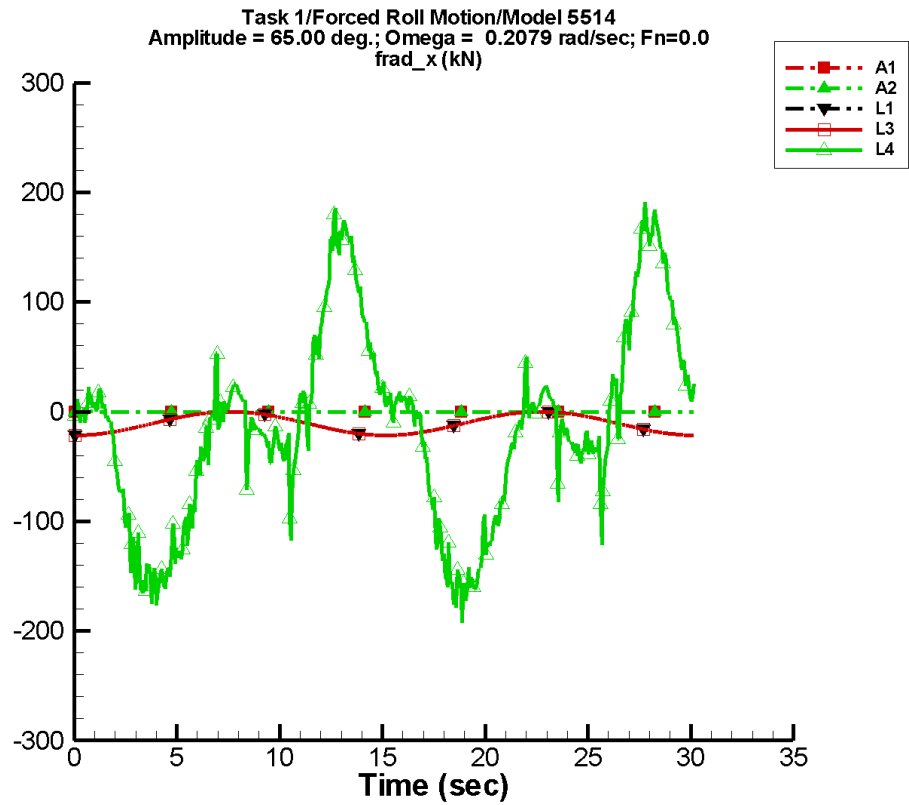
Table D-787. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.70E-04	1.42E-02	0	1.39E-04	44
A2	-1.70E-04	1.42E-02	0	1.39E-04	44
FD	—	—	—	—	—
L1	-5.16	4.19E-04	163	5.16	-91
L3	-5.16	4.19E-04	163	5.16	-91
L4	-8.86	0.235	37	71.0	145
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-788. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.46E-02	8.51E-02	-2.07E-02	2.09E-02
A2	-8.46E-02	8.51E-02	-2.07E-02	2.09E-02
FD	—	—	—	—
L1	-10.3	9.52E-04	-10.3	-7.21E-03
L3	-10.3	9.52E-04	-10.3	-7.21E-03
L4	-105.	78.0	-101.	74.5
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-395. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

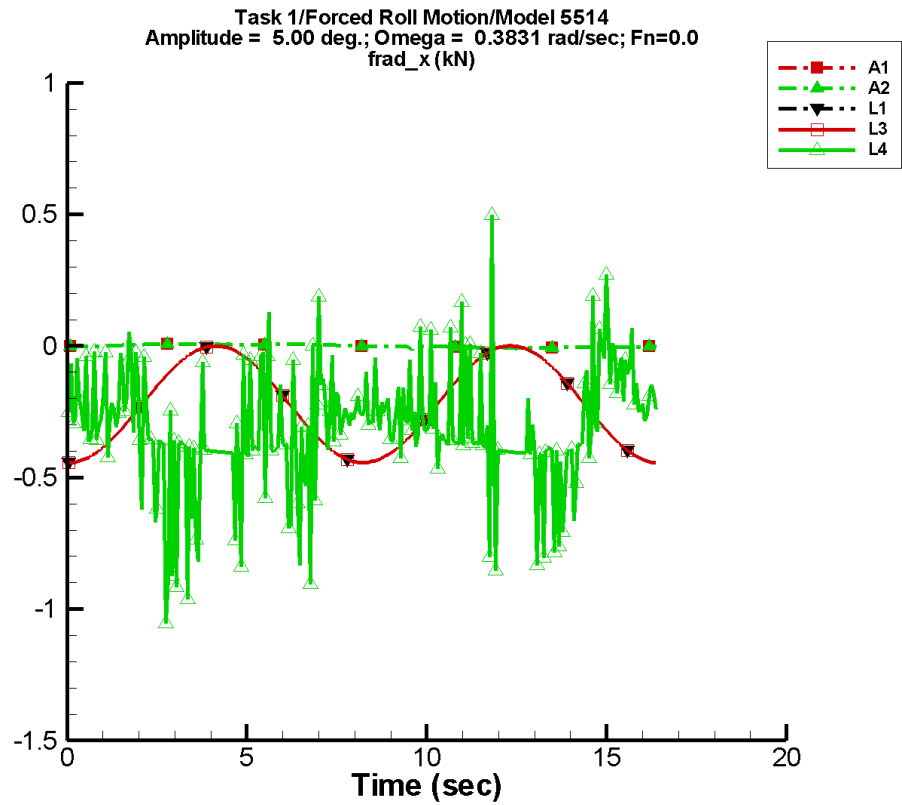
Table D-789. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.46E-04	2.05E-02	0	2.01E-04	44
A2	-2.46E-04	2.05E-02	0	2.01E-04	44
FD	—	—	—	—	—
L1	-10.8	6.82E-04	159	10.8	-91
L3	-10.8	6.82E-04	159	10.8	-91
L4	-14.8	2.23	-161	94.2	154
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-790. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.122	0.123	-2.98E-02	3.01E-02
A2	-0.122	0.123	-2.98E-02	3.01E-02
FD	—	—	—	—
L1	-21.6	1.76E-03	-21.5	-1.52E-02
L3	-21.6	1.76E-03	-21.5	-1.52E-02
L4	-193.	191.	-164.	168.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-396. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

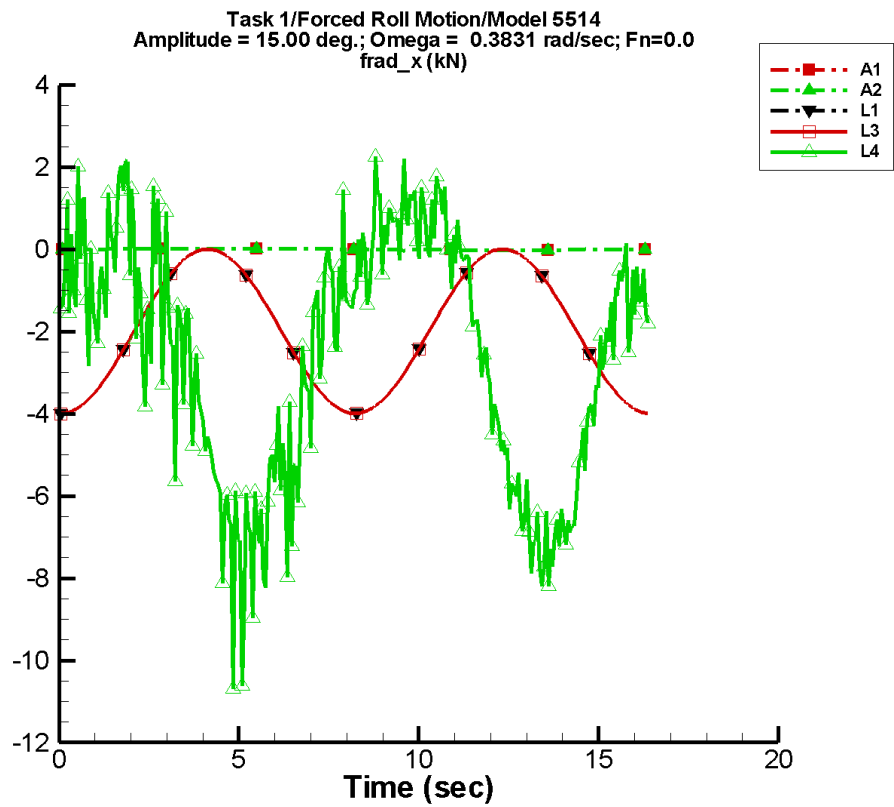
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-7.56E-05	6.83E-03	-6	1.42E-04	-26
A2	-7.56E-05	6.83E-03	-6	1.42E-04	-26
FD	—	—	—	—	—
L1	-0.222	1.54E-04	171	0.222	-92
L3	-0.222	1.54E-04	171	0.222	-92
L4	-0.311	3.61E-02	150	0.123	84
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-792. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.53E-02	1.14E-02	-8.49E-03	7.50E-03
A2	-1.53E-02	1.14E-02	-8.49E-03	7.50E-03
FD	—	—	—	—
L1	-0.444	2.69E-04	-0.444	-9.19E-04
L3	-0.444	2.69E-04	-0.444	-9.19E-04
L4	-1.05	0.496	-0.612	-8.75E-03
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-397. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

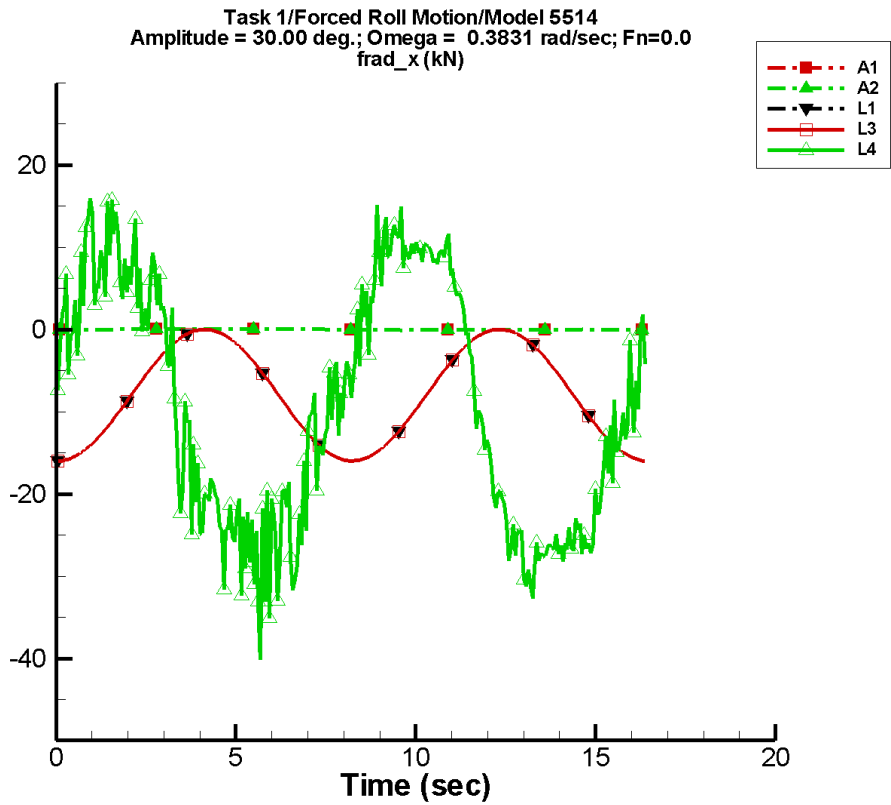
Table D-793. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.27E-04	2.05E-02	-6	4.26E-04	-26
A2	-2.27E-04	2.05E-02	-6	4.26E-04	-26
FD	—	—	—	—	—
L1	-2.00	4.02E-04	179	2.00	-92
L3	-2.00	4.02E-04	179	2.00	-92
L4	-2.65	0.421	-138	3.72	35
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-794. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.60E-02	3.42E-02	-2.55E-02	2.25E-02
A2	-4.60E-02	3.42E-02	-2.55E-02	2.25E-02
FD	—	—	—	—
L1	-4.00	1.44E-03	-4.00	-9.24E-03
L3	-4.00	1.44E-03	-4.00	-9.24E-03
L4	-10.7	2.25	-7.73	1.32
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-398. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

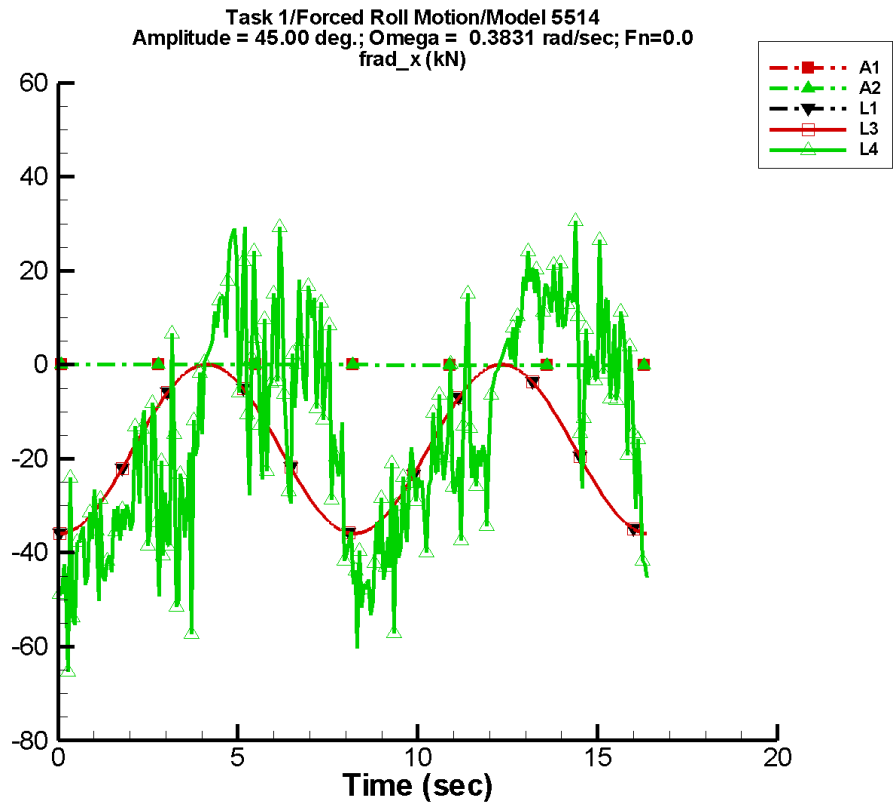
Table D-795. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-4.53E-04	4.10E-02	-6	8.52E-04	-26
A2	-4.53E-04	4.10E-02	-6	8.52E-04	-26
FD	—	—	—	—	—
L1	-7.99	6.42E-04	-166	7.99	-92
L3	-7.99	6.42E-04	-166	7.99	-92
L4	-9.58	1.01	-129	19.7	24
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-796. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-9.20E-02	6.84E-02	-5.09E-02	4.50E-02
A2	-9.20E-02	6.84E-02	-5.09E-02	4.50E-02
FD	—	—	—	—
L1	-16.0	4.75E-03	-16.0	-3.79E-02
L3	-16.0	4.75E-03	-16.0	-3.79E-02
L4	-40.2	15.9	-29.4	11.2
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-399. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

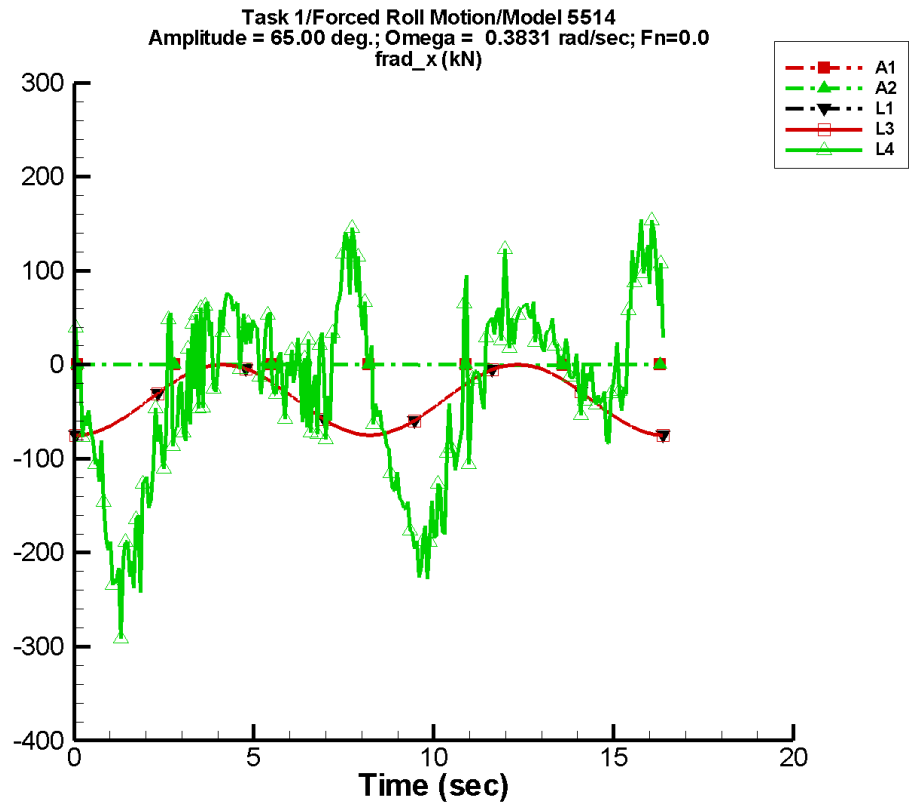
Table D-797. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-6.80E-04	6.14E-02	-6	1.28E-03	-26
A2	-6.80E-04	6.14E-02	-6	1.28E-03	-26
FD	—	—	—	—	—
L1	-18.0	7.96E-04	-143	18.0	-92
L3	-18.0	7.96E-04	-143	18.0	-92
L4	-14.5	3.45	-175	25.4	-145
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-798. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.138	0.103	-7.64E-02	6.75E-02
A2	-0.138	0.103	-7.64E-02	6.75E-02
FD	—	—	—	—
L1	-36.0	9.96E-03	-36.0	-8.60E-02
L3	-36.0	9.96E-03	-36.0	-8.60E-02
L4	-65.4	30.6	-52.4	18.3
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-400. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

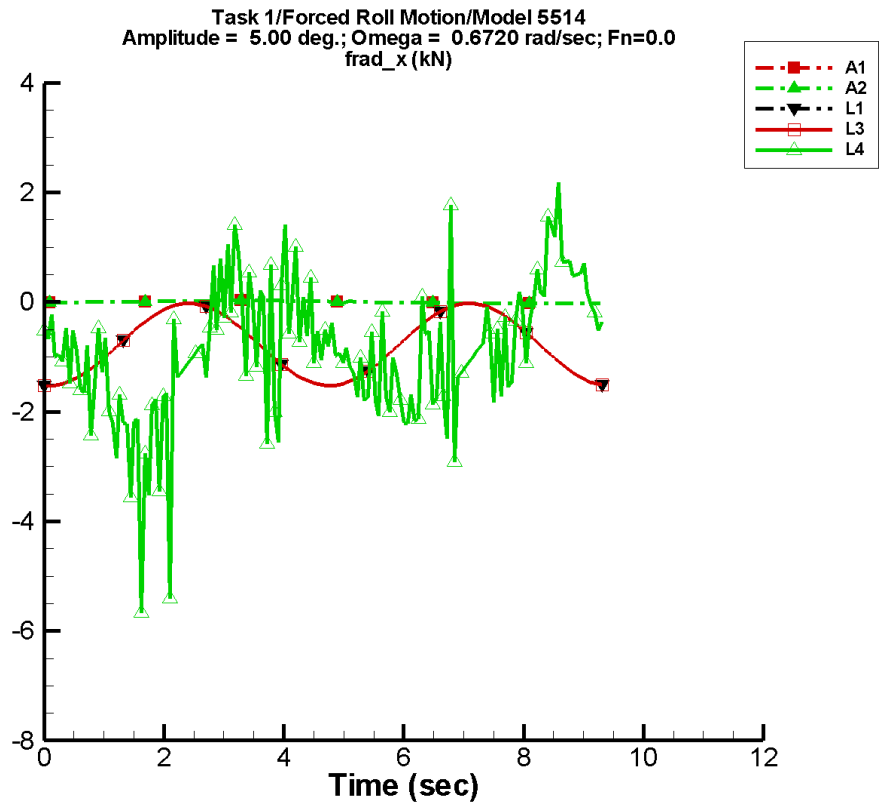
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-9.82E-04	8.87E-02	-6	1.85E-03	-26
A2	-9.82E-04	8.87E-02	-6	1.85E-03	-26
FD	—	—	—	—	—
L1	-37.5	1.27E-03	-108	37.5	-92
L3	-37.5	1.27E-03	-108	37.5	-92
L4	-29.2	11.7	-147	86.1	-157
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D-800. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.199	0.148	-0.110	9.75E-02
A2	-0.199	0.148	-0.110	9.75E-02
FD	—	—	—	—
L1	-75.1	1.99E-02	-75.1	-0.180
L3	-75.1	1.99E-02	-75.1	-0.180
L4	-294.	155.	-226.	124.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-401. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

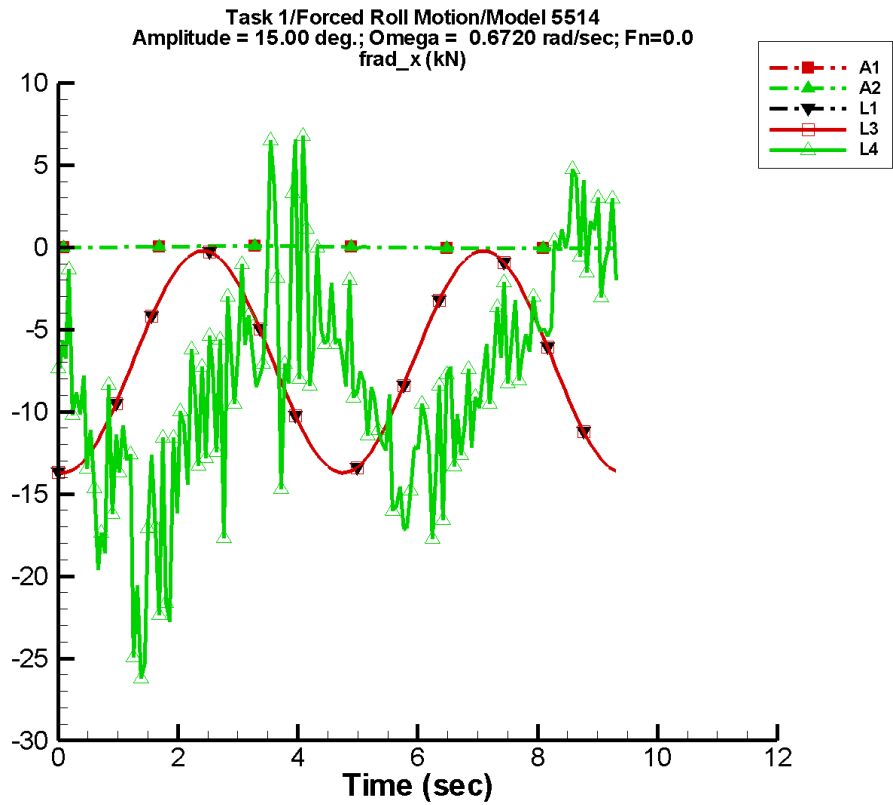
Table D–801. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.85E-04	2.55E-02	-31	7.13E-04	-106
A2	1.85E-04	2.55E-02	-31	7.13E-04	-106
FD	—	—	—	—	—
L1	-0.774	3.17E-04	153	0.750	-96
L3	-0.774	3.17E-04	153	0.750	-96
L4	-0.877	0.243	162	1.10	154
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–802. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.69E-02	2.86E-02	-2.65E-02	2.80E-02
A2	-2.69E-02	2.86E-02	-2.65E-02	2.80E-02
FD	—	—	—	—
L1	-1.52	-2.42E-02	-1.52	-3.64E-02
L3	-1.52	-2.42E-02	-1.52	-3.64E-02
L4	-5.67	2.18	-3.00	1.07
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-402. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

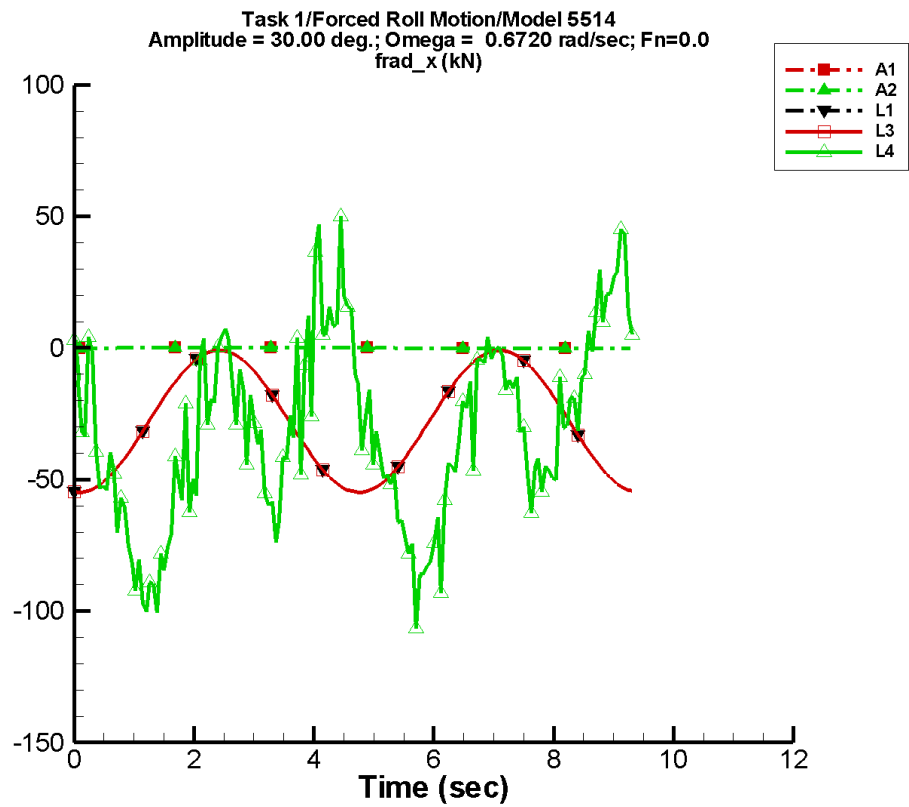
Table D–803. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	5.54E-04	7.64E-02	-31	2.14E-03	-106
A2	5.54E-04	7.64E-02	-31	2.14E-03	-106
FD	—	—	—	—	—
L1	-6.97	5.34E-04	173	6.75	-96
L3	-6.97	5.34E-04	173	6.75	-96
L4	-8.25	1.87	180	7.48	156
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–804. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-8.07E-02	8.58E-02	-7.94E-02	8.39E-02
A2	-8.07E-02	8.58E-02	-7.94E-02	8.39E-02
FD	—	—	—	—
L1	-13.7	-0.219	-13.7	-0.329
L3	-13.7	-0.219	-13.7	-0.329
L4	-27.2	6.78	-19.8	1.86
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-403. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

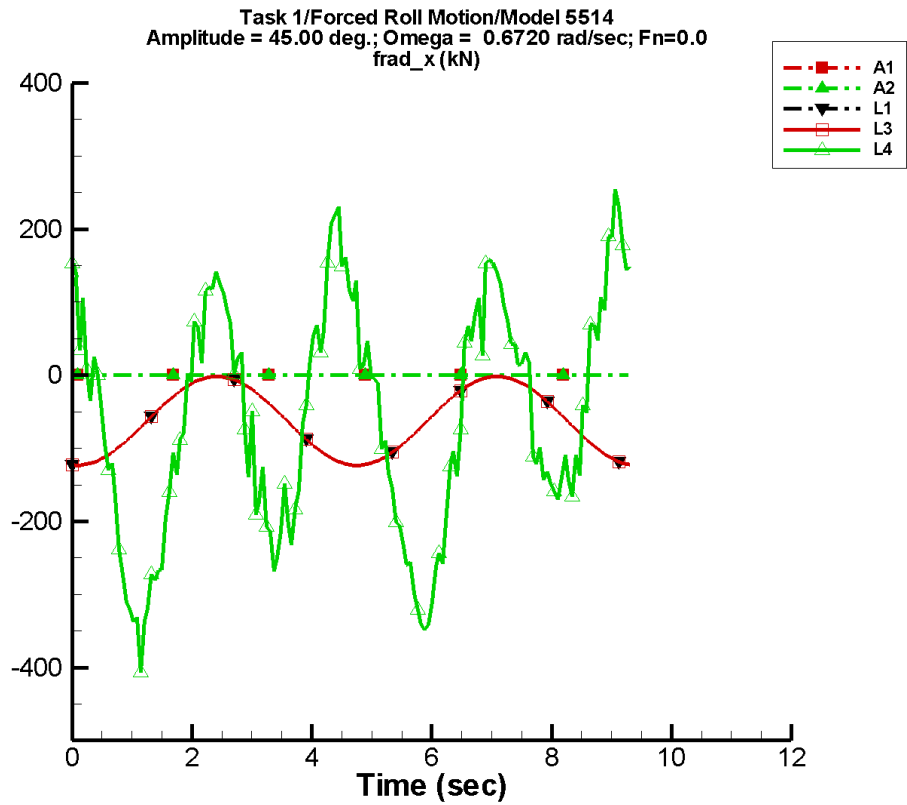
Table D–805. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.11E-03	0.153	-31	4.28E-03	-106
A2	1.11E-03	0.153	-31	4.28E-03	-106
FD	—	—	—	—	—
L1	-27.9	9.90E-04	-101	27.0	-96
L3	-27.9	9.90E-04	-101	27.0	-96
L4	-32.6	6.29	-168	31.6	160
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–806. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.161	0.172	-0.159	0.168
A2	-0.161	0.172	-0.159	0.168
FD	—	—	—	—
L1	-54.9	-0.876	-54.9	-1.32
L3	-54.9	-0.876	-54.9	-1.32
L4	-107.	50.1	-91.1	26.7
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-404. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

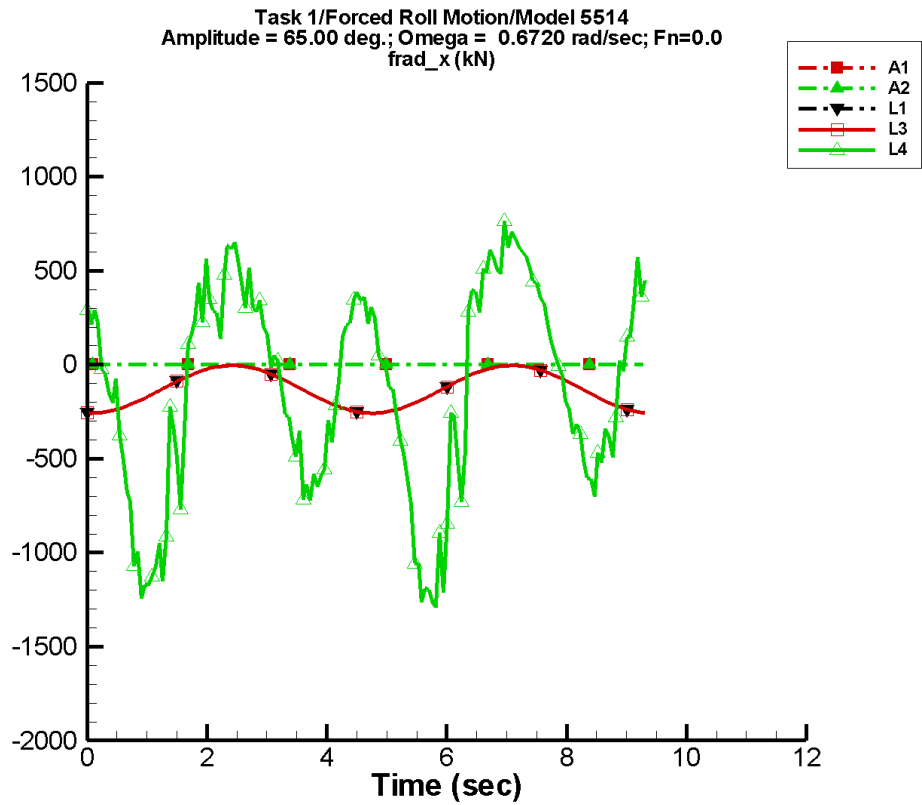
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.66E-03	0.229	-31	6.41E-03	-106
A2	1.66E-03	0.229	-31	6.41E-03	-106
FD	—	—	—	—	—
L1	-62.7	3.28E-03	-74	60.7	-96
L3	-62.7	3.28E-03	-74	60.7	-96
L4	-63.2	31.2	177	98.8	164
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–808. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.242	0.257	-0.238	0.252
A2	-0.242	0.257	-0.238	0.252
FD	—	—	—	—
L1	-123.	-1.97	-123.	-2.97
L3	-123.	-1.97	-123.	-2.97
L4	-406.	255.	-336.	179.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-405. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

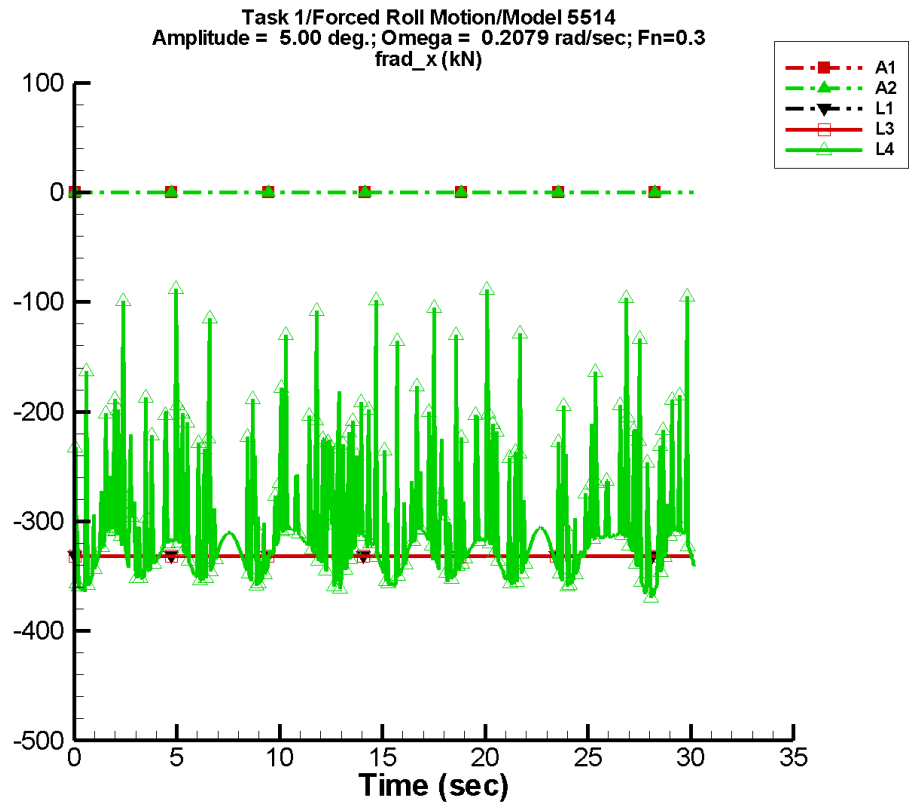
Table D–809. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	2.40E-03	0.331	-31	9.27E-03	-106
A2	2.40E-03	0.331	-31	9.27E-03	-106
FD	—	—	—	—	—
L1	-131.	8.77E-03	-64	127.	-96
L3	-131.	8.77E-03	-64	127.	-96
L4	-148.	91.9	179	376.	-142
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–810. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.350	0.372	-0.344	0.363
A2	-0.350	0.372	-0.344	0.363
FD	—	—	—	—
L1	-258.	-4.12	-258.	-6.20
L3	-258.	-4.12	-258.	-6.20
L4	-1.31E+03	766.	-1.15E+03	627.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-406. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

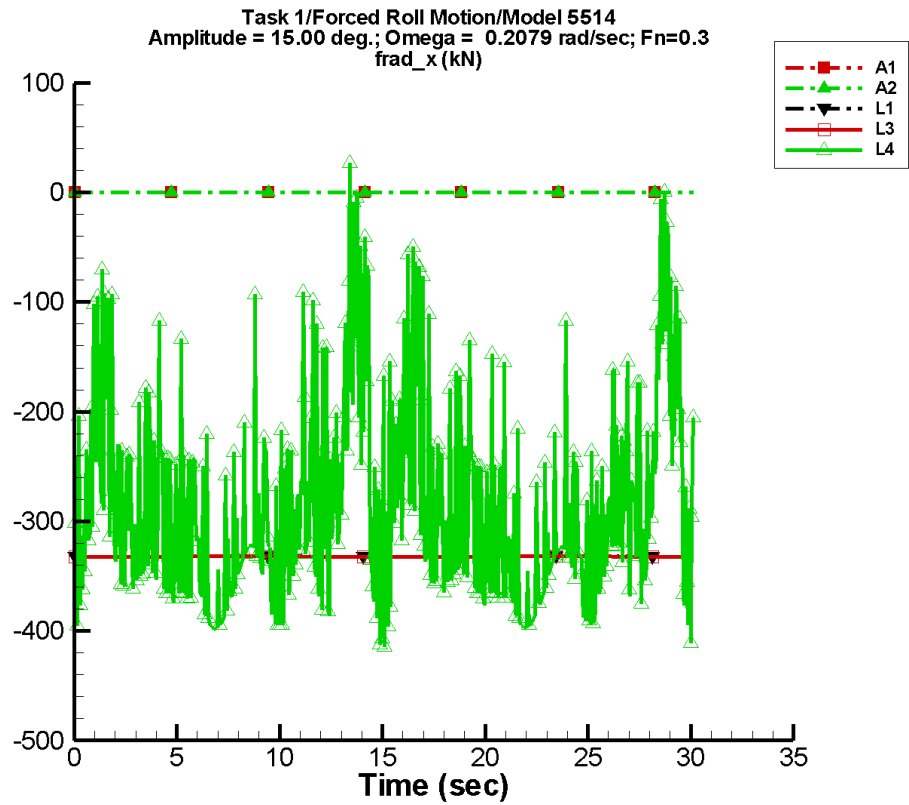
Table D–811. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.51E-05	7.76E-03	-167	9.30E-05	94
A2	-1.51E-05	7.76E-03	-167	9.30E-05	94
FD	—	—	—	—	—
L1	-332.	1.21E-02	-158	5.32E-02	-106
L3	-332.	8.21E-03	-145	5.26E-02	-105
L4	-305.	1.90	-64	4.47	102
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–812. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.10E-02	2.07E-02	-1.03E-02	1.02E-02
A2	-2.10E-02	2.07E-02	-1.03E-02	1.02E-02
FD	—	—	—	—
L1	-332.	-332.	-332.	-332.
L3	-332.	-332.	-332.	-332.
L4	-372.	-85.4	-361.	-260.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-407. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

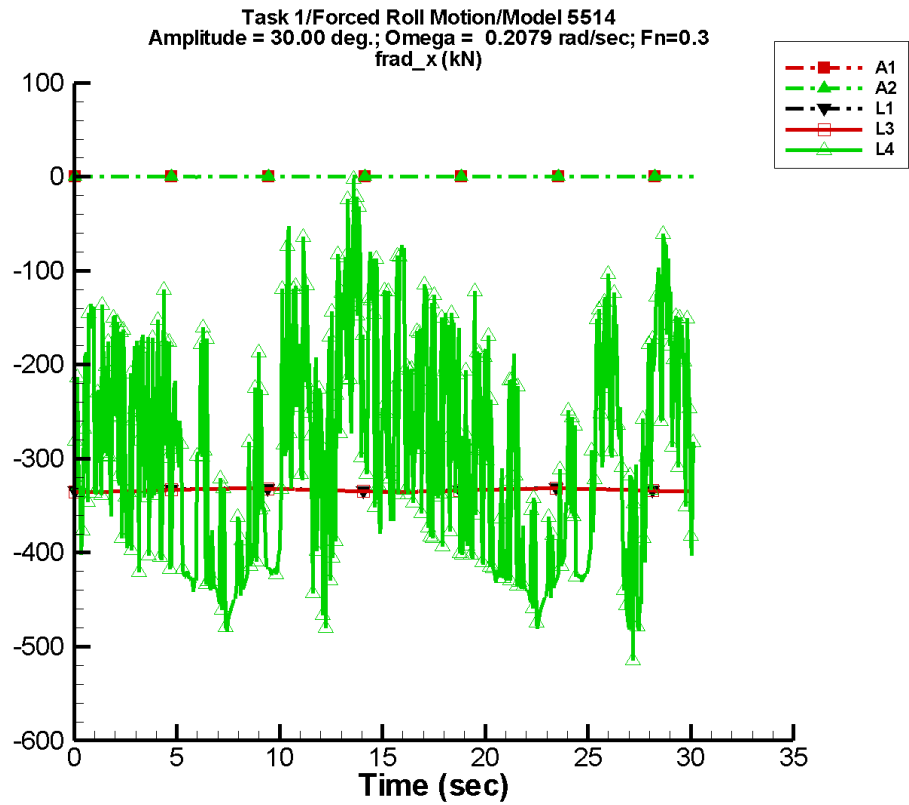
Table D–813. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-4.52E-05	2.33E-02	-167	2.79E-04	94
A2	-4.52E-05	2.33E-02	-167	2.79E-04	94
FD	—	—	—	—	—
L1	-332.	1.23E-02	-155	0.432	-106
L3	-332.	8.48E-03	-141	0.431	-106
L4	-284.	3.28	-50	56.2	96
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–814. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.29E-02	6.21E-02	-3.09E-02	3.07E-02
A2	-6.29E-02	6.21E-02	-3.09E-02	3.07E-02
FD	—	—	—	—
L1	-333.	-332.	-333.	-332.
L3	-333.	-332.	-333.	-332.
L4	-416.	26.8	-393.	-78.1
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-408. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

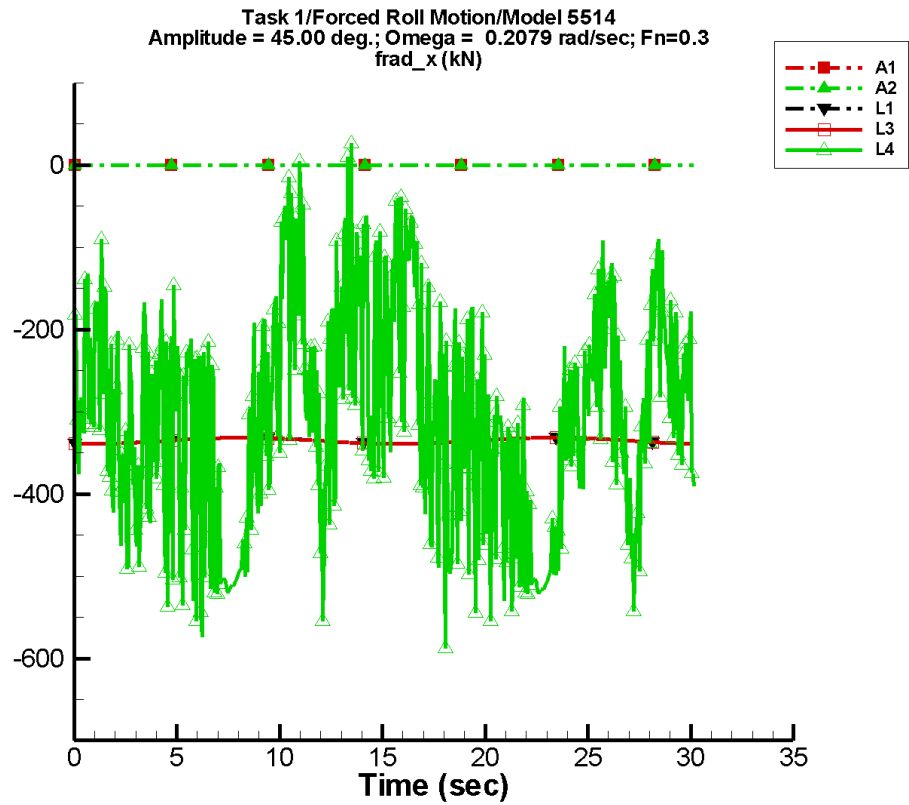
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-9.04E-05	4.65E-02	-167	5.58E-04	94
A2	-9.04E-05	4.65E-02	-167	5.58E-04	94
FD	—	—	—	—	—
L1	-333.	1.34E-02	-151	1.71	-106
L3	-333.	9.99E-03	-139	1.71	-106
L4	-297.	18.4	-71	85.9	93
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–816. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.126	0.124	-6.17E-02	6.13E-02
A2	-0.126	0.124	-6.17E-02	6.13E-02
FD	—	—	—	—
L1	-335.	-332.	-335.	-332.
L3	-335.	-332.	-335.	-332.
L4	-515.	-2.24	-454.	-56.0
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-409. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

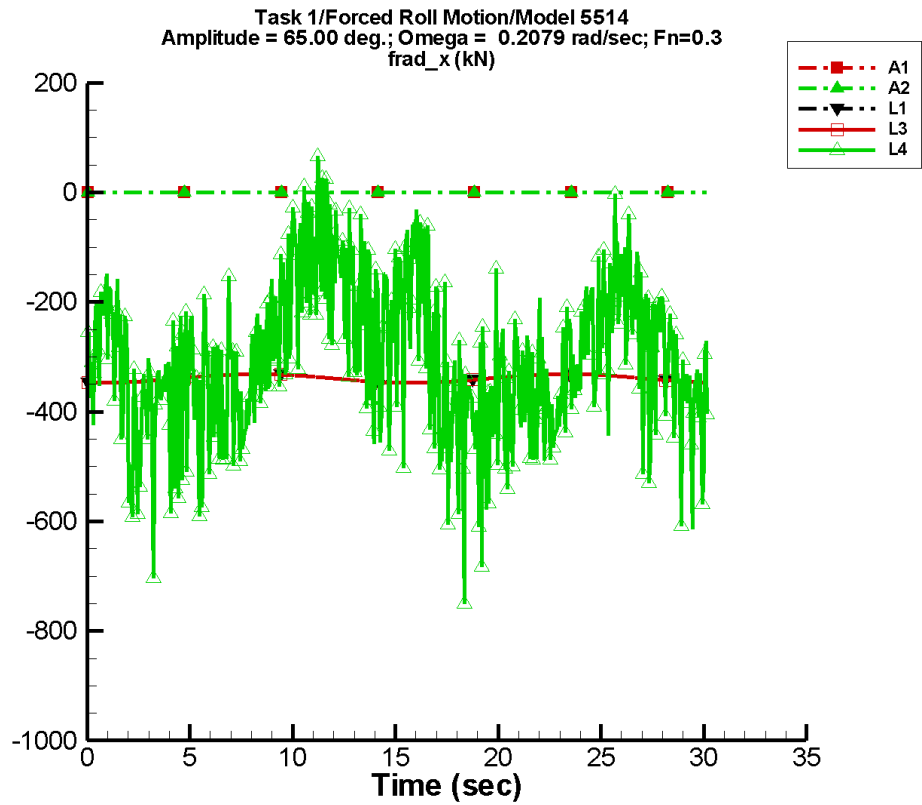
Table D–817. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.36E-04	6.98E-02	-167	8.37E-04	94
A2	-1.36E-04	6.98E-02	-167	8.37E-04	94
FD	—	—	—	—	—
L1	-335.	1.42E-02	-147	3.83	-106
L3	-335.	1.09E-02	-137	3.83	-106
L4	-306.	23.6	-51	97.4	115
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–818. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.189	0.186	-9.26E-02	9.20E-02
A2	-0.189	0.186	-9.26E-02	9.20E-02
FD	—	—	—	—
L1	-339.	-331.	-339.	-332.
L3	-339.	-332.	-339.	-332.
L4	-588.	26.7	-517.	-43.7
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-410. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

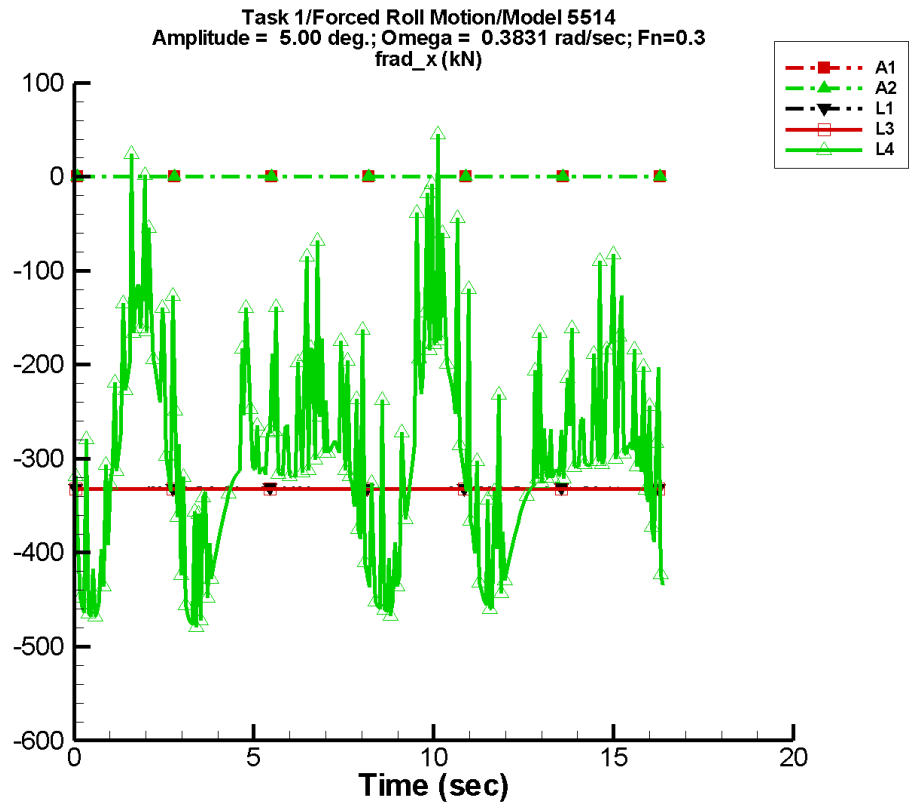
Table D–819. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.96E-04	0.101	-167	1.21E-03	94
A2	-1.96E-04	0.101	-167	1.21E-03	94
FD	—	—	—	—	—
L1	-339.	1.52E-02	-142	7.99	-106
L3	-339.	1.20E-02	-134	7.99	-106
L4	-297.	46.1	-62	109.	161
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–820. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.272	0.269	-0.134	0.133
A2	-0.272	0.269	-0.134	0.133
FD	—	—	—	—
L1	-347.	-331.	-347.	-331.
L3	-347.	-331.	-347.	-331.
L4	-761.	134.	-477.	-29.7
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-411. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

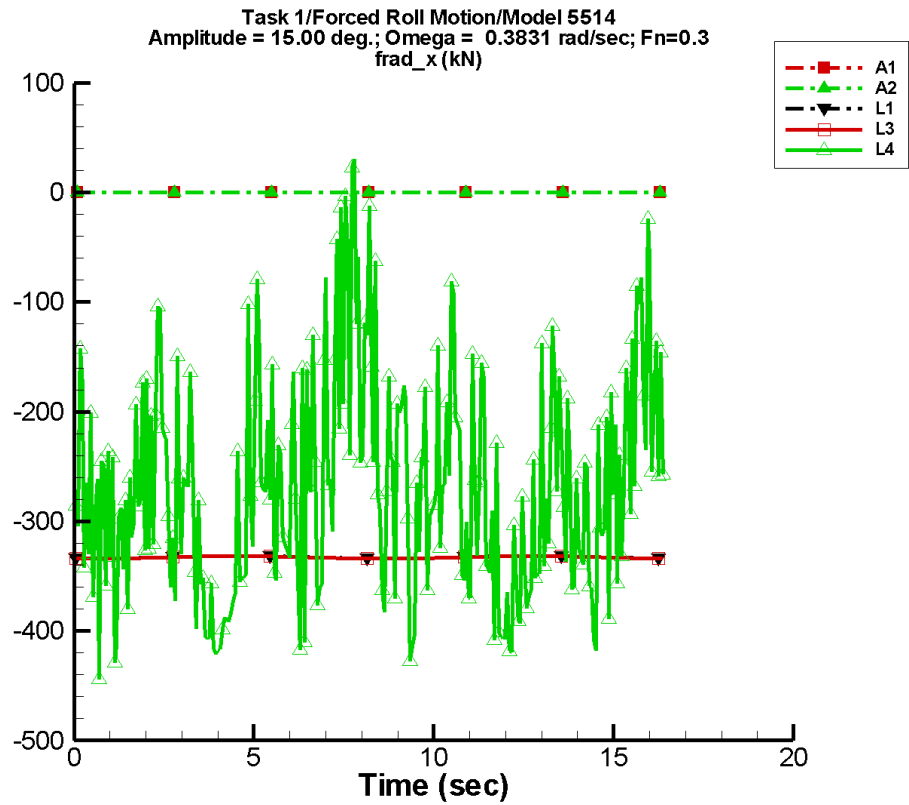
Table D–821. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.41E-04	7.57E-03	-173	1.41E-03	152
A2	1.41E-04	7.57E-03	-173	1.41E-03	152
FD	—	—	—	—	—
L1	-332.	1.97E-03	124	0.131	-110
L3	-332.	3.57E-03	138	0.130	-110
L4	-293.	10.8	-5	11.1	4
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–822. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.00E-02	1.70E-02	-9.10E-03	7.50E-03
A2	-2.00E-02	1.70E-02	-9.10E-03	7.50E-03
FD	—	—	—	—
L1	-332.	-332.	-332.	-332.
L3	-332.	-332.	-332.	-332.
L4	-479.	56.2	-439.	-87.4
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-412. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

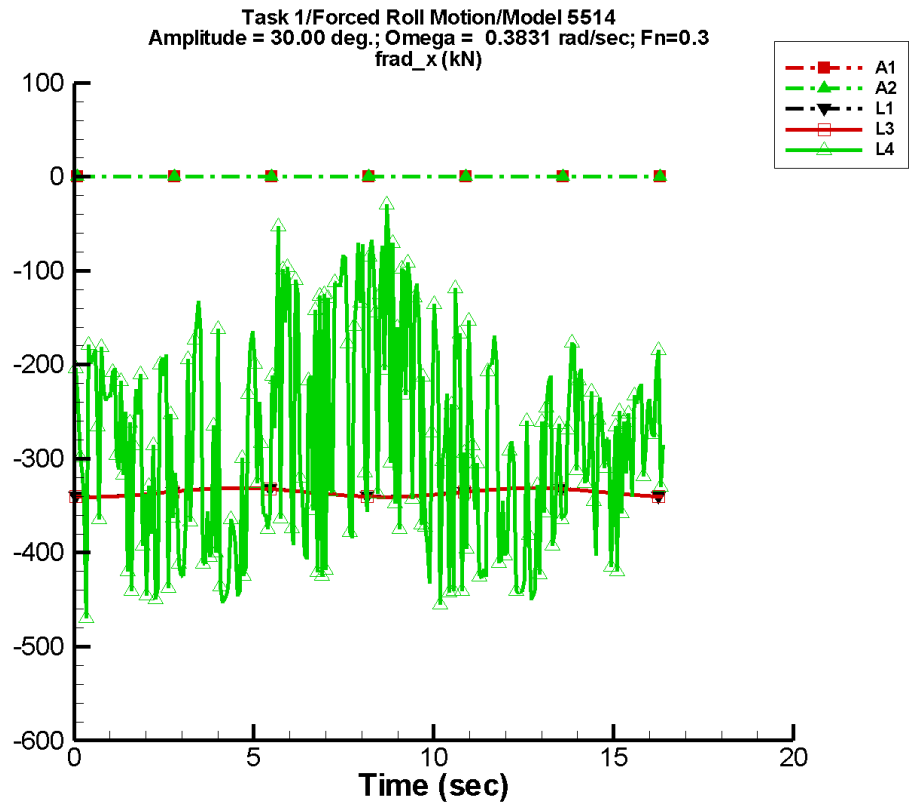
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	4.22E-04	2.27E-02	-173	4.23E-03	152
A2	4.22E-04	2.27E-02	-173	4.23E-03	152
FD	—	—	—	—	—
L1	-333.	8.42E-04	-160	1.18	-110
L3	-333.	2.63E-03	169	1.18	-110
L4	-270.	21.4	-89	52.8	105
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–824. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-5.98E-02	5.09E-02	-2.73E-02	2.25E-02
A2	-5.98E-02	5.09E-02	-2.73E-02	2.25E-02
FD	—	—	—	—
L1	-334.	-331.	-334.	-332.
L3	-334.	-332.	-334.	-332.
L4	-444.	30.4	-405.	-83.5
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-413. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

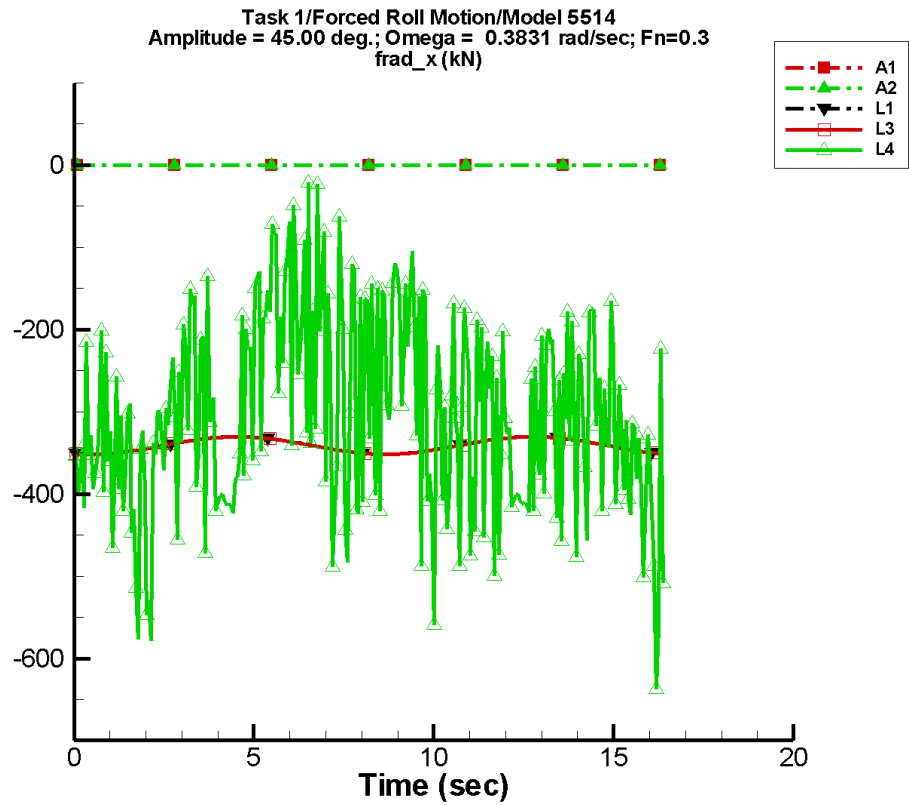
Table D–825. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	8.44E-04	4.54E-02	-173	8.46E-03	152
A2	8.44E-04	4.54E-02	-173	8.46E-03	152
FD	—	—	—	—	—
L1	-336.	2.90E-03	-125	4.73	-110
L3	-336.	4.05E-03	-164	4.73	-110
L4	-281.	35.8	-87	61.5	96
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–826. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.120	0.102	-5.46E-02	4.50E-02
A2	-0.120	0.102	-5.46E-02	4.50E-02
FD	—	—	—	—
L1	-341.	-331.	-341.	-331.
L3	-341.	-331.	-341.	-331.
L4	-470.	-29.5	-415.	-147.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-414. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

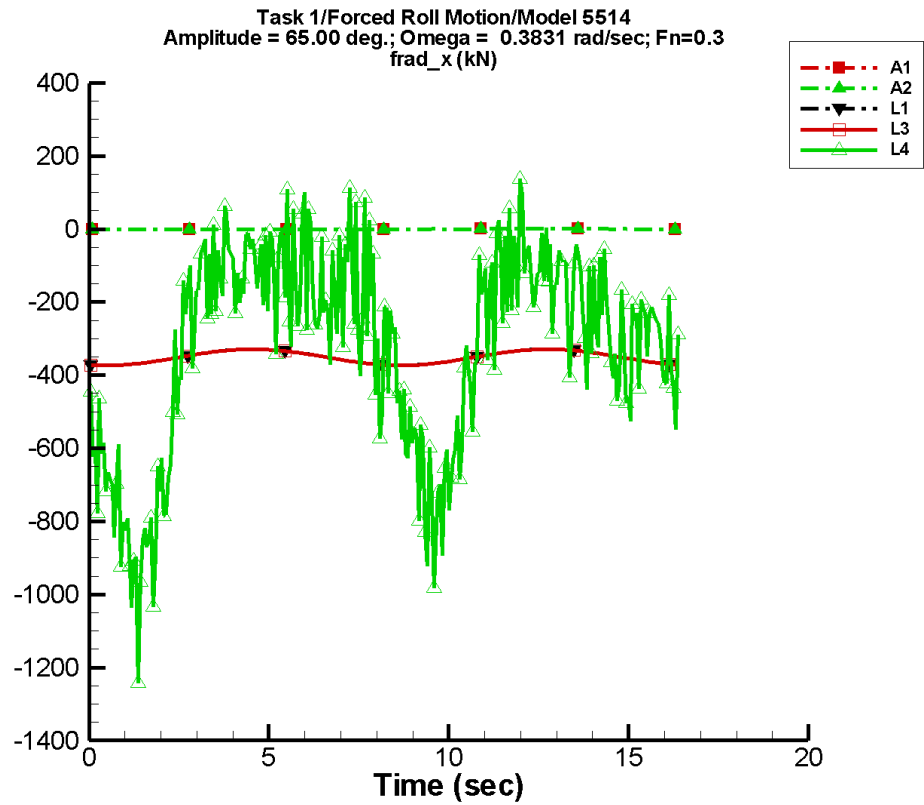
Table D–827. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.27E-03	6.81E-02	-173	1.27E-02	152
A2	1.27E-03	6.81E-02	-173	1.27E-02	152
FD	—	—	—	—	—
L1	-341.	5.47E-03	-111	10.6	-110
L3	-341.	5.77E-03	-145	10.6	-110
L4	-306.	70.1	-79	43.7	-179
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–828. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.179	0.153	-8.19E-02	6.75E-02
A2	-0.179	0.153	-8.19E-02	6.75E-02
FD	—	—	—	—
L1	-352.	-330.	-352.	-330.
L3	-352.	-330.	-352.	-331.
L4	-655.	-21.6	-567.	-154.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-415. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

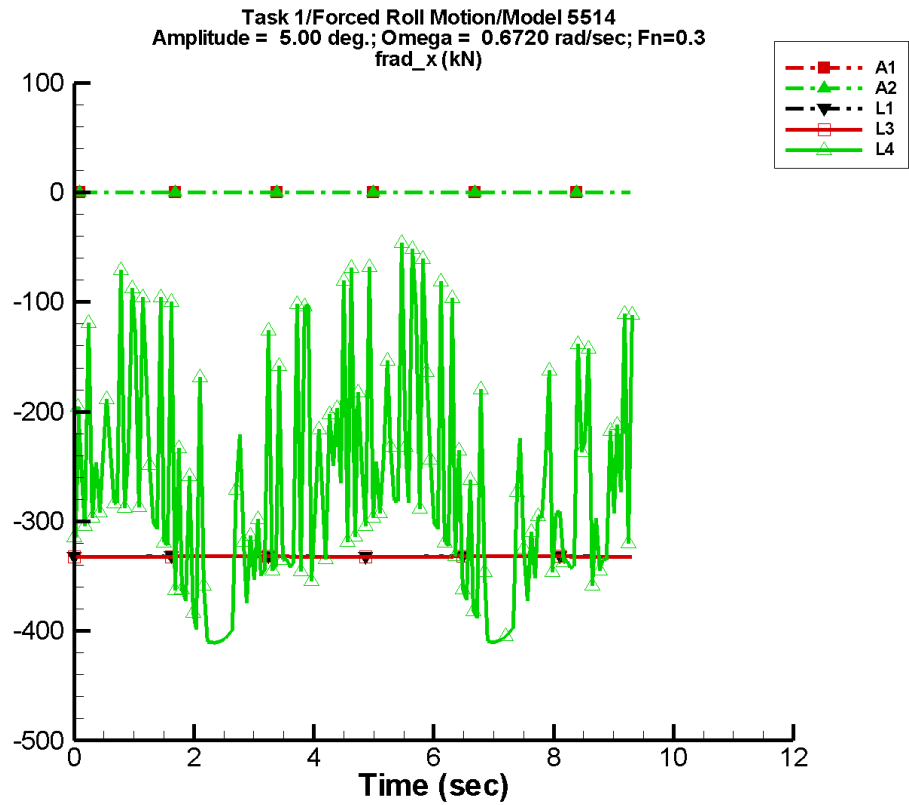
Table D–829. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.83E-03	9.84E-02	-173	1.83E-02	152
A2	1.83E-03	9.84E-02	-173	1.83E-02	152
FD	—	—	—	—	—
L1	-351.	8.99E-03	-108	22.2	-110
L3	-351.	8.77E-03	-136	22.2	-110
L4	-334.	100.	-94	309.	-137
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–830. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.259	0.221	-0.118	9.74E-02
A2	-0.259	0.221	-0.118	9.74E-02
FD	—	—	—	—
L1	-373.	-329.	-373.	-329.
L3	-373.	-329.	-373.	-329.
L4	-1.24E+03	137.	-1.01E+03	-55.3
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-416. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

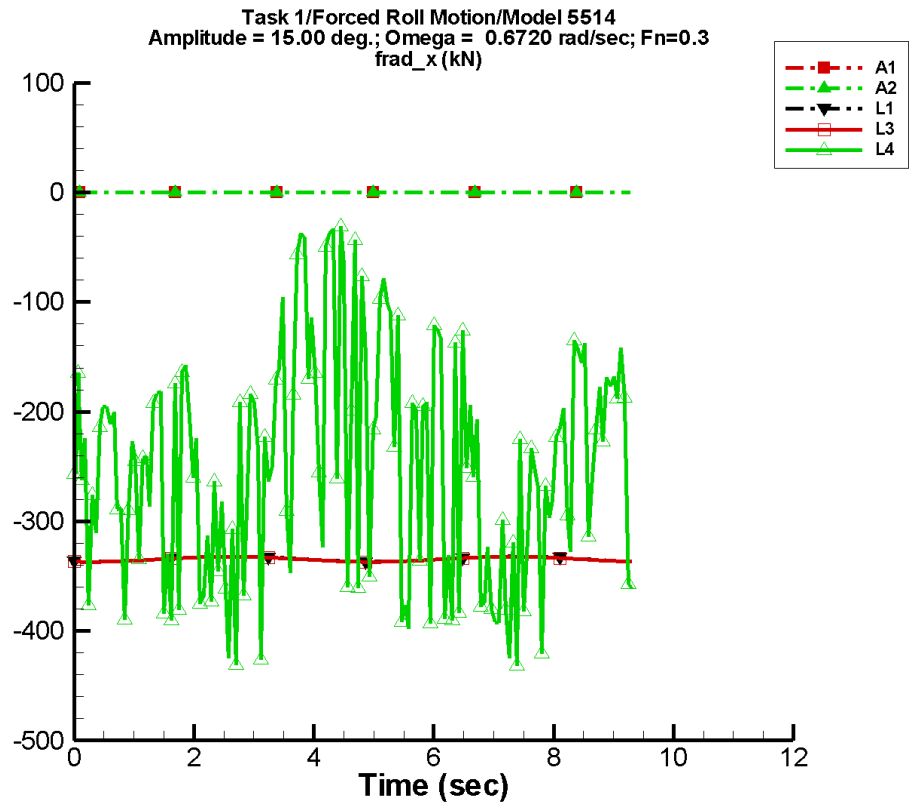
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.65E-05	1.73E-02	140	3.73E-04	78
A2	-2.65E-05	1.73E-02	140	3.73E-04	78
FD	—	—	—	—	—
L1	-332.	2.82E-03	172	0.266	-112
L3	-332.	3.01E-03	175	0.266	-112
L4	-271.	8.56	-81	68.2	59
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–832. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.59E-02	1.96E-02	-1.76E-02	1.73E-02
A2	-2.59E-02	1.96E-02	-1.76E-02	1.73E-02
FD	—	—	—	—
L1	-332.	-332.	-332.	-332.
L3	-332.	-332.	-332.	-332.
L4	-411.	-46.3	-387.	-176.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-417. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

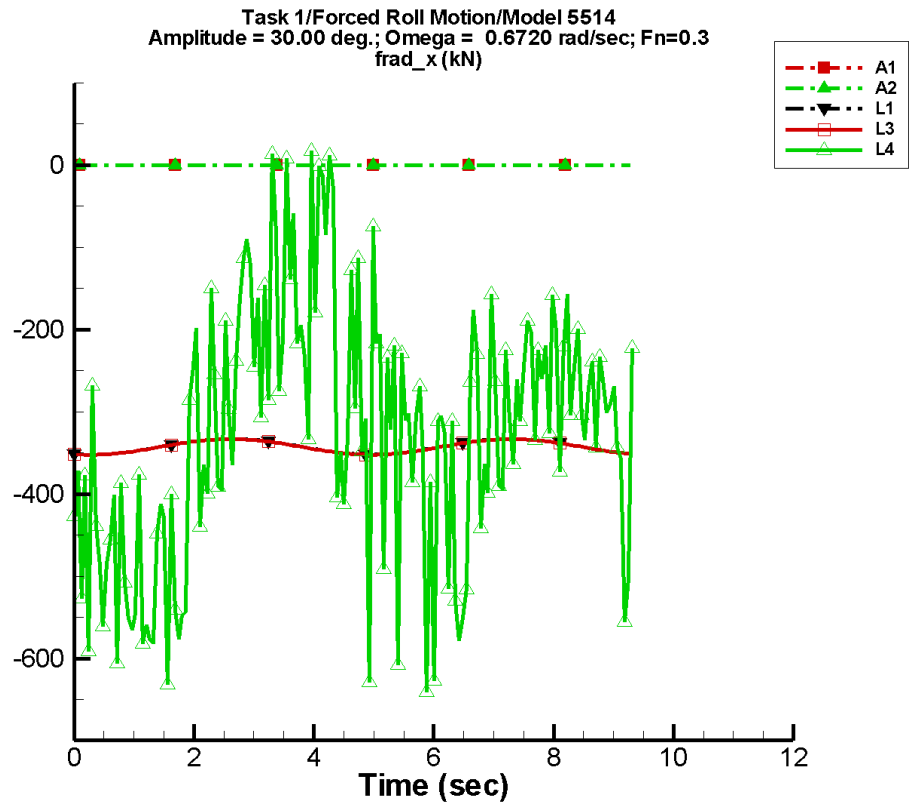
Table D–833. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-7.96E-05	5.20E-02	140	1.12E-03	78
A2	-7.96E-05	5.20E-02	140	1.12E-03	78
FD	—	—	—	—	—
L1	-334.	5.18E-03	-151	2.39	-112
L3	-335.	4.80E-03	-161	2.39	-112
L4	-248.	34.0	-73	59.5	104
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–834. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-7.78E-02	5.87E-02	-5.29E-02	5.17E-02
A2	-7.78E-02	5.87E-02	-5.29E-02	5.17E-02
FD	—	—	—	—
L1	-337.	-332.	-337.	-332.
L3	-337.	-332.	-337.	-332.
L4	-431.	-30.7	-373.	-137.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-418. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

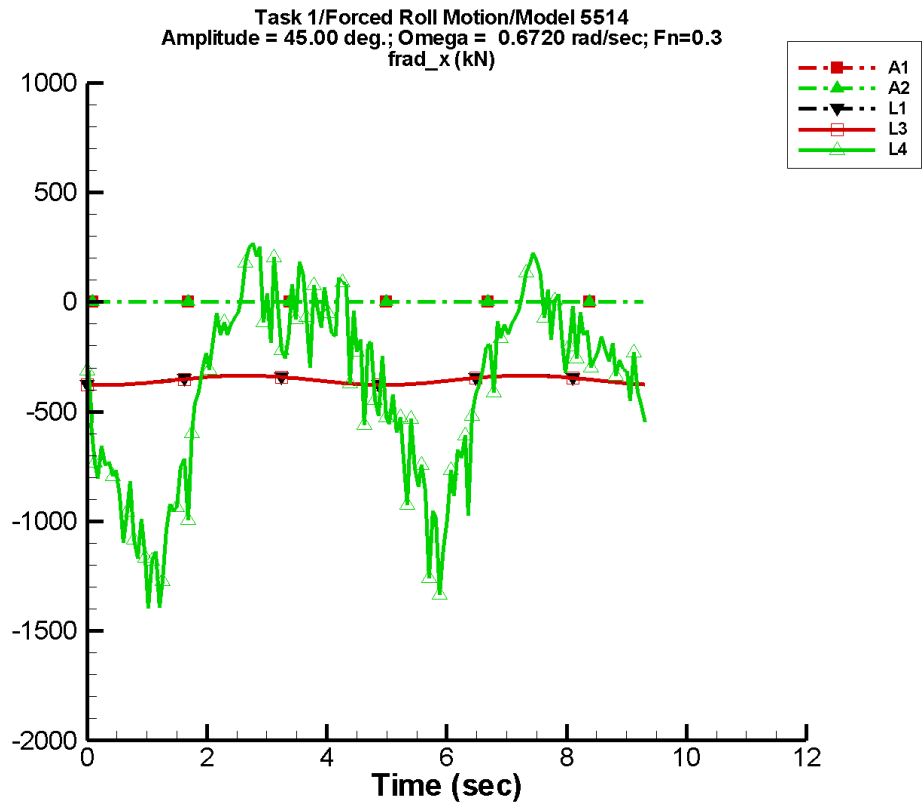
Table D–835. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.59E-04	0.104	140	2.24E-03	78
A2	-1.59E-04	0.104	140	2.24E-03	78
FD	—	—	—	—	—
L1	-343.	1.01E-02	-140	9.56	-112
L3	-343.	8.47E-03	-147	9.56	-112
L4	-321.	77.5	-88	135.	178
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–836. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.156	0.117	-0.106	0.103
A2	-0.156	0.117	-0.106	0.103
FD	—	—	—	—
L1	-352.	-333.	-352.	-333.
L3	-352.	-333.	-352.	-333.
L4	-649.	17.3	-561.	-106.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-419. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

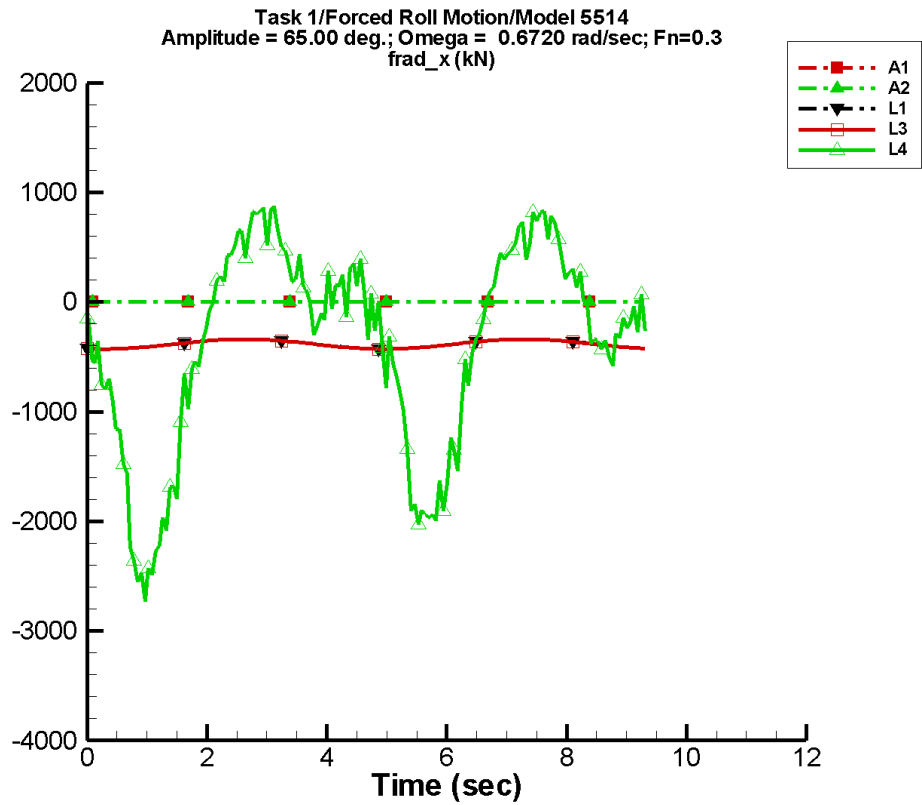
Table D–837. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-2.39E-04	0.156	140	3.36E-03	78
A2	-2.39E-04	0.156	140	3.36E-03	78
FD	—	—	—	—	—
L1	-356.	1.56E-02	-136	21.5	-112
L3	-356.	1.23E-02	-142	21.5	-112
L4	-395.	124.	-100	515.	-163
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–838. Minimum and maximum of of  $F_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.233	0.176	-0.159	0.155
A2	-0.233	0.176	-0.159	0.155
FD	—	—	—	—
L1	-378.	-335.	-378.	-335.
L3	-378.	-335.	-378.	-335.
L4	-1.49E+03	269.	-1.22E+03	138.
NF	—	—	—	—
NS	—	—	—	—

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-420. Time history of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

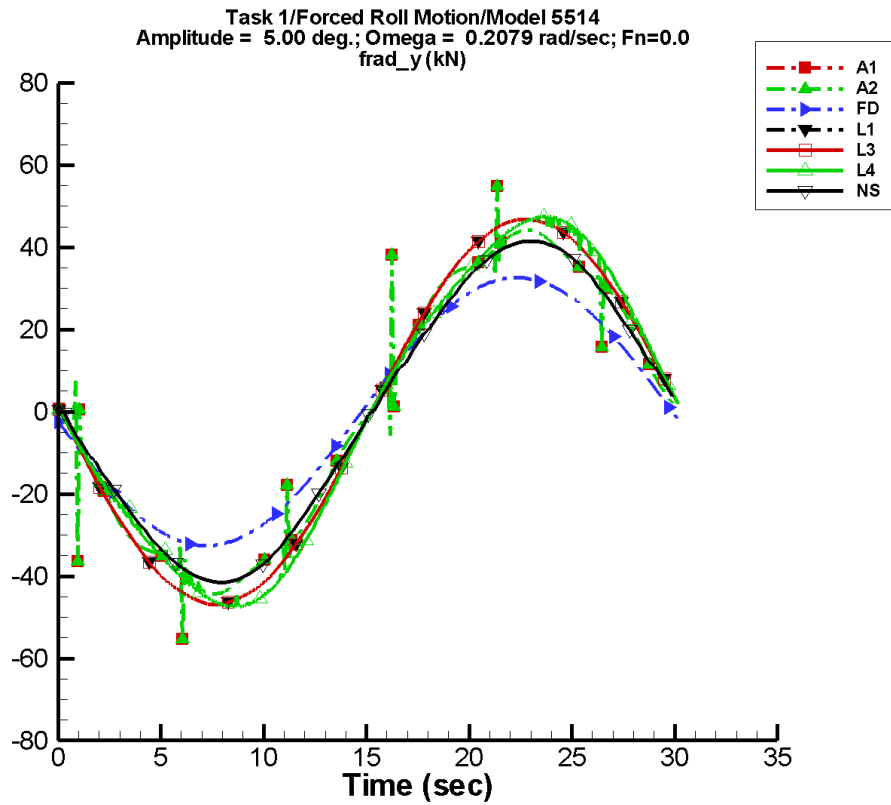
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-3.45E-04	0.225	140	4.85E-03	78
A2	-3.45E-04	0.225	140	4.85E-03	78
FD	—	—	—	—	—
L1	-383.	2.23E-02	-135	44.9	-112
L3	-383.	1.76E-02	-142	44.9	-112
L4	-391.	222.	-117	1.14E+03	-161
NF	—	—	—	—	—
NS	—	—	—	—	—

Table D–840. Minimum and maximum of  $F_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.337	0.254	-0.229	0.224
A2	-0.337	0.254	-0.229	0.224
FD	—	—	—	—
L1	-428.	-338.	-427.	-339.
L3	-428.	-338.	-427.	-339.
L4	-2.73E+03	878.	-2.43E+03	749.
NF	—	—	—	—
NS	—	—	—	—



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-421. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

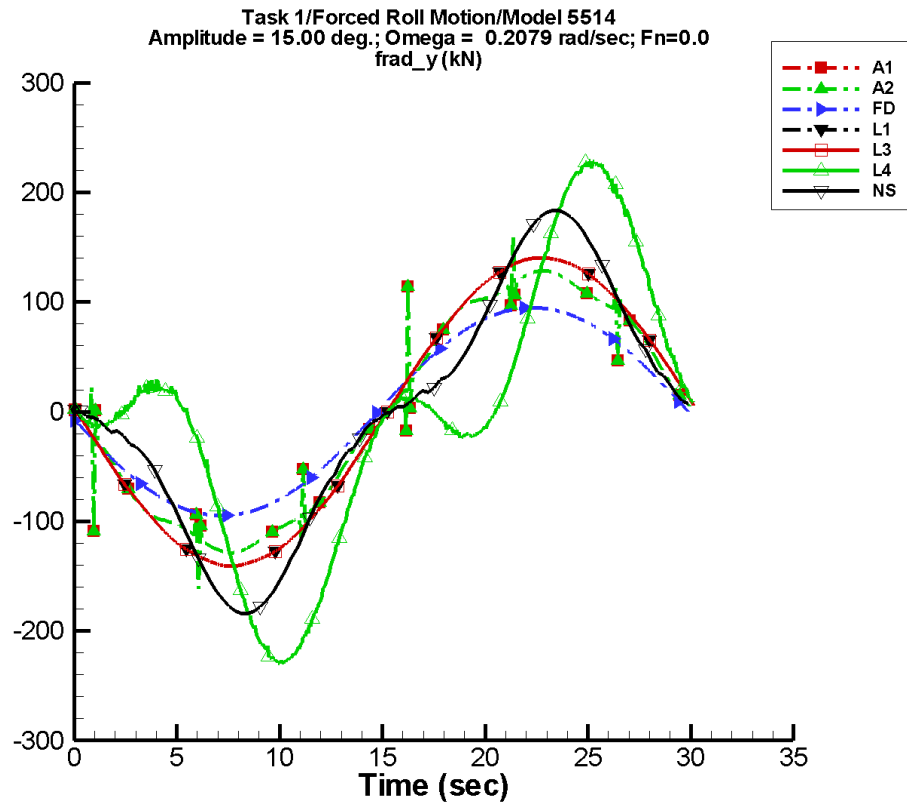
Table D–841. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	4.06E-02	42.8	180	2.67E-02	175
A2	4.06E-02	42.8	180	2.67E-02	175
FD	-8.73E-04	32.6	-176	4.80E-03	-119
L1	1.85E-03	46.8	179	1.29E-02	17
L3	1.85E-03	46.8	179	1.29E-02	17
L4	-0.105	46.1	175	0.636	-17
NF	—	—	—	—	—
NS	3.24E-03	40.5	177	2.28E-03	-158

Table D–842. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-55.4	54.9	-44.2	44.1
A2	-55.4	54.9	-44.2	44.1
FD	-32.6	32.6	-32.6	32.6
L1	-46.9	46.8	-46.9	46.8
L3	-46.9	46.8	-46.9	46.8
L4	-47.5	47.6	-47.2	47.3
NF	—	—	—	—
NS	-41.5	41.6	-41.0	41.1

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-422. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

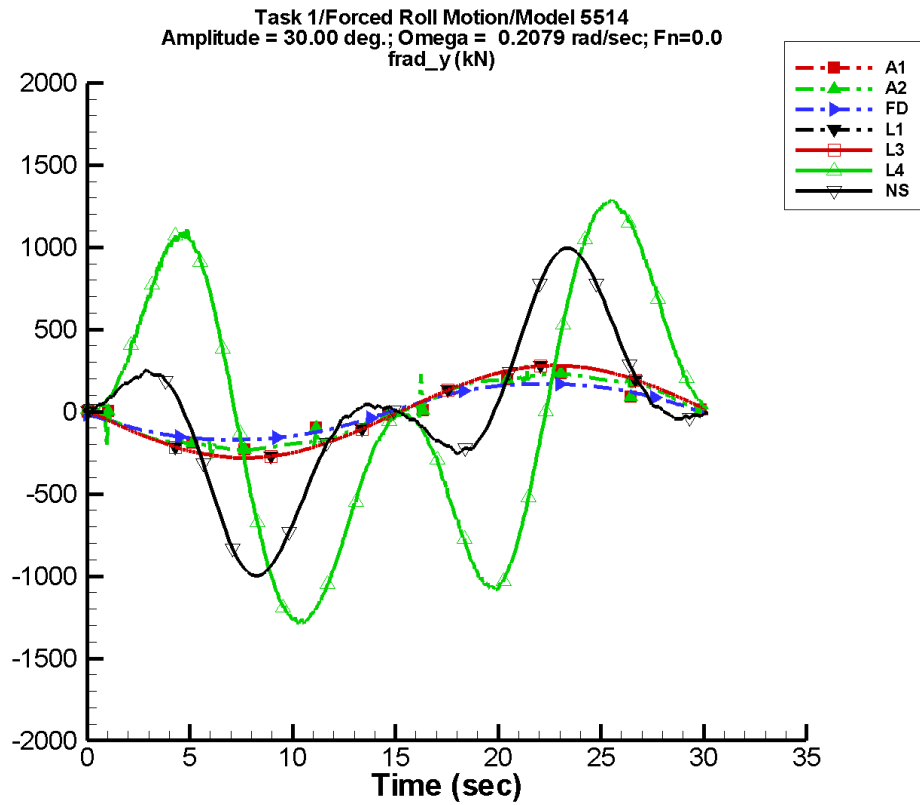
Table D-843. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	9.40E-02	126.	180	0.198	-143
A2	9.40E-02	126.	180	0.198	-143
FD	-2.34E-02	95.6	-176	0.129	-119
L1	5.53E-03	140.	179	3.89E-02	17
L3	5.52E-03	140.	179	3.88E-02	17
L4	-3.00	152.	147	16.1	-22
NF	—	—	—	—	—
NS	8.30E-02	145.	172	5.98E-02	-111

Table D-844. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-161.	160.	-128.	128.
A2	-161.	160.	-128.	128.
FD	-94.8	94.8	-95.0	94.7
L1	-141.	140.	-141.	140.
L3	-141.	140.	-141.	140.
L4	-230.	229.	-228.	227.
NF	—	—	—	—
NS	-184.	185.	-179.	179.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-423. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

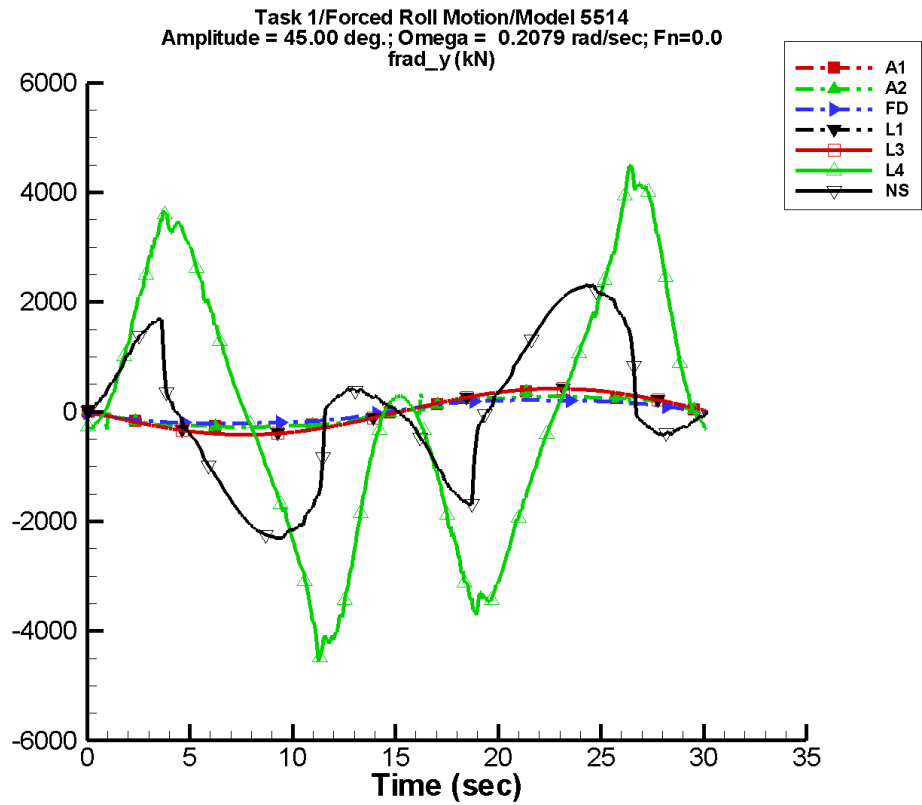
Table D–845. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.04E-02	232.	-180	1.36	-128
A2	1.04E-02	232.	-180	1.36	-128
FD	-0.184	177.	-176	1.01	-119
L1	1.11E-02	281.	179	7.77E-02	17
L3	1.11E-02	281.	179	7.77E-02	17
L4	-27.9	787.	103	152.	-20
NF	—	—	—	—	—
NS	0.809	528.	161	0.613	-108

Table D–846. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-293.	289.	-230.	230.
A2	-293.	289.	-230.	230.
FD	-170.	170.	-171.	170.
L1	-282.	281.	-282.	281.
L3	-282.	281.	-282.	281.
L4	-1.29E+03	1.29E+03	-1.28E+03	1.28E+03
NF	—	—	—	—
NS	-997.	1.00E+03	-976.	984.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-424. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

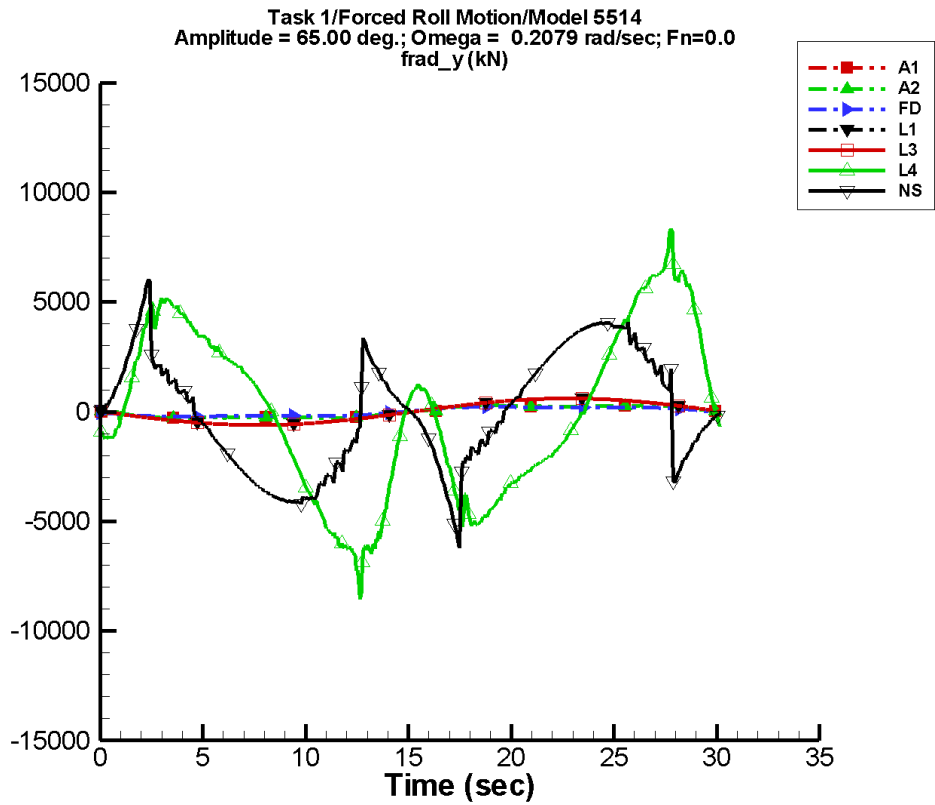
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-0.403	301.	-180	4.35	-125
A2	-0.403	301.	-180	4.35	-125
FD	-0.601	229.	-175	3.30	-118
L1	1.69E-02	421.	179	0.117	17
L3	1.70E-02	421.	179	0.117	17
L4	-118.	2.44E+03	91	498.	-35
NF	—	—	—	—	—
NS	2.80	1.24E+03	151	1.81	-112

Table D–848. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-367.	361.	-282.	282.
A2	-367.	361.	-282.	282.
FD	-210.	210.	-210.	210.
L1	-422.	421.	-422.	421.
L3	-422.	421.	-422.	421.
L4	-4.56E+03	4.50E+03	-4.30E+03	4.31E+03
NF	—	—	—	—
NS	-2.31E+03	2.33E+03	-2.28E+03	2.31E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-425. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

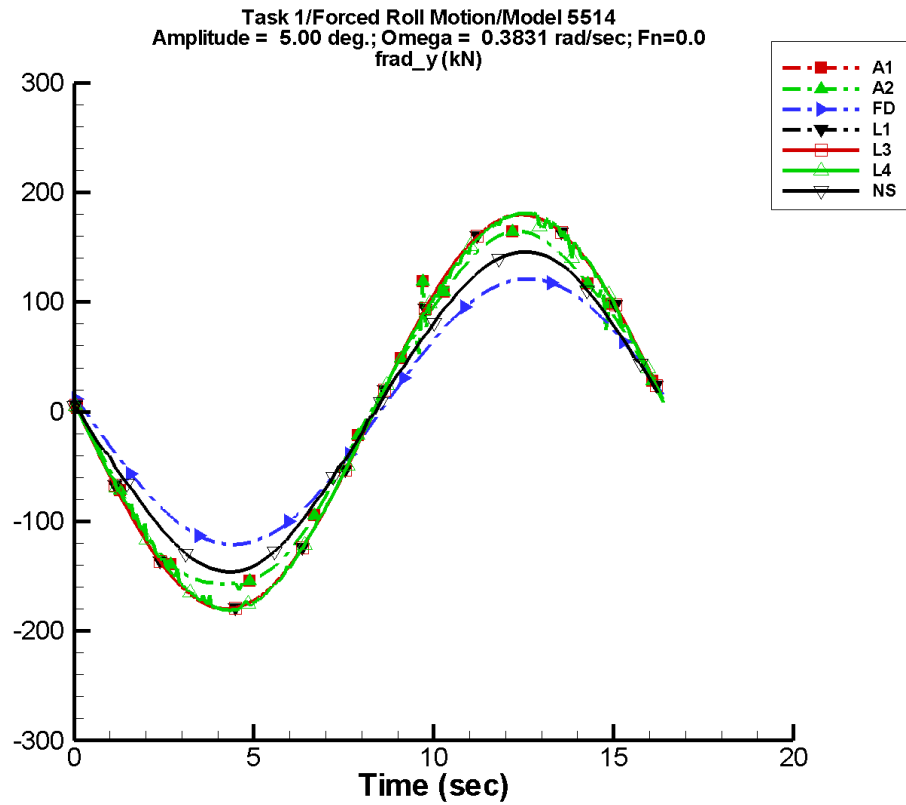
Table D–849. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.66	311.	-179	12.2	-123
A2	-1.66	311.	-179	12.2	-123
FD	-1.70	238.	-173	9.30	-118
L1	2.44E-02	609.	179	0.168	17
L3	2.45E-02	609.	179	0.168	17
L4	-211.	4.26E+03	91	780.	-52
NF	—	—	—	—	—
NS	4.55	2.37E+03	142	17.8	63

Table D–850. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-491.	477.	-293.	291.
A2	-491.	477.	-293.	291.
FD	-223.	223.	-223.	223.
L1	-610.	608.	-610.	608.
L3	-610.	608.	-610.	608.
L4	-8.54E+03	8.35E+03	-7.30E+03	7.37E+03
NF	—	—	—	—
NS	-6.21E+03	6.06E+03	-4.78E+03	4.88E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-426. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

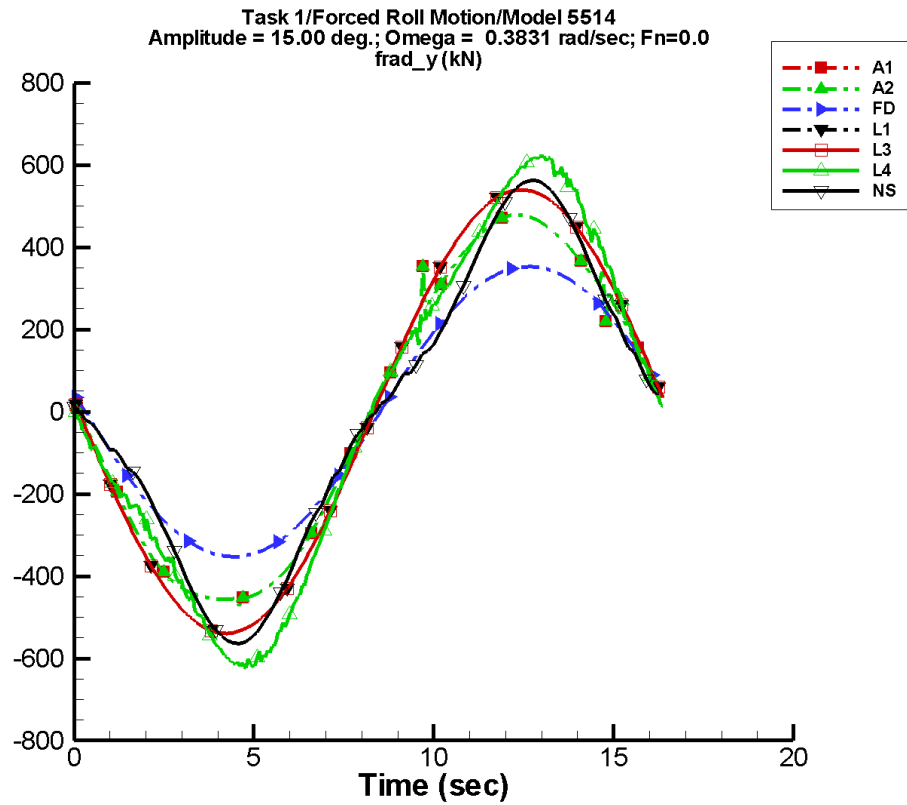
Table D–851. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.152	161.	178	0.393	-146
A2	0.152	161.	178	0.393	-146
FD	-2.81E-03	121.	173	2.29E-02	-112
L1	3.06E-03	180.	177	3.60E-02	155
L3	3.05E-03	180.	177	3.60E-02	155
L4	-1.21E-02	178.	177	0.874	-4
NF	—	—	—	—	—
NS	-5.45E-03	144.	176	1.60E-02	-20

Table D–852. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-174.	165.	-160.	164.
A2	-174.	165.	-160.	164.
FD	-121.	121.	-121.	121.
L1	-180.	180.	-180.	180.
L3	-180.	180.	-180.	180.
L4	-181.	181.	-181.	181.
NF	—	—	—	—
NS	-146.	146.	-144.	144.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-427. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

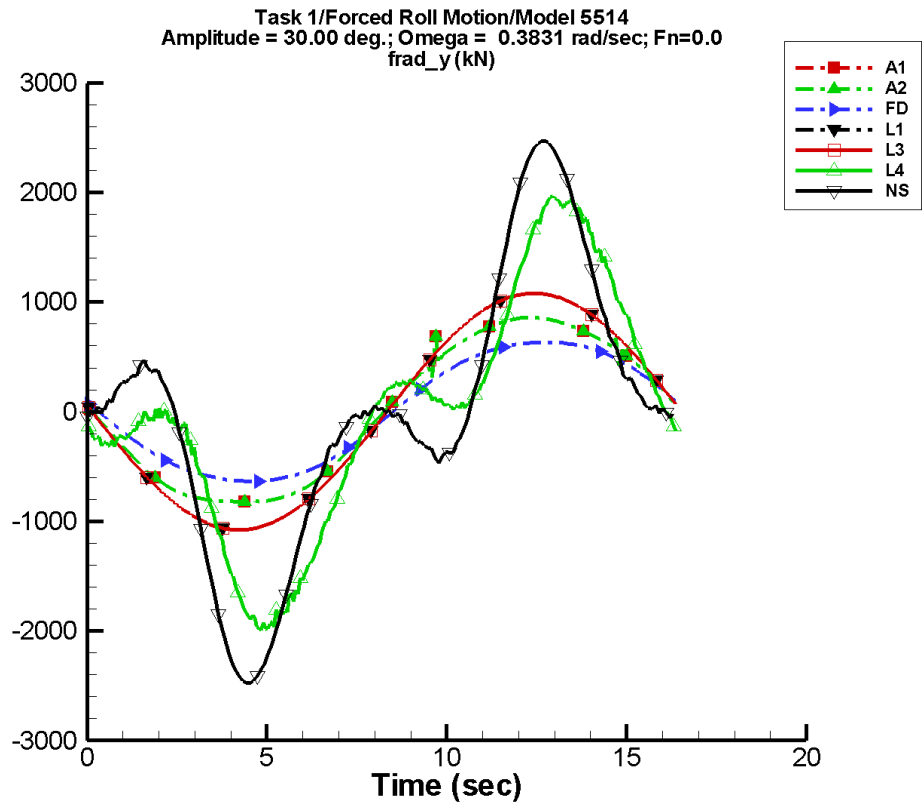
Table D-853. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.366	473.	178	1.70	-140
A2	0.366	473.	178	1.70	-140
FD	-7.48E-02	356.	173	0.614	-112
L1	9.25E-03	539.	177	0.108	155
L3	9.22E-03	539.	177	0.108	155
L4	-0.692	556.	173	8.92	-36
NF	—	—	—	—	—
NS	-9.69E-02	479.	172	3.07E-02	84

Table D-854. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-506.	479.	-466.	477.
A2	-506.	479.	-466.	477.
FD	-353.	353.	-352.	352.
L1	-539.	539.	-539.	539.
L3	-539.	539.	-539.	539.
L4	-622.	622.	-615.	619.
NF	—	—	—	—
NS	-564.	563.	-551.	550.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-428. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

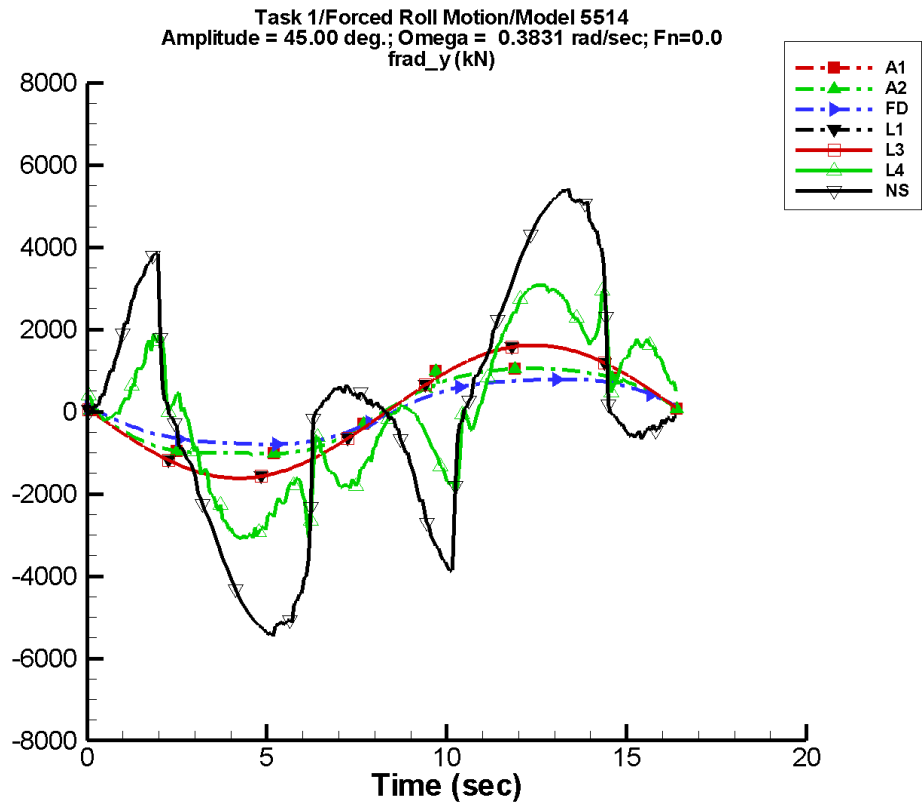
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.145	872.	178	6.94	-133
A2	0.145	872.	178	6.94	-133
FD	-0.584	656.	173	4.81	-112
L1	1.85E-02	1.08E+03	177	0.216	155
L3	1.86E-02	1.08E+03	177	0.216	155
L4	-7.78	1.32E+03	162	60.1	-48
NF	—	—	—	—	—
NS	-0.831	1.44E+03	163	0.693	130

Table D–856. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-914.	859.	-836.	855.
A2	-914.	859.	-836.	855.
FD	-634.	634.	-633.	632.
L1	-1.08E+03	1.08E+03	-1.08E+03	1.08E+03
L3	-1.08E+03	1.08E+03	-1.08E+03	1.08E+03
L4	-1.99E+03	1.97E+03	-1.95E+03	1.93E+03
NF	—	—	—	—
NS	-2.48E+03	2.47E+03	-2.43E+03	2.42E+03



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

Figure D-429. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

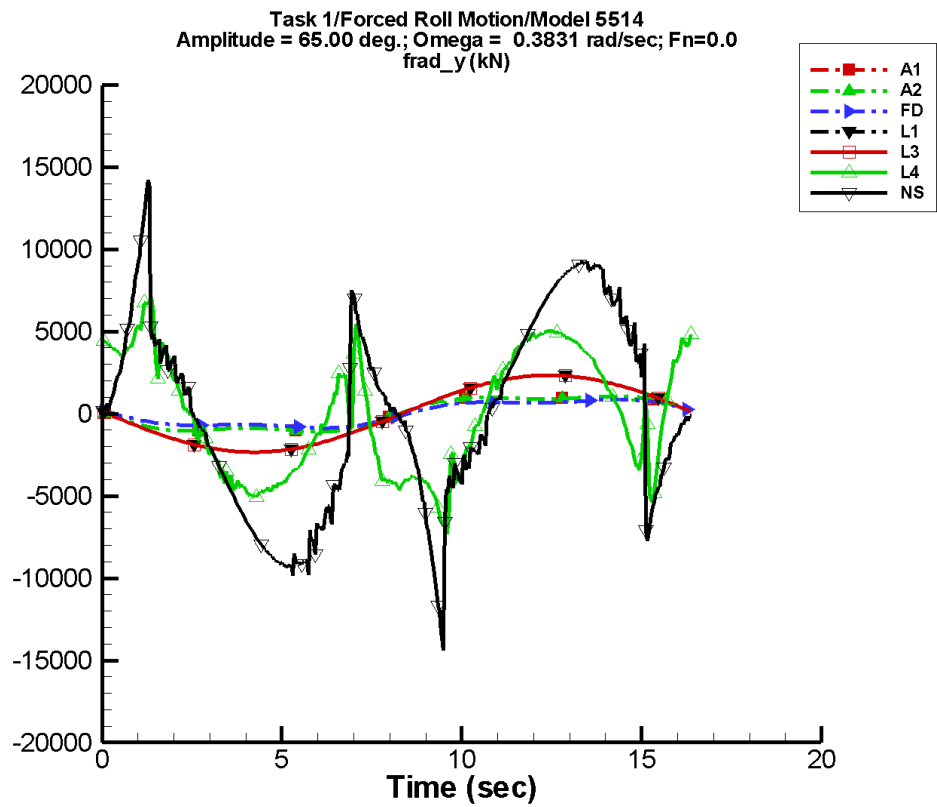
Table D–857. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.17	1.13E+03	178	18.8	-129
A2	-1.17	1.13E+03	178	18.8	-129
FD	-1.90	852.	172	15.7	-112
L1	2.85E-02	1.62E+03	177	0.325	155
L3	2.84E-02	1.62E+03	177	0.325	155
L4	29.2	2.09E+03	144	168.	-39
NF	—	—	—	—	—
NS	-2.52	2.97E+03	151	2.26	142

Table D–858. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.13E+03	1.05E+03	-1.02E+03	1.05E+03
A2	-1.13E+03	1.05E+03	-1.02E+03	1.05E+03
FD	-789.	789.	-788.	788.
L1	-1.62E+03	1.62E+03	-1.62E+03	1.62E+03
L3	-1.62E+03	1.62E+03	-1.62E+03	1.62E+03
L4	-3.09E+03	3.08E+03	-3.03E+03	3.05E+03
NF	—	—	—	—
NS	-5.45E+03	5.44E+03	-5.33E+03	5.31E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-430. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

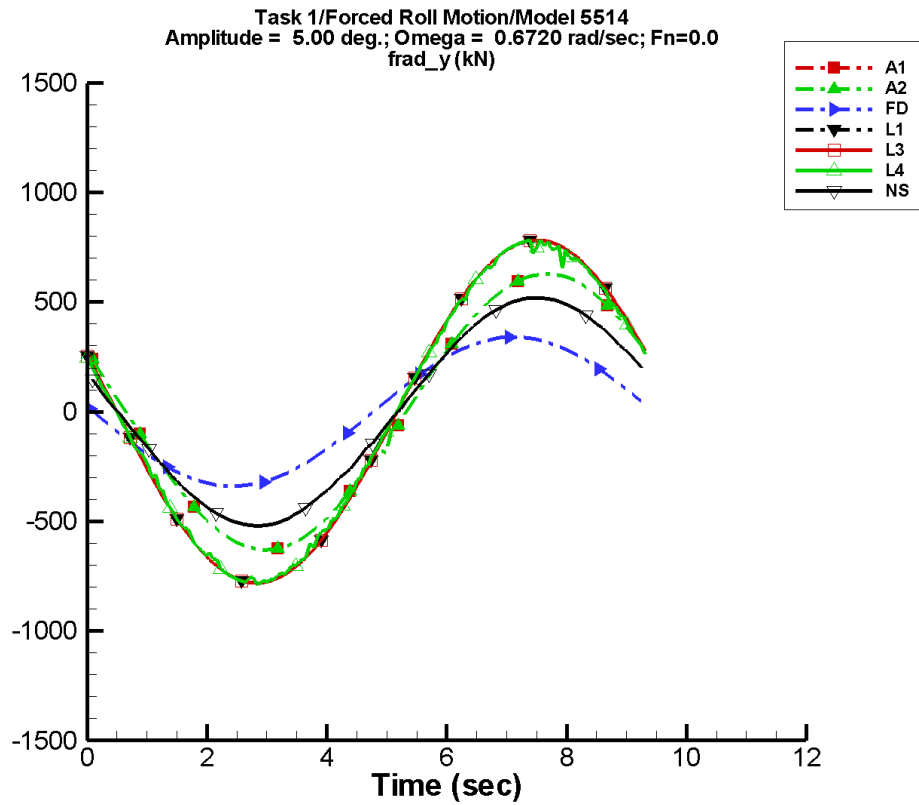
Table D–859. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-5.25	1.17E+03	179	48.6	-128
A2	-5.25	1.17E+03	179	48.6	-128
FD	-5.28	884.	170	44.1	-112
L1	4.07E-02	2.34E+03	177	0.470	155
L3	4.10E-02	2.34E+03	177	0.470	155
L4	237.	3.22E+03	121	499.	20
NF	—	—	—	—	—
NS	-3.67	5.26E+03	140	43.6	69

Table D–860. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.09E+03	1.27E+03	-1.08E+03	1.04E+03
A2	-1.09E+03	1.27E+03	-1.08E+03	1.04E+03
FD	-867.	867.	-868.	860.
L1	-2.34E+03	2.34E+03	-2.33E+03	2.33E+03
L3	-2.34E+03	2.34E+03	-2.33E+03	2.33E+03
L4	-7.32E+03	7.10E+03	-5.81E+03	6.00E+03
NF	—	—	—	—
NS	-1.44E+04	1.43E+04	-1.15E+04	1.17E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-431. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

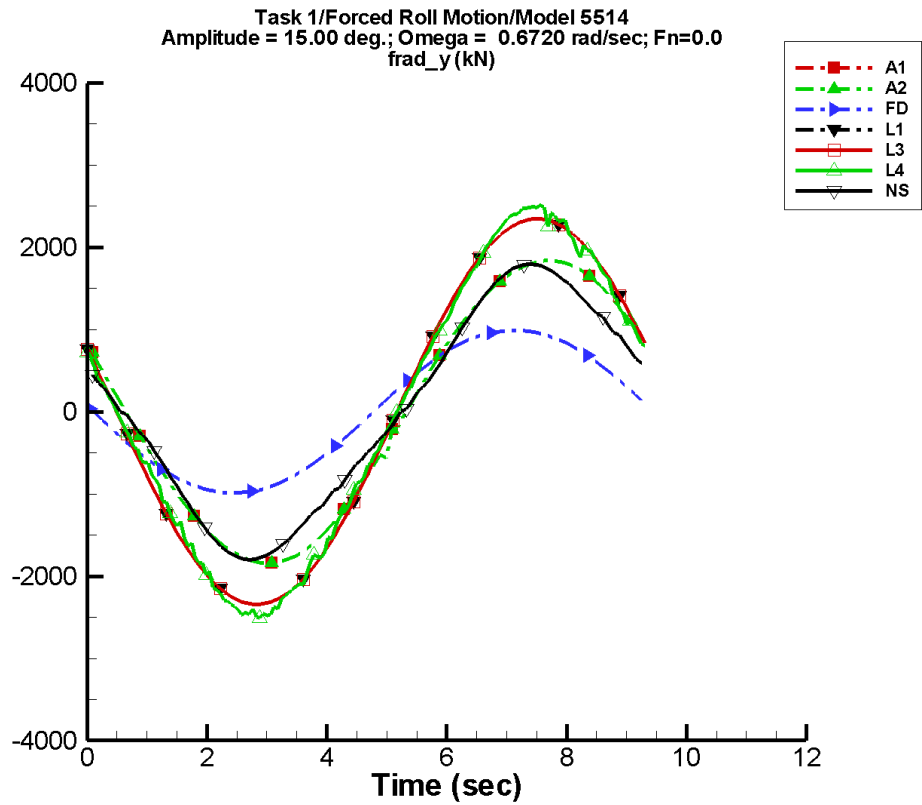
Table D–861. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-0.259	627.	155	0.868	62
A2	-0.259	627.	155	0.868	62
FD	-2.35E-02	340.	176	4.62E-02	-37
L1	1.41E-02	781.	161	4.65E-03	-124
L3	1.41E-02	781.	161	4.67E-03	-124
L4	-5.86E-02	767.	161	3.78	17
NF	—	—	—	—	—
NS	0.274	516.	161	0.294	-21

Table D–862. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-631.	628.	-623.	621.
A2	-631.	628.	-623.	621.
FD	-340.	340.	-336.	340.
L1	-781.	782.	-778.	778.
L3	-781.	782.	-778.	778.
L4	-785.	784.	-773.	766.
NF	—	—	—	—
NS	-521.	520.	-515.	515.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-432. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

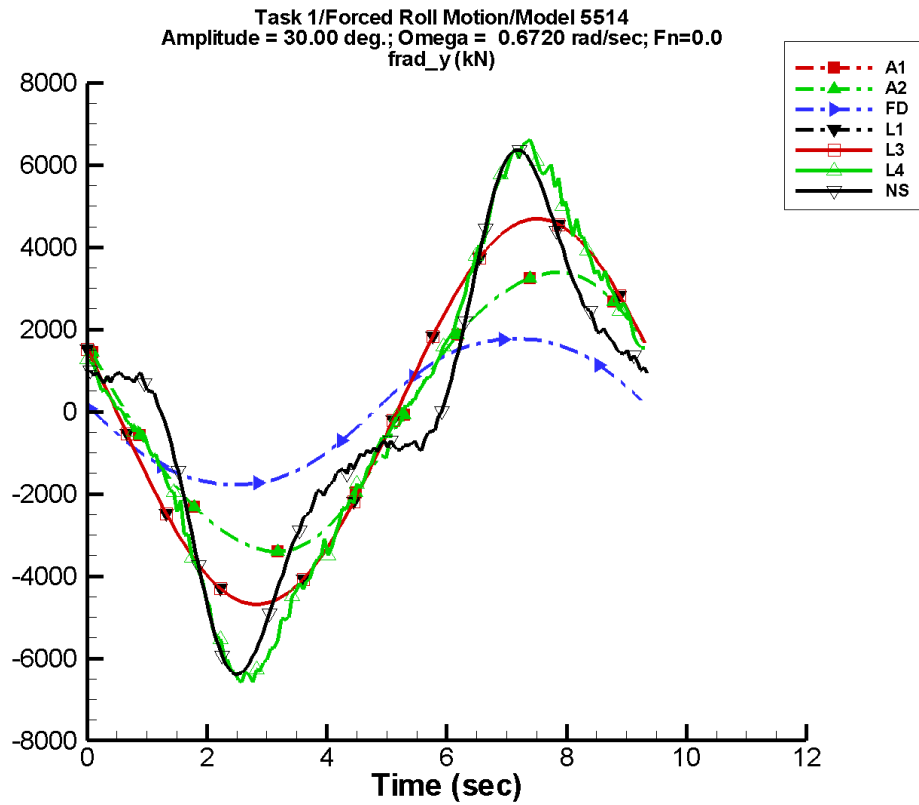
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.51	1.84E+03	155	1.96	101
A2	-1.51	1.84E+03	155	1.96	101
FD	-0.642	997.	176	1.23	-38
L1	4.21E-02	2.34E+03	161	1.31E-02	-121
L3	4.19E-02	2.34E+03	161	1.30E-02	-122
L4	7.63	2.35E+03	161	28.0	-24
NF	—	—	—	—	—
NS	0.491	1.66E+03	160	0.785	-4

Table D–864. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.84E+03	1.84E+03	-1.82E+03	1.82E+03
A2	-1.84E+03	1.84E+03	-1.82E+03	1.82E+03
FD	-989.	989.	-978.	990.
L1	-2.34E+03	2.34E+03	-2.33E+03	2.33E+03
L3	-2.34E+03	2.34E+03	-2.33E+03	2.33E+03
L4	-2.51E+03	2.51E+03	-2.46E+03	2.47E+03
NF	—	—	—	—
NS	-1.80E+03	1.80E+03	-1.77E+03	1.77E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-433. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

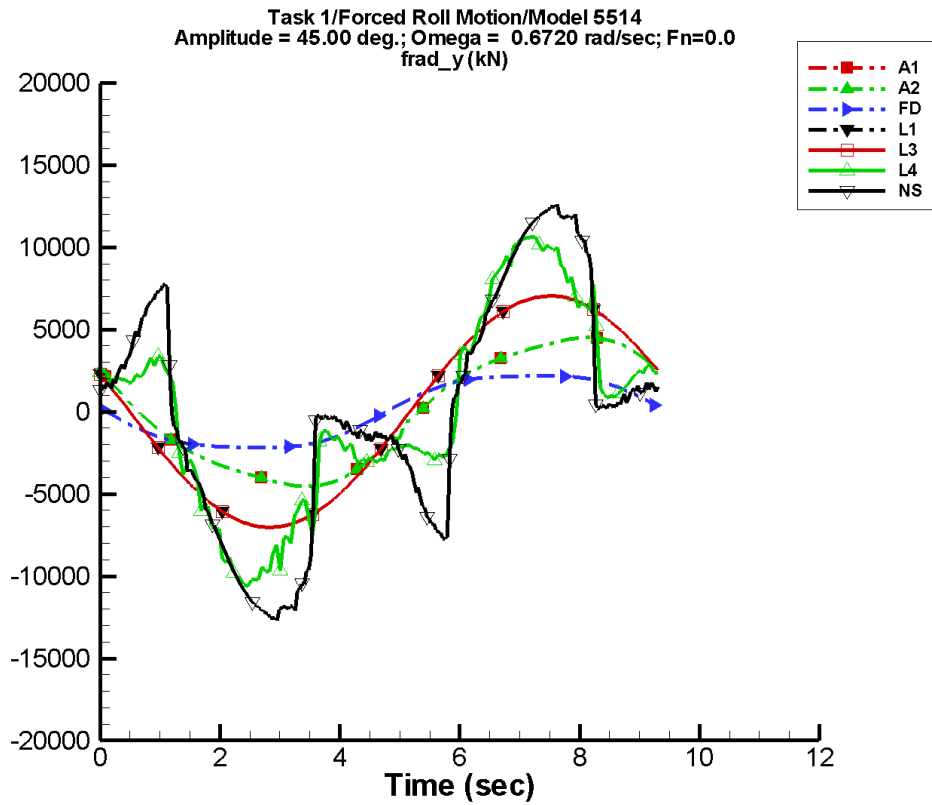
Table D–865. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-7.84	3.44E+03	154	11.4	173
A2	-7.84	3.44E+03	154	11.4	173
FD	-5.03	1.84E+03	176	9.67	-38
L1	8.57E-02	4.69E+03	161	2.70E-02	-124
L3	8.57E-02	4.69E+03	161	2.66E-02	-125
L4	22.2	5.26E+03	159	155.	-22
NF	—	—	—	—	—
NS	-1.93	4.36E+03	158	2.76	57

Table D–866. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-3.40E+03	3.39E+03	-3.36E+03	3.35E+03
A2	-3.40E+03	3.39E+03	-3.36E+03	3.35E+03
FD	-1.77E+03	1.77E+03	-1.76E+03	1.78E+03
L1	-4.69E+03	4.69E+03	-4.67E+03	4.67E+03
L3	-4.69E+03	4.69E+03	-4.67E+03	4.67E+03
L4	-6.58E+03	6.61E+03	-6.42E+03	6.35E+03
NF	—	—	—	—
NS	-6.39E+03	6.37E+03	-6.28E+03	6.26E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-434. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

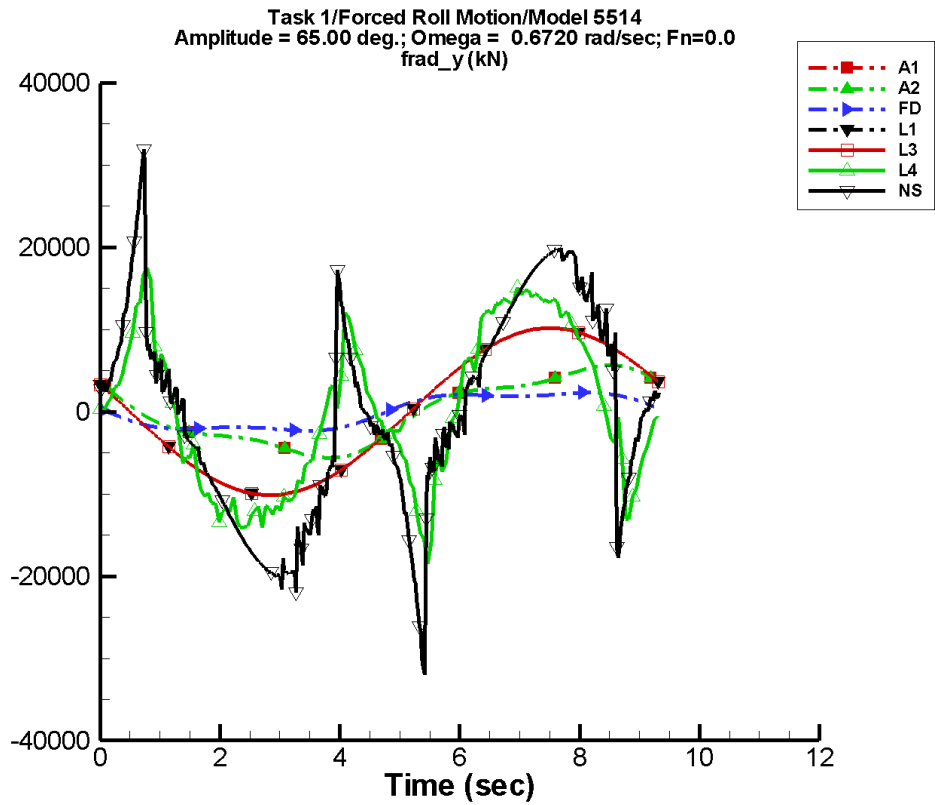
Table D–867. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-23.2	4.57E+03	152	42.1	-175
A2	-23.2	4.57E+03	152	42.1	-175
FD	-16.4	2.38E+03	176	31.5	-38
L1	0.130	7.03E+03	161	3.99E-02	-129
L3	0.130	7.03E+03	161	3.89E-02	-130
L4	269.	7.25E+03	153	477.	-17
NF	—	—	—	—	—
NS	-9.69	7.96E+03	151	7.03	53

Table D–868. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.53E+03	4.52E+03	-4.47E+03	4.46E+03
A2	-4.53E+03	4.52E+03	-4.47E+03	4.46E+03
FD	-2.19E+03	2.19E+03	-2.18E+03	2.19E+03
L1	-7.03E+03	7.03E+03	-7.00E+03	7.00E+03
L3	-7.03E+03	7.03E+03	-7.00E+03	7.00E+03
L4	-1.06E+04	1.06E+04	-1.02E+04	1.04E+04
NF	—	—	—	—
NS	-1.27E+04	1.26E+04	-1.24E+04	1.23E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-435. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

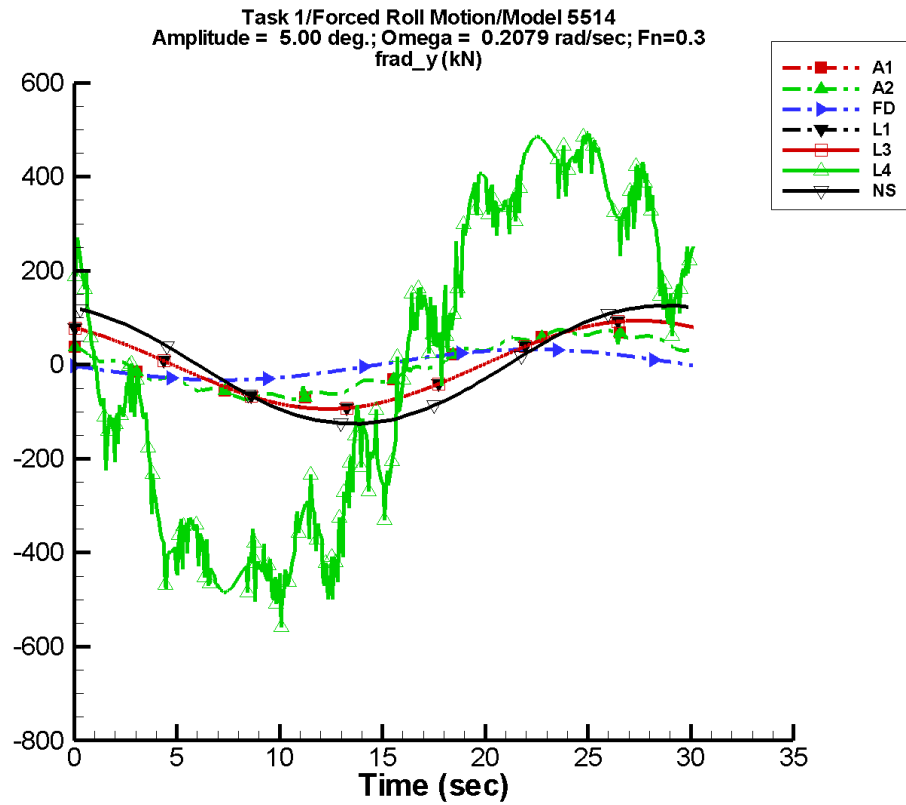
Table D–869. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-62.5	5.07E+03	146	126.	-171
A2	-62.5	5.07E+03	146	126.	-171
FD	-45.9	2.44E+03	176	88.6	-39
L1	0.191	1.02E+04	161	5.80E-02	-131
L3	0.191	1.02E+04	161	5.89E-02	-131
L4	703.	7.70E+03	152	1.09E+03	3
NF	—	—	—	—	—
NS	-45.0	1.21E+04	142	89.0	58

Table D–870. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-5.63E+03	5.64E+03	-5.48E+03	5.49E+03
A2	-5.63E+03	5.64E+03	-5.48E+03	5.49E+03
FD	-2.32E+03	2.33E+03	-2.27E+03	2.27E+03
L1	-1.02E+04	1.02E+04	-1.01E+04	1.01E+04
L3	-1.02E+04	1.02E+04	-1.01E+04	1.01E+04
L4	-1.85E+04	1.82E+04	-1.29E+04	1.42E+04
NF	—	—	—	—
NS	-3.21E+04	3.19E+04	-2.55E+04	2.59E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-436. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

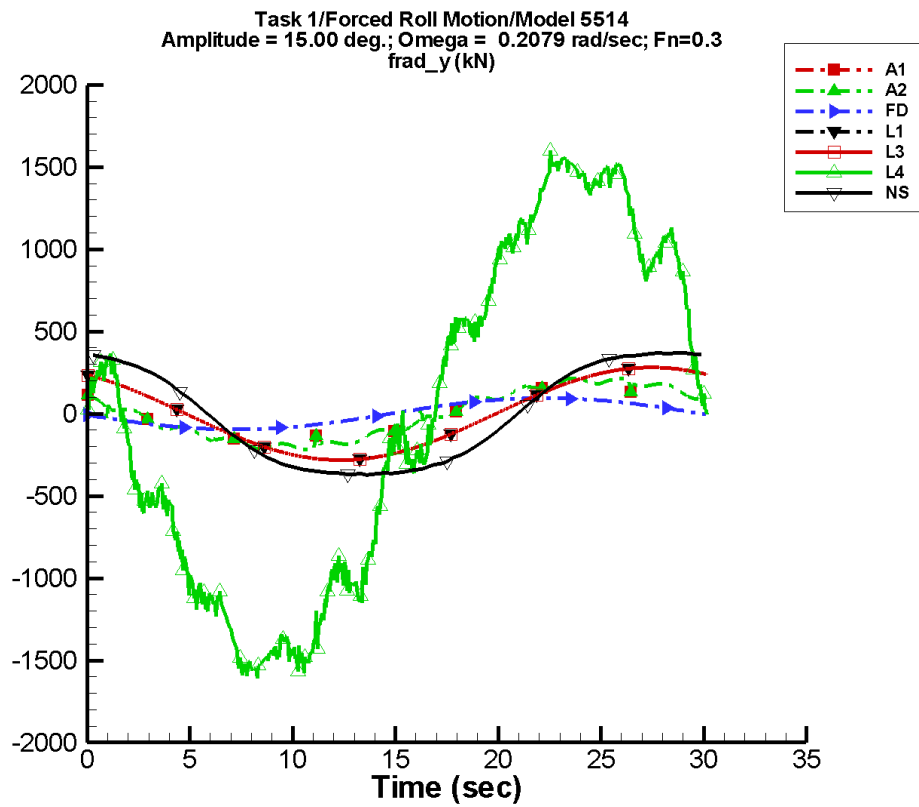
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	4.95E-02	68.8	154	8.35E-02	172
A2	4.95E-02	68.8	154	8.35E-02	172
FD	-8.75E-04	32.6	-176	4.80E-03	-119
L1	-2.98E-02	93.9	123	5.41E-03	161
L3	-4.49E-02	93.9	123	2.61E-03	-169
L4	-4.74	462.	165	2.48	127
NF	—	—	—	—	—
NS	4.43E-03	127.	109	2.70E-03	179

Table D–872. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-73.7	74.2	-72.5	73.0
A2	-73.7	74.2	-72.5	73.0
FD	-32.6	32.6	-32.6	32.6
L1	-93.9	93.9	-93.9	93.8
L3	-93.9	93.8	-93.9	93.8
L4	-559.	494.	-493.	482.
NF	—	—	—	—
NS	-126.	126.	-124.	124.



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

Figure D-437. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

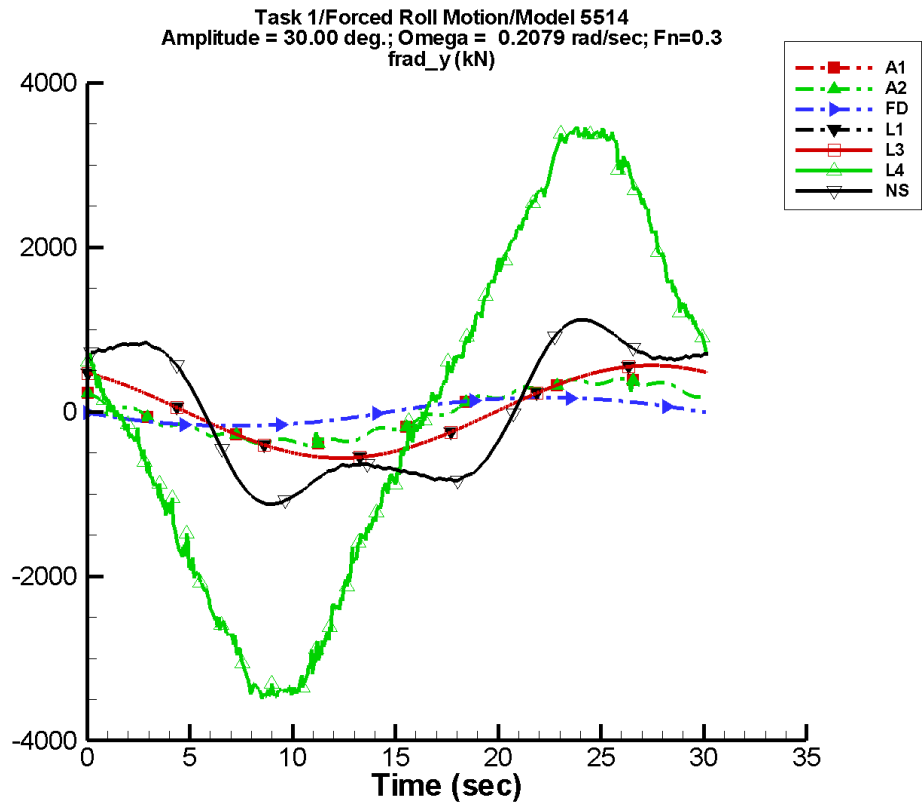
Table D–873. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.110	202.	153	0.412	-171
A2	0.110	202.	153	0.412	-171
FD	-2.34E-02	95.6	-176	0.129	-119
L1	-3.02E-02	282.	123	4.95E-03	164
L3	-4.50E-02	282.	123	2.00E-03	-162
L4	-8.33	1.44E+03	163	11.4	41
NF	—	—	—	—	—
NS	5.87E-02	401.	111	5.25E-02	-141

Table D–874. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-216.	216.	-212.	213.
A2	-216.	216.	-212.	213.
FD	-94.8	94.8	-95.0	94.7
L1	-282.	282.	-282.	281.
L3	-282.	282.	-282.	281.
L4	-1.61E+03	1.60E+03	-1.55E+03	1.53E+03
NF	—	—	—	—
NS	-372.	372.	-367.	367.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-438. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

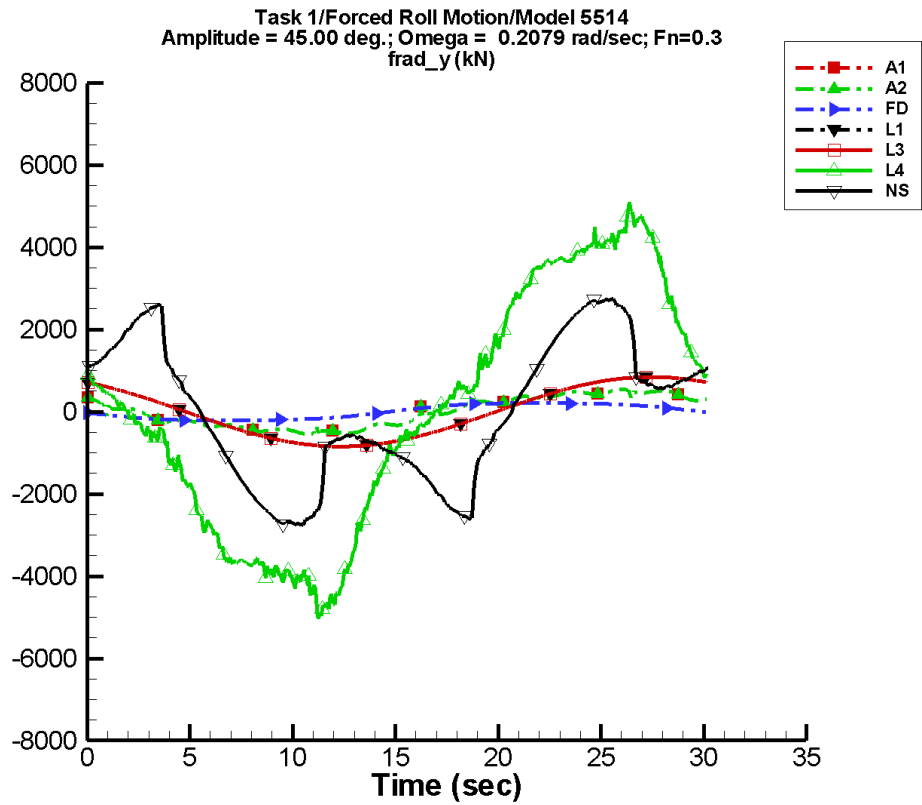
Table D–875. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-8.76E-02	378.	152	2.03	-159
A2	-8.76E-02	378.	152	2.03	-159
FD	-0.184	177.	-176	1.01	-119
L1	-3.10E-02	563.	123	4.31E-03	163
L3	-4.55E-02	563.	123	1.24E-03	-136
L4	-8.66	3.09E+03	162	66.1	28
NF	—	—	—	—	—
NS	0.693	1.01E+03	118	0.614	-129

Table D–876. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-404.	404.	-394.	394.
A2	-404.	404.	-394.	394.
FD	-170.	170.	-171.	170.
L1	-563.	563.	-563.	563.
L3	-563.	563.	-563.	563.
L4	-3.50E+03	3.46E+03	-3.44E+03	3.41E+03
NF	—	—	—	—
NS	-1.13E+03	1.13E+03	-1.11E+03	1.11E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-439. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

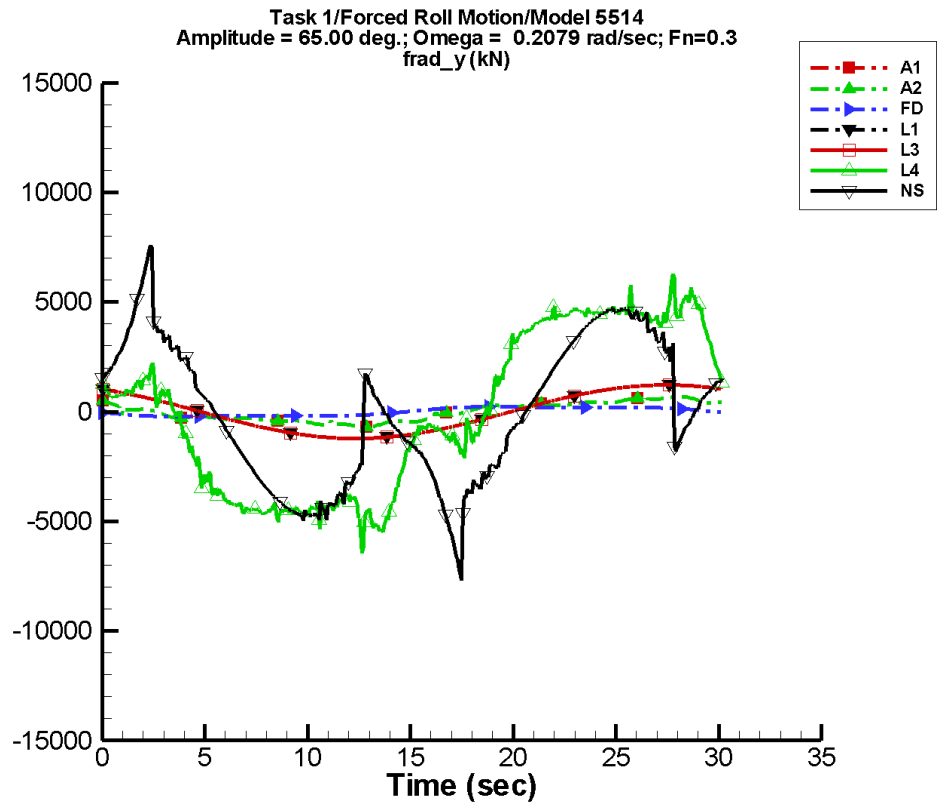
Table D–877. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-0.911	502.	150	5.95	-156
A2	-0.911	502.	150	5.95	-156
FD	-0.601	229.	-175	3.30	-118
L1	-3.10E-02	845.	123	5.87E-03	171
L3	-4.53E-02	845.	123	1.96E-03	-143
L4	-28.5	4.07E+03	155	128.	-38
NF	—	—	—	—	—
NS	2.31	1.98E+03	119	1.88	-138

Table D–878. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-538.	541.	-523.	526.
A2	-538.	541.	-523.	526.
FD	-210.	210.	-210.	210.
L1	-845.	845.	-844.	844.
L3	-845.	845.	-845.	844.
L4	-5.05E+03	5.10E+03	-4.81E+03	4.77E+03
NF	—	—	—	—
NS	-2.77E+03	2.78E+03	-2.71E+03	2.72E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-440. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

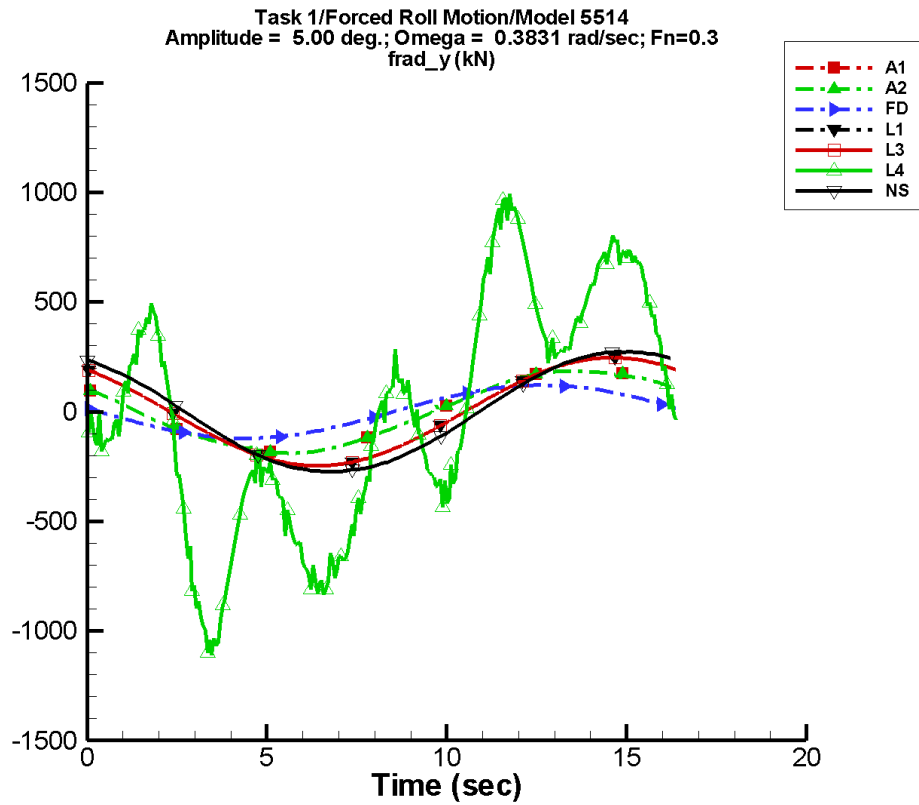
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-3.39	559.	144	16.0	-155
A2	-3.39	559.	144	16.0	-155
FD	-1.70	238.	-173	9.30	-118
L1	-3.04E-02	1.22E+03	123	5.74E-03	162
L3	-4.44E-02	1.22E+03	123	5.43E-04	-154
L4	10.8	4.98E+03	149	28.5	-173
NF	—	—	—	—	—
NS	7.19	3.56E+03	117	15.6	99

Table D–880. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-702.	697.	-689.	684.
A2	-702.	697.	-689.	684.
FD	-223.	223.	-223.	223.
L1	-1.22E+03	1.22E+03	-1.22E+03	1.22E+03
L3	-1.22E+03	1.22E+03	-1.22E+03	1.22E+03
L4	-6.44E+03	6.28E+03	-5.32E+03	5.27E+03
NF	—	—	—	—
NS	-7.69E+03	7.62E+03	-6.47E+03	6.54E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-441. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

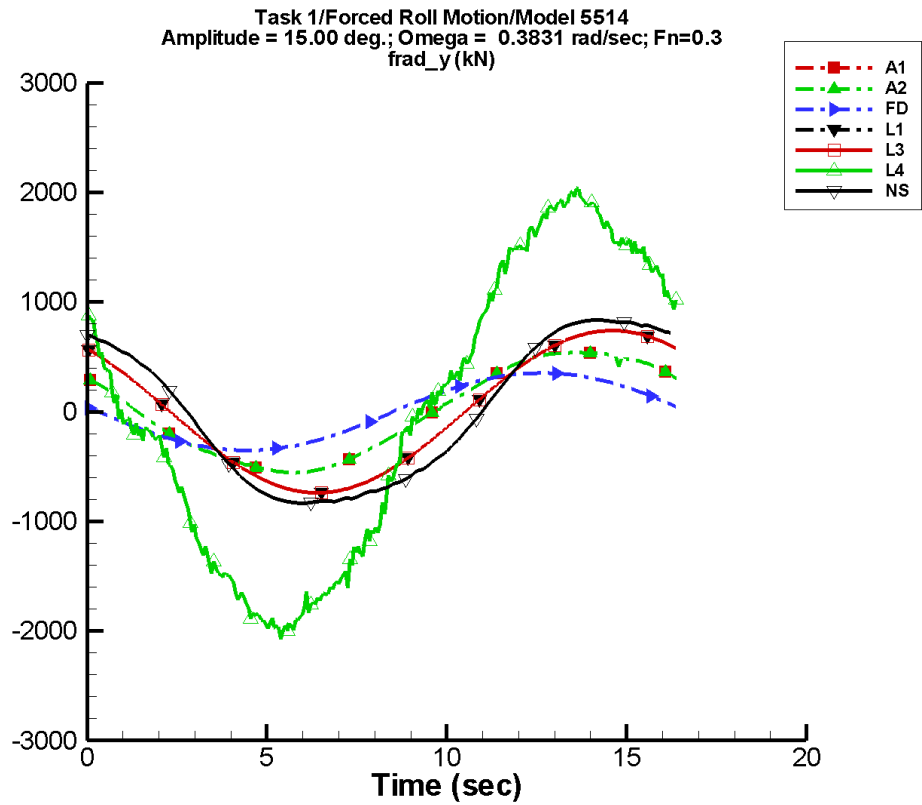
Table D–881. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.257	187.	149	0.390	-143
A2	0.257	187.	149	0.390	-143
FD	-2.81E-03	121.	173	2.29E-02	-112
L1	-2.83E-02	247.	129	3.89E-03	-52
L3	-4.47E-02	247.	129	1.56E-03	-30
L4	0.629	596.	151	41.9	-24
NF	—	—	—	—	—
NS	-1.37E-02	276.	121	2.66E-02	-55

Table D–882. Minimum and maximum of of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-189.	184.	-188.	184.
A2	-189.	184.	-188.	184.
FD	-121.	121.	-121.	121.
L1	-247.	247.	-246.	246.
L3	-247.	247.	-246.	246.
L4	-1.11E+03	993.	-1.04E+03	932.
NF	—	—	—	—
NS	-273.	273.	-271.	271.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-442. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

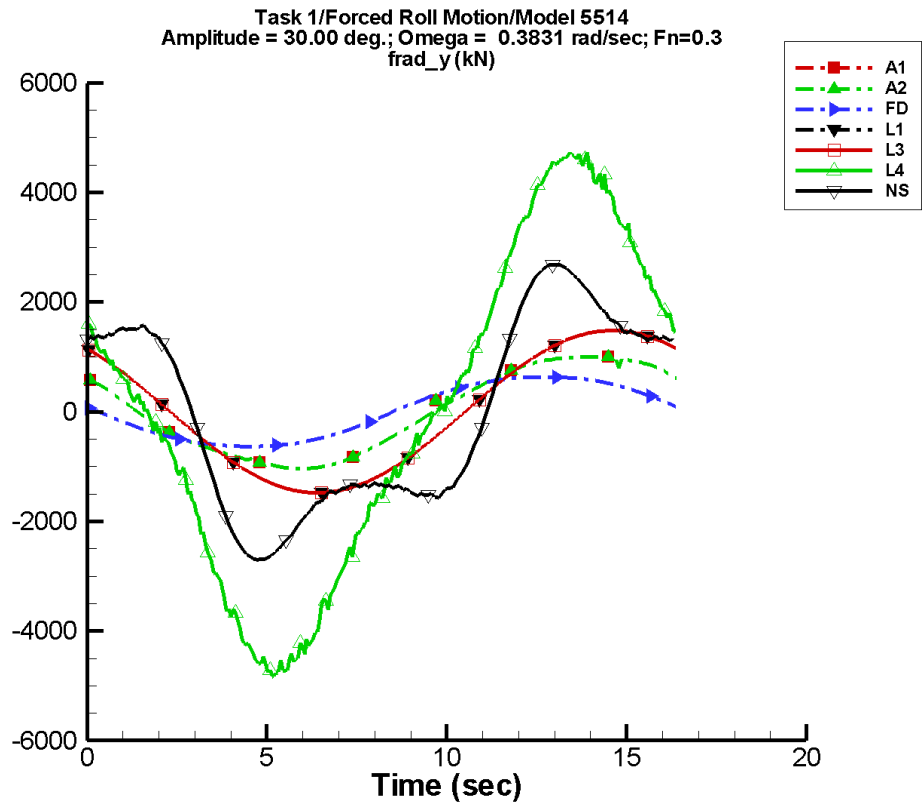
Table D–883. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.644	550.	149	1.64	-149
A2	0.644	550.	149	1.64	-149
FD	-7.48E-02	356.	173	0.614	-112
L1	-2.84E-02	740.	129	3.47E-03	-68
L3	-4.49E-02	740.	129	1.27E-03	-100
L4	-11.8	1.85E+03	151	10.3	-66
NF	—	—	—	—	—
NS	-0.200	876.	122	4.07E-02	62

Table D–884. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-557.	538.	-554.	538.
A2	-557.	538.	-554.	538.
FD	-353.	353.	-352.	352.
L1	-740.	740.	-739.	739.
L3	-740.	740.	-739.	739.
L4	-2.07E+03	2.04E+03	-1.98E+03	1.97E+03
NF	—	—	—	—
NS	-835.	836.	-826.	827.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-443. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

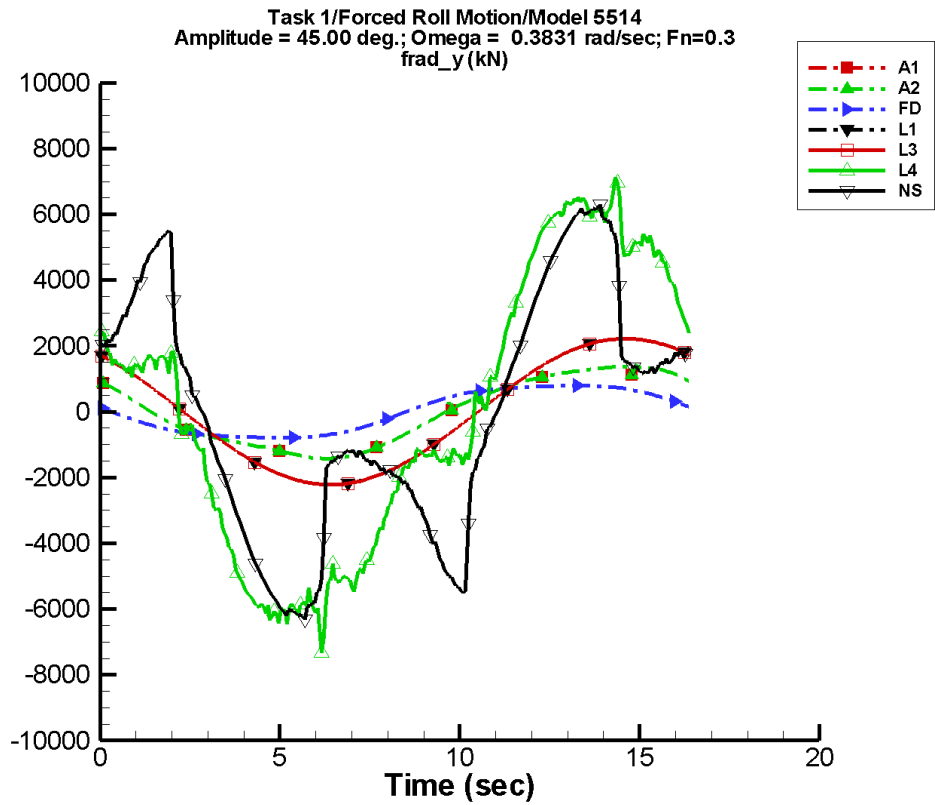
Table D–885. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.392	1.03E+03	147	6.43	-158
A2	0.392	1.03E+03	147	6.43	-158
FD	-0.584	656.	173	4.81	-112
L1	-2.95E-02	1.48E+03	129	3.81E-03	-52
L3	-4.69E-02	1.48E+03	129	2.24E-03	-67
L4	3.13	4.03E+03	149	54.9	-6
NF	—	—	—	—	—
NS	-1.64	2.21E+03	127	0.985	110

Table D–886. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.04E+03	1.00E+03	-1.04E+03	1.00E+03
A2	-1.04E+03	1.00E+03	-1.04E+03	1.00E+03
FD	-634.	634.	-633.	632.
L1	-1.48E+03	1.48E+03	-1.48E+03	1.48E+03
L3	-1.48E+03	1.48E+03	-1.48E+03	1.48E+03
L4	-4.84E+03	4.73E+03	-4.73E+03	4.66E+03
NF	—	—	—	—
NS	-2.70E+03	2.69E+03	-2.66E+03	2.65E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-444. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

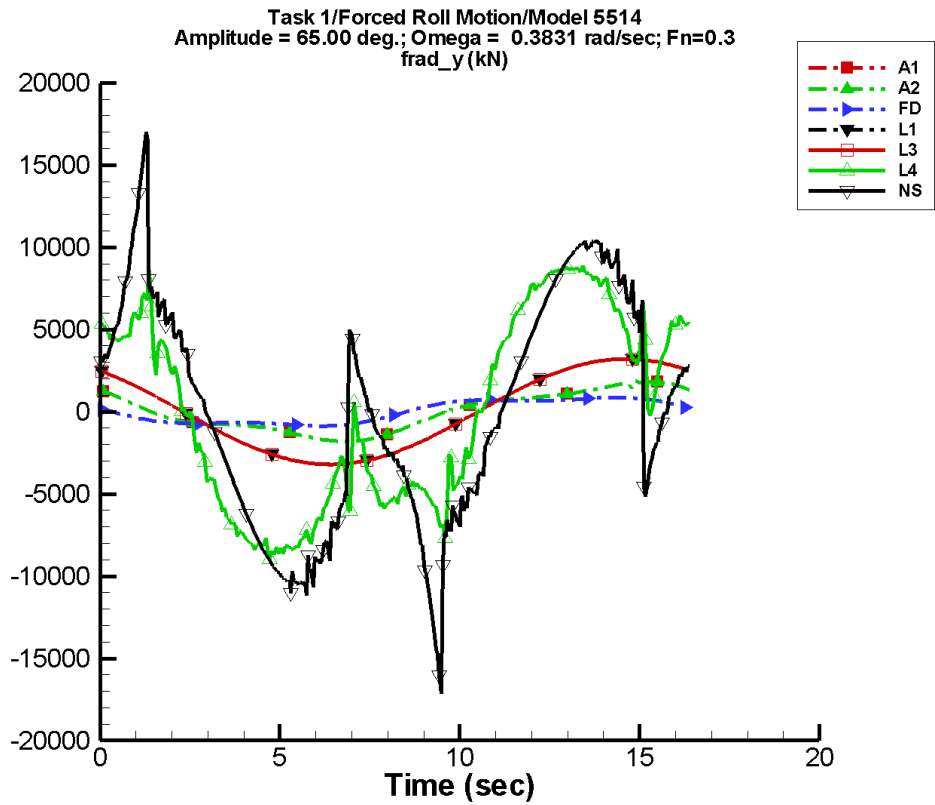
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-1.59	1.38E+03	145	17.2	-162
A2	-1.59	1.38E+03	145	17.2	-162
FD	-1.90	852.	172	15.7	-112
L1	-3.15E-02	2.22E+03	129	3.50E-03	-65
L3	-4.92E-02	2.22E+03	129	4.23E-03	-111
L4	32.7	5.74E+03	141	127.	-48
NF	—	—	—	—	—
NS	-5.72	4.25E+03	125	3.72	113

Table D–888. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.42E+03	1.43E+03	-1.42E+03	1.35E+03
A2	-1.42E+03	1.43E+03	-1.42E+03	1.35E+03
FD	-789.	789.	-788.	788.
L1	-2.22E+03	2.22E+03	-2.22E+03	2.22E+03
L3	-2.22E+03	2.22E+03	-2.22E+03	2.22E+03
L4	-7.32E+03	7.13E+03	-6.19E+03	6.40E+03
NF	—	—	—	—
NS	-6.32E+03	6.30E+03	-6.14E+03	6.13E+03



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

Figure D-445. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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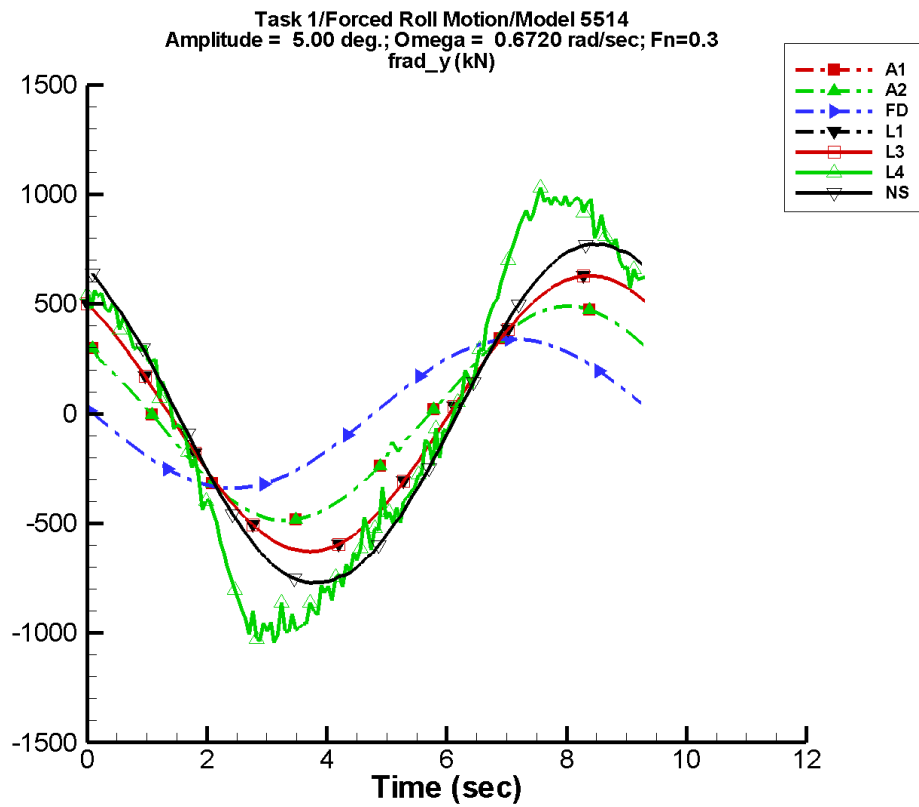
Table D–889. Coefficients of the Fourier fit  $a_0+a_1 \sin (\omega t + \Phi_1)+a_2 \sin (2\omega t + \Phi_2)+\dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-7.95	1.57E+03	139	44.0	-165
A2	-7.95	1.57E+03	139	44.0	-165
FD	-5.28	884.	170	44.1	-112
L1	-3.28E-02	3.21E+03	129	6.30E-03	-65
L3	-5.33E-02	3.21E+03	129	7.80E-03	-100
L4	233.	7.48E+03	133	369.	10
NF	—	—	—	—	—
NS	-14.0	7.36E+03	119	50.2	80

Table D–890. Minimum and maximum of of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.82E+03	1.84E+03	-1.80E+03	1.78E+03
A2	-1.82E+03	1.84E+03	-1.80E+03	1.78E+03
FD	-867.	867.	-868.	860.
L1	-3.21E+03	3.21E+03	-3.20E+03	3.20E+03
L3	-3.21E+03	3.21E+03	-3.20E+03	3.20E+03
L4	-8.97E+03	8.89E+03	-8.47E+03	8.69E+03
NF	—	—	—	—
NS	-1.72E+04	1.71E+04	-1.42E+04	1.44E+04

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

Figure D-446. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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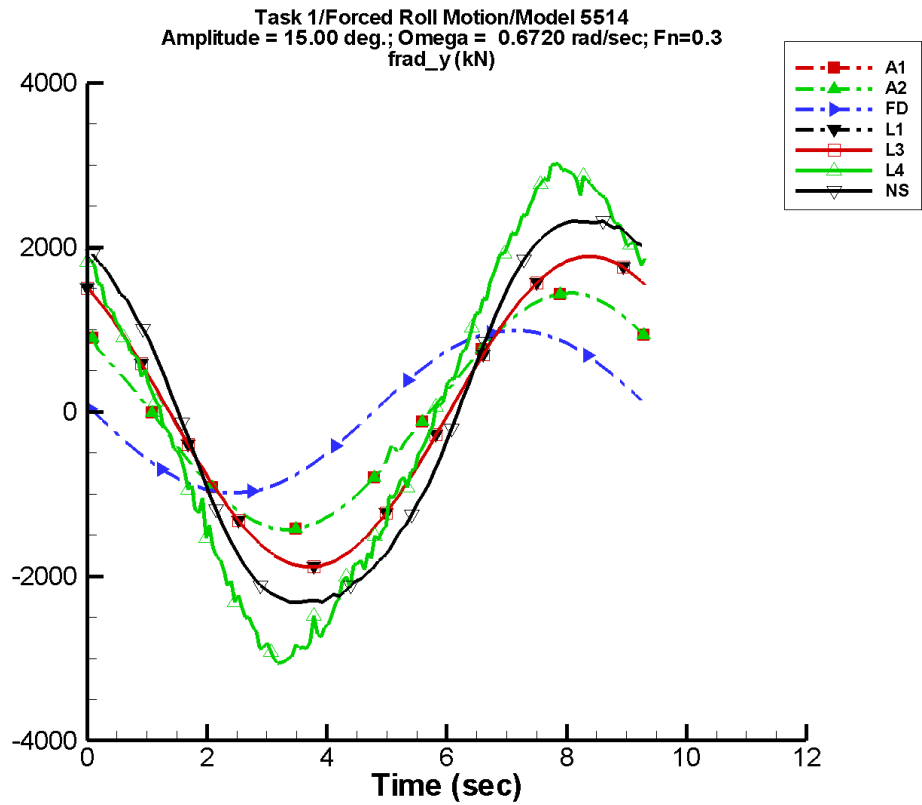
Table D–891. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	0.725	480.	141	2.17	97
A2	0.725	480.	141	2.17	97
FD	-2.35E-02	340.	176	4.62E-02	-37
L1	-2.70E-02	629.	127	3.45E-03	-19
L3	-4.46E-02	629.	127	1.58E-03	-93
L4	4.11	924.	132	19.7	-9
NF	—	—	—	—	—
NS	0.295	778.	122	0.322	-23

Table D–892. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-487.	490.	-481.	484.
A2	-487.	490.	-481.	484.
FD	-340.	340.	-336.	340.
L1	-629.	629.	-627.	627.
L3	-629.	629.	-627.	627.
L4	-1.04E+03	1.03E+03	-986.	975.
NF	—	—	—	—
NS	-771.	772.	-765.	766.

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

Figure D-447. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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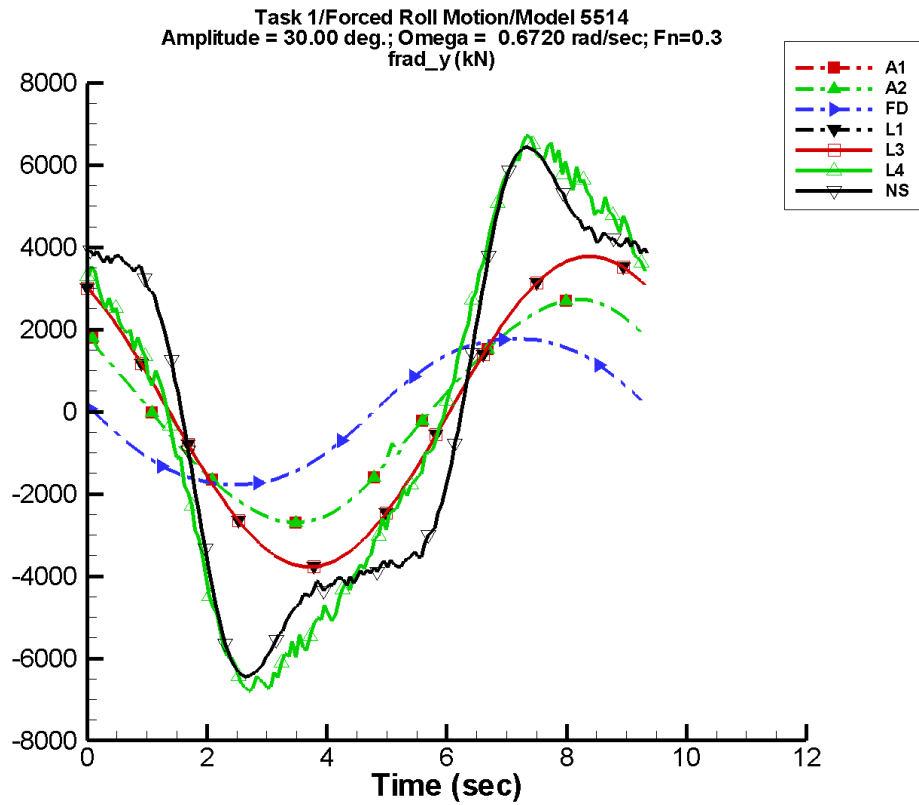
Table D–893. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.66	1.42E+03	140	6.90	107
A2	1.66	1.42E+03	140	6.90	107
FD	-0.642	997.	176	1.23	-38
L1	-2.92E-02	1.89E+03	127	4.89E-03	-56
L3	-4.59E-02	1.89E+03	127	4.85E-03	-124
L4	14.2	2.77E+03	137	44.7	1
NF	—	—	—	—	—
NS	0.484	2.43E+03	124	0.843	-5

Table D–894. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.43E+03	1.44E+03	-1.42E+03	1.42E+03
A2	-1.43E+03	1.44E+03	-1.42E+03	1.42E+03
FD	-989.	989.	-978.	990.
L1	-1.89E+03	1.89E+03	-1.88E+03	1.88E+03
L3	-1.89E+03	1.89E+03	-1.88E+03	1.88E+03
L4	-3.06E+03	3.01E+03	-2.99E+03	2.94E+03
NF	—	—	—	—
NS	-2.32E+03	2.32E+03	-2.31E+03	2.31E+03

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

Figure D-448. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

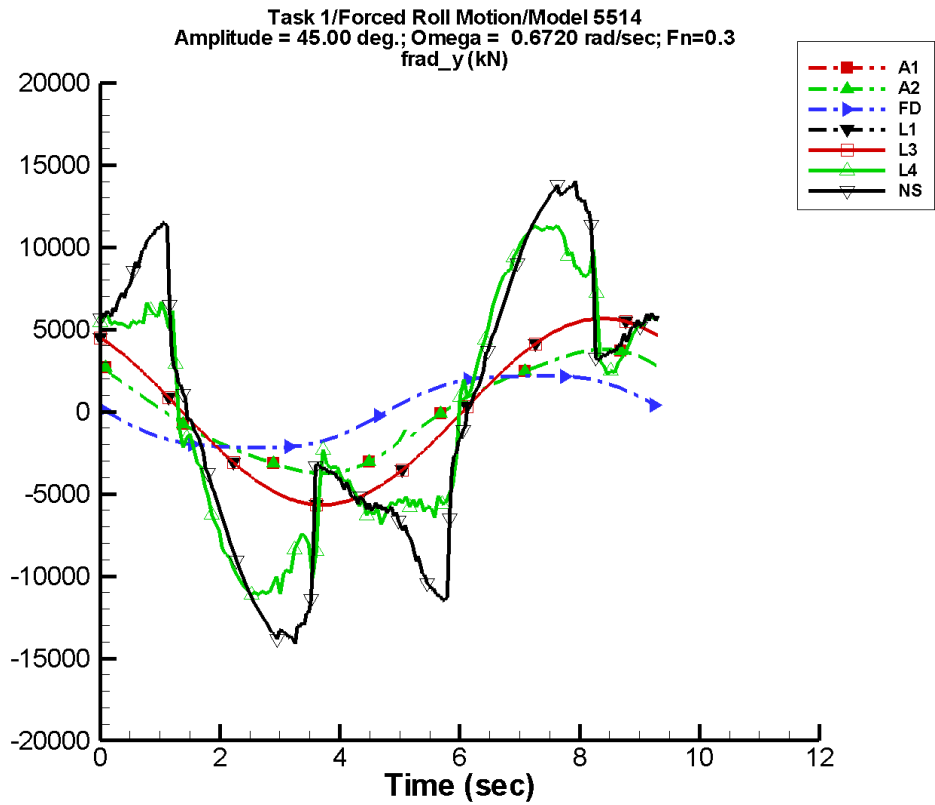
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-8.18E-02	2.67E+03	139	18.7	131
A2	-8.18E-02	2.67E+03	139	18.7	131
FD	-5.03	1.84E+03	176	9.67	-38
L1	-3.57E-02	3.78E+03	127	1.31E-02	-83
L3	-5.03E-02	3.78E+03	127	1.54E-02	-123
L4	44.7	6.11E+03	139	203.	-6
NF	—	—	—	—	—
NS	-2.40	5.78E+03	129	3.38	52

Table D–896. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-2.70E+03	2.73E+03	-2.66E+03	2.69E+03
A2	-2.70E+03	2.73E+03	-2.66E+03	2.69E+03
FD	-1.77E+03	1.77E+03	-1.76E+03	1.78E+03
L1	-3.78E+03	3.78E+03	-3.76E+03	3.76E+03
L3	-3.78E+03	3.78E+03	-3.76E+03	3.76E+03
L4	-6.81E+03	6.71E+03	-6.64E+03	6.43E+03
NF	—	—	—	—
NS	-6.45E+03	6.44E+03	-6.36E+03	6.34E+03



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

Figure D-449. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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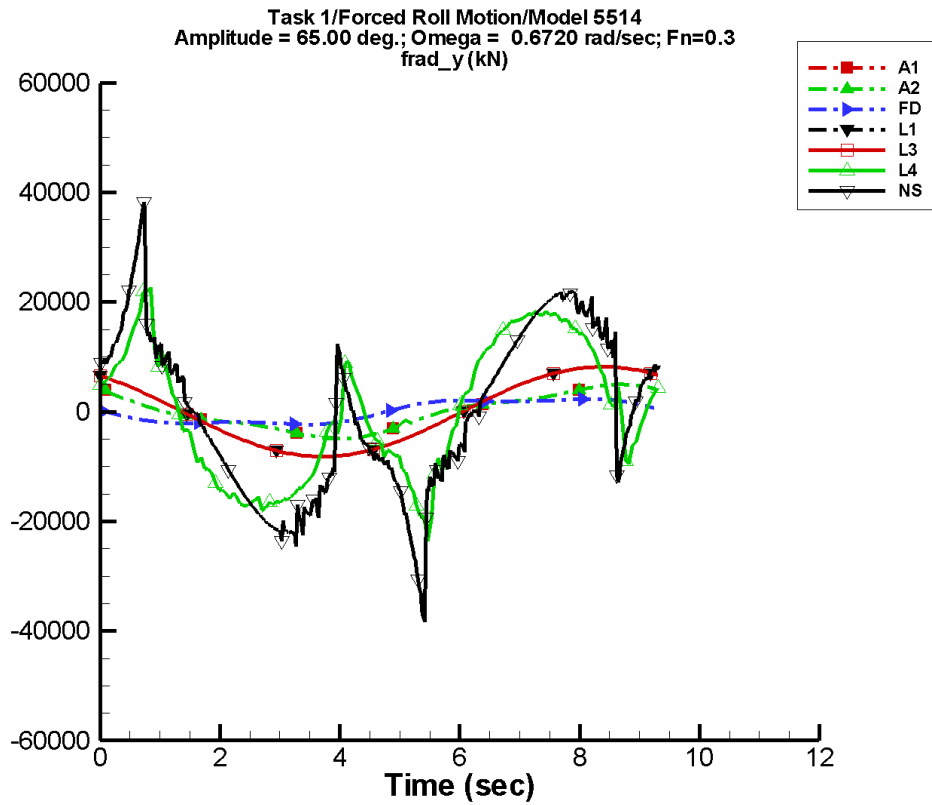
Table D–897. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-8.19	3.64E+03	136	44.6	149
A2	-8.19	3.64E+03	136	44.6	149
FD	-16.4	2.38E+03	176	31.5	-38
L1	-4.66E-02	5.67E+03	127	2.46E-02	-80
L3	-5.76E-02	5.67E+03	127	2.35E-02	-112
L4	215.	9.04E+03	134	507.	1
NF	—	—	—	—	—
NS	-10.7	1.03E+04	127	9.15	49

Table D–898. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-3.74E+03	3.79E+03	-3.68E+03	3.73E+03
A2	-3.74E+03	3.79E+03	-3.68E+03	3.73E+03
FD	-2.19E+03	2.19E+03	-2.18E+03	2.19E+03
L1	-5.66E+03	5.66E+03	-5.64E+03	5.64E+03
L3	-5.66E+03	5.66E+03	-5.64E+03	5.64E+03
L4	-1.11E+04	1.13E+04	-1.10E+04	1.12E+04
NF	—	—	—	—
NS	-1.41E+04	1.40E+04	-1.36E+04	1.35E+04

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

Figure D-450. Time history of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

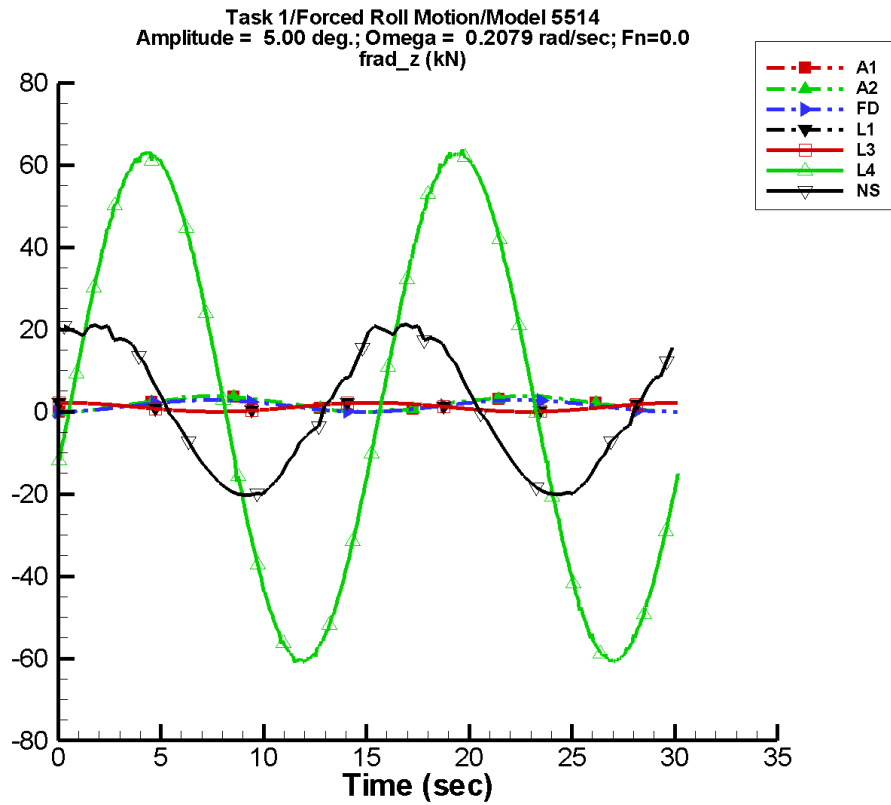
Table D–899. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	-32.4	4.30E+03	130	112.	160
A2	-32.4	4.30E+03	130	112.	160
FD	-45.9	2.44E+03	176	88.6	-39
L1	-6.40E-02	8.18E+03	127	4.19E-02	-92
L3	-7.03E-02	8.18E+03	127	4.47E-02	-124
L4	686.	1.27E+04	136	1.26E+03	16
NF	—	—	—	—	—
NS	-51.3	1.62E+04	121	90.1	65

Table D–900. Minimum and maximum of  $F_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.93E+03	5.00E+03	-4.81E+03	4.87E+03
A2	-4.93E+03	5.00E+03	-4.81E+03	4.87E+03
FD	-2.32E+03	2.33E+03	-2.27E+03	2.27E+03
L1	-8.18E+03	8.18E+03	-8.15E+03	8.15E+03
L3	-8.18E+03	8.18E+03	-8.15E+03	8.15E+03
L4	-2.36E+04	2.27E+04	-1.70E+04	1.78E+04
NF	—	—	—	—
NS	-3.84E+04	3.82E+04	-3.18E+04	3.22E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-451. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

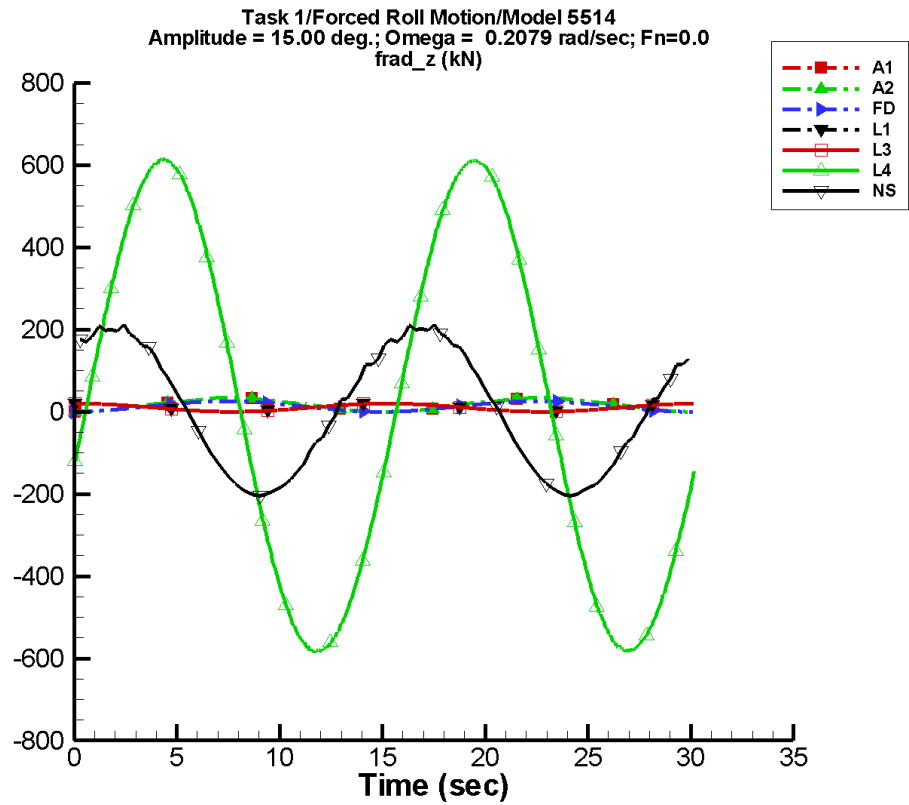
Table D-901. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.87	9.21E-03	169	1.87	-90
A2	1.87	9.21E-03	169	1.87	-90
FD	1.42	8.64E-06	21	1.43	-86
L1	1.10	6.23E-04	-9	1.10	87
L3	1.10	6.22E-04	-9	1.10	87
L4	0.955	7.94E-02	-136	61.6	-14
NF	—	—	—	—	—
NS	0.567	6.44E-02	-13	20.8	51

Table D-902. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.117	4.63	-9.30E-03	3.86
A2	-0.117	4.63	-9.30E-03	3.86
FD	-3.45E-03	2.85	2.02E-03	2.84
L1	-6.52E-04	2.21	1.06E-03	2.20
L3	-6.88E-04	2.21	1.05E-03	2.20
L4	-61.0	63.9	-60.5	62.7
NF	—	—	—	—
NS	-20.6	21.2	-19.9	20.3

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-452. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

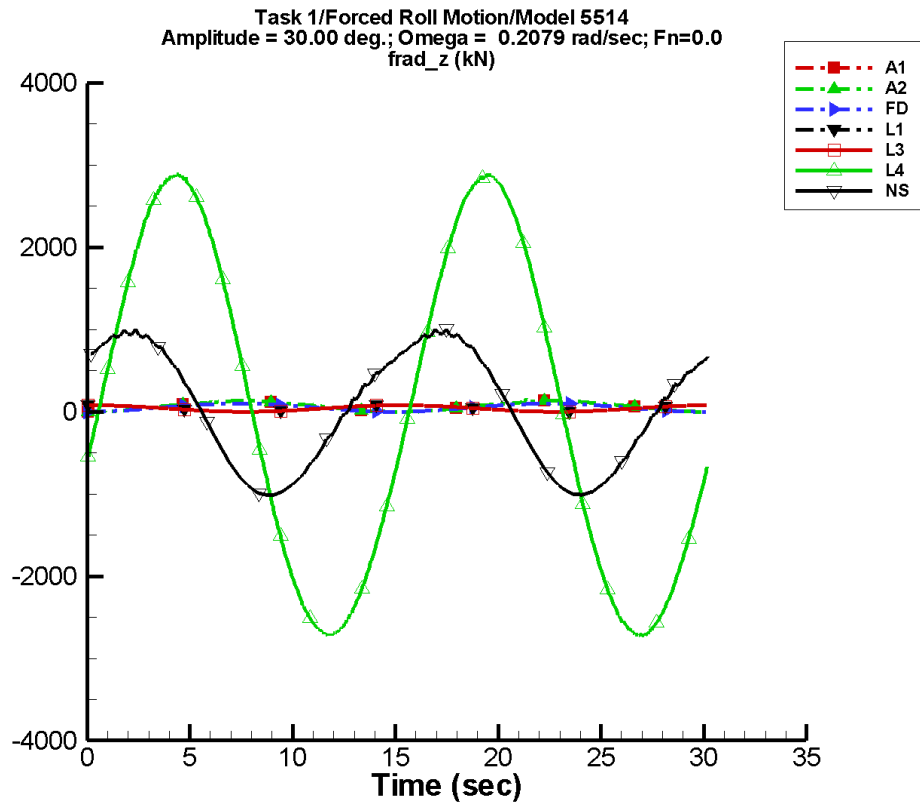
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	16.7	4.56E-02	171	16.6	-90
A2	16.7	4.56E-02	171	16.6	-90
FD	12.7	7.21E-04	21	12.7	-86
L1	9.92	2.02E-03	-21	9.92	87
L3	9.92	2.01E-03	-21	9.92	87
L4	6.99	1.01	-108	596.	-13
NF	—	—	—	—	—
NS	5.32	0.625	-13	203.	51

Table D-904. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.01	41.2	-9.14E-02	34.4
A2	-1.01	41.2	-9.14E-02	34.4
FD	-3.10E-02	25.4	1.89E-02	25.3
L1	-3.04E-03	19.8	1.26E-02	19.8
L3	-3.07E-03	19.8	1.26E-02	19.8
L4	-586.	615.	-582.	612.
NF	—	—	—	—
NS	-208.	213.	-198.	198.



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-453. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

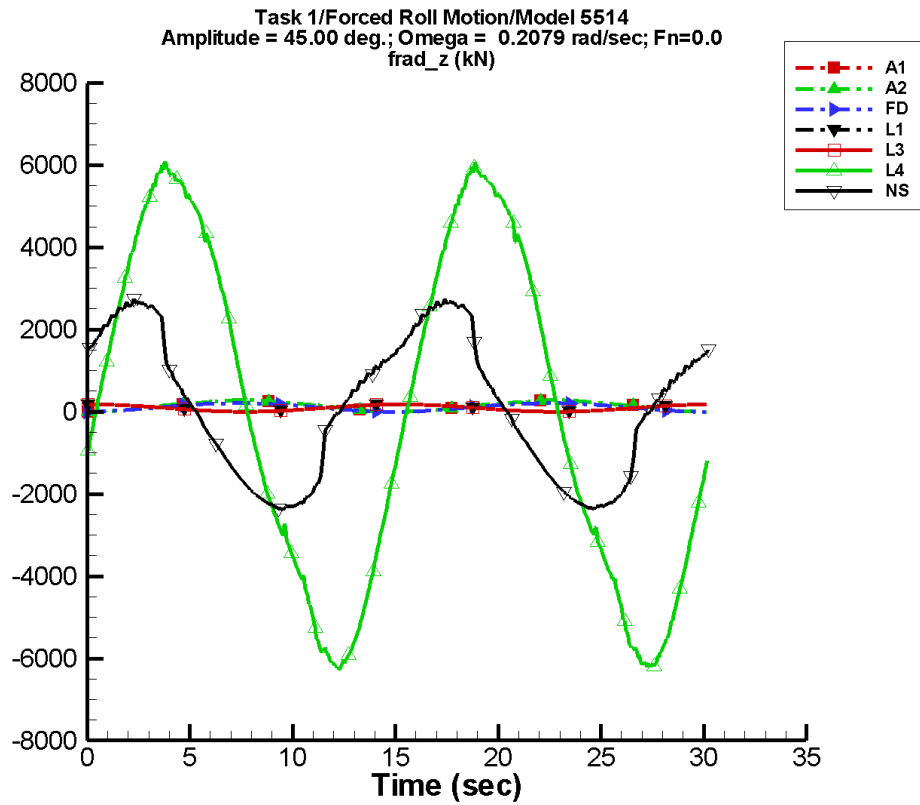
Table D-905. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	65.2	0.134	170	64.3	-90
A2	65.2	0.134	170	64.3	-90
FD	49.5	1.14E-02	21	49.1	-86
L1	39.7	4.83E-03	-35	39.7	87
L3	39.7	4.84E-03	-35	39.7	87
L4	16.7	9.29	-76	2.78E+03	-12
NF	—	—	—	—	—
NS	26.1	2.94	-14	968.	52

Table D-906. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.09	160.	-0.362	133.
A2	-4.09	160.	-0.362	133.
FD	-0.124	98.0	8.47E-02	97.8
L1	-9.08E-03	79.4	5.37E-02	79.3
L3	-8.83E-03	79.4	5.37E-02	79.3
L4	-2.72E+03	2.90E+03	-2.71E+03	2.87E+03
NF	—	—	—	—
NS	-1.03E+03	1.01E+03	-1.01E+03	955.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-454. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

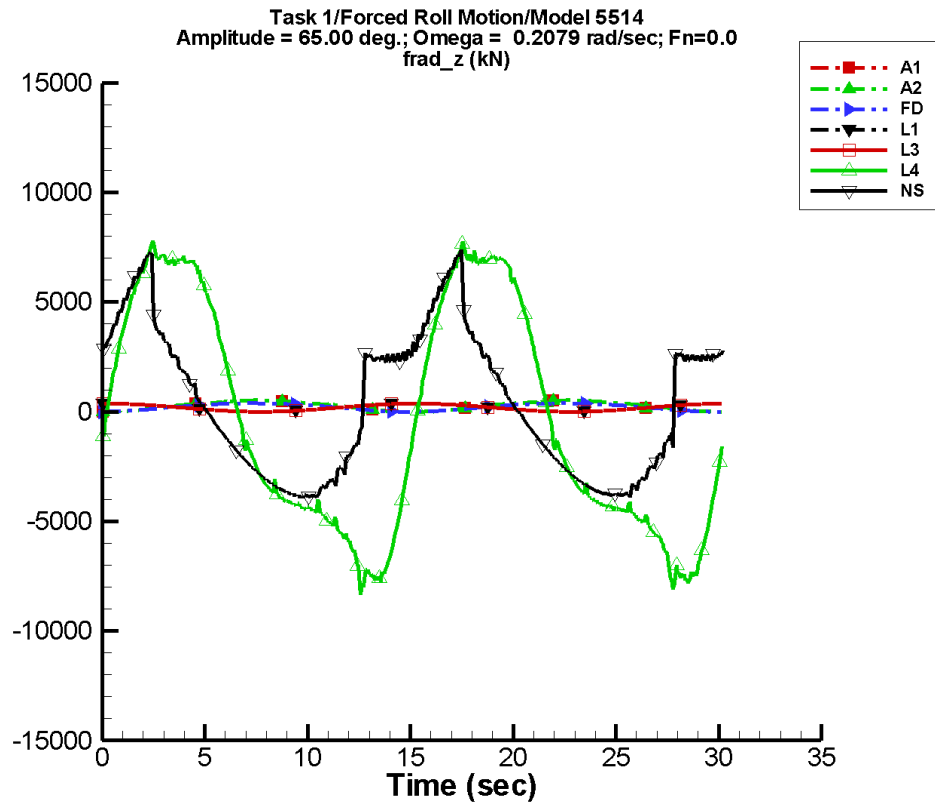
Table D-907. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	140.	0.232	167	136.	-90
A2	140.	0.232	167	136.	-90
FD	107.	5.61E-02	21	104.	-86
L1	89.3	8.72E-03	-45	89.3	87
L3	89.3	8.80E-03	-44	89.3	87
L4	-60.6	18.4	74	5.71E+03	-11
NF	—	—	—	—	—
NS	95.6	7.17	-13	2.36E+03	52

Table D-908. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-9.22	340.	-0.775	282.
A2	-9.22	340.	-0.775	282.
FD	-0.279	208.	0.224	208.
L1	-1.75E-02	179.	0.123	178.
L3	-1.75E-02	179.	0.123	178.
L4	-6.28E+03	6.09E+03	-6.19E+03	5.93E+03
NF	—	—	—	—
NS	-2.42E+03	2.76E+03	-2.37E+03	2.65E+03

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-455. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

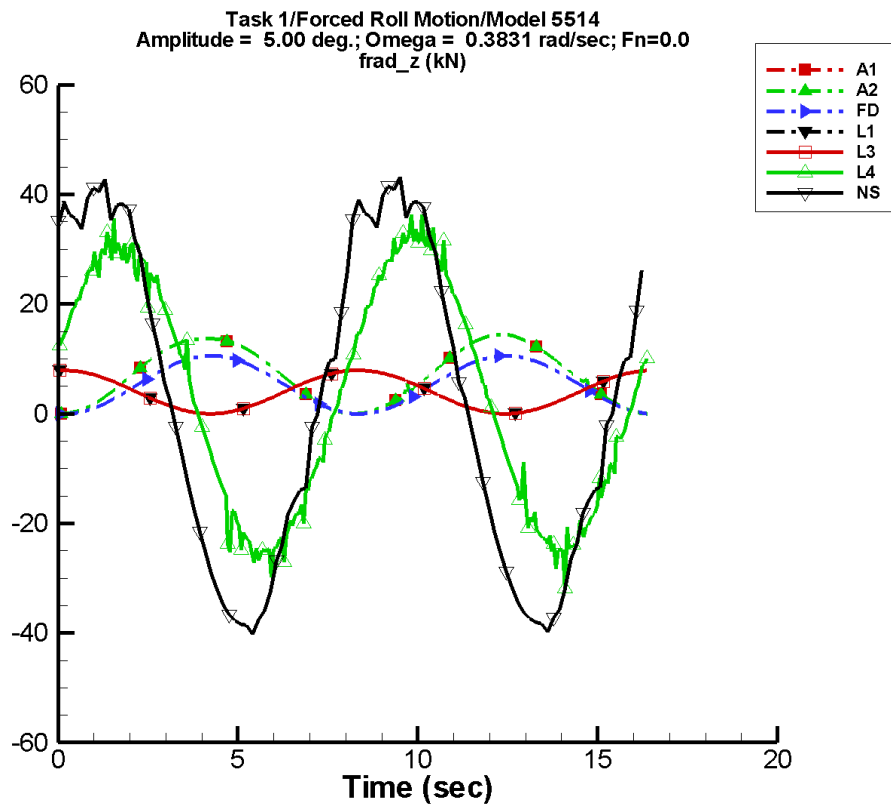
Table D-909. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	268.	0.305	156	252.	-90
A2	268.	0.305	156	252.	-90
FD	204.	0.231	21	193.	-85
L1	186.	1.59E-02	-53	186.	87
L3	186.	1.59E-02	-53	186.	87
L4	-405.	73.7	46	6.81E+03	3
NF	—	—	—	—	—
NS	300.	9.22	21	4.43E+03	54

Table D-910. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-19.2	637.	-1.45	522.
A2	-19.2	637.	-1.45	522.
FD	-0.583	385.	0.473	385.
L1	-3.32E-02	373.	0.261	372.
L3	-3.32E-02	373.	0.261	372.
L4	-8.33E+03	7.80E+03	-7.66E+03	7.38E+03
NF	—	—	—	—
NS	-4.01E+03	7.37E+03	-3.88E+03	6.78E+03

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

Figure D-456. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

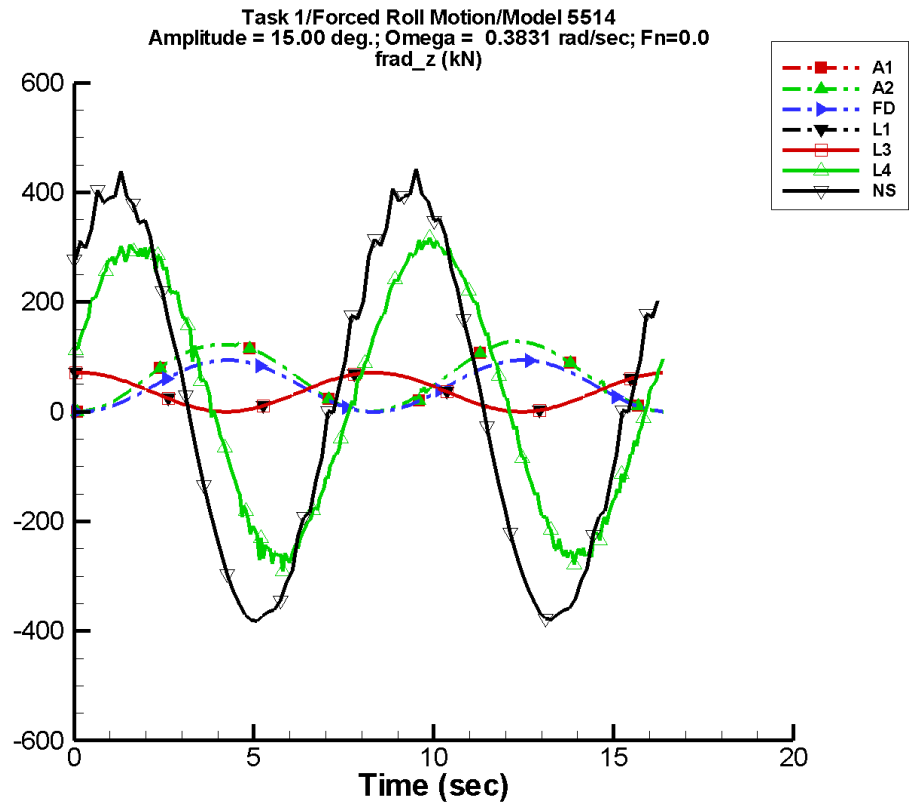
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.05	2.80E-02	147	7.03	-92
A2	7.05	2.80E-02	147	7.03	-92
FD	5.26	8.10E-05	-65	5.30	-97
L1	3.96	5.44E-03	-31	3.96	84
L3	3.96	5.43E-03	-31	3.96	84
L4	3.32	0.637	-155	28.3	16
NF	—	—	—	—	—
NS	2.02	8.79E-02	-143	40.3	42

Table D-912. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-4.22E-03	14.8	-1.24E-02	14.3
A2	-4.22E-03	14.8	-1.24E-02	14.3
FD	-3.90E-02	10.6	-3.63E-02	10.5
L1	-6.16E-03	7.92	1.51E-02	7.92
L3	-6.14E-03	7.92	1.52E-02	7.92
L4	-31.9	36.4	-25.7	32.9
NF	—	—	—	—
NS	-40.2	43.5	-37.4	40.0



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

Figure D-457. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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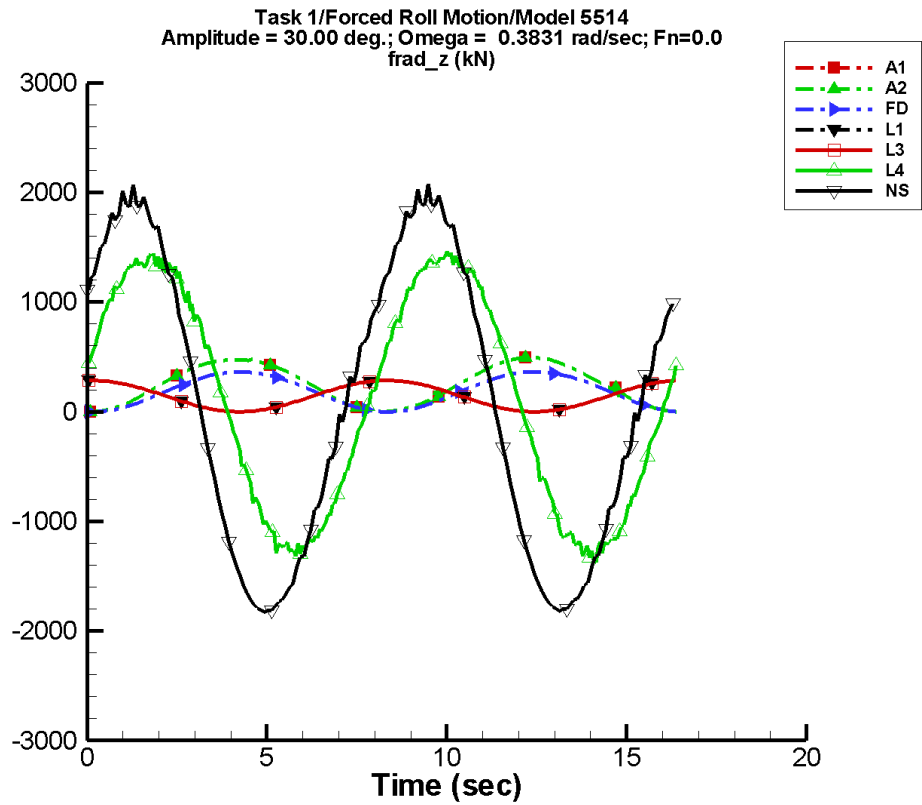
Table D-913. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	62.9	0.219	151	62.6	-92
A2	62.9	0.219	151	62.6	-92
FD	47.0	6.48E-03	-65	47.2	-97
L1	35.6	1.65E-02	-28	35.6	84
L3	35.6	1.65E-02	-28	35.6	84
L4	27.1	4.62	-138	282.	16
NF	—	—	—	—	—
NS	16.9	0.836	-144	392.	42

Table D-914. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-6.30E-02	132.	-0.137	127.
A2	-6.30E-02	132.	-0.137	127.
FD	-0.351	94.1	-0.326	93.4
L1	-2.62E-02	71.2	0.165	71.3
L3	-2.60E-02	71.2	0.165	71.3
L4	-292.	317.	-267.	307.
NF	—	—	—	—
NS	-382.	445.	-366.	397.

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

Figure D-458. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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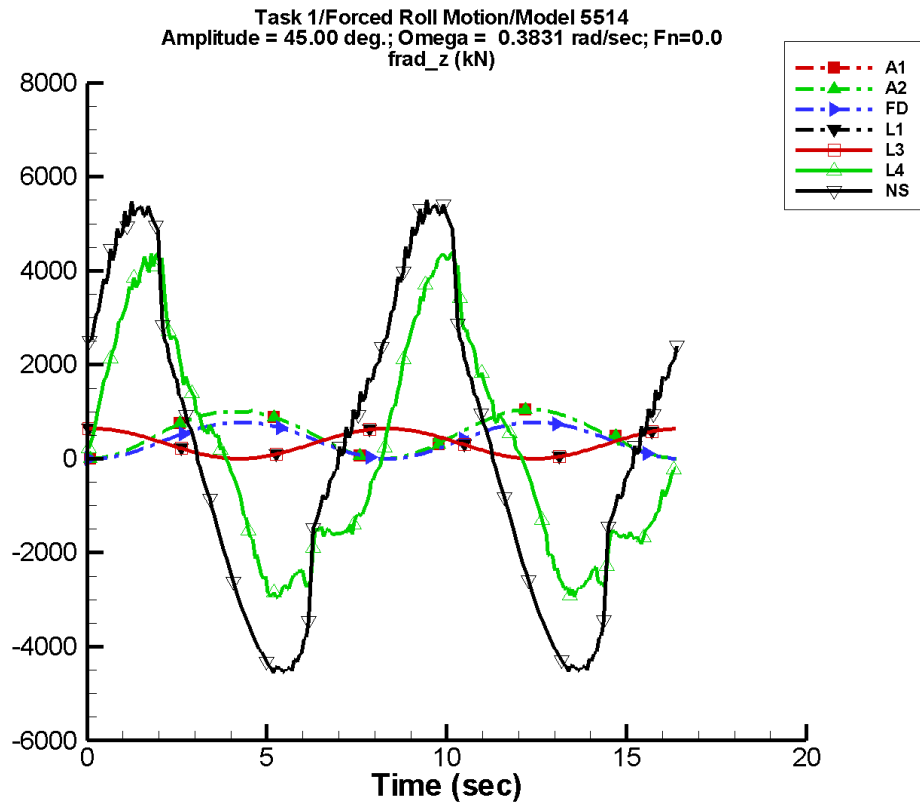
Table D-915. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	245.	0.799	149	242.	-92
A2	245.	0.799	149	242.	-92
FD	183.	0.102	-65	182.	-97
L1	142.	3.41E-02	-23	143.	84
L3	142.	3.41E-02	-23	143.	84
L4	91.6	18.1	-94	1.36E+03	14
NF	—	—	—	—	—
NS	67.0	3.71	-141	1.85E+03	43

Table D-916. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.285	510.	-0.499	492.
A2	-0.285	510.	-0.499	492.
FD	-1.40	364.	-1.29	361.
L1	-7.40E-02	285.	0.689	285.
L3	-7.50E-02	285.	0.689	285.
L4	-1.37E+03	1.46E+03	-1.29E+03	1.41E+03
NF	—	—	—	—
NS	-1.83E+03	2.09E+03	-1.79E+03	1.94E+03

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

Figure D-459. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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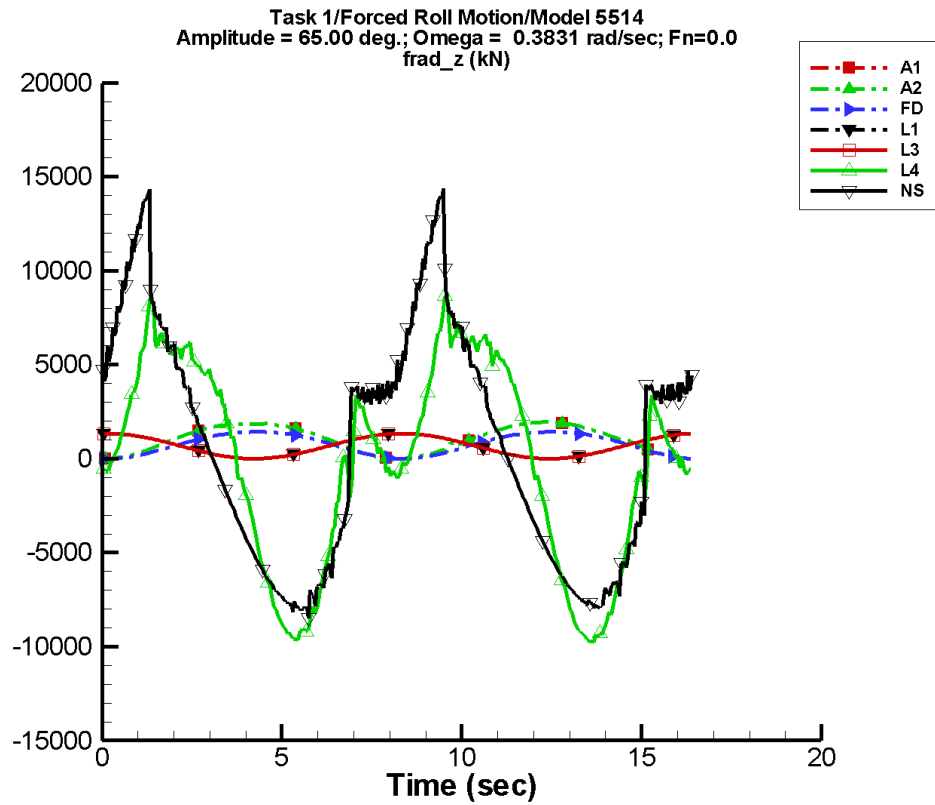
Table D-917. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	528.	1.61	144	513.	-92
A2	528.	1.61	144	513.	-92
FD	395.	0.502	-65	387.	-97
L1	320.	5.32E-02	-18	321.	84
L3	320.	5.33E-02	-18	321.	84
L4	181.	30.0	10	3.16E+03	13
NF	—	—	—	—	—
NS	208.	8.87	-137	4.47E+03	43

Table D-918. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.666	1.09E+03	-0.845	1.04E+03
A2	-0.666	1.09E+03	-0.845	1.04E+03
FD	-3.16	772.	-2.87	767.
L1	-0.147	641.	1.57	642.
L3	-0.148	641.	1.57	642.
L4	-2.95E+03	4.41E+03	-2.88E+03	4.31E+03
NF	—	—	—	—
NS	-4.56E+03	5.54E+03	-4.48E+03	5.38E+03

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

Figure D-460. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

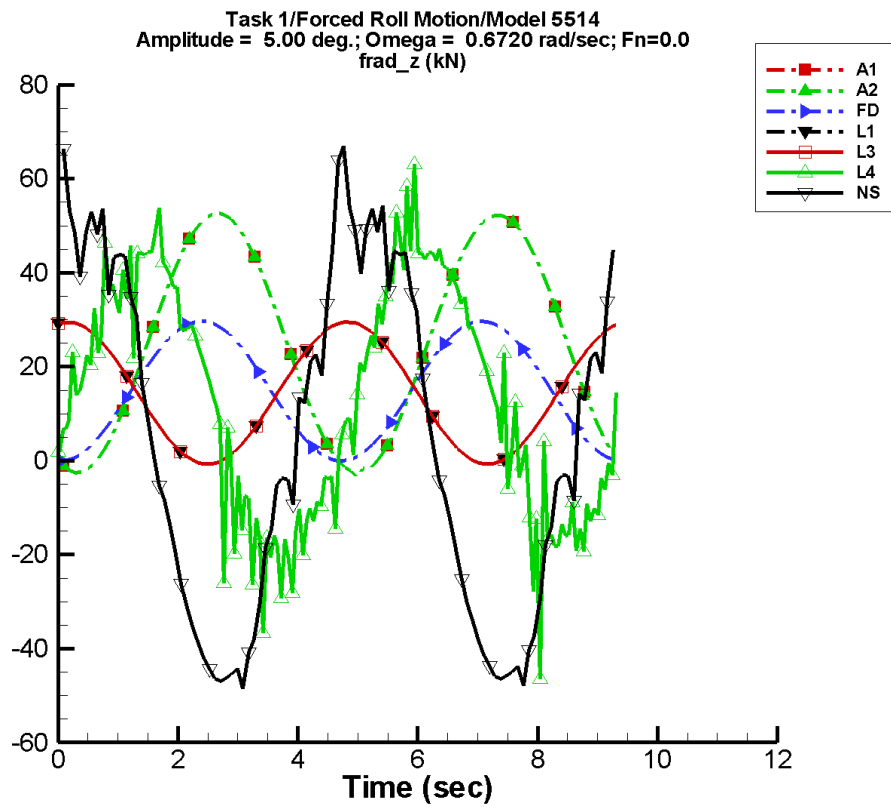
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.01E+03	2.79	130	949.	-92
A2	1.01E+03	2.79	130	949.	-92
FD	755.	2.07	-66	715.	-98
L1	669.	8.10E-02	-12	669.	84
L3	669.	8.14E-02	-12	669.	84
L4	-312.	364.	-100	6.61E+03	20
NF	—	—	—	—	—
NS	646.	19.1	156	8.48E+03	45

Table D-920. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.42	2.02E+03	-0.627	1.93E+03
A2	-1.42	2.02E+03	-0.627	1.93E+03
FD	-6.59	1.43E+03	-5.83	1.42E+03
L1	-0.280	1.34E+03	3.30	1.34E+03
L3	-0.279	1.34E+03	3.30	1.34E+03
L4	-9.77E+03	8.76E+03	-9.59E+03	7.29E+03
NF	—	—	—	—
NS	-8.49E+03	1.45E+04	-7.97E+03	1.34E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-461. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

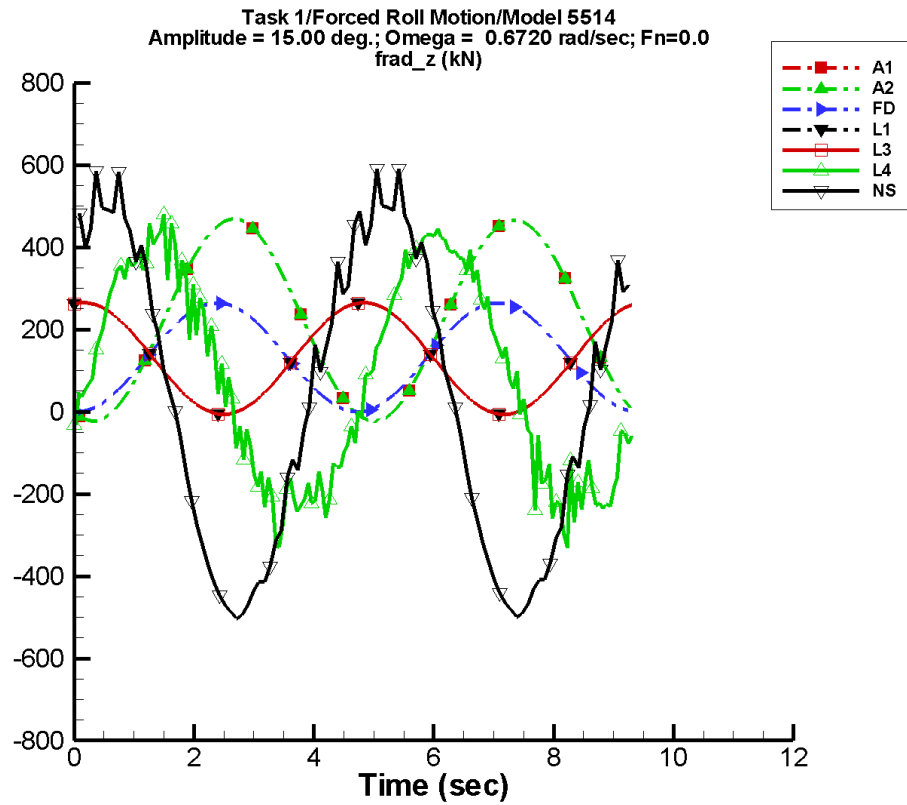
Table D-921. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	24.9	8.08E-02	8	27.5	-115
A2	24.9	8.08E-02	8	27.5	-115
FD	14.8	3.41E-04	-44	14.9	-94
L1	14.4	7.13E-03	-56	15.1	78
L3	14.4	7.15E-03	-55	15.1	78
L4	12.6	2.52	169	32.3	-18
NF	—	—	—	—	—
NS	4.67	0.339	-168	50.4	57

Table D-922. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-3.47	52.6	-2.09	51.3
A2	-3.47	52.6	-2.09	51.3
FD	-3.50E-02	29.7	0.130	29.4
L1	-0.734	29.5	-0.478	29.5
L3	-0.735	29.5	-0.478	29.5
L4	-46.4	63.0	-21.4	48.9
NF	—	—	—	—
NS	-48.5	68.0	-45.9	59.2

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-462. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

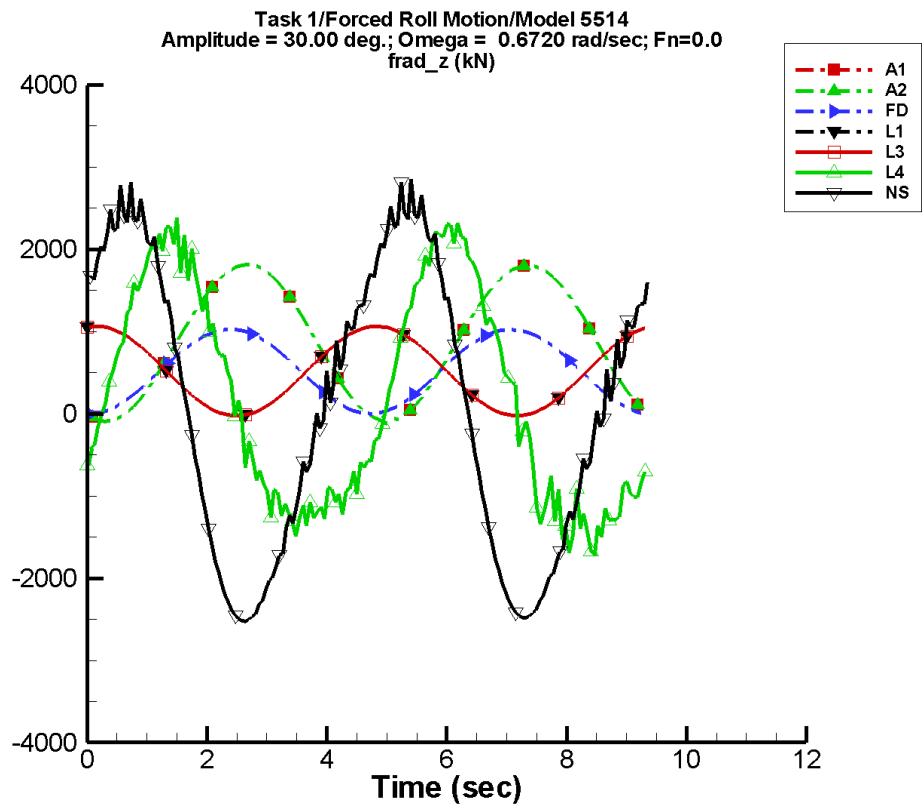
Table D-923. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	222.	0.635	-2	245.	-115
A2	222.	0.635	-2	245.	-115
FD	133.	2.75E-02	-34	132.	-94
L1	129.	2.08E-02	-52	136.	78
L3	129.	2.08E-02	-52	136.	78
L4	81.9	18.0	167	337.	-16
NF	—	—	—	—	—
NS	32.4	3.18	-168	502.	55

Table D-924. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-30.9	469.	-18.8	457.
A2	-30.9	469.	-18.8	457.
FD	-0.315	265.	1.19	262.
L1	-6.53	265.	-4.27	265.
L3	-6.53	265.	-4.27	265.
L4	-331.	481.	-240.	422.
NF	—	—	—	—
NS	-505.	601.	-471.	515.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-463. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

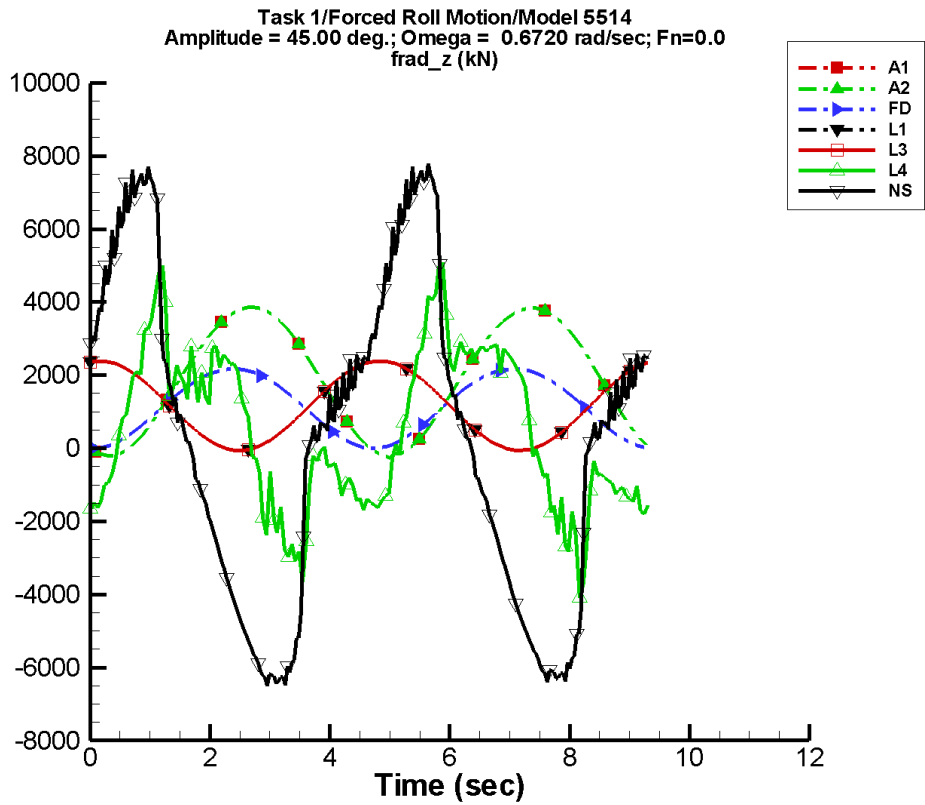
Table D-925. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	866.	2.96	-6	951.	-115
A2	866.	2.96	-6	951.	-115
FD	516.	0.433	-33	512.	-94
L1	517.	3.97E-02	-48	544.	78
L3	517.	3.93E-02	-48	544.	78
L4	166.	69.0	-51	1.80E+03	-16
NF	—	—	—	—	—
NS	92.0	15.1	-170	2.39E+03	53

Table D-926. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-123.	1.81E+03	-75.0	1.77E+03
A2	-123.	1.81E+03	-75.0	1.77E+03
FD	-1.26	1.02E+03	4.95	1.01E+03
L1	-26.0	1.06E+03	-17.1	1.06E+03
L3	-26.0	1.06E+03	-17.1	1.06E+03
L4	-1.72E+03	2.39E+03	-1.44E+03	2.21E+03
NF	—	—	—	—
NS	-2.52E+03	2.90E+03	-2.47E+03	2.57E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-464. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

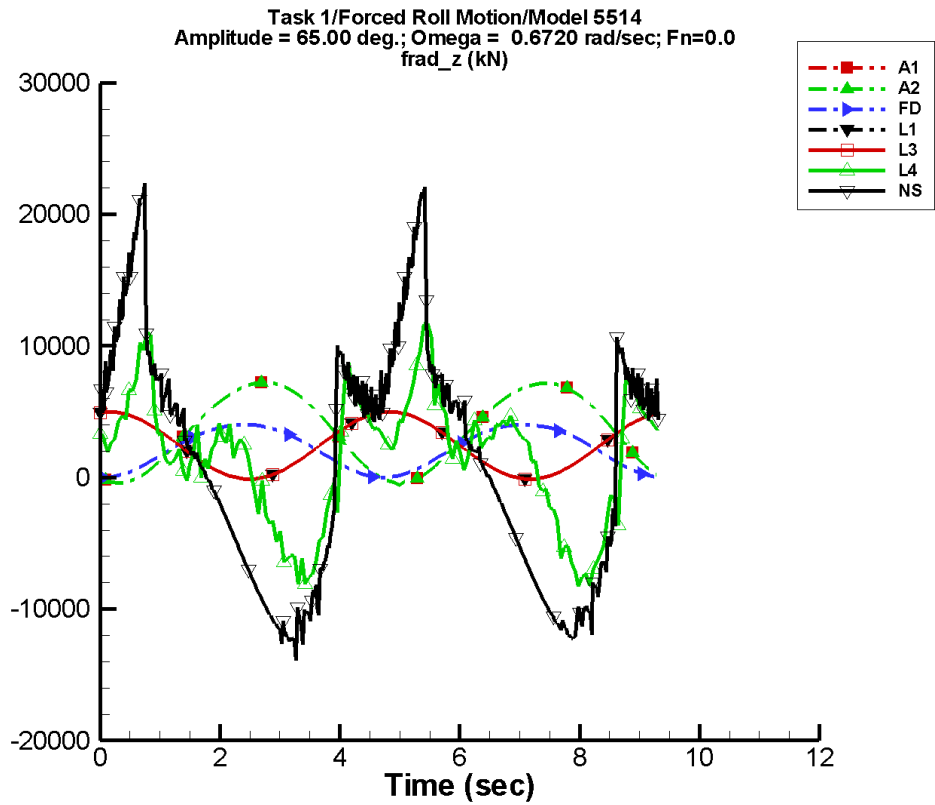
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.87E+03	8.54	-9	2.03E+03	-116
A2	1.87E+03	8.54	-9	2.03E+03	-116
FD	1.11E+03	2.13	-33	1.08E+03	-94
L1	1.16E+03	5.52E-02	-43	1.22E+03	78
L3	1.16E+03	5.57E-02	-44	1.22E+03	78
L4	400.	201.	-134	2.68E+03	-26
NF	—	—	—	—	—
NS	265.	34.1	-171	5.89E+03	48

Table D-928. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-276.	3.86E+03	-167.	3.78E+03
A2	-276.	3.86E+03	-167.	3.78E+03
FD	-2.84	2.17E+03	11.9	2.15E+03
L1	-58.5	2.39E+03	-38.3	2.39E+03
L3	-58.5	2.39E+03	-38.3	2.39E+03
L4	-4.08E+03	5.17E+03	-2.67E+03	3.92E+03
NF	—	—	—	—
NS	-6.51E+03	7.89E+03	-6.30E+03	7.62E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-465. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

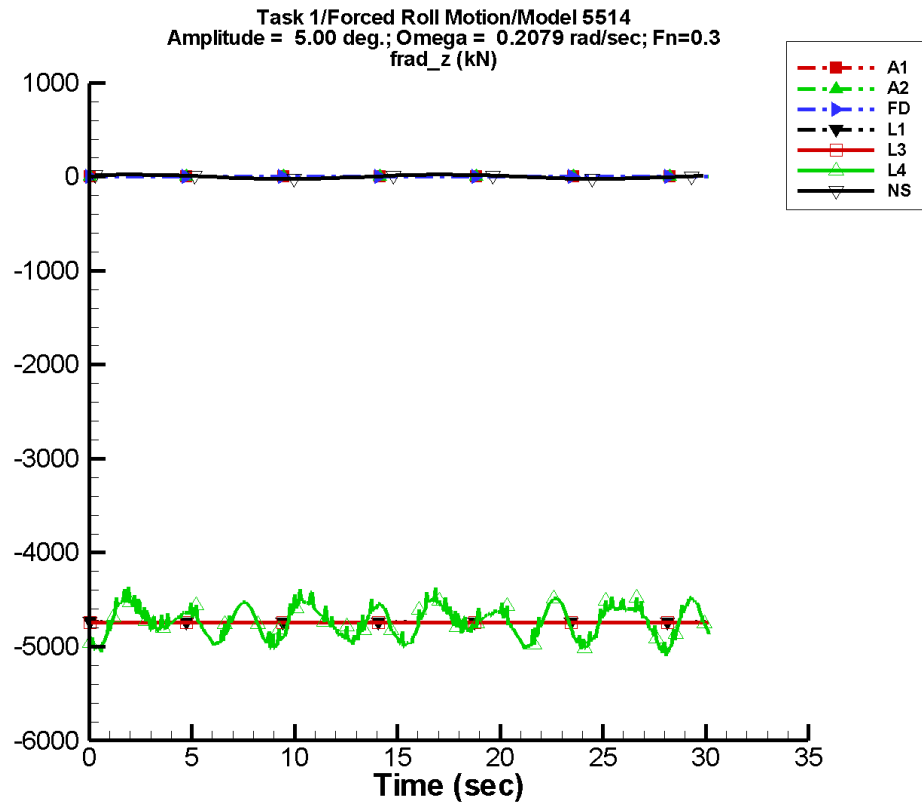
Table D-929. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	3.57E+03	25.1	-11	3.81E+03	-117
A2	3.57E+03	25.1	-11	3.81E+03	-117
FD	2.12E+03	8.80	-33	2.01E+03	-94
L1	2.43E+03	7.78E-02	-35	2.55E+03	78
L3	2.43E+03	7.60E-02	-36	2.55E+03	78
L4	1.42E+03	777.	-143	4.92E+03	31
NF	—	—	—	—	—
NS	1.04E+03	91.9	157	1.16E+04	48

Table D-930. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-574.	7.20E+03	-343.	7.06E+03
A2	-574.	7.20E+03	-343.	7.06E+03
FD	-5.92	4.02E+03	27.6	4.00E+03
L1	-122.	4.98E+03	-80.0	4.98E+03
L3	-122.	4.98E+03	-80.0	4.98E+03
L4	-8.27E+03	1.18E+04	-7.25E+03	9.00E+03
NF	—	—	—	—
NS	-1.39E+04	2.26E+04	-1.22E+04	2.02E+04

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

Figure D-466. Time history of  $F_z^{rad}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

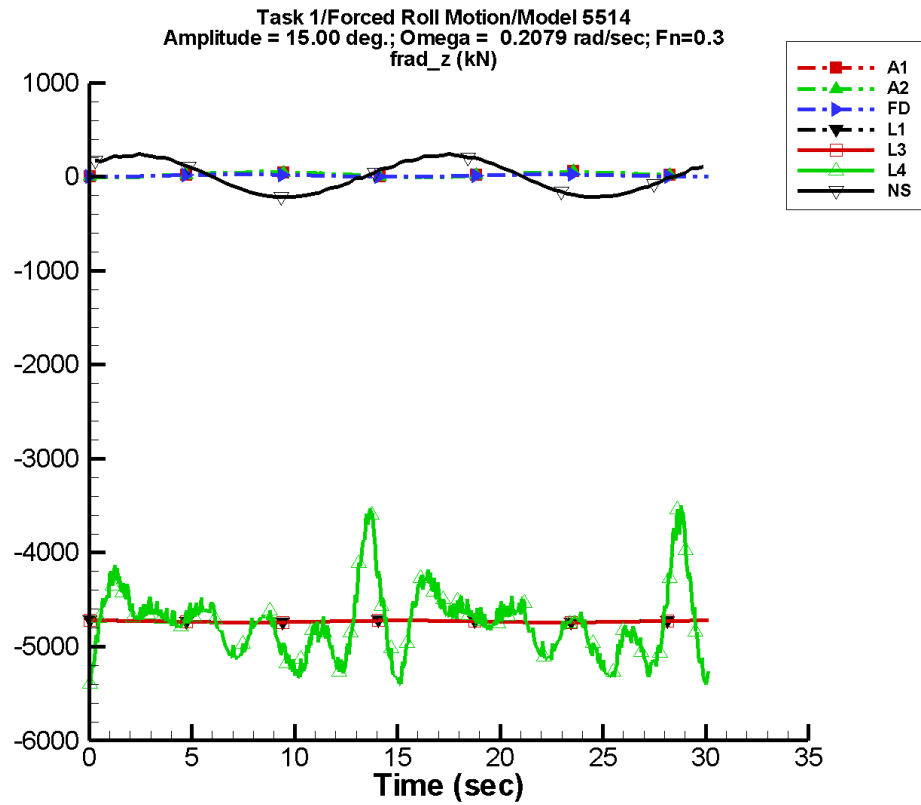
Table D-931. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	2.70	6.61E-02	33	3.00	-116
A2	2.70	6.61E-02	33	3.00	-116
FD	1.42	8.99E-06	19	1.43	-86
L1	-4.74E+03	8.58E-02	-173	1.08	87
L3	-4.74E+03	9.47E-02	-160	1.09	87
L4	-4.74E+03	1.80	57	12.5	16
NF	—	—	—	—	—
NS	0.722	8.61E-02	-20	23.5	39

Table D-932. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-0.369	6.40	-0.302	6.29
A2	-0.369	6.40	-0.302	6.29
FD	-3.45E-03	2.85	2.02E-03	2.84
L1	-4.74E+03	-4.74E+03	-4.74E+03	-4.74E+03
L3	-4.74E+03	-4.74E+03	-4.74E+03	-4.74E+03
L4	-5.11E+03	-4.37E+03	-5.04E+03	-4.49E+03
NF	—	—	—	—
NS	-24.2	24.5	-22.6	23.0

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-467. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

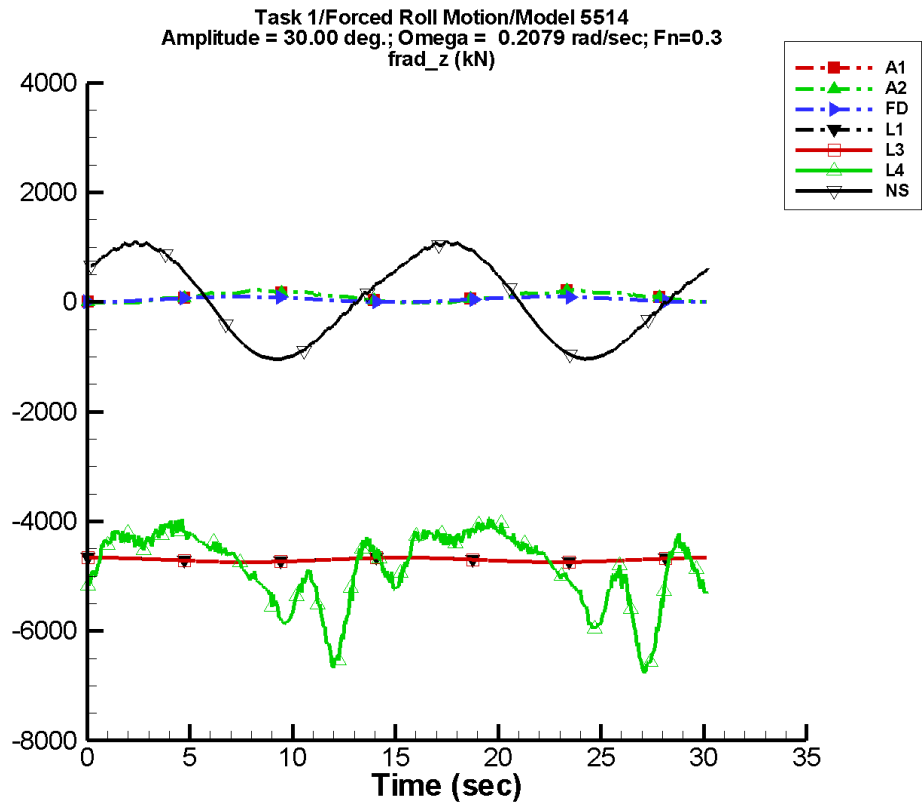
Table D-933. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	24.1	0.186	39	26.7	-116
A2	24.1	0.186	39	26.7	-116
FD	12.7	7.21E-04	21	12.7	-86
L1	-4.73E+03	8.21E-02	-175	10.0	86
L3	-4.73E+03	9.11E-02	-160	10.0	86
L4	-4.76E+03	8.21	-81	220.	49
NF	—	—	—	—	—
NS	8.17	0.528	-35	223.	39

Table D-934. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-3.12	56.7	-2.66	55.7
A2	-3.12	56.7	-2.66	55.7
FD	-3.10E-02	25.4	1.89E-02	25.3
L1	-4.74E+03	-4.72E+03	-4.74E+03	-4.72E+03
L3	-4.74E+03	-4.72E+03	-4.74E+03	-4.72E+03
L4	-5.42E+03	-3.49E+03	-5.34E+03	-3.67E+03
NF	—	—	—	—
NS	-219.	249.	-210.	225.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-468. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

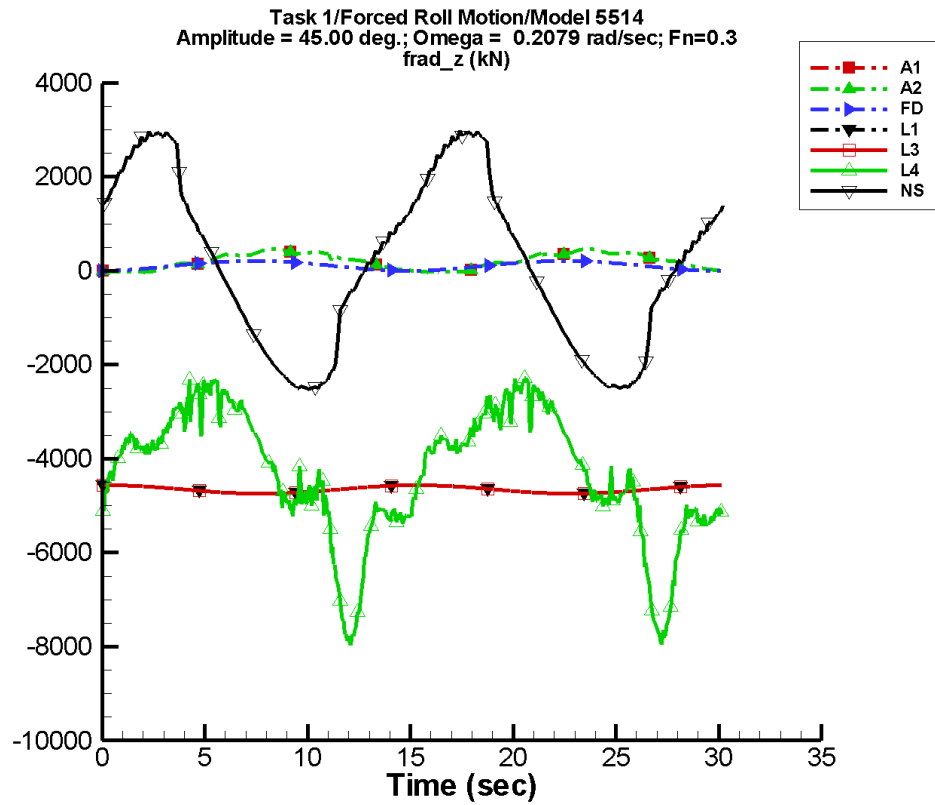
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	93.8	0.344	44	104.	-117
A2	93.8	0.344	44	104.	-117
FD	49.5	1.14E-02	21	49.1	-86
L1	-4.70E+03	8.37E-02	-178	40.1	85
L3	-4.70E+03	8.31E-02	-164	40.1	85
L4	-4.87E+03	21.5	-101	770.	3
NF	—	—	—	—	—
NS	37.8	2.86	-31	1.03E+03	42

Table D-936. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-12.7	219.	-10.9	215.
A2	-12.7	219.	-10.9	215.
FD	-0.124	98.0	8.47E-02	97.8
L1	-4.74E+03	-4.66E+03	-4.74E+03	-4.66E+03
L3	-4.74E+03	-4.66E+03	-4.74E+03	-4.66E+03
L4	-6.81E+03	-3.94E+03	-6.65E+03	-4.06E+03
NF	—	—	—	—
NS	-1.05E+03	1.13E+03	-1.03E+03	1.07E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-469. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

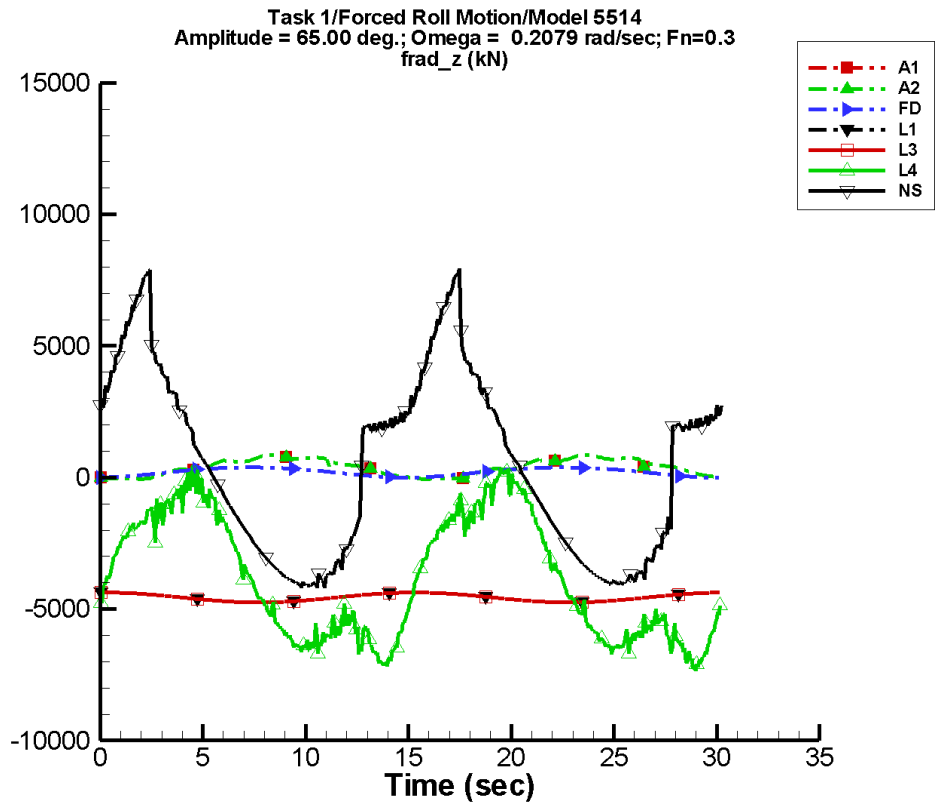
Table D-937. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	202.	0.493	36	221.	-117
A2	202.	0.493	36	221.	-117
FD	107.	5.61E-02	21	104.	-86
L1	-4.65E+03	8.14E-02	177	90.3	85
L3	-4.65E+03	7.58E-02	-166	90.3	85
L4	-4.33E+03	31.8	139	1.74E+03	-24
NF	—	—	—	—	—
NS	134.	6.81	-29	2.49E+03	43

Table D-938. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-28.8	466.	-24.7	458.
A2	-28.8	466.	-24.7	458.
FD	-0.279	208.	0.224	208.
L1	-4.74E+03	-4.56E+03	-4.74E+03	-4.56E+03
L3	-4.74E+03	-4.56E+03	-4.74E+03	-4.56E+03
L4	-7.96E+03	-2.28E+03	-7.82E+03	-2.42E+03
NF	—	—	—	—
NS	-2.54E+03	3.00E+03	-2.51E+03	2.96E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-470. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

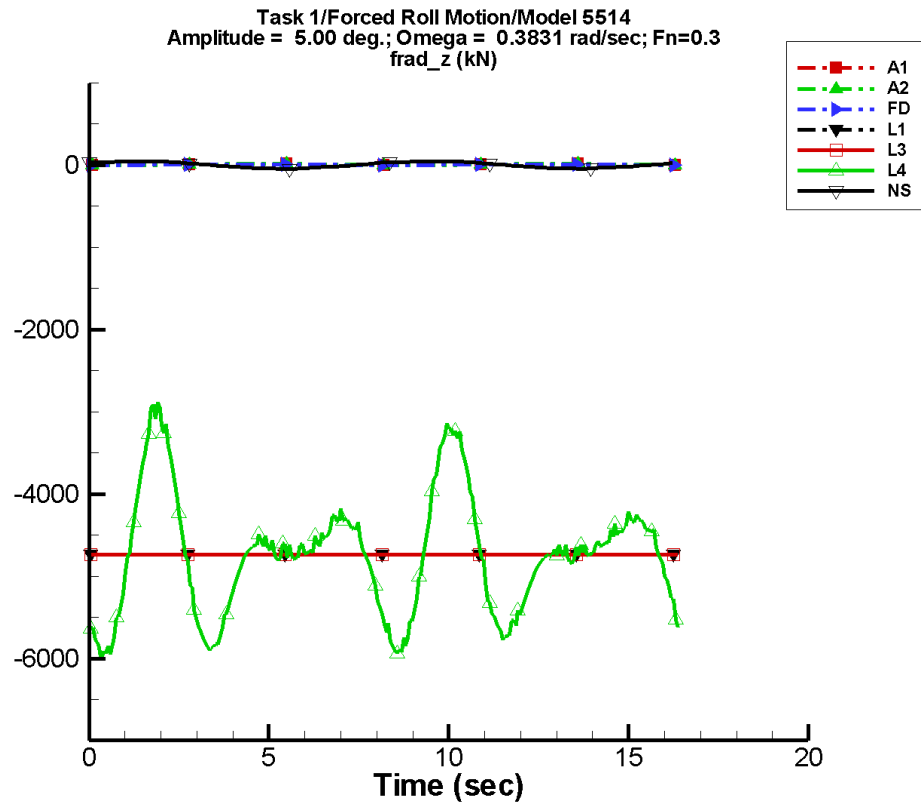
Table D-939. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	386.	0.950	3	416.	-119
A2	386.	0.950	3	416.	-119
FD	204.	0.231	21	193.	-85
L1	-4.56E+03	8.21E-02	171	188.	85
L3	-4.56E+03	7.00E-02	-173	188.	85
L4	-3.81E+03	93.8	-96	3.04E+03	-4
NF	—	—	—	—	—
NS	380.	8.50	-11	4.69E+03	47

Table D-940. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-60.2	867.	-51.6	852.
A2	-60.2	867.	-51.6	852.
FD	-0.583	385.	0.473	385.
L1	-4.75E+03	-4.37E+03	-4.75E+03	-4.37E+03
L3	-4.75E+03	-4.37E+03	-4.75E+03	-4.37E+03
L4	-7.33E+03	372.	-7.11E+03	166.
NF	—	—	—	—
NS	-4.21E+03	7.94E+03	-4.11E+03	7.41E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-471. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

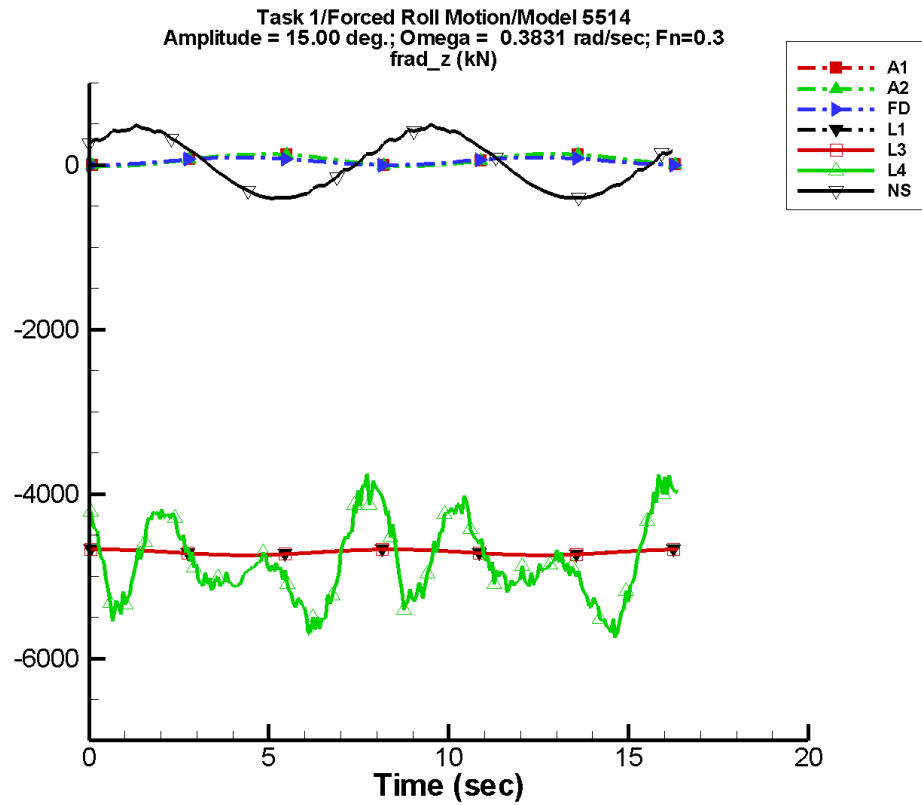
Table D-941. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	7.00	4.14E-02	-30	8.13	-121
A2	7.00	4.14E-02	-30	8.13	-121
FD	5.26	8.10E-05	-65	5.30	-97
L1	-4.74E+03	3.89E-02	69	3.87	79
L3	-4.74E+03	4.14E-02	84	3.87	79
L4	-4.74E+03	72.4	-13	185.	-14
NF	—	—	—	—	—
NS	2.27	0.108	-155	45.2	34

Table D-942. Minimum and maximum of of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-1.34	15.4	-1.17	15.2
A2	-1.34	15.4	-1.17	15.2
FD	-3.90E-02	10.6	-3.63E-02	10.5
L1	-4.74E+03	-4.73E+03	-4.74E+03	-4.73E+03
L3	-4.74E+03	-4.73E+03	-4.74E+03	-4.73E+03
L4	-6.05E+03	-2.82E+03	-6.01E+03	-2.99E+03
NF	—	—	—	—
NS	-46.0	48.8	-42.1	45.1

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-472. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

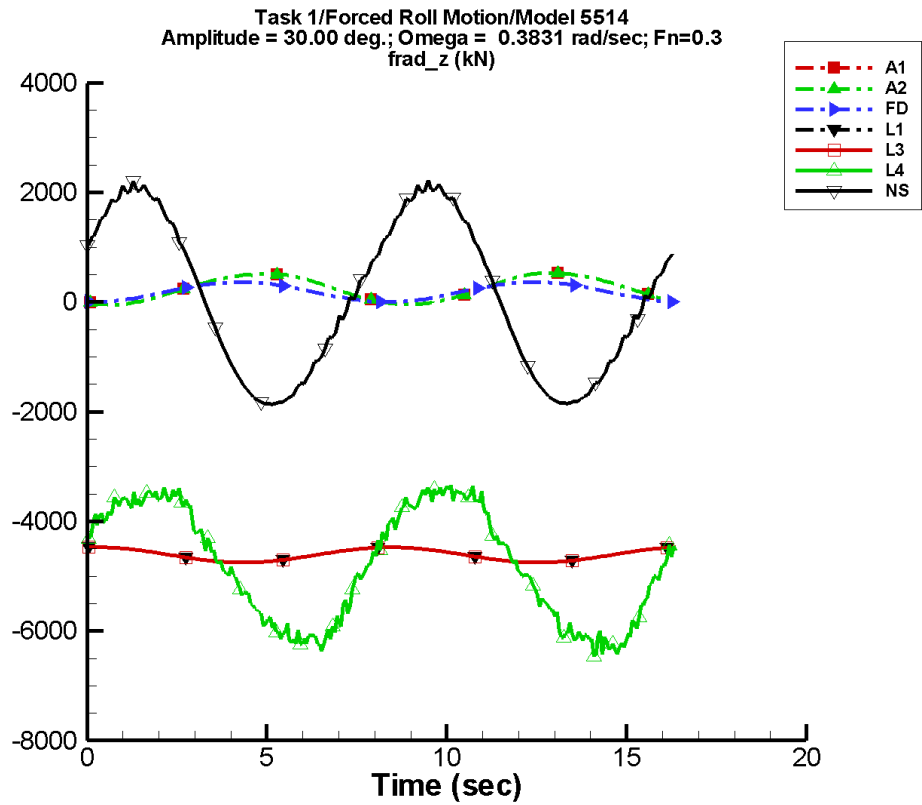
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	62.5	9.55E-02	-159	72.4	-121
A2	62.5	9.55E-02	-159	72.4	-121
FD	47.0	6.48E-03	-65	47.2	-97
L1	-4.71E+03	4.81E-02	65	34.8	79
L3	-4.71E+03	4.17E-02	77	34.8	79
L4	-4.83E+03	52.5	-100	272.	40
NF	—	—	—	—	—
NS	20.9	1.33	-162	426.	35

Table D-944. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-12.0	137.	-10.4	136.
A2	-12.0	137.	-10.4	136.
FD	-0.351	94.1	-0.326	93.4
L1	-4.74E+03	-4.67E+03	-4.74E+03	-4.67E+03
L3	-4.74E+03	-4.67E+03	-4.74E+03	-4.67E+03
L4	-5.75E+03	-3.76E+03	-5.61E+03	-3.90E+03
NF	—	—	—	—
NS	-401.	496.	-389.	442.



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-473. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

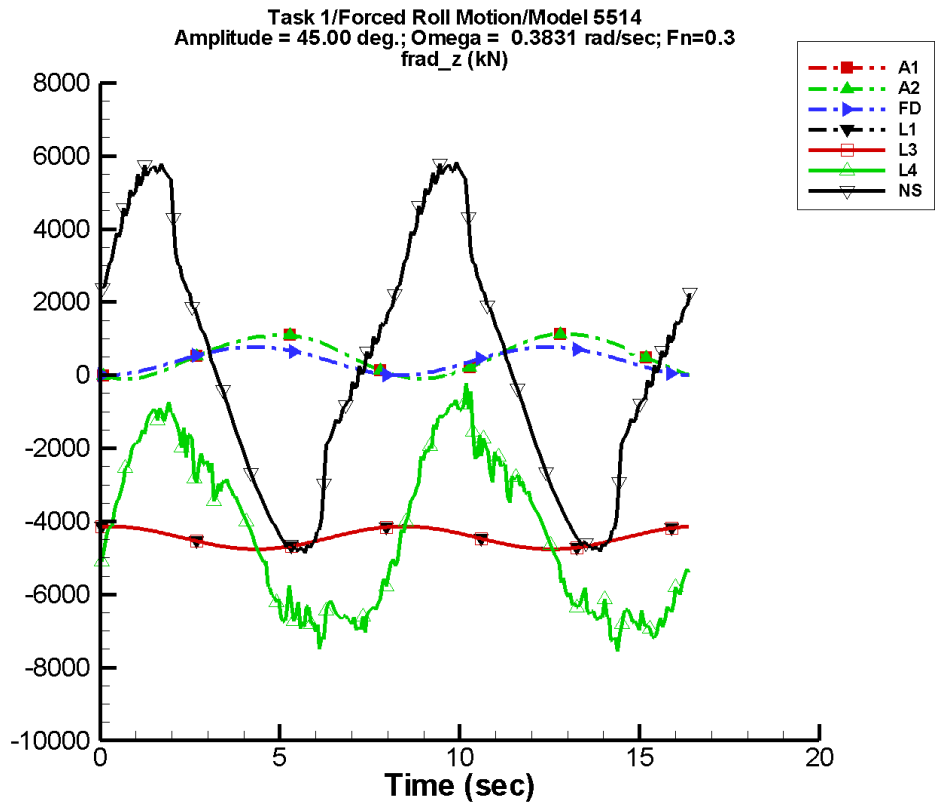
Table D-945. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	243.	0.630	-175	281.	-121
A2	243.	0.630	-175	281.	-121
FD	183.	0.102	-65	182.	-97
L1	-4.61E+03	6.20E-02	62	139.	79
L3	-4.61E+03	4.64E-02	67	139.	79
L4	-4.80E+03	35.5	-74	1.41E+03	14
NF	—	—	—	—	—
NS	83.8	5.90	-161	1.94E+03	37

Table D-946. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-47.7	532.	-41.5	527.
A2	-47.7	532.	-41.5	527.
FD	-1.40	364.	-1.29	361.
L1	-4.75E+03	-4.47E+03	-4.75E+03	-4.47E+03
L3	-4.75E+03	-4.47E+03	-4.75E+03	-4.47E+03
L4	-6.47E+03	-3.32E+03	-6.30E+03	-3.44E+03
NF	—	—	—	—
NS	-1.87E+03	2.25E+03	-1.84E+03	2.09E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-474. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

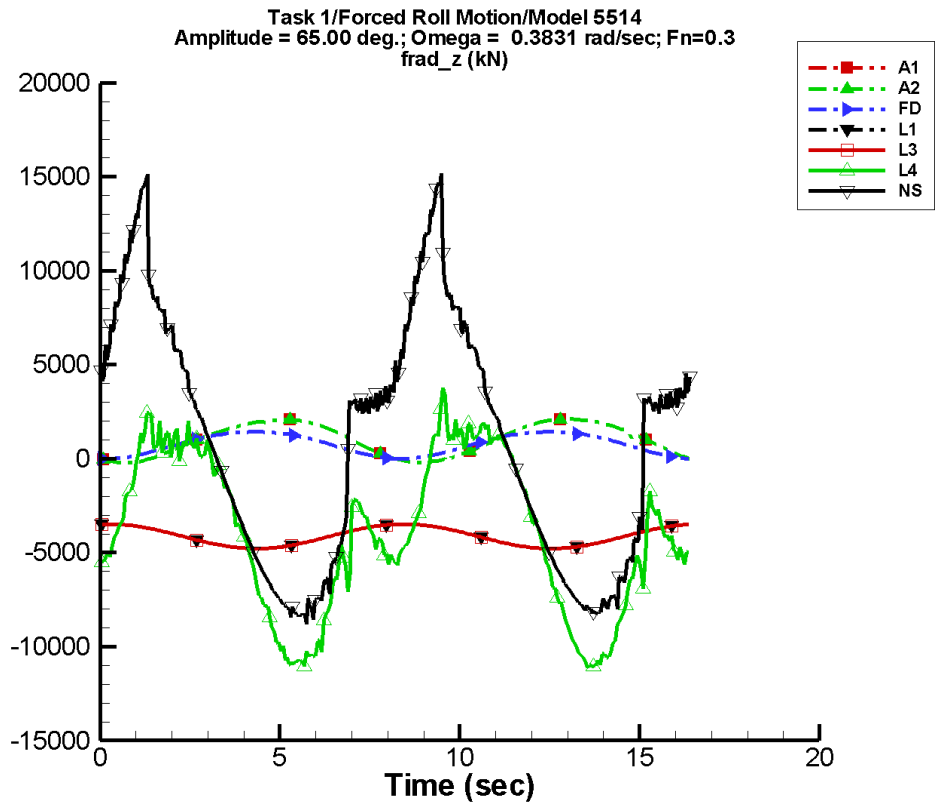
Table D-947. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	524.	1.18	-167	602.	-122
A2	524.	1.18	-167	602.	-122
FD	395.	0.502	-65	387.	-97
L1	-4.45E+03	7.55E-02	58	313.	79
L3	-4.45E+03	5.17E-02	58	313.	79
L4	-4.31E+03	26.1	-34	2.96E+03	-3
NF	—	—	—	—	—
NS	268.	14.5	-159	4.68E+03	37

Table D-948. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-107.	1.13E+03	-92.9	1.12E+03
A2	-107.	1.13E+03	-92.9	1.12E+03
FD	-3.16	772.	-2.87	767.
L1	-4.76E+03	-4.14E+03	-4.76E+03	-4.14E+03
L3	-4.76E+03	-4.14E+03	-4.76E+03	-4.14E+03
L4	-7.54E+03	-218.	-6.99E+03	-772.
NF	—	—	—	—
NS	-4.86E+03	5.88E+03	-4.77E+03	5.77E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-475. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

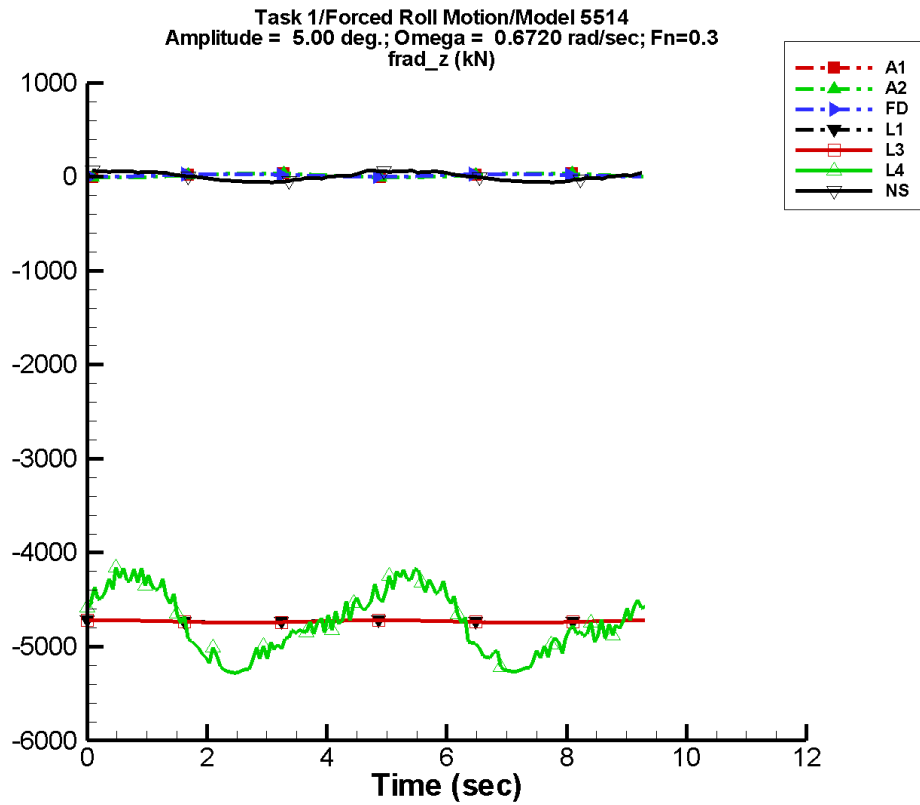
Table D-949. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.00E+03	1.55	-110	1.14E+03	-124
A2	1.00E+03	1.55	-110	1.14E+03	-124
FD	755.	2.07	-66	715.	-98
L1	-4.13E+03	9.57E-02	55	653.	79
L3	-4.13E+03	5.94E-02	52	653.	79
L4	-4.03E+03	336.	-113	5.20E+03	9
NF	—	—	—	—	—
NS	816.	35.8	172	8.91E+03	41

Table D-950. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-221.	2.11E+03	-192.	2.10E+03
A2	-221.	2.11E+03	-192.	2.10E+03
FD	-6.59	1.43E+03	-5.83	1.42E+03
L1	-4.78E+03	-3.48E+03	-4.78E+03	-3.48E+03
L3	-4.78E+03	-3.48E+03	-4.78E+03	-3.48E+03
L4	-1.11E+04	3.77E+03	-1.09E+04	2.08E+03
NF	—	—	—	—
NS	-8.79E+03	1.53E+04	-8.29E+03	1.41E+04

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

Figure D-476. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

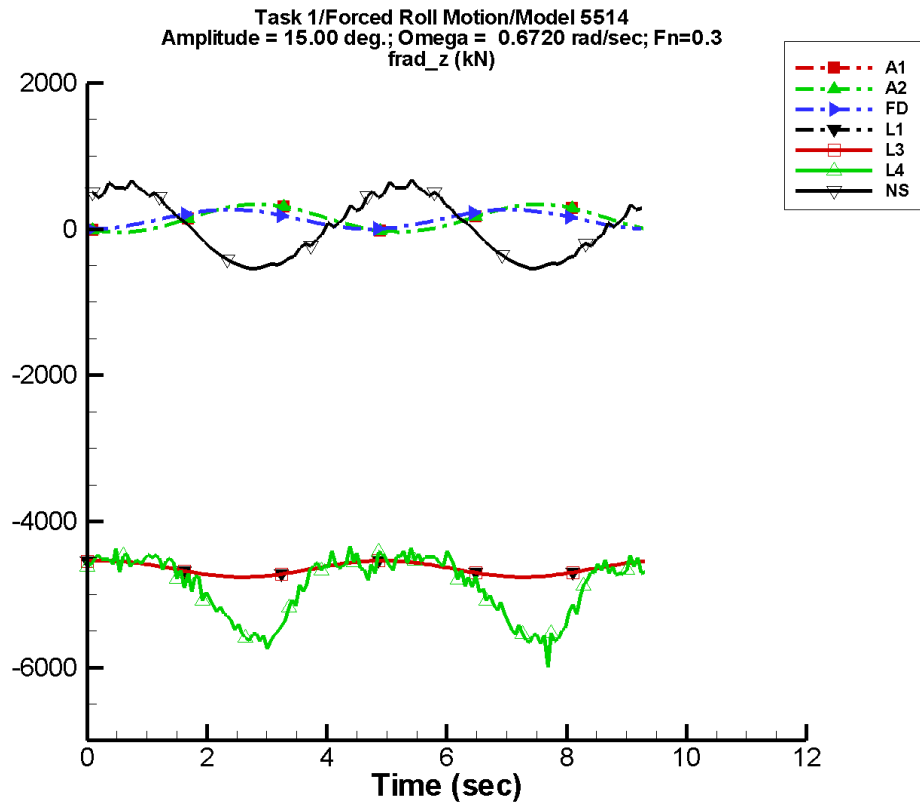
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	16.3	0.110	-19	21.3	-130
A2	16.3	0.110	-19	21.3	-130
FD	14.8	3.41E-04	-44	14.9	-94
L1	-4.73E+03	1.80E-02	106	12.4	70
L3	-4.73E+03	1.90E-02	145	12.4	70
L4	-4.74E+03	16.9	12	437.	53
NF	—	—	—	—	—
NS	4.17	0.364	-173	58.3	47

Table D-952. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-5.04	38.2	-4.02	37.1
A2	-5.04	38.2	-4.02	37.1
FD	-3.50E-02	29.7	0.130	29.4
L1	-4.74E+03	-4.72E+03	-4.74E+03	-4.72E+03
L3	-4.74E+03	-4.72E+03	-4.74E+03	-4.72E+03
L4	-5.28E+03	-4.14E+03	-5.25E+03	-4.21E+03
NF	—	—	—	—
NS	-60.3	70.5	-54.5	61.8



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-477. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

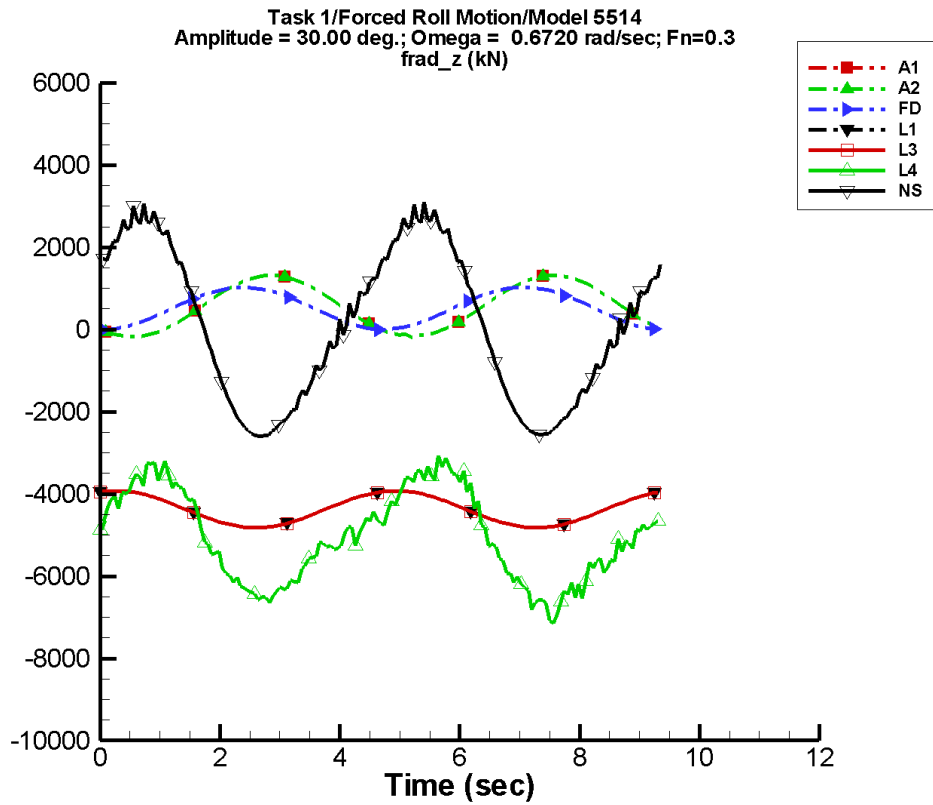
Table D-953. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	145.	0.902	17	190.	-131
A2	145.	0.902	17	190.	-131
FD	133.	2.75E-02	-34	132.	-94
L1	-4.65E+03	1.88E-02	67	112.	70
L3	-4.65E+03	1.30E-02	131	112.	70
L4	-4.89E+03	36.3	-55	507.	54
NF	—	—	—	—	—
NS	31.1	3.68	-175	557.	48

Table D-954. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-45.9	340.	-35.6	331.
A2	-45.9	340.	-35.6	331.
FD	-0.315	265.	1.19	262.
L1	-4.76E+03	-4.54E+03	-4.76E+03	-4.54E+03
L3	-4.76E+03	-4.54E+03	-4.76E+03	-4.54E+03
L4	-5.99E+03	-4.31E+03	-5.65E+03	-4.47E+03
NF	—	—	—	—
NS	-543.	686.	-513.	585.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-478. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

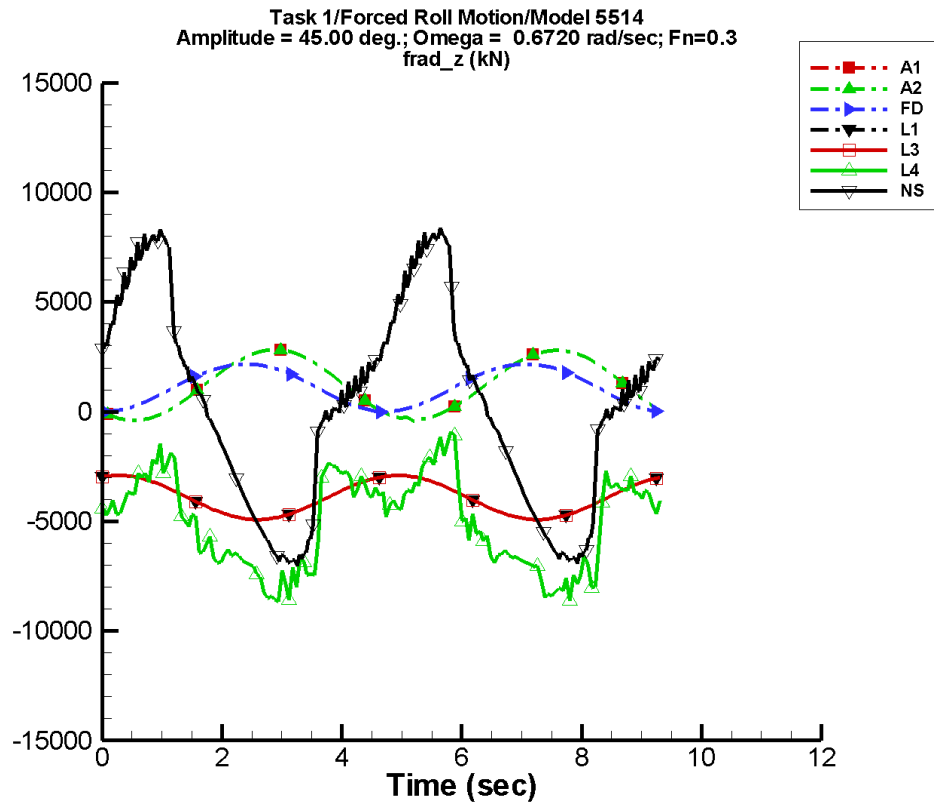
Table D-955. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	565.	3.95	21	741.	-131
A2	565.	3.95	21	741.	-131
FD	516.	0.433	-33	512.	-94
L1	-4.37E+03	3.49E-02	20	447.	70
L3	-4.37E+03	6.06E-03	20	447.	70
L4	-5.03E+03	113.	-58	1.48E+03	37
NF	—	—	—	—	—
NS	96.8	17.1	-176	2.56E+03	48

Table D-956. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-183.	1.32E+03	-141.	1.28E+03
A2	-183.	1.32E+03	-141.	1.28E+03
FD	-1.26	1.02E+03	4.95	1.01E+03
L1	-4.82E+03	-3.93E+03	-4.81E+03	-3.93E+03
L3	-4.82E+03	-3.93E+03	-4.81E+03	-3.93E+03
L4	-7.15E+03	-3.07E+03	-6.77E+03	-3.37E+03
NF	—	—	—	—
NS	-2.60E+03	3.16E+03	-2.55E+03	2.82E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-479. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

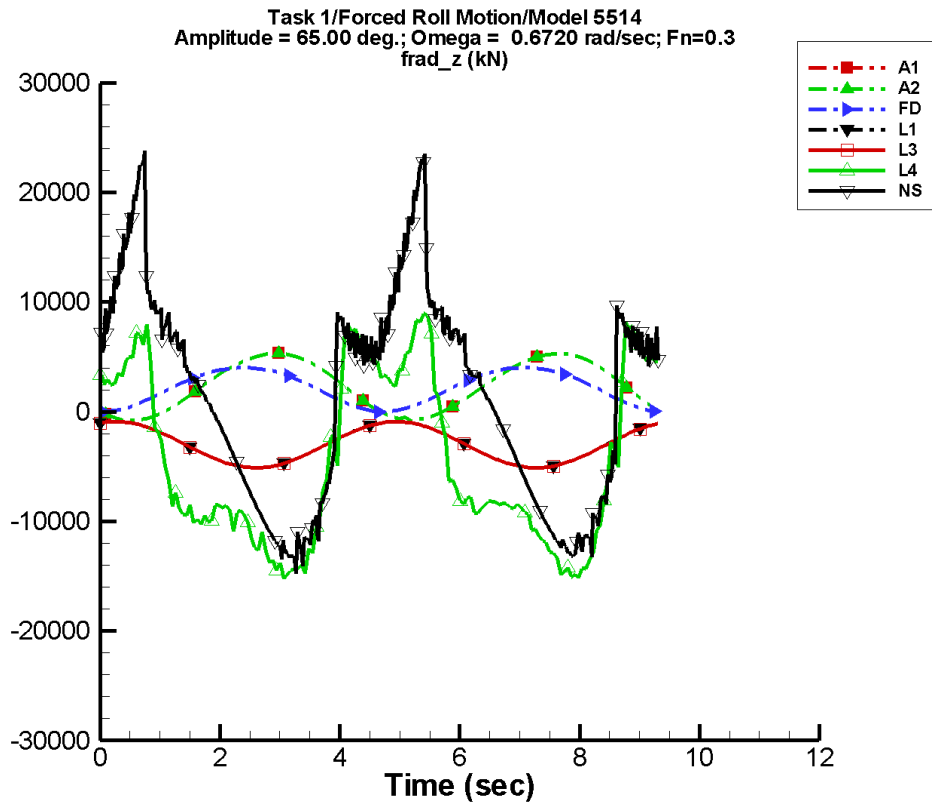
Table D-957. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	1.22E+03	9.81	16	1.59E+03	-132
A2	1.22E+03	9.81	16	1.59E+03	-132
FD	1.11E+03	2.13	-33	1.08E+03	-94
L1	-3.91E+03	5.22E-02	12	1.01E+03	70
L3	-3.91E+03	1.79E-02	-9	1.01E+03	70
L4	-5.07E+03	271.	-80	2.36E+03	58
NF	—	—	—	—	—
NS	330.	36.9	-175	6.26E+03	43

Table D-958. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-410.	2.82E+03	-314.	2.75E+03
A2	-410.	2.82E+03	-314.	2.75E+03
FD	-2.84	2.17E+03	11.9	2.15E+03
L1	-4.92E+03	-2.91E+03	-4.90E+03	-2.92E+03
L3	-4.92E+03	-2.91E+03	-4.90E+03	-2.92E+03
L4	-8.64E+03	-898.	-8.15E+03	-1.74E+03
NF	—	—	—	—
NS	-7.03E+03	8.51E+03	-6.81E+03	8.19E+03

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-480. Time history of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

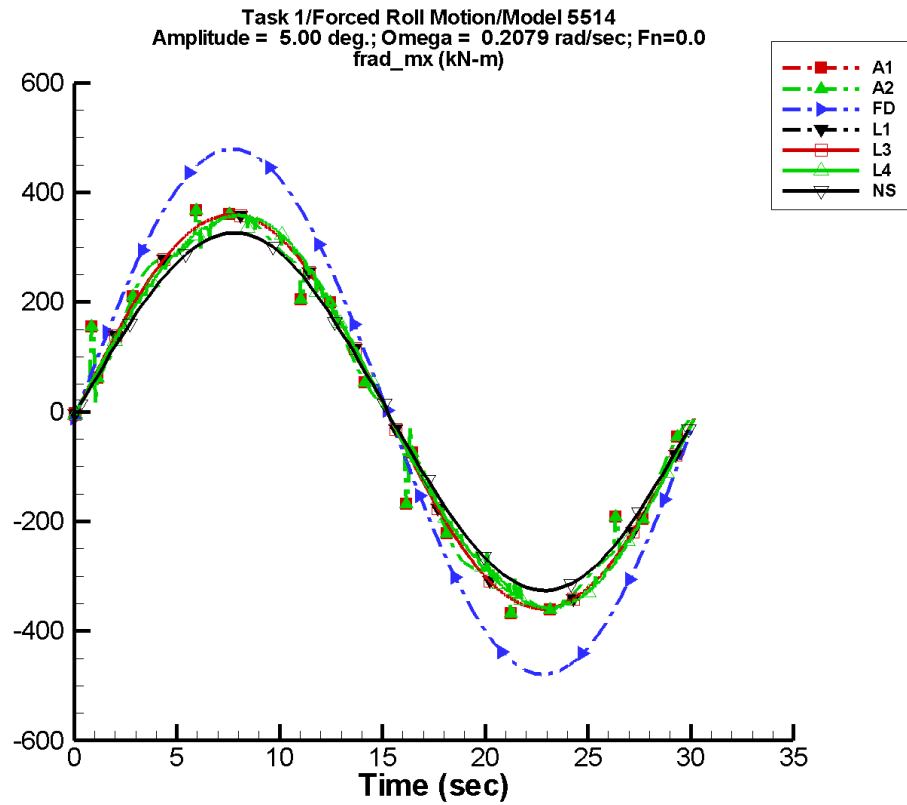
Code	$a_0$ (kN)	$a_1$ (kN)	$\Phi_1$ (deg)	$a_2$ (kN)	$\Phi_2$ (deg)
A1	2.33E+03	24.3	6	3.04E+03	-133
A2	2.33E+03	24.3	6	3.04E+03	-133
FD	2.12E+03	8.80	-33	2.01E+03	-94
L1	-3.02E+03	8.31E-02	5	2.10E+03	70
L3	-3.02E+03	3.34E-02	-12	2.10E+03	70
L4	-4.67E+03	849.	-137	9.74E+03	72
NF	—	—	—	—	—
NS	1.27E+03	104.	165	1.26E+04	43

Table D-960. Minimum and maximum of  $F_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN)	Maximum (kN)	Minimum (kN)	Maximum (kN)
A1	-846.	5.31E+03	-645.	5.18E+03
A2	-846.	5.31E+03	-645.	5.18E+03
FD	-5.92	4.02E+03	27.6	4.00E+03
L1	-5.12E+03	-916.	-5.08E+03	-945.
L3	-5.12E+03	-916.	-5.08E+03	-945.
L4	-1.53E+04	8.99E+03	-1.46E+04	7.06E+03
NF	—	—	—	—
NS	-1.47E+04	2.40E+04	-1.31E+04	2.15E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-481. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

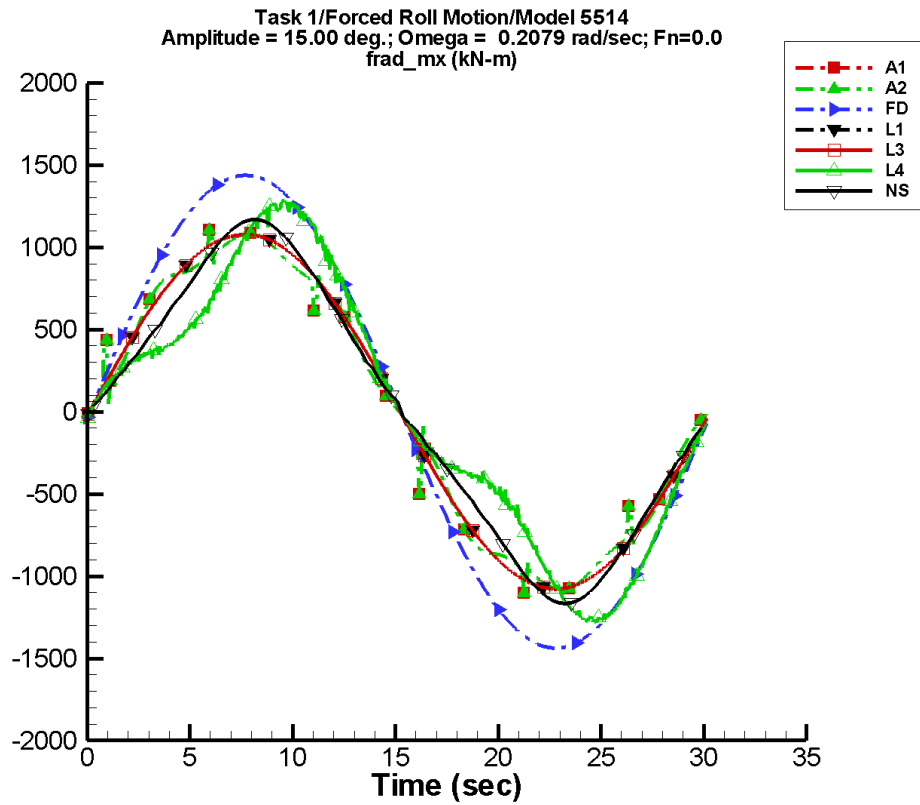
Table D-961. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.373	350.	0	0.220	13
A2	-0.373	350.	0	0.220	13
FD	-1.86E-05	479.	-2	7.19E-05	111
L1	5.51E-03	359.	-1	3.86E-02	163
L3	5.49E-03	359.	-1	3.86E-02	163
L4	0.182	355.	-3	0.671	172
NF	—	—	—	—	—
NS	-1.02E-02	324.	-2	1.02E-02	4

Table D-962. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-371.	372.	-360.	361.
A2	-371.	372.	-360.	361.
FD	-479.	479.	-479.	479.
L1	-359.	360.	-359.	360.
L3	-359.	360.	-359.	360.
L4	-358.	358.	-358.	358.
NF	—	—	—	—
NS	-326.	326.	-323.	323.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-482. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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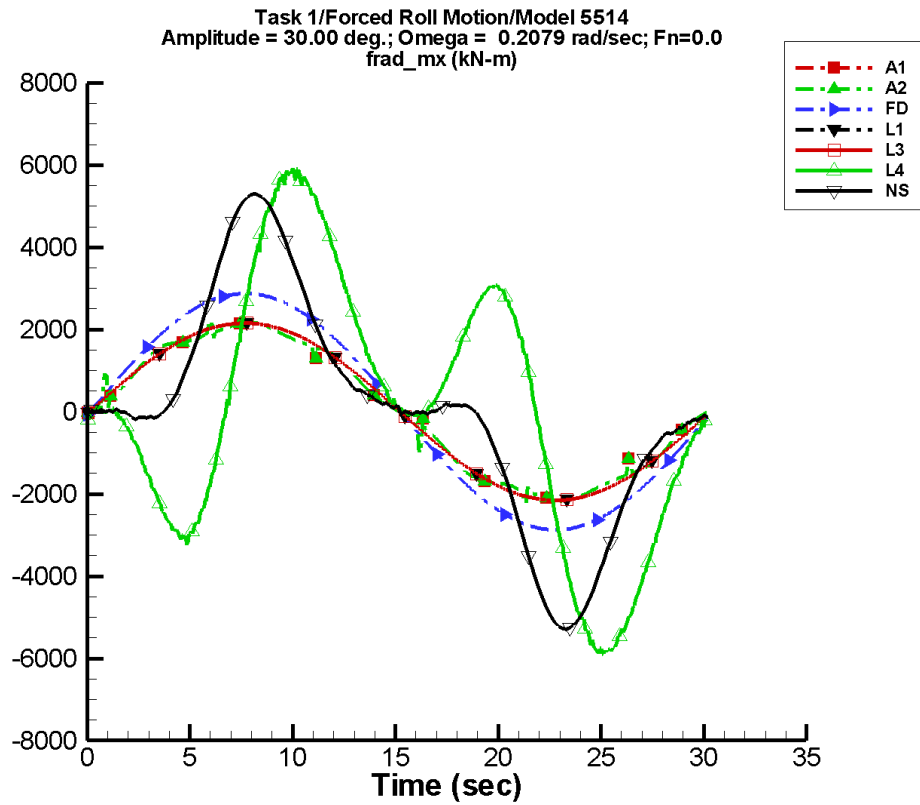
Table D-963. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.12	1.05E+03	0	0.659	13
A2	-1.12	1.05E+03	0	0.659	13
FD	-7.87E-05	1.44E+03	-2	1.58E-04	55
L1	1.66E-02	1.08E+03	-1	0.116	163
L3	1.66E-02	1.08E+03	-1	0.116	163
L4	7.30	1.06E+03	-14	42.7	155
NF	—	—	—	—	—
NS	-0.269	1.05E+03	-5	0.213	64

Table D-964. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.11E+03	1.12E+03	-1.08E+03	1.08E+03
A2	-1.11E+03	1.12E+03	-1.08E+03	1.08E+03
FD	-1.44E+03	1.44E+03	-1.44E+03	1.44E+03
L1	-1.08E+03	1.08E+03	-1.08E+03	1.08E+03
L3	-1.08E+03	1.08E+03	-1.08E+03	1.08E+03
L4	-1.28E+03	1.28E+03	-1.26E+03	1.27E+03
NF	—	—	—	—
NS	-1.17E+03	1.17E+03	-1.15E+03	1.14E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-483. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

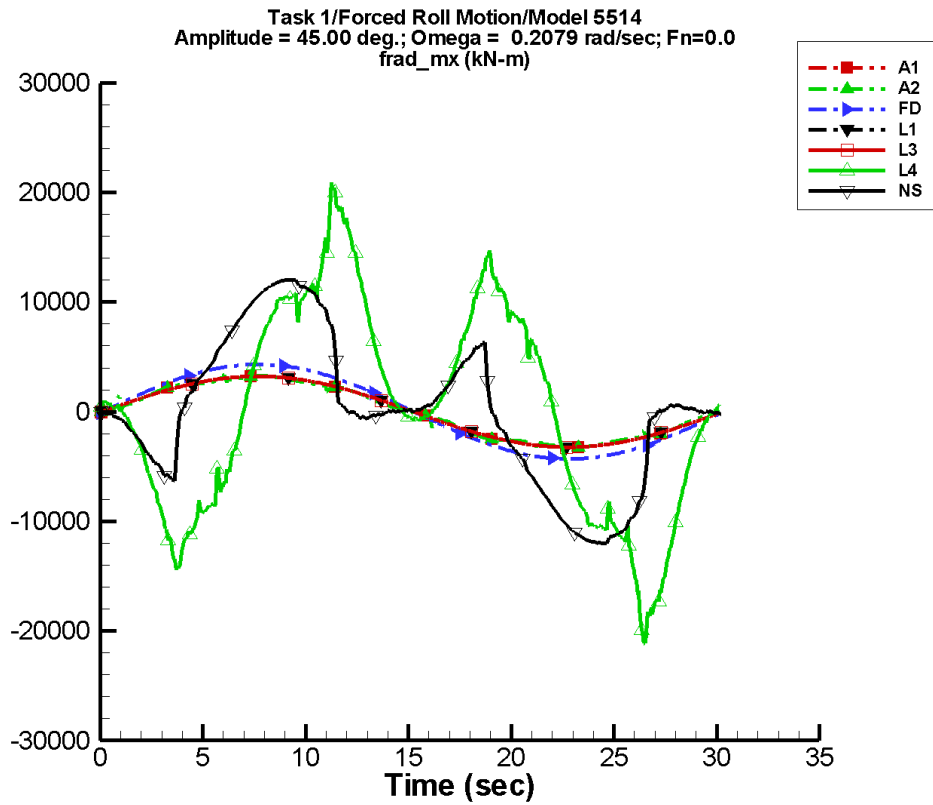
Table D-965. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.24	2.10E+03	0	1.32	13
A2	-2.24	2.10E+03	0	1.32	13
FD	-3.93E-04	2.87E+03	-2	3.27E-04	46
L1	3.38E-02	2.16E+03	-1	0.232	163
L3	3.39E-02	2.16E+03	-1	0.232	163
L4	92.3	3.31E+03	-55	546.	161
NF	—	—	—	—	—
NS	-3.14	3.27E+03	-12	2.77	75

Table D-966. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.23E+03	2.23E+03	-2.16E+03	2.17E+03
A2	-2.23E+03	2.23E+03	-2.16E+03	2.17E+03
FD	-2.87E+03	2.87E+03	-2.87E+03	2.87E+03
L1	-2.16E+03	2.16E+03	-2.15E+03	2.16E+03
L3	-2.16E+03	2.16E+03	-2.15E+03	2.16E+03
L4	-5.90E+03	5.91E+03	-5.83E+03	5.81E+03
NF	—	—	—	—
NS	-5.33E+03	5.30E+03	-5.23E+03	5.20E+03

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-484. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D-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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

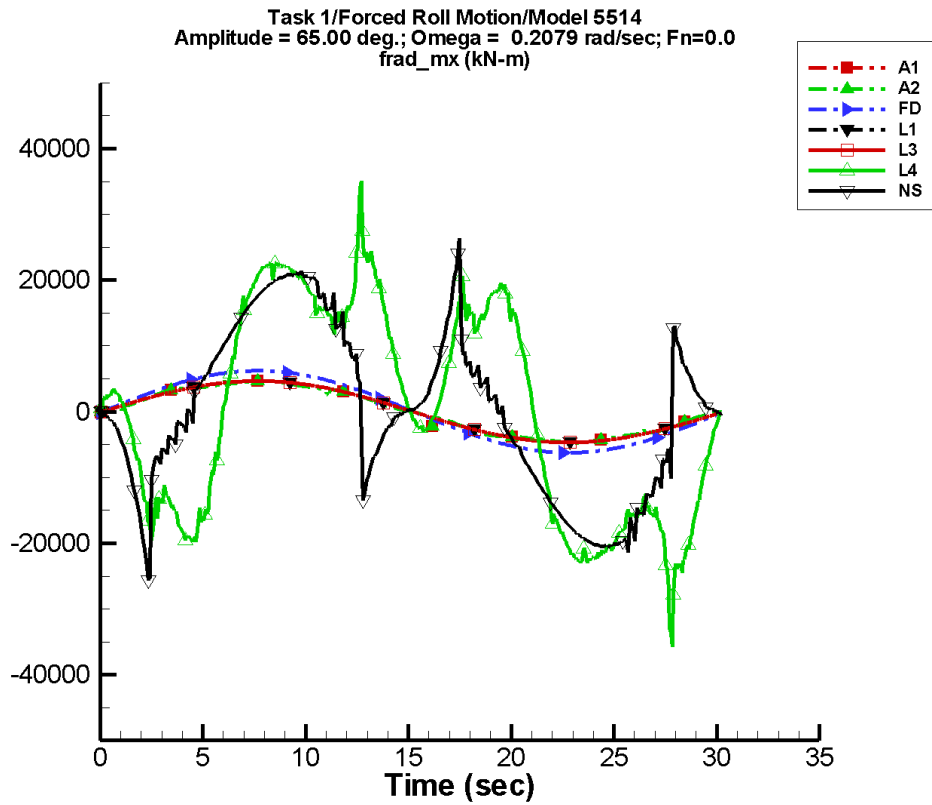
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.36	3.15E+03	0	1.98	13
A2	-3.36	3.15E+03	0	1.98	13
FD	-6.63E-04	4.31E+03	-2	8.41E-04	84
L1	5.12E-02	3.23E+03	-1	0.348	163
L3	5.11E-02	3.23E+03	-1	0.348	163
L4	357.	9.95E+03	-71	1.85E+03	150
NF	—	—	—	—	—
NS	-11.8	7.27E+03	-21	8.97	72

Table D-968. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.34E+03	3.35E+03	-3.24E+03	3.25E+03
A2	-3.34E+03	3.35E+03	-3.24E+03	3.25E+03
FD	-4.31E+03	4.31E+03	-4.31E+03	4.31E+03
L1	-3.23E+03	3.24E+03	-3.23E+03	3.24E+03
L3	-3.23E+03	3.24E+03	-3.23E+03	3.24E+03
L4	-2.12E+04	2.12E+04	-1.97E+04	1.94E+04
NF	—	—	—	—
NS	-1.22E+04	1.21E+04	-1.21E+04	1.19E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-485. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

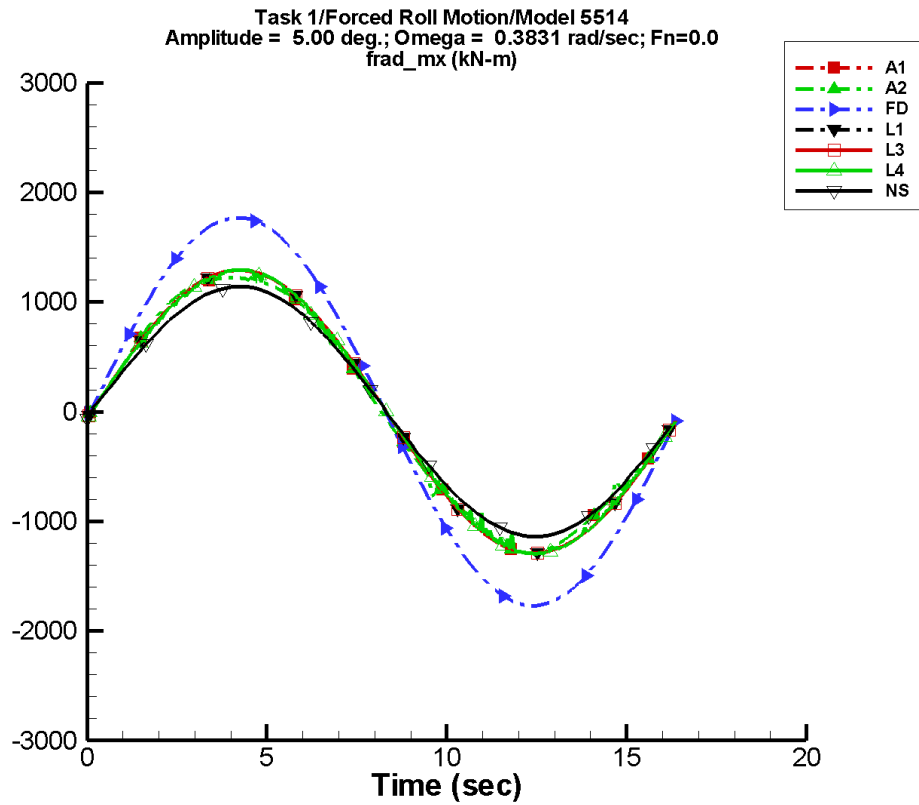
Table D-969. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-4.85	4.55E+03	0	2.86	13
A2	-4.85	4.55E+03	0	2.86	13
FD	-1.23E-03	6.23E+03	-2	7.70E-04	66
L1	7.56E-02	4.67E+03	-1	0.502	163
L3	7.55E-02	4.67E+03	-1	0.502	163
L4	224.	1.80E+04	-58	1.80E+03	165
NF	—	—	—	—	—
NS	-0.894	1.32E+04	-29	109.	-118

Table D-970. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.82E+03	4.83E+03	-4.68E+03	4.69E+03
A2	-4.82E+03	4.83E+03	-4.68E+03	4.69E+03
FD	-6.23E+03	6.23E+03	-6.22E+03	6.22E+03
L1	-4.67E+03	4.68E+03	-4.67E+03	4.67E+03
L3	-4.67E+03	4.68E+03	-4.67E+03	4.67E+03
L4	-3.58E+04	3.51E+04	-2.86E+04	2.76E+04
NF	—	—	—	—
NS	-2.57E+04	2.64E+04	-2.07E+04	2.09E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-486. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

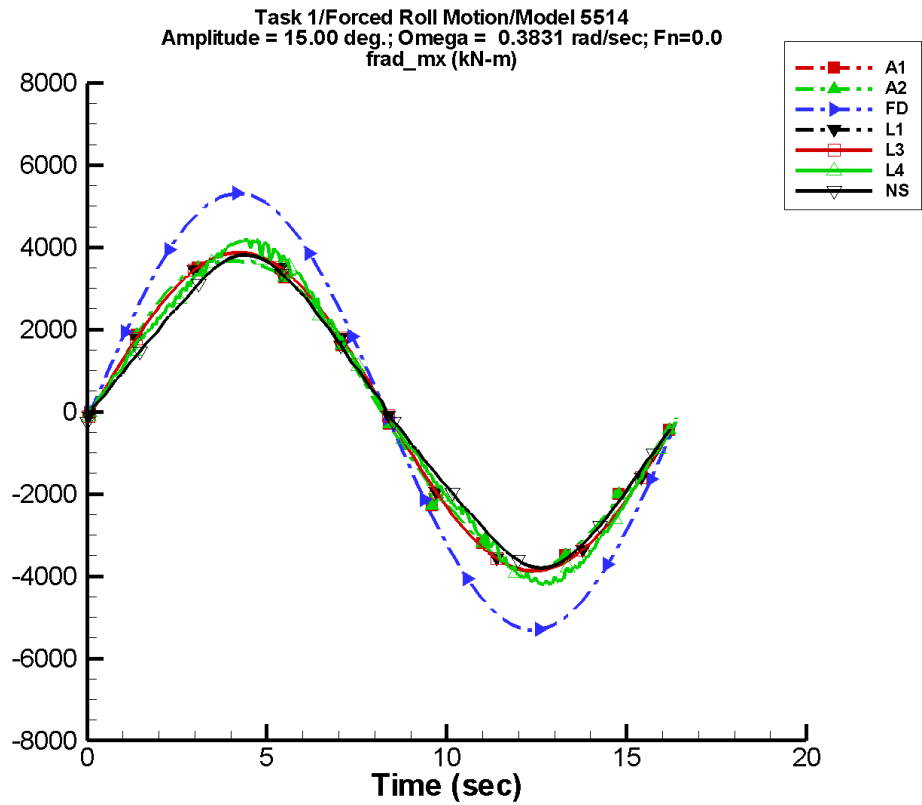
Table D-971. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.74	1.25E+03	-1	3.57	-2
A2	-1.74	1.25E+03	-1	3.57	-2
FD	4.31E-04	1.77E+03	-2	7.99E-05	-151
L1	-9.32E-03	1.29E+03	-3	0.106	-43
L3	-9.36E-03	1.29E+03	-3	0.106	-43
L4	-0.439	1.28E+03	-3	4.33	-25
NF	—	—	—	—	—
NS	2.27E-02	1.14E+03	-3	0.105	161

Table D-972. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.29E+03	1.25E+03	-1.28E+03	1.23E+03
A2	-1.29E+03	1.25E+03	-1.28E+03	1.23E+03
FD	-1.77E+03	1.77E+03	-1.76E+03	1.76E+03
L1	-1.29E+03	1.29E+03	-1.29E+03	1.29E+03
L3	-1.29E+03	1.29E+03	-1.29E+03	1.29E+03
L4	-1.30E+03	1.29E+03	-1.29E+03	1.29E+03
NF	—	—	—	—
NS	-1.14E+03	1.14E+03	-1.13E+03	1.13E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-487. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

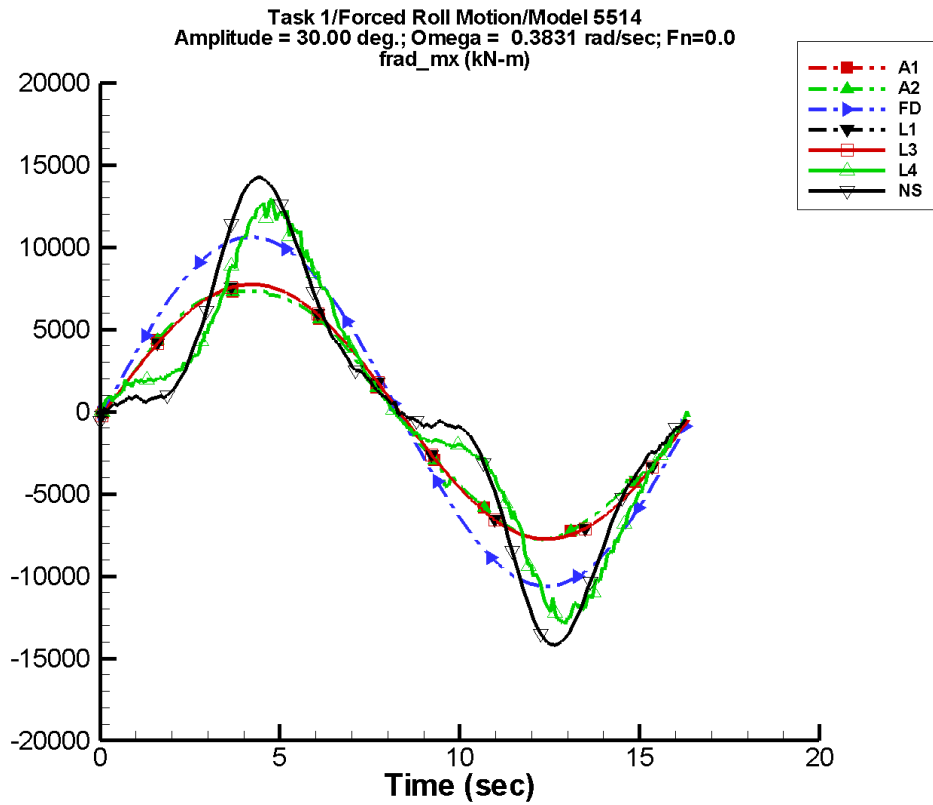
Table D-973. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.21	3.75E+03	-1	10.7	-2
A2	-5.21	3.75E+03	-1	10.7	-2
FD	1.24E-03	5.31E+03	-2	4.10E-04	88
L1	-2.67E-02	3.87E+03	-3	0.319	-43
L3	-2.67E-02	3.87E+03	-3	0.319	-43
L4	-5.17	3.90E+03	-5	14.8	20
NF	—	—	—	—	—
NS	0.332	3.56E+03	-5	0.177	-151

Table D-974. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.88E+03	3.74E+03	-3.85E+03	3.67E+03
A2	-3.88E+03	3.74E+03	-3.85E+03	3.67E+03
FD	-5.31E+03	5.31E+03	-5.29E+03	5.29E+03
L1	-3.87E+03	3.87E+03	-3.87E+03	3.87E+03
L3	-3.87E+03	3.87E+03	-3.87E+03	3.87E+03
L4	-4.19E+03	4.19E+03	-4.15E+03	4.14E+03
NF	—	—	—	—
NS	-3.80E+03	3.81E+03	-3.74E+03	3.75E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-488. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

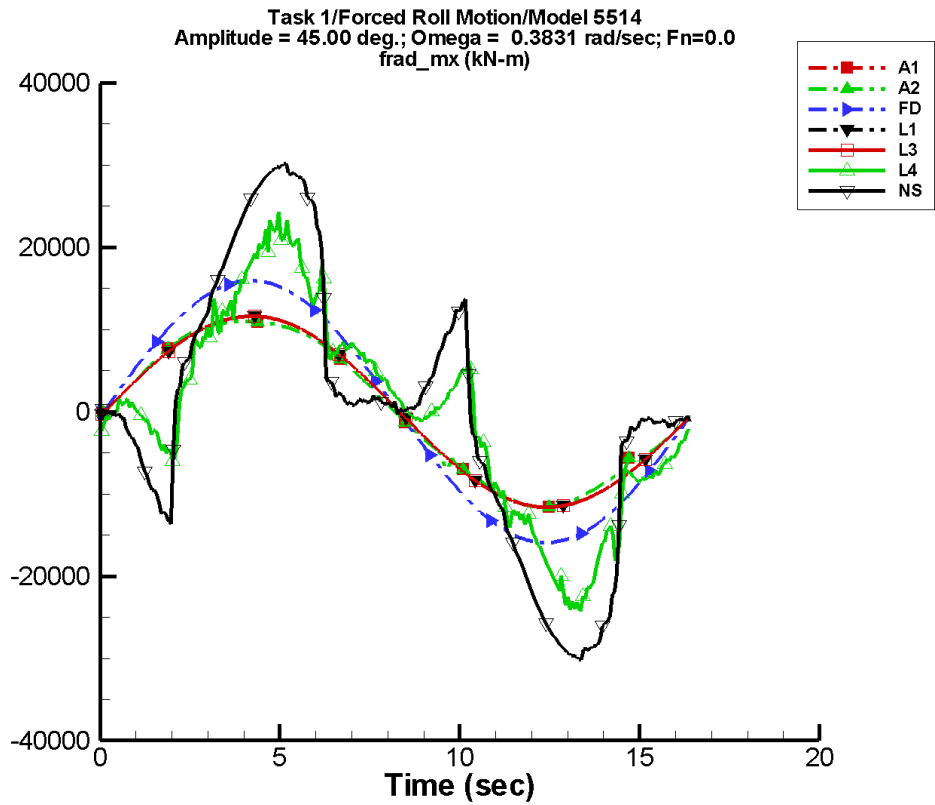
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-10.4	7.50E+03	-1	21.4	-2
A2	-10.4	7.50E+03	-1	21.4	-2
FD	2.22E-03	1.06E+04	-2	9.83E-04	98
L1	-5.09E-02	7.74E+03	-3	0.636	-43
L3	-5.12E-02	7.74E+03	-3	0.636	-43
L4	-49.0	9.13E+03	-12	133.	139
NF	—	—	—	—	—
NS	3.32	9.66E+03	-11	3.02	-58

Table D-976. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.75E+03	7.48E+03	-7.71E+03	7.35E+03
A2	-7.75E+03	7.48E+03	-7.71E+03	7.35E+03
FD	-1.06E+04	1.06E+04	-1.06E+04	1.06E+04
L1	-7.74E+03	7.74E+03	-7.73E+03	7.73E+03
L3	-7.74E+03	7.74E+03	-7.73E+03	7.73E+03
L4	-1.29E+04	1.29E+04	-1.25E+04	1.24E+04
NF	—	—	—	—
NS	-1.42E+04	1.42E+04	-1.40E+04	1.40E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-489. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

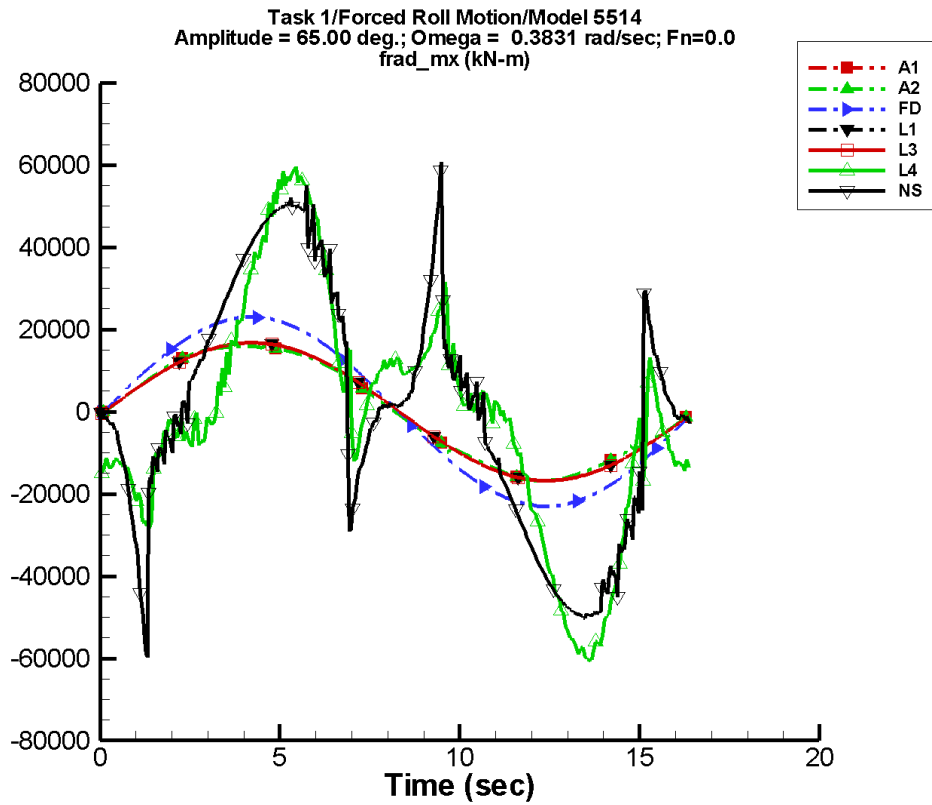
Table D-977. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-15.6	1.12E+04	-1	32.2	-2
A2	-15.6	1.12E+04	-1	32.2	-2
FD	3.12E-03	1.59E+04	-2	1.60E-03	67
L1	-7.34E-02	1.16E+04	-3	0.956	-43
L3	-7.33E-02	1.16E+04	-3	0.956	-43
L4	-436.	1.53E+04	-23	659.	145
NF	—	—	—	—	—
NS	10.3	1.91E+04	-20	9.90	-45

Table D-978. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.16E+04	1.12E+04	-1.16E+04	1.10E+04
A2	-1.16E+04	1.12E+04	-1.16E+04	1.10E+04
FD	-1.59E+04	1.59E+04	-1.59E+04	1.59E+04
L1	-1.16E+04	1.16E+04	-1.16E+04	1.16E+04
L3	-1.16E+04	1.16E+04	-1.16E+04	1.16E+04
L4	-2.42E+04	2.43E+04	-2.34E+04	2.21E+04
NF	—	—	—	—
NS	-3.01E+04	3.02E+04	-2.97E+04	2.98E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-490. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

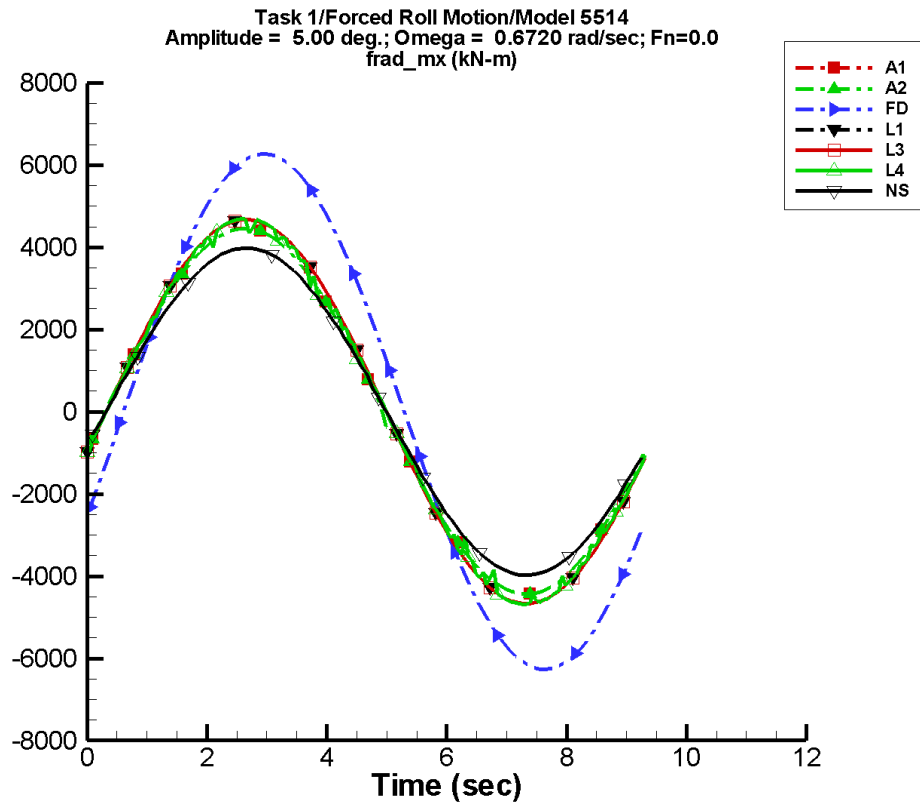
Table D-979. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-22.6	1.62E+04	-1	46.5	-2
A2	-22.6	1.62E+04	-1	46.5	-2
FD	3.75E-03	2.30E+04	-2	1.36E-03	179
L1	-9.77E-02	1.68E+04	-3	1.38	-43
L3	-9.76E-02	1.68E+04	-3	1.38	-43
L4	-1.08E+03	3.25E+04	-41	1.40E+03	168
NF	—	—	—	—	—
NS	52.4	3.20E+04	-30	247.	-113

Table D-980. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.68E+04	1.62E+04	-1.67E+04	1.59E+04
A2	-1.68E+04	1.62E+04	-1.67E+04	1.59E+04
FD	-2.30E+04	2.30E+04	-2.29E+04	2.29E+04
L1	-1.68E+04	1.68E+04	-1.68E+04	1.68E+04
L3	-1.68E+04	1.68E+04	-1.68E+04	1.68E+04
L4	-6.04E+04	5.97E+04	-5.91E+04	5.75E+04
NF	—	—	—	—
NS	-6.02E+04	6.09E+04	-4.97E+04	5.04E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-491. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

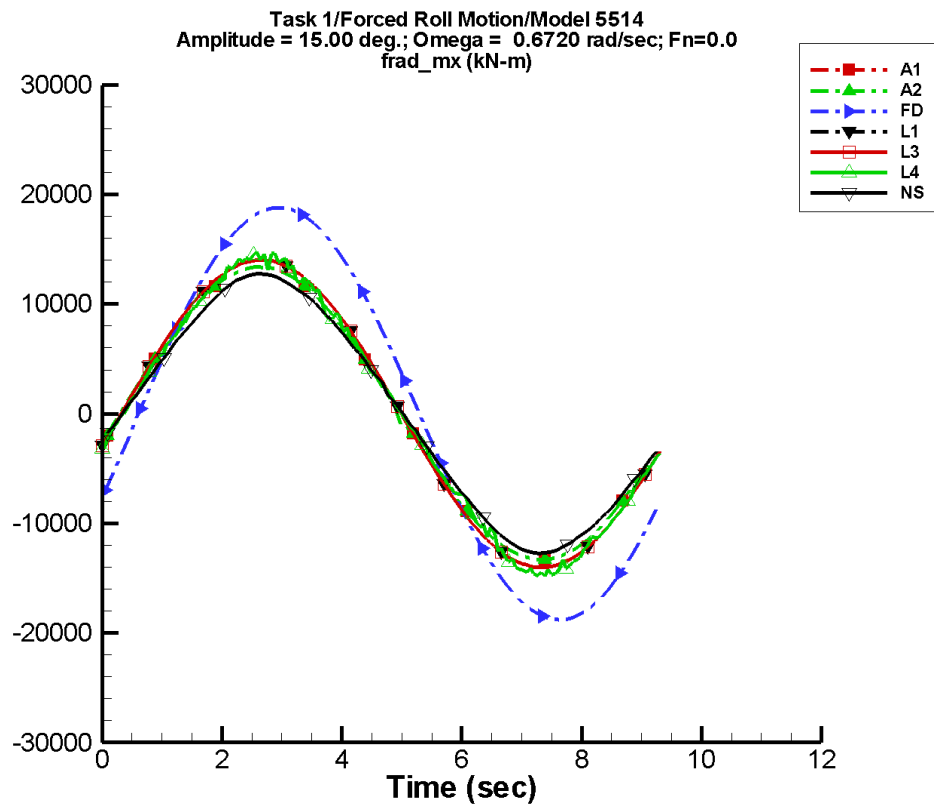
Table D-981. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.33	4.41E+03	-11	10.4	-90
A2	-2.33	4.41E+03	-11	10.4	-90
FD	-1.14E-02	6.27E+03	-24	1.37E-02	-166
L1	1.45E-02	4.67E+03	-12	0.139	-118
L3	1.45E-02	4.67E+03	-12	0.139	-118
L4	-9.89	4.58E+03	-12	34.7	-46
NF	—	—	—	—	—
NS	-0.850	3.97E+03	-12	1.06	175

Table D-982. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.44E+03	4.46E+03	-4.38E+03	4.40E+03
A2	-4.44E+03	4.46E+03	-4.38E+03	4.40E+03
FD	-6.27E+03	6.27E+03	-6.19E+03	6.20E+03
L1	-4.67E+03	4.67E+03	-4.65E+03	4.65E+03
L3	-4.67E+03	4.67E+03	-4.65E+03	4.65E+03
L4	-4.69E+03	4.69E+03	-4.65E+03	4.61E+03
NF	—	—	—	—
NS	-3.98E+03	3.98E+03	-3.94E+03	3.94E+03

# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-492. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

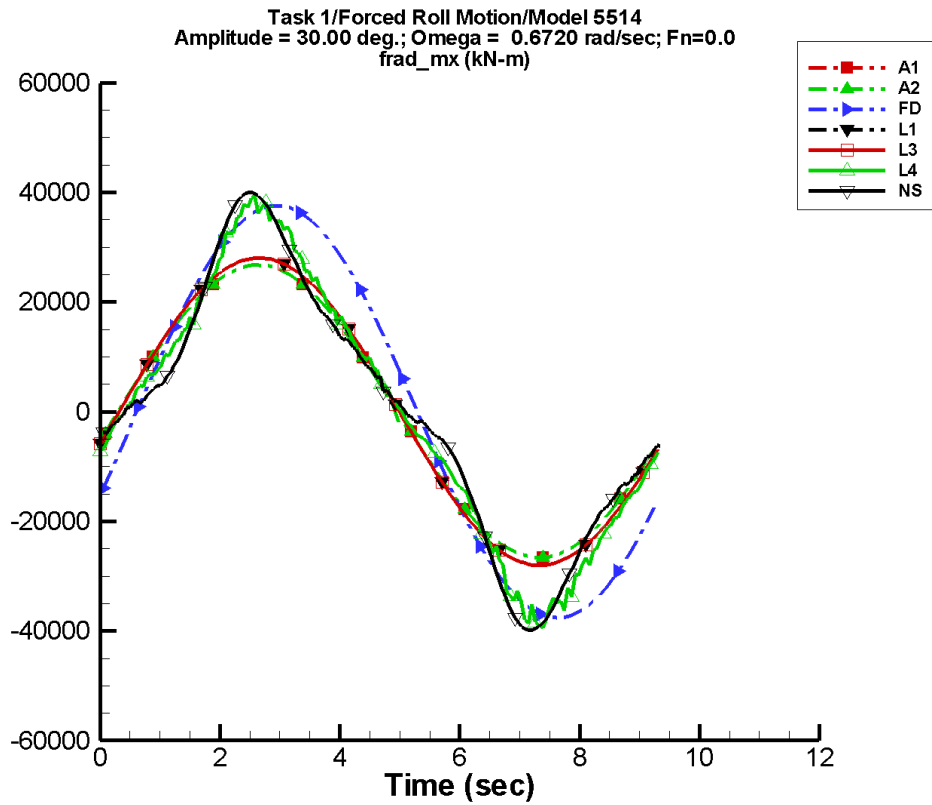
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-6.99	1.32E+04	-11	31.2	-90
A2	-6.99	1.32E+04	-11	31.2	-90
FD	-3.53E-02	1.88E+04	-24	4.03E-02	-167
L1	4.62E-02	1.40E+04	-12	0.416	-118
L3	4.60E-02	1.40E+04	-12	0.416	-118
L4	-121.	1.38E+04	-13	113.	-29
NF	—	—	—	—	—
NS	-1.48	1.23E+04	-13	3.08	-173

Table D-984. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.33E+04	1.34E+04	-1.31E+04	1.32E+04
A2	-1.33E+04	1.34E+04	-1.31E+04	1.32E+04
FD	-1.88E+04	1.88E+04	-1.86E+04	1.86E+04
L1	-1.40E+04	1.40E+04	-1.40E+04	1.40E+04
L3	-1.40E+04	1.40E+04	-1.40E+04	1.40E+04
L4	-1.48E+04	1.48E+04	-1.45E+04	1.43E+04
NF	—	—	—	—
NS	-1.27E+04	1.28E+04	-1.26E+04	1.26E+04



# TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-493. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

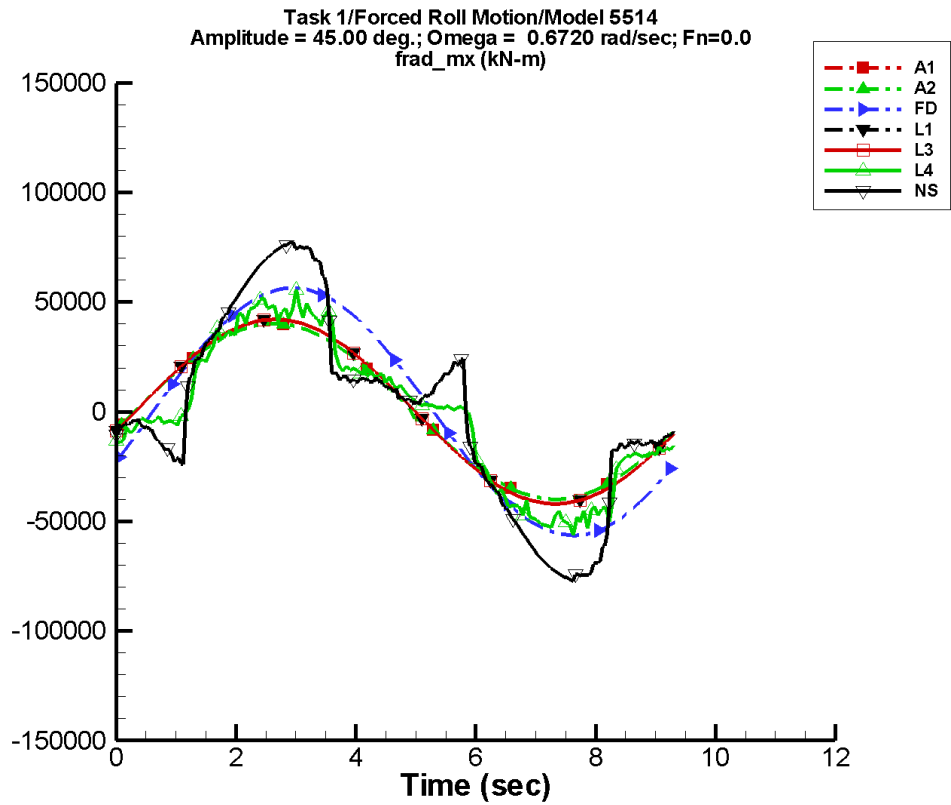
Table D–985. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-14.0	2.65E+04	-11	62.5	-90
A2	-14.0	2.65E+04	-11	62.5	-90
FD	-6.82E-02	3.76E+04	-24	8.18E-02	-169
L1	0.102	2.80E+04	-12	0.825	-119
L3	0.102	2.80E+04	-12	0.825	-119
L4	-477.	3.14E+04	-16	288.	-158
NF	—	—	—	—	—
NS	8.36	3.06E+04	-15	14.6	-109

Table D–986. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.66E+04	2.67E+04	-2.63E+04	2.64E+04
A2	-2.66E+04	2.67E+04	-2.63E+04	2.64E+04
FD	-3.76E+04	3.76E+04	-3.72E+04	3.72E+04
L1	-2.80E+04	2.80E+04	-2.79E+04	2.79E+04
L3	-2.80E+04	2.80E+04	-2.79E+04	2.79E+04
L4	-3.94E+04	3.93E+04	-3.74E+04	3.75E+04
NF	—	—	—	—
NS	-3.99E+04	4.00E+04	-3.93E+04	3.94E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-494. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

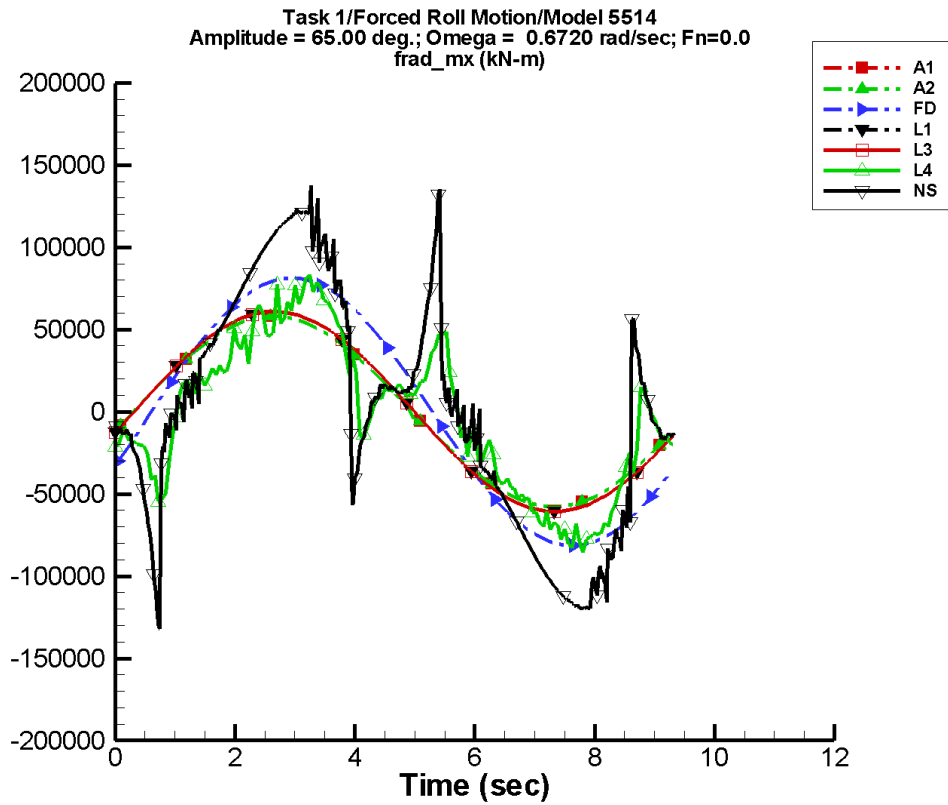
Table D–987. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-21.0	3.97E+04	-11	93.7	-90
A2	-21.0	3.97E+04	-11	93.7	-90
FD	-0.104	5.64E+04	-24	0.124	-167
L1	0.157	4.20E+04	-12	1.23	-119
L3	0.158	4.20E+04	-12	1.23	-119
L4	-1.66E+03	4.31E+04	-22	1.24E+03	174
NF	—	—	—	—	—
NS	41.6	5.50E+04	-20	40.4	-113

Table D–988. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.99E+04	4.01E+04	-3.94E+04	3.96E+04
A2	-3.99E+04	4.01E+04	-3.94E+04	3.96E+04
FD	-5.64E+04	5.64E+04	-5.57E+04	5.58E+04
L1	-4.20E+04	4.21E+04	-4.19E+04	4.19E+04
L3	-4.20E+04	4.21E+04	-4.19E+04	4.19E+04
L4	-5.61E+04	5.57E+04	-5.03E+04	4.80E+04
NF	—	—	—	—
NS	-7.71E+04	7.74E+04	-7.58E+04	7.61E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-495. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

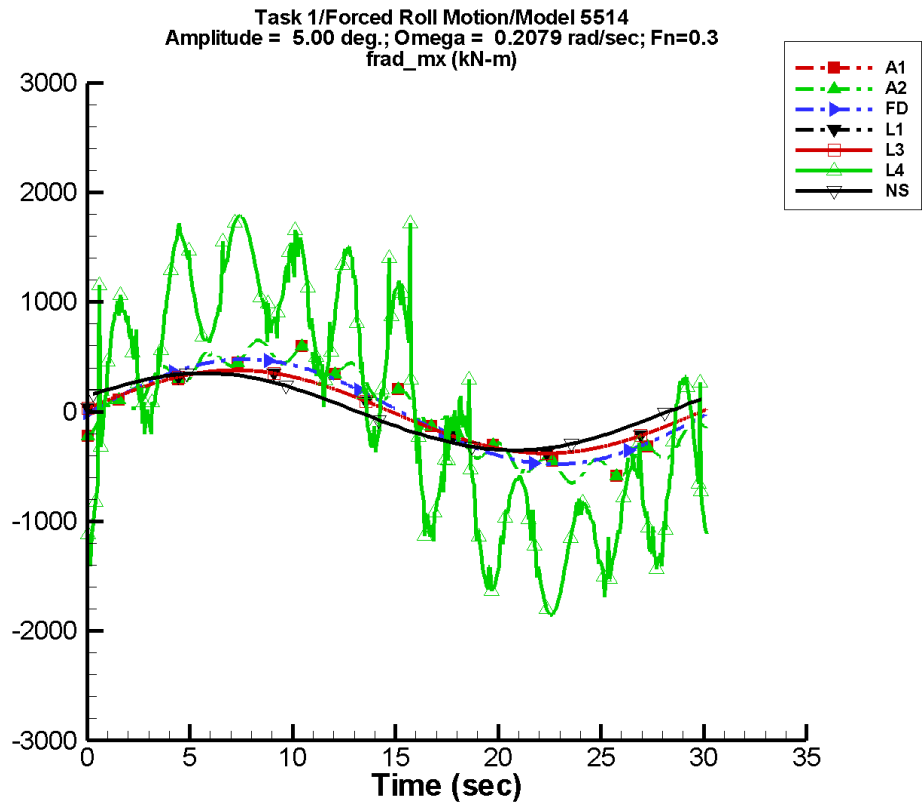
Table D-989. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-30.3	5.74E+04	-11	135.	-90
A2	-30.3	5.74E+04	-11	135.	-90
FD	-0.148	8.15E+04	-24	0.180	-167
L1	0.235	6.07E+04	-12	1.75	-119
L3	0.235	6.07E+04	-12	1.75	-119
L4	-3.46E+03	5.61E+04	-32	2.67E+03	156
NF	—	—	—	—	—
NS	333.	8.28E+04	-28	703.	-118

Table D-990. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.76E+04	5.79E+04	-5.70E+04	5.72E+04
A2	-5.76E+04	5.79E+04	-5.70E+04	5.72E+04
FD	-8.15E+04	8.15E+04	-8.05E+04	8.05E+04
L1	-6.07E+04	6.07E+04	-6.05E+04	6.05E+04
L3	-6.07E+04	6.07E+04	-6.05E+04	6.05E+04
L4	-8.54E+04	8.33E+04	-7.77E+04	7.51E+04
NF	—	—	—	—
NS	-1.32E+05	1.37E+05	-1.20E+05	1.22E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-496. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D-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  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

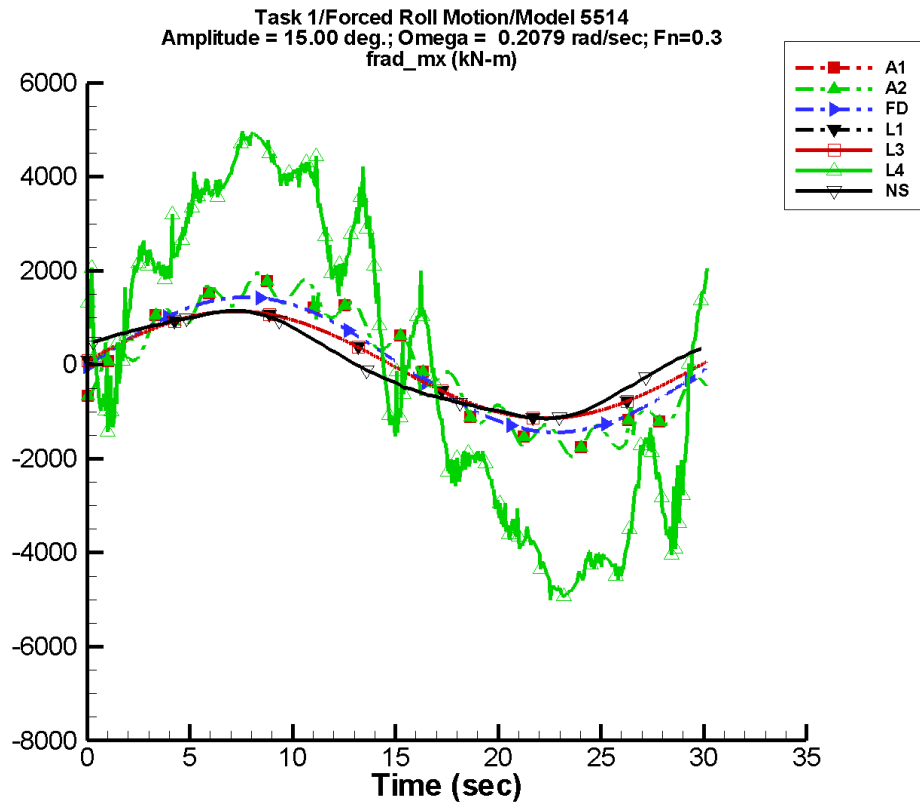
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.295	543.	-12	0.951	-17
A2	-0.295	543.	-12	0.951	-17
FD	-5.32E-05	479.	-2	6.57E-05	88
L1	0.170	379.	4	8.21E-03	-116
L3	0.142	379.	4	2.65E-03	-156
L4	10.5	1.29E+03	-8	27.3	36
NF	—	—	—	—	—
NS	-9.38E-03	352.	23	1.14E-02	16

Table D-992. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-651.	652.	-632.	633.
A2	-651.	652.	-632.	633.
FD	-479.	479.	-479.	479.
L1	-379.	380.	-379.	380.
L3	-379.	380.	-379.	379.
L4	-1.85E+03	1.87E+03	-1.83E+03	1.85E+03
NF	—	—	—	—
NS	-352.	352.	-348.	348.



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-497. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

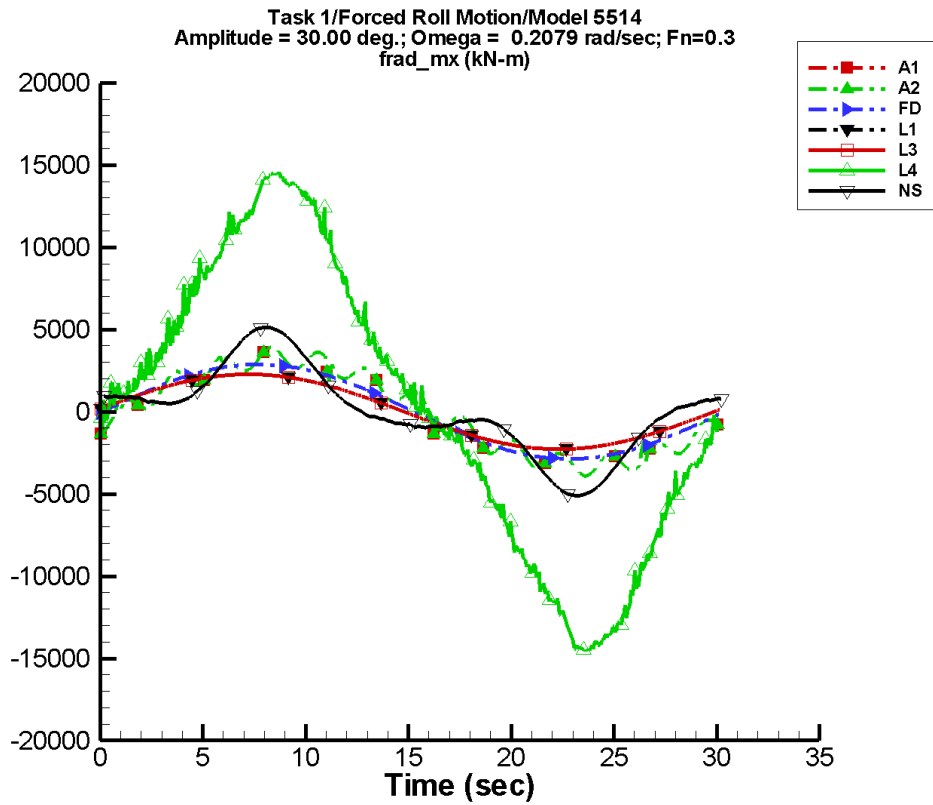
Table D-993. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.885	1.63E+03	-12	2.85	-17
A2	-0.885	1.63E+03	-12	2.85	-17
FD	-7.87E-05	1.44E+03	-2	1.58E-04	55
L1	0.167	1.14E+03	4	7.01E-03	-125
L3	0.138	1.14E+03	4	1.25E-03	153
L4	22.8	4.28E+03	-9	6.15	-51
NF	—	—	—	—	—
NS	-0.261	1.10E+03	19	0.231	57

Table D-994. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.95E+03	1.96E+03	-1.90E+03	1.90E+03
A2	-1.95E+03	1.96E+03	-1.90E+03	1.90E+03
FD	-1.44E+03	1.44E+03	-1.44E+03	1.44E+03
L1	-1.14E+03	1.14E+03	-1.14E+03	1.14E+03
L3	-1.14E+03	1.14E+03	-1.14E+03	1.14E+03
L4	-5.01E+03	4.97E+03	-4.88E+03	4.87E+03
NF	—	—	—	—
NS	-1.15E+03	1.15E+03	-1.13E+03	1.13E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-498. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

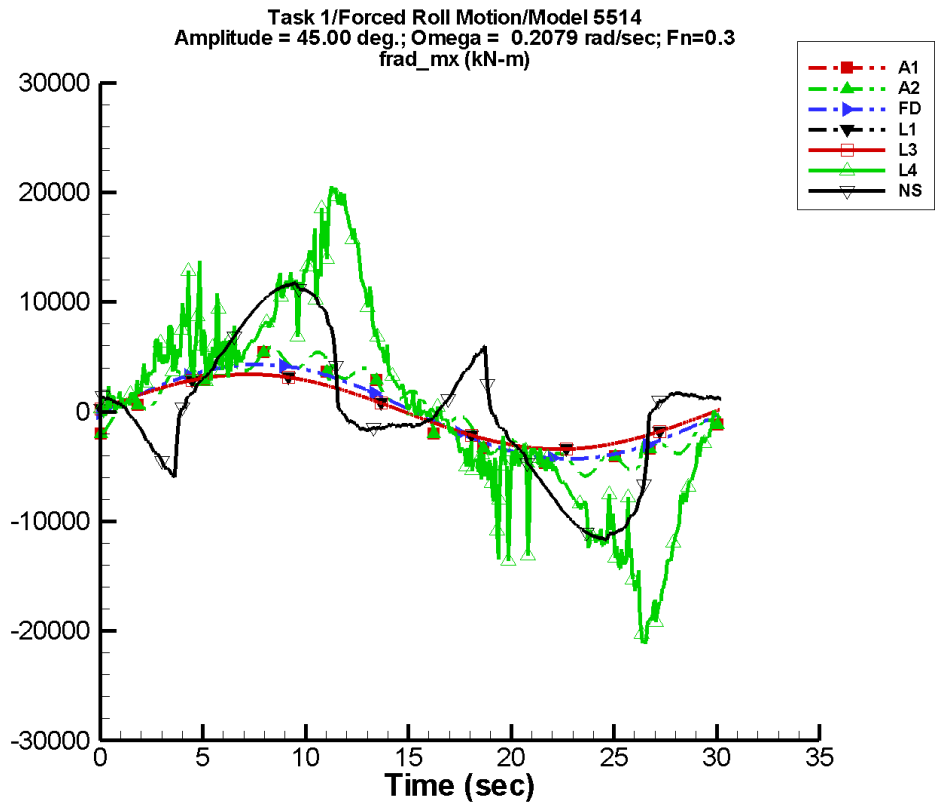
Table D-995. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.77	3.26E+03	-12	5.70	-17
A2	-1.77	3.26E+03	-12	5.70	-17
FD	-3.93E-04	2.87E+03	-2	3.27E-04	46
L1	0.166	2.28E+03	4	2.22E-03	-158
L3	0.139	2.28E+03	4	6.63E-03	68
L4	105.	1.20E+04	-10	224.	-124
NF	—	—	—	—	—
NS	-3.10	3.14E+03	3	2.86	67

Table D-996. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.91E+03	3.91E+03	-3.79E+03	3.80E+03
A2	-3.91E+03	3.91E+03	-3.79E+03	3.80E+03
FD	-2.87E+03	2.87E+03	-2.87E+03	2.87E+03
L1	-2.28E+03	2.28E+03	-2.28E+03	2.28E+03
L3	-2.28E+03	2.28E+03	-2.28E+03	2.28E+03
L4	-1.46E+04	1.46E+04	-1.45E+04	1.45E+04
NF	—	—	—	—
NS	-5.16E+03	5.13E+03	-5.05E+03	5.03E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-499. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

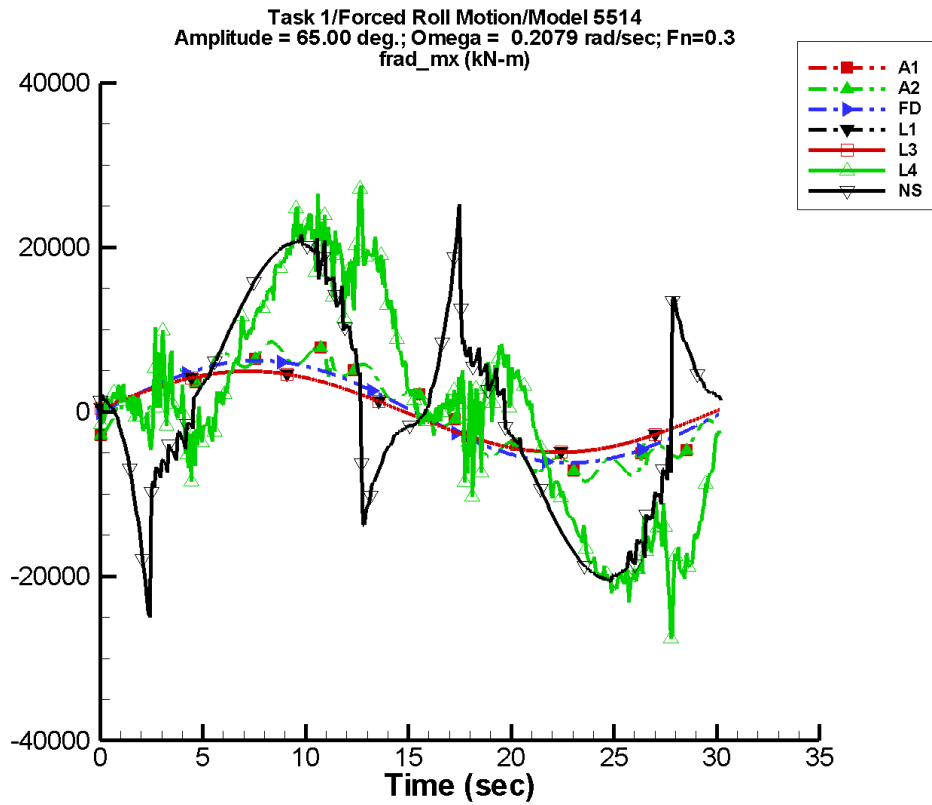
Table D-997. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.66	4.89E+03	-12	8.55	-17
A2	-2.66	4.89E+03	-12	8.55	-17
FD	-6.63E-04	4.31E+03	-2	8.41E-04	84
L1	0.162	3.41E+03	4	9.78E-03	-124
L3	0.135	3.41E+03	4	1.13E-03	-137
L4	573.	1.19E+04	-23	1.16E+03	108
NF	—	—	—	—	—
NS	-11.1	6.51E+03	-14	8.86	59

Table D-998. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.86E+03	5.87E+03	-5.69E+03	5.70E+03
A2	-5.86E+03	5.87E+03	-5.69E+03	5.70E+03
FD	-4.31E+03	4.31E+03	-4.31E+03	4.31E+03
L1	-3.41E+03	3.42E+03	-3.41E+03	3.41E+03
L3	-3.41E+03	3.41E+03	-3.41E+03	3.41E+03
L4	-2.12E+04	2.12E+04	-2.00E+04	1.99E+04
NF	—	—	—	—
NS	-1.18E+04	1.17E+04	-1.16E+04	1.15E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-500. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

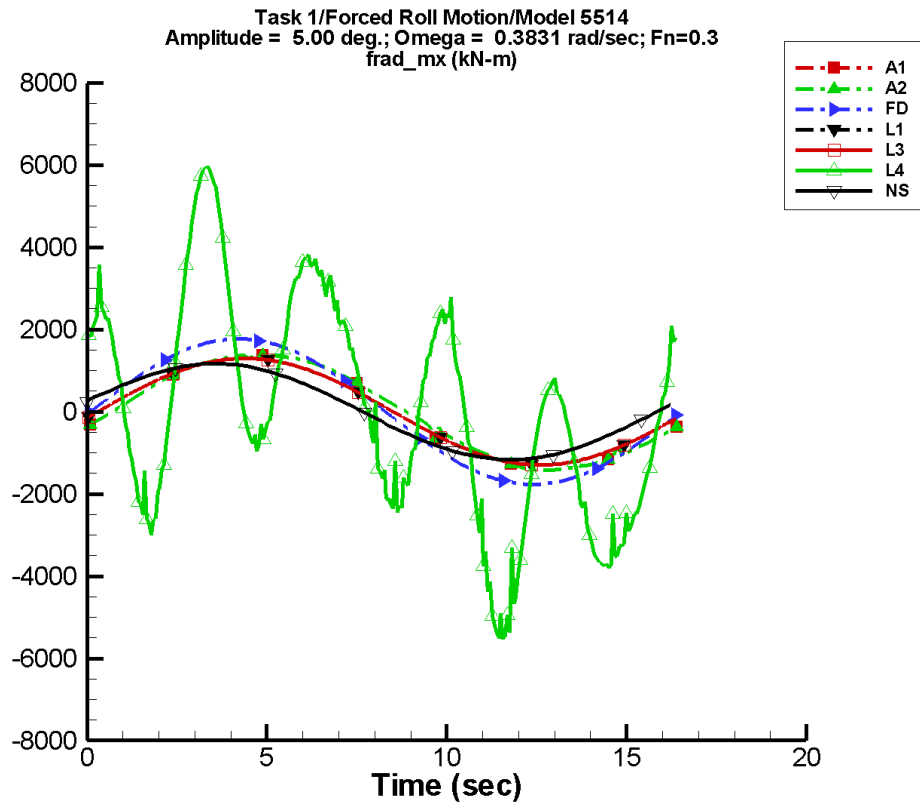
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.84	7.06E+03	-12	12.4	-17
A2	-3.84	7.06E+03	-12	12.4	-17
FD	-1.23E-03	6.23E+03	-2	7.70E-04	66
L1	0.167	4.93E+03	4	1.01E-02	-116
L3	0.139	4.93E+03	4	3.14E-03	-54
L4	935.	1.61E+04	-40	1.61E+03	127
NF	—	—	—	—	—
NS	-11.4	1.19E+04	-29	94.6	-87

Table D–1000. Minimum and maximum of of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.46E+03	8.48E+03	-8.22E+03	8.23E+03
A2	-8.46E+03	8.48E+03	-8.22E+03	8.23E+03
FD	-6.23E+03	6.23E+03	-6.22E+03	6.22E+03
L1	-4.93E+03	4.93E+03	-4.93E+03	4.93E+03
L3	-4.93E+03	4.93E+03	-4.93E+03	4.93E+03
L4	-2.76E+04	2.75E+04	-2.15E+04	2.23E+04
NF	—	—	—	—
NS	-2.50E+04	2.53E+04	-2.07E+04	2.07E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-501. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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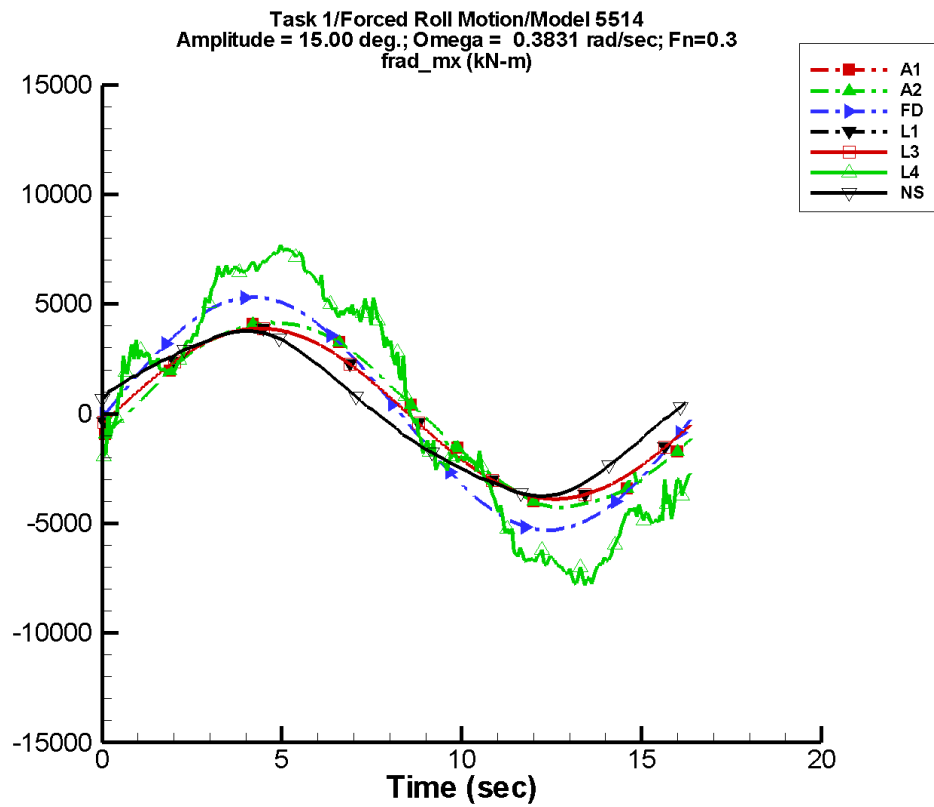
Table D–1001. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.12	1.40E+03	-15	4.22	51
A2	-1.12	1.40E+03	-15	4.22	51
FD	4.31E-04	1.77E+03	-2	7.99E-05	-151
L1	0.175	1.30E+03	-7	1.82E-02	133
L3	0.139	1.30E+03	-7	4.28E-03	93
L4	-12.7	2.12E+03	-14	261.	147
NF	—	—	—	—	—
NS	9.90E-03	1.16E+03	12	0.102	-175

Table D–1002. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.42E+03	1.39E+03	-1.42E+03	1.37E+03
A2	-1.42E+03	1.39E+03	-1.42E+03	1.37E+03
FD	-1.77E+03	1.77E+03	-1.76E+03	1.76E+03
L1	-1.30E+03	1.30E+03	-1.29E+03	1.29E+03
L3	-1.30E+03	1.30E+03	-1.29E+03	1.29E+03
L4	-5.52E+03	5.98E+03	-5.20E+03	5.78E+03
NF	—	—	—	—
NS	-1.17E+03	1.17E+03	-1.15E+03	1.16E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-502. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

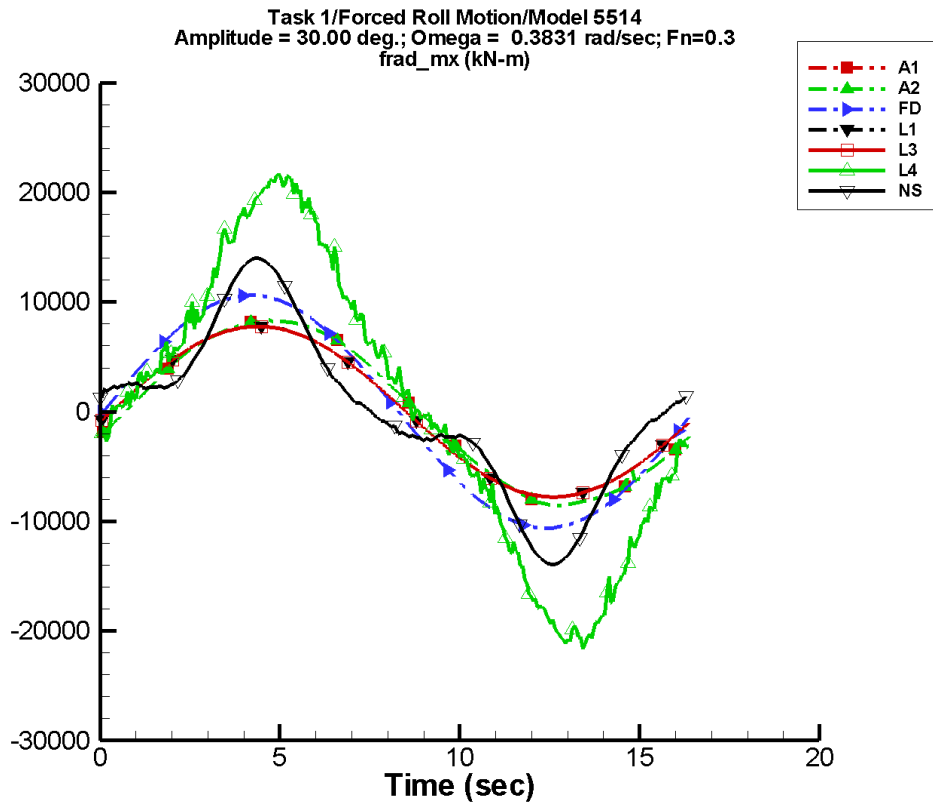
Table D–1003. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.37	4.19E+03	-15	12.7	51
A2	-3.37	4.19E+03	-15	12.7	51
FD	1.24E-03	5.31E+03	-2	4.10E-04	88
L1	0.177	3.89E+03	-7	1.07E-02	129
L3	0.140	3.89E+03	-7	2.93E-03	3
L4	121.	6.91E+03	-15	230.	64
NF	—	—	—	—	—
NS	0.440	3.60E+03	10	0.380	-123

Table D–1004. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.27E+03	4.18E+03	-4.25E+03	4.10E+03
A2	-4.27E+03	4.18E+03	-4.25E+03	4.10E+03
FD	-5.31E+03	5.31E+03	-5.29E+03	5.29E+03
L1	-3.89E+03	3.89E+03	-3.88E+03	3.88E+03
L3	-3.89E+03	3.89E+03	-3.88E+03	3.88E+03
L4	-7.84E+03	7.70E+03	-7.51E+03	7.47E+03
NF	—	—	—	—
NS	-3.76E+03	3.77E+03	-3.70E+03	3.71E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-503. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

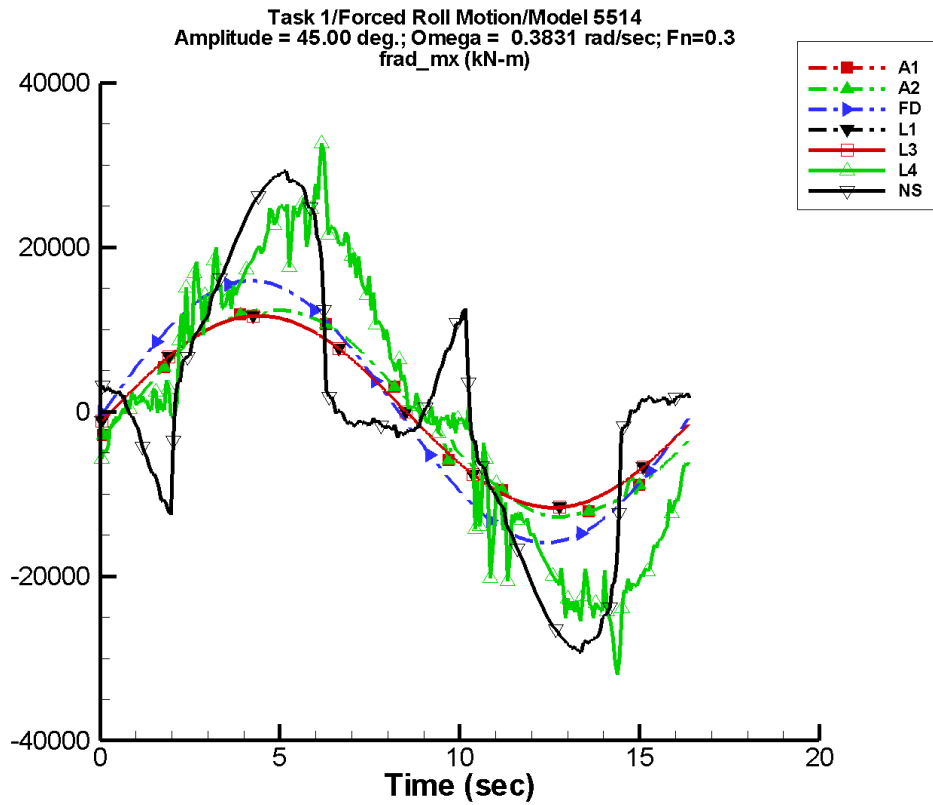
Table D–1005. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-6.73	8.38E+03	-15	25.3	51
A2	-6.73	8.38E+03	-15	25.3	51
FD	2.22E-03	1.06E+04	-2	9.83E-04	98
L1	0.185	7.77E+03	-7	1.42E-02	132
L3	0.147	7.77E+03	-7	5.17E-03	87
L4	229.	1.74E+04	-17	162.	84
NF	—	—	—	—	—
NS	4.79	9.42E+03	0	4.33	-73

Table D–1006. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.54E+03	8.36E+03	-8.49E+03	8.21E+03
A2	-8.54E+03	8.36E+03	-8.49E+03	8.21E+03
FD	-1.06E+04	1.06E+04	-1.06E+04	1.06E+04
L1	-7.77E+03	7.77E+03	-7.76E+03	7.76E+03
L3	-7.77E+03	7.77E+03	-7.76E+03	7.76E+03
L4	-2.16E+04	2.18E+04	-2.06E+04	2.12E+04
NF	—	—	—	—
NS	-1.39E+04	1.40E+04	-1.37E+04	1.37E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-504. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

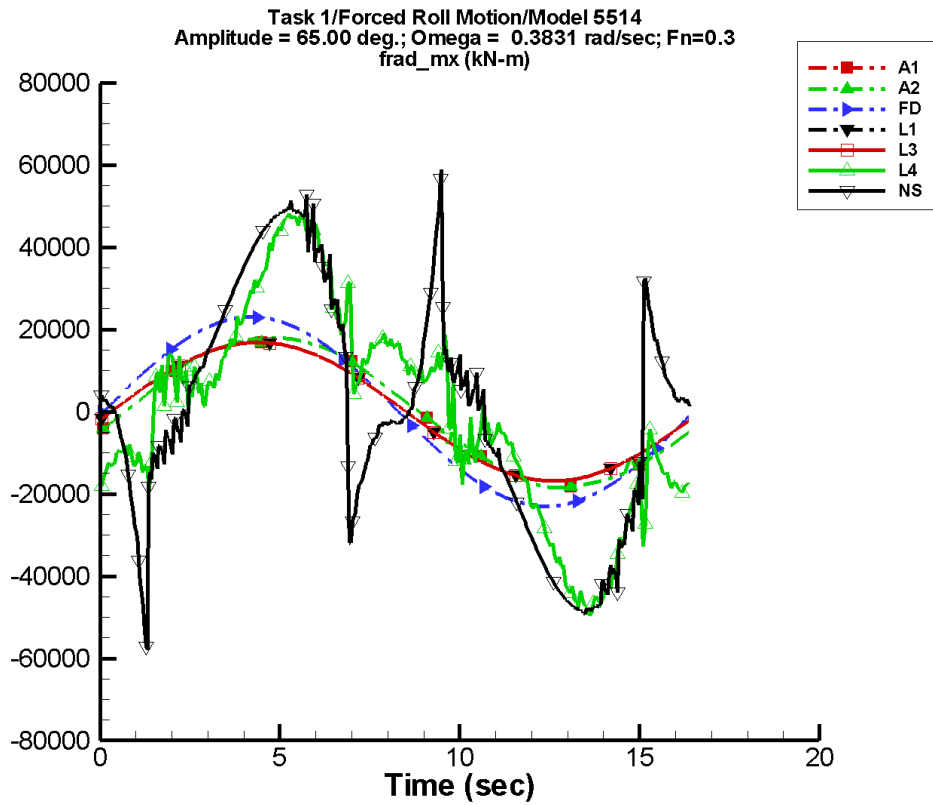
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-10.1	1.26E+04	-15	38.0	51
A2	-10.1	1.26E+04	-15	38.0	51
FD	3.12E-03	1.59E+04	-2	1.60E-03	67
L1	0.188	1.17E+04	-7	1.94E-02	107
L3	0.147	1.17E+04	-7	1.57E-02	85
L4	210.	2.20E+04	-26	371.	116
NF	—	—	—	—	—
NS	20.7	1.78E+04	-13	18.2	-71

Table D–1008. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.28E+04	1.25E+04	-1.27E+04	1.23E+04
A2	-1.28E+04	1.25E+04	-1.27E+04	1.23E+04
FD	-1.59E+04	1.59E+04	-1.59E+04	1.59E+04
L1	-1.17E+04	1.17E+04	-1.16E+04	1.16E+04
L3	-1.17E+04	1.17E+04	-1.16E+04	1.16E+04
L4	-3.20E+04	3.26E+04	-2.69E+04	2.73E+04
NF	—	—	—	—
NS	-2.92E+04	2.93E+04	-2.87E+04	2.88E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-505. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

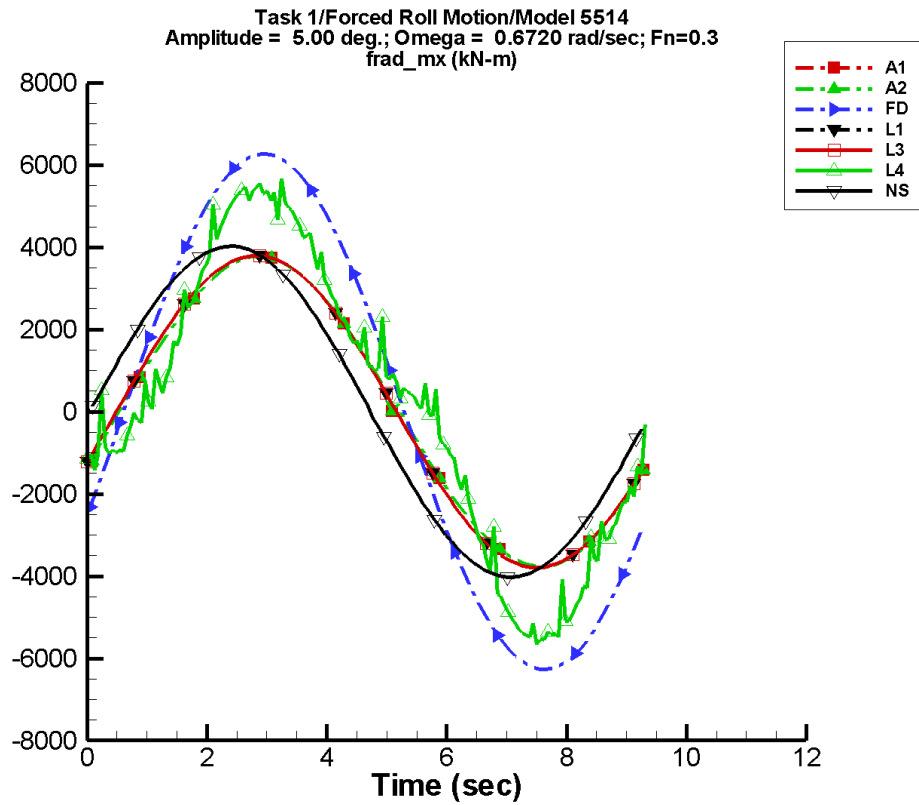
Table D–1009. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-14.6	1.82E+04	-15	54.9	51
A2	-14.6	1.82E+04	-15	54.9	51
FD	3.75E-03	2.30E+04	-2	1.36E-03	179
L1	0.193	1.68E+04	-7	2.30E-02	101
L3	0.155	1.68E+04	-7	2.50E-02	87
L4	0.246	3.30E+04	-34	186.	-156
NF	—	—	—	—	—
NS	95.7	2.92E+04	-27	294.	-101

Table D–1010. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.85E+04	1.81E+04	-1.84E+04	1.78E+04
A2	-1.85E+04	1.81E+04	-1.84E+04	1.78E+04
FD	-2.30E+04	2.30E+04	-2.29E+04	2.29E+04
L1	-1.68E+04	1.68E+04	-1.68E+04	1.68E+04
L3	-1.68E+04	1.68E+04	-1.68E+04	1.68E+04
L4	-4.96E+04	4.83E+04	-4.72E+04	4.71E+04
NF	—	—	—	—
NS	-5.84E+04	5.91E+04	-4.84E+04	4.93E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-506. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

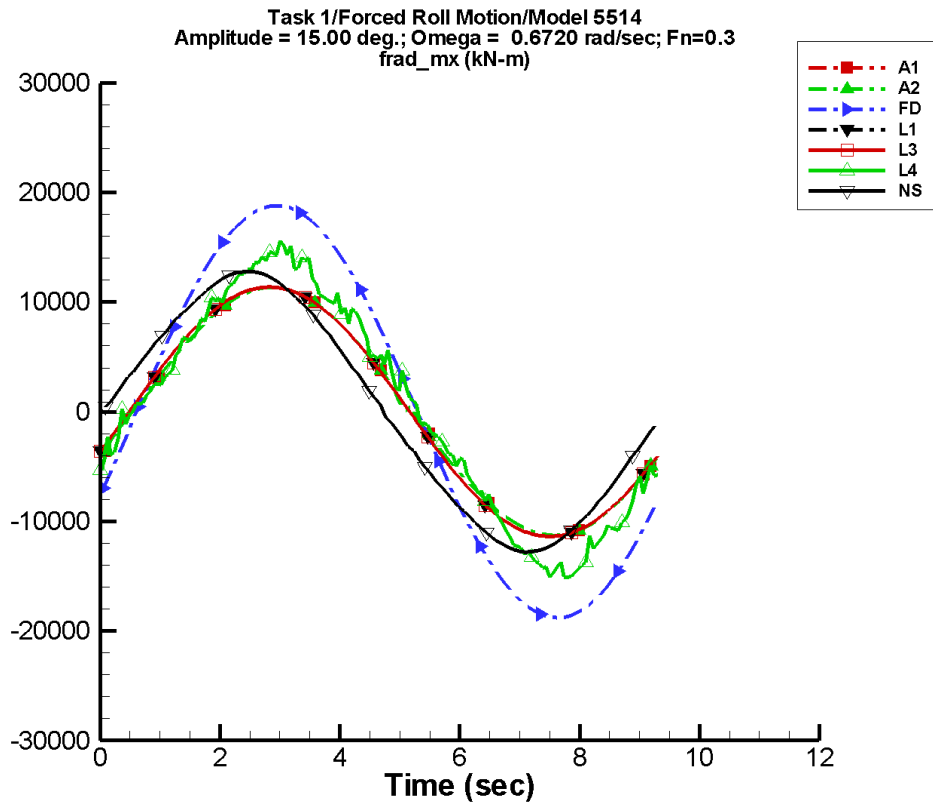
Table D–1011. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-3.06	3.73E+03	-20	10.9	-86
A2	-3.06	3.73E+03	-20	10.9	-86
FD	-1.14E-02	6.27E+03	-24	1.37E-02	-166
L1	0.176	3.79E+03	-19	2.32E-02	-164
L3	0.140	3.79E+03	-19	8.36E-03	-12
L4	34.7	4.61E+03	-28	88.7	147
NF	—	—	—	—	—
NS	-0.871	4.02E+03	-2	1.10	176

Table D–1012. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.77E+03	3.78E+03	-3.72E+03	3.73E+03
A2	-3.77E+03	3.78E+03	-3.72E+03	3.73E+03
FD	-6.27E+03	6.27E+03	-6.19E+03	6.20E+03
L1	-3.79E+03	3.79E+03	-3.78E+03	3.78E+03
L3	-3.79E+03	3.79E+03	-3.78E+03	3.78E+03
L4	-5.66E+03	5.66E+03	-5.45E+03	5.37E+03
NF	—	—	—	—
NS	-4.02E+03	4.02E+03	-3.98E+03	3.98E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-507. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

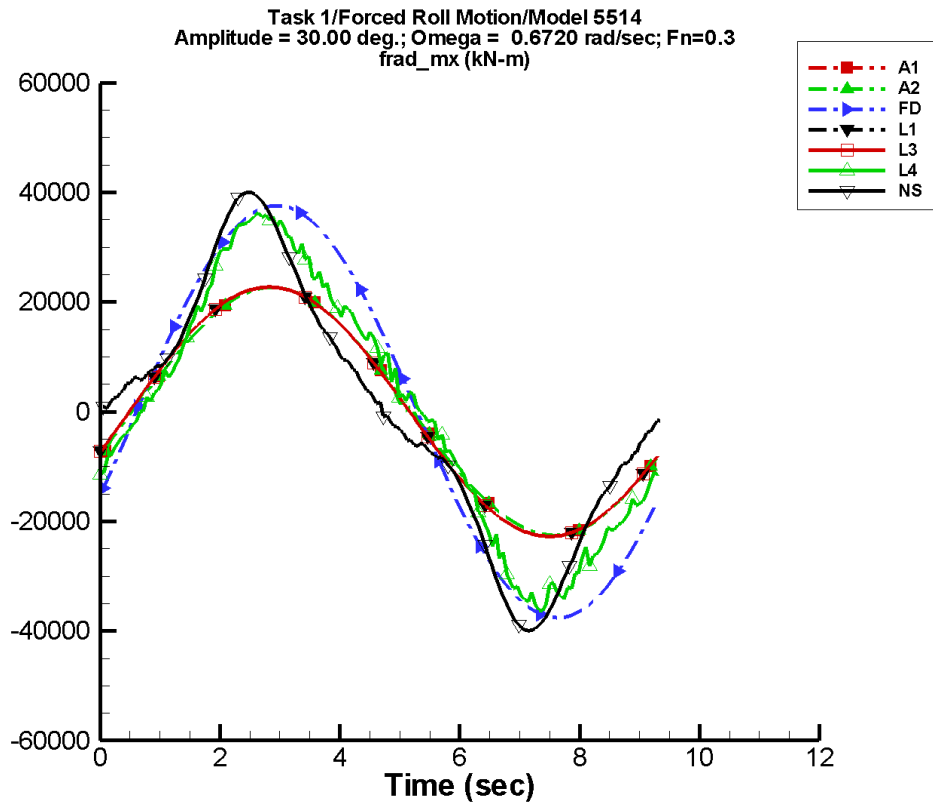
Table D–1013. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.18	1.12E+04	-20	32.8	-86
A2	-9.18	1.12E+04	-20	32.8	-86
FD	-3.53E-02	1.88E+04	-24	4.03E-02	-167
L1	0.180	1.14E+04	-19	2.86E-02	150
L3	0.149	1.14E+04	-19	2.61E-02	81
L4	92.9	1.33E+04	-25	182.	51
NF	—	—	—	—	—
NS	-1.35	1.23E+04	-3	2.91	-171

Table D–1014. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.13E+04	1.13E+04	-1.12E+04	1.12E+04
A2	-1.13E+04	1.13E+04	-1.12E+04	1.12E+04
FD	-1.88E+04	1.88E+04	-1.86E+04	1.86E+04
L1	-1.14E+04	1.14E+04	-1.13E+04	1.13E+04
L3	-1.14E+04	1.14E+04	-1.13E+04	1.13E+04
L4	-1.51E+04	1.56E+04	-1.47E+04	1.46E+04
NF	—	—	—	—
NS	-1.28E+04	1.28E+04	-1.26E+04	1.26E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-508. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

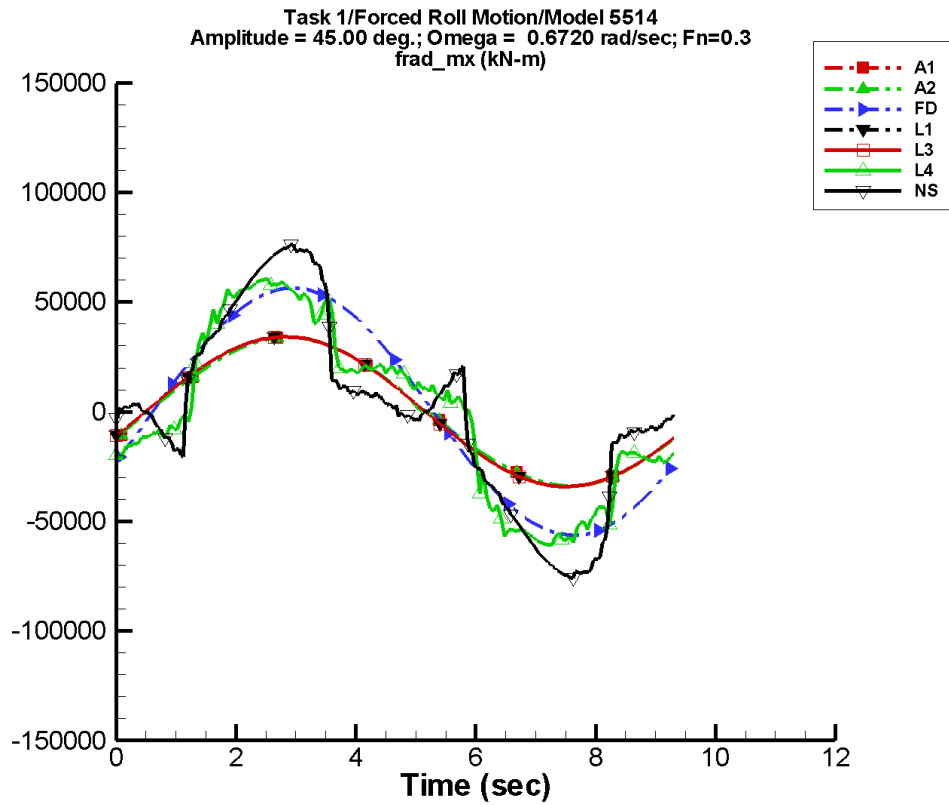
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-18.4	2.24E+04	-20	65.6	-86
A2	-18.4	2.24E+04	-20	65.6	-86
FD	-6.82E-02	3.76E+04	-24	8.18E-02	-169
L1	0.197	2.28E+04	-19	6.32E-02	132
L3	0.169	2.28E+04	-19	6.24E-02	85
L4	-91.2	3.09E+04	-23	523.	-140
NF	—	—	—	—	—
NS	9.36	3.03E+04	-7	15.0	-111

Table D–1016. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.26E+04	2.27E+04	-2.23E+04	2.24E+04
A2	-2.26E+04	2.27E+04	-2.23E+04	2.24E+04
FD	-3.76E+04	3.76E+04	-3.72E+04	3.72E+04
L1	-2.28E+04	2.28E+04	-2.27E+04	2.27E+04
L3	-2.28E+04	2.28E+04	-2.27E+04	2.27E+04
L4	-3.63E+04	3.62E+04	-3.45E+04	3.54E+04
NF	—	—	—	—
NS	-4.00E+04	4.01E+04	-3.94E+04	3.95E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-509. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

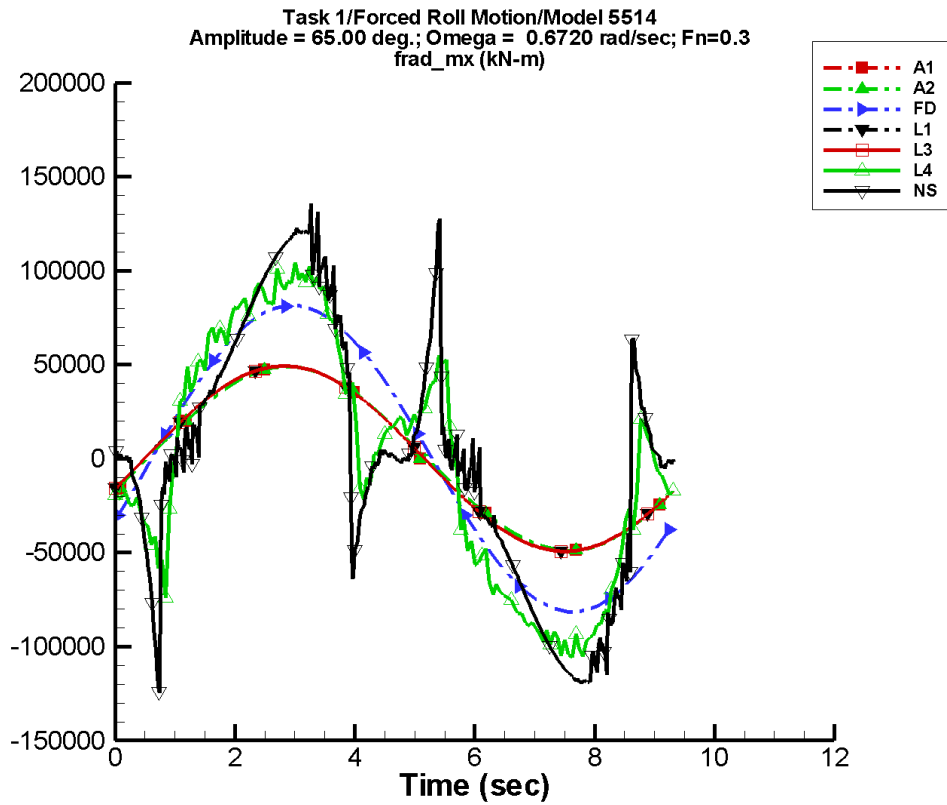
Table D–1017. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-27.5	3.35E+04	-20	98.4	-86
A2	-27.5	3.35E+04	-20	98.4	-86
FD	-0.104	5.64E+04	-24	0.124	-167
L1	0.217	3.41E+04	-19	0.109	138
L3	0.186	3.41E+04	-19	9.98E-02	100
L4	-1.36E+03	5.06E+04	-24	2.41E+03	-152
NF	—	—	—	—	—
NS	41.6	5.27E+04	-15	43.2	-117

Table D–1018. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.39E+04	3.40E+04	-3.35E+04	3.36E+04
A2	-3.39E+04	3.40E+04	-3.35E+04	3.36E+04
FD	-5.64E+04	5.64E+04	-5.57E+04	5.58E+04
L1	-3.41E+04	3.41E+04	-3.40E+04	3.40E+04
L3	-3.41E+04	3.41E+04	-3.40E+04	3.40E+04
L4	-6.09E+04	6.06E+04	-5.91E+04	5.90E+04
NF	—	—	—	—
NS	-7.59E+04	7.62E+04	-7.47E+04	7.50E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-510. Time history of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

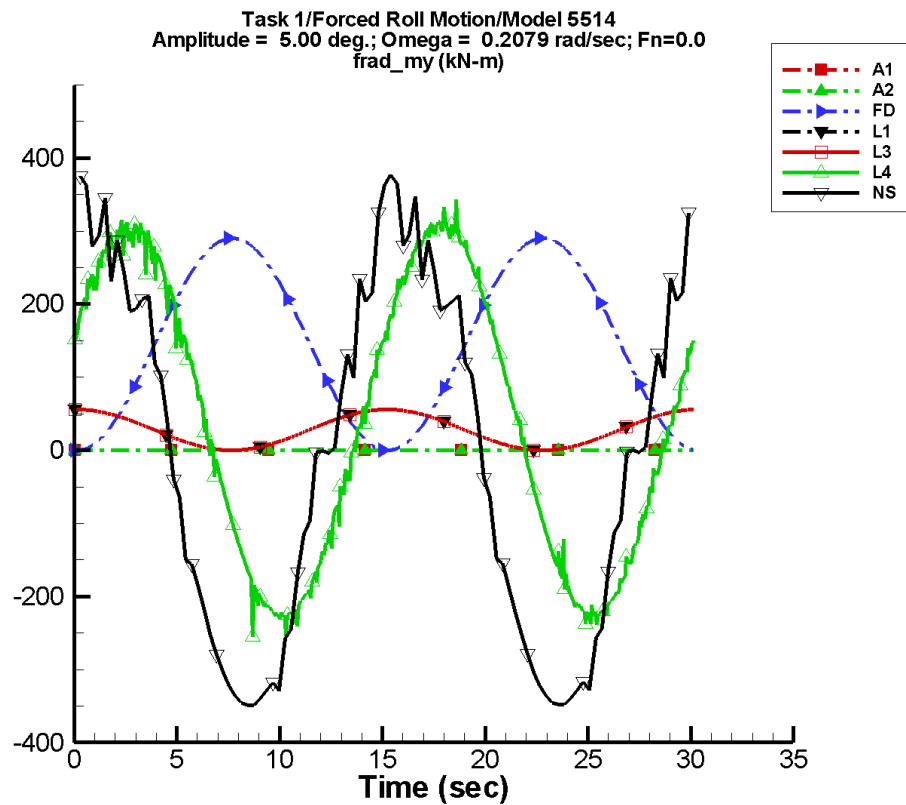
Table D–1019. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-39.8	4.84E+04	-20	142.	-86
A2	-39.8	4.84E+04	-20	142.	-86
FD	-0.148	8.15E+04	-24	0.180	-167
L1	0.253	4.93E+04	-19	0.137	117
L3	0.211	4.93E+04	-19	0.165	81
L4	-2.92E+03	8.12E+04	-22	4.73E+03	-152
NF	—	—	—	—	—
NS	363.	7.73E+04	-24	711.	-112

Table D–1020. Minimum and maximum of  $M_x^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.90E+04	4.91E+04	-4.83E+04	4.85E+04
A2	-4.90E+04	4.91E+04	-4.83E+04	4.85E+04
FD	-8.15E+04	8.15E+04	-8.05E+04	8.05E+04
L1	-4.93E+04	4.93E+04	-4.91E+04	4.91E+04
L3	-4.93E+04	4.93E+04	-4.91E+04	4.91E+04
L4	-1.06E+05	1.04E+05	-1.00E+05	9.72E+04
NF	—	—	—	—
NS	-1.25E+05	1.36E+05	-1.19E+05	1.21E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-511. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

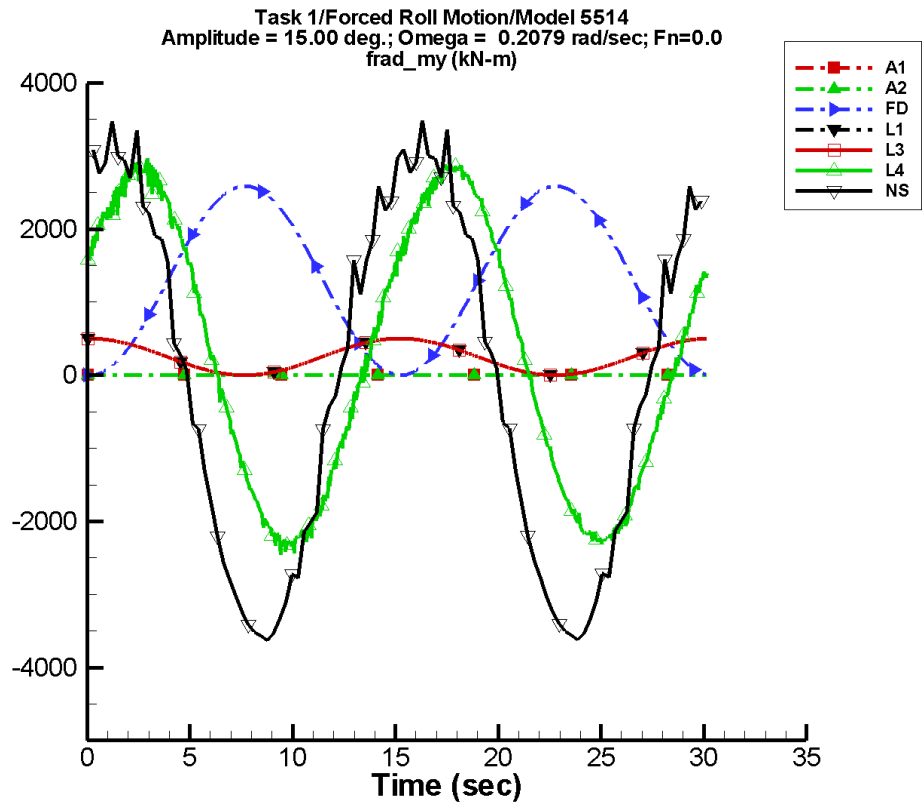
Table D–1021. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.33E-04	3.70E-02	14	3.14E-04	107
A2	3.33E-04	3.70E-02	14	3.14E-04	107
FD	145.	1.18E-03	-3	145.	-94
L1	27.9	9.85E-03	169	27.9	87
L3	27.9	9.85E-03	169	27.9	87
L4	39.3	4.36	-160	264.	27
NF	—	—	—	—	—
NS	-9.04	0.626	-12	338.	68

Table D–1022. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-0.244	0.244	-6.74E-02	6.82E-02
A2	-0.244	0.244	-6.74E-02	6.82E-02
FD	-0.279	290.	-0.855	290.
L1	-1.10E-02	55.9	3.38E-02	55.9
L3	-1.12E-02	55.9	3.36E-02	55.9
L4	-255.	343.	-229.	309.
NF	—	—	—	—
NS	-352.	377.	-342.	352.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-512. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

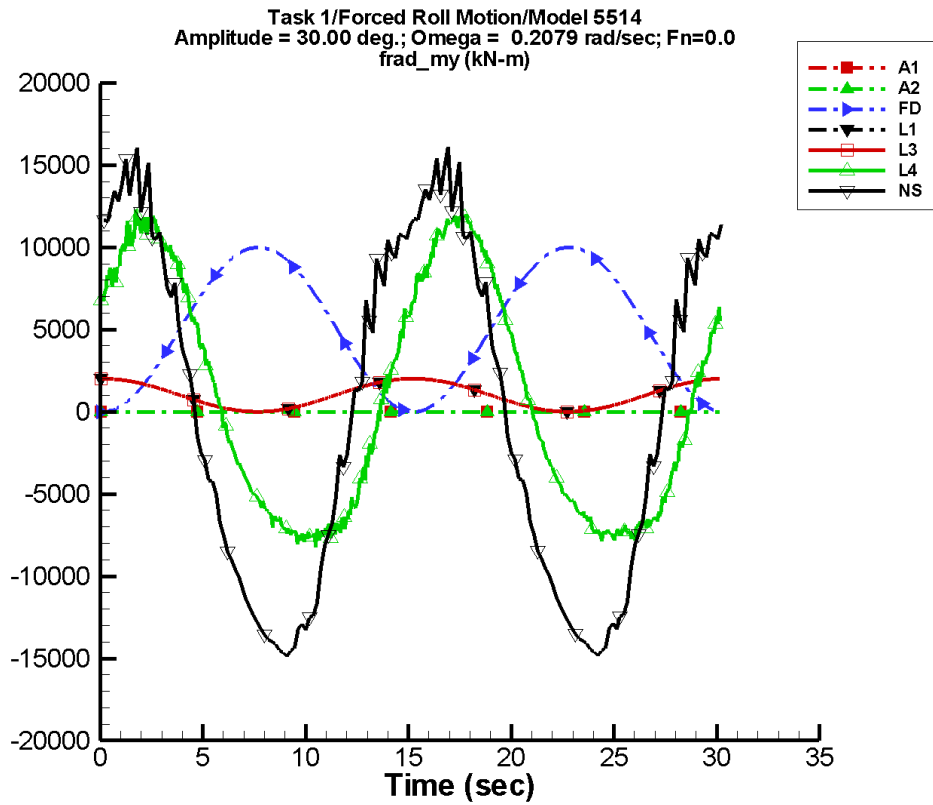
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	1.00E-03	0.111	14	9.41E-04	107
A2	1.00E-03	0.111	14	9.41E-04	107
FD	1.30E+03	0.101	-3	1.29E+03	-94
L1	251.	3.71E-02	152	251.	87
L3	251.	3.70E-02	152	251.	87
L4	260.	31.0	-152	2.52E+03	33
NF	—	—	—	—	—
NS	-80.1	6.08	-13	3.36E+03	66

Table D–1024. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-0.733	0.733	-0.202	0.205
A2	-0.733	0.733	-0.202	0.205
FD	-2.51	2.59E+03	-7.63	2.58E+03
L1	-2.16E-02	503.	0.377	503.
L3	-2.15E-02	503.	0.377	503.
L4	-2.45E+03	2.96E+03	-2.31E+03	2.84E+03
NF	—	—	—	—
NS	-3.66E+03	3.49E+03	-3.46E+03	3.02E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-513. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

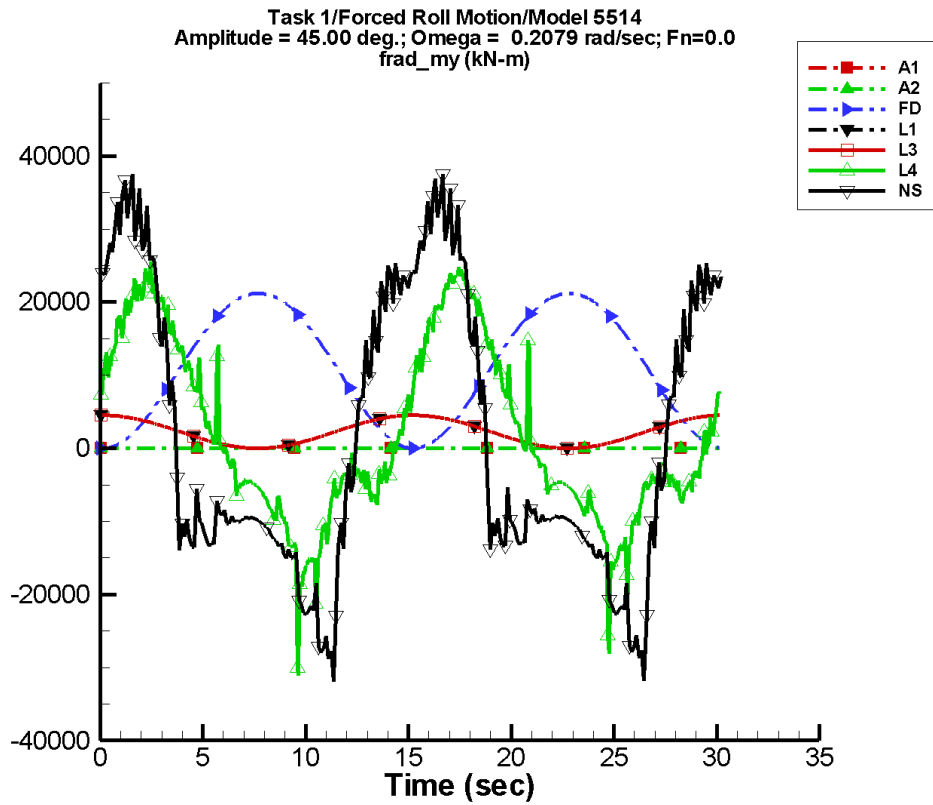
Table D–1025. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	2.00E-03	0.222	14	1.88E-03	107
A2	2.00E-03	0.222	14	1.88E-03	107
FD	5.05E+03	1.58	-3	5.00E+03	-94
L1	1.00E+03	0.103	137	1.00E+03	87
L3	1.00E+03	0.103	137	1.00E+03	87
L4	793.	113.	140	9.64E+03	36
NF	—	—	—	—	—
NS	-254.	27.9	-13	1.44E+04	66

Table D–1026. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.47	1.47	-0.404	0.409
A2	-1.47	1.47	-0.404	0.409
FD	-10.0	9.99E+03	-29.6	9.97E+03
L1	-2.03E-02	2.01E+03	1.55	2.01E+03
L3	-2.31E-02	2.01E+03	1.55	2.01E+03
L4	-8.24E+03	1.24E+04	-7.64E+03	1.18E+04
NF	—	—	—	—
NS	-1.50E+04	1.61E+04	-1.45E+04	1.42E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-514. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

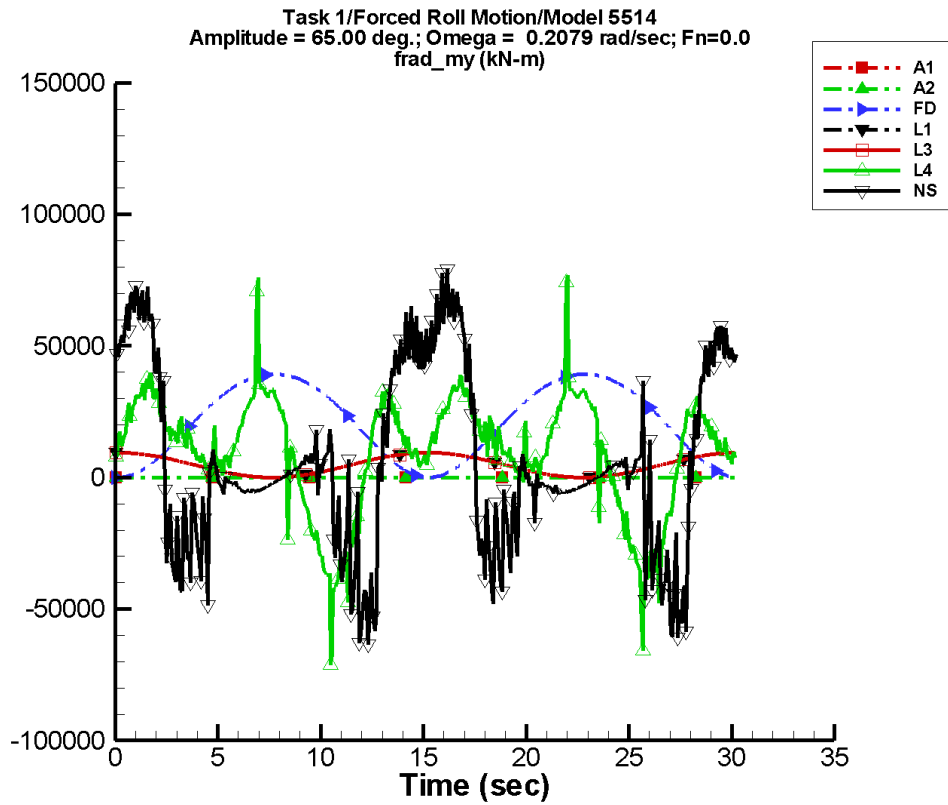
Table D–1027. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.00E-03	0.333	14	2.82E-03	107
A2	3.00E-03	0.333	14	2.82E-03	107
FD	1.09E+04	7.81	-3	1.06E+04	-94
L1	2.26E+03	0.202	129	2.26E+03	87
L3	2.26E+03	0.202	128	2.26E+03	87
L4	1.93E+03	191.	144	1.58E+04	34
NF	—	—	—	—	—
NS	1.27E+03	47.1	-13	2.39E+04	67

Table D–1028. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.20	2.20	-0.607	0.614
A2	-2.20	2.20	-0.607	0.614
FD	-22.6	2.12E+04	-63.2	2.12E+04
L1	-2.14E-02	4.53E+03	3.51	4.52E+03
L3	-2.52E-02	4.53E+03	3.51	4.52E+03
L4	-3.10E+04	2.55E+04	-2.02E+04	2.38E+04
NF	—	—	—	—
NS	-3.23E+04	3.75E+04	-2.66E+04	3.33E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-515. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

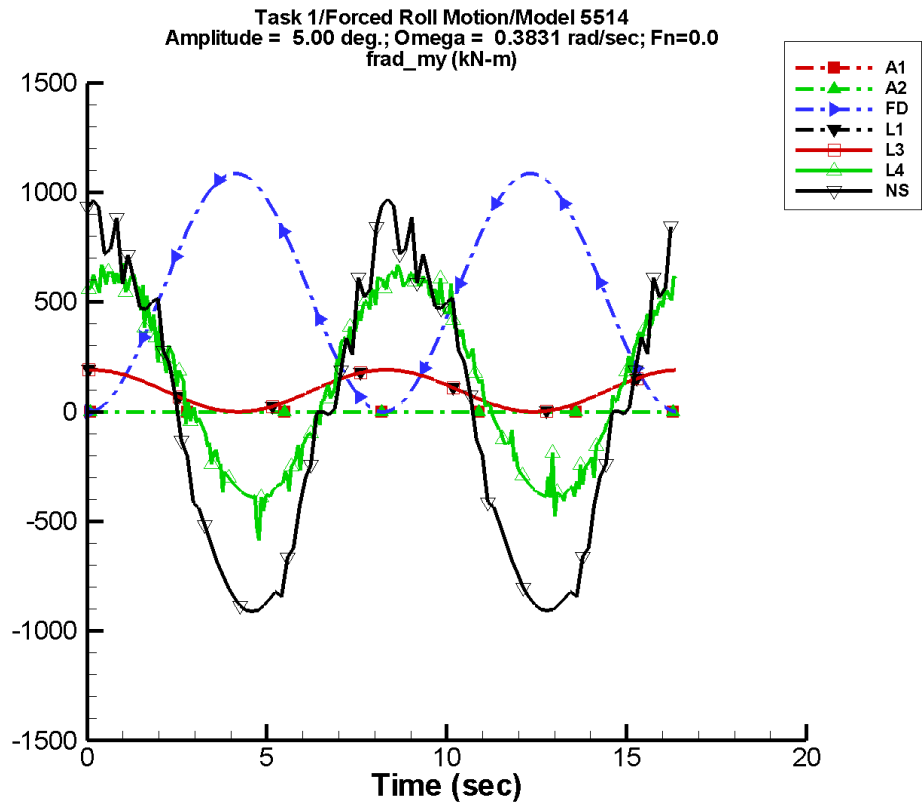
Table D–1029. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	4.33E-03	0.481	14	4.08E-03	107
A2	4.33E-03	0.481	14	4.08E-03	107
FD	2.08E+04	32.3	-3	1.97E+04	-94
L1	4.72E+03	0.392	122	4.72E+03	87
L3	4.72E+03	0.391	122	4.72E+03	87
L4	9.36E+03	726.	163	1.68E+04	16
NF	—	—	—	—	—
NS	6.07E+03	216.	-23	2.37E+04	77

Table D–1030. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.17	3.18	-0.876	0.887
A2	-3.17	3.18	-0.876	0.887
FD	-47.1	3.92E+04	-119.	3.92E+04
L1	-2.58E-02	9.44E+03	7.37	9.44E+03
L3	-2.31E-02	9.44E+03	7.37	9.44E+03
L4	-7.11E+04	7.95E+04	-4.80E+04	4.51E+04
NF	—	—	—	—
NS	-6.34E+04	7.91E+04	-5.06E+04	6.72E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-516. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

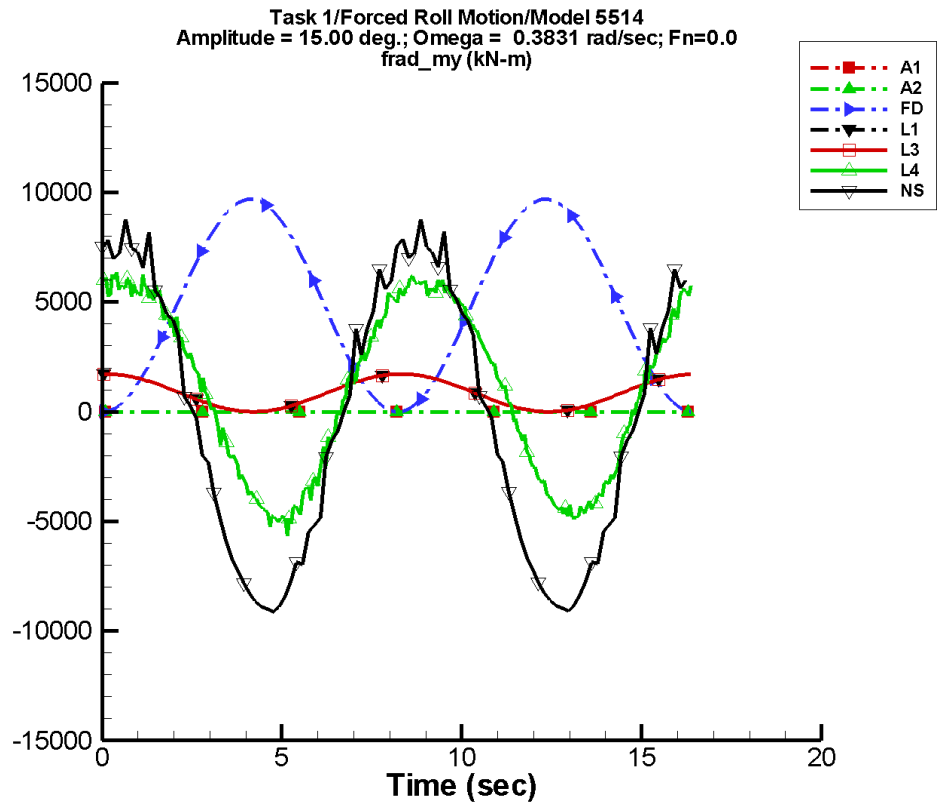
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	5.34E-04	0.431	-17	9.68E-03	129
A2	5.34E-04	0.431	-17	9.68E-03	129
FD	544.	8.35E-03	-59	544.	-91
L1	95.5	3.11E-02	-153	95.5	85
L3	95.5	3.10E-02	-153	95.5	85
L4	125.	22.9	-168	512.	63
NF	—	—	—	—	—
NS	-32.0	0.833	-143	873.	69

Table D–1032. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-0.682	0.539	-0.432	0.465
A2	-0.682	0.539	-0.432	0.465
FD	0.204	1.09E+03	3.85	1.08E+03
L1	5.74E-03	191.	0.517	191.
L3	6.55E-03	191.	0.518	191.
L4	-587.	683.	-439.	622.
NF	—	—	—	—
NS	-910.	973.	-884.	907.



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-517. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

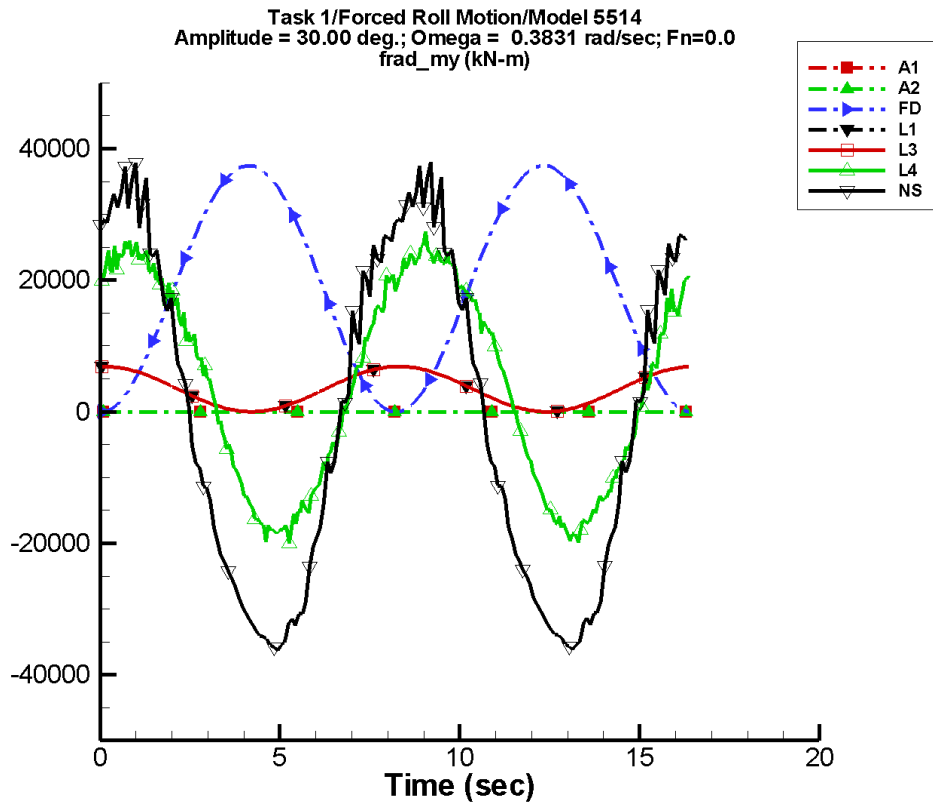
Table D–1033. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	1.60E-03	1.29	-17	2.90E-02	129
A2	1.60E-03	1.29	-17	2.90E-02	129
FD	4.86E+03	0.663	-60	4.84E+03	-91
L1	859.	0.107	-135	859.	85
L3	859.	0.107	-135	859.	85
L4	914.	165.	-176	5.36E+03	56
NF	—	—	—	—	—
NS	-338.	8.75	-146	8.44E+03	67

Table D–1034. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.05	1.62	-1.29	1.39
A2	-2.05	1.62	-1.29	1.39
FD	1.84	9.68E+03	34.8	9.61E+03
L1	0.234	1.72E+03	4.83	1.72E+03
L3	0.233	1.72E+03	4.83	1.72E+03
L4	-5.66E+03	6.74E+03	-4.98E+03	6.03E+03
NF	—	—	—	—
NS	-9.13E+03	8.82E+03	-8.65E+03	7.59E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-518. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

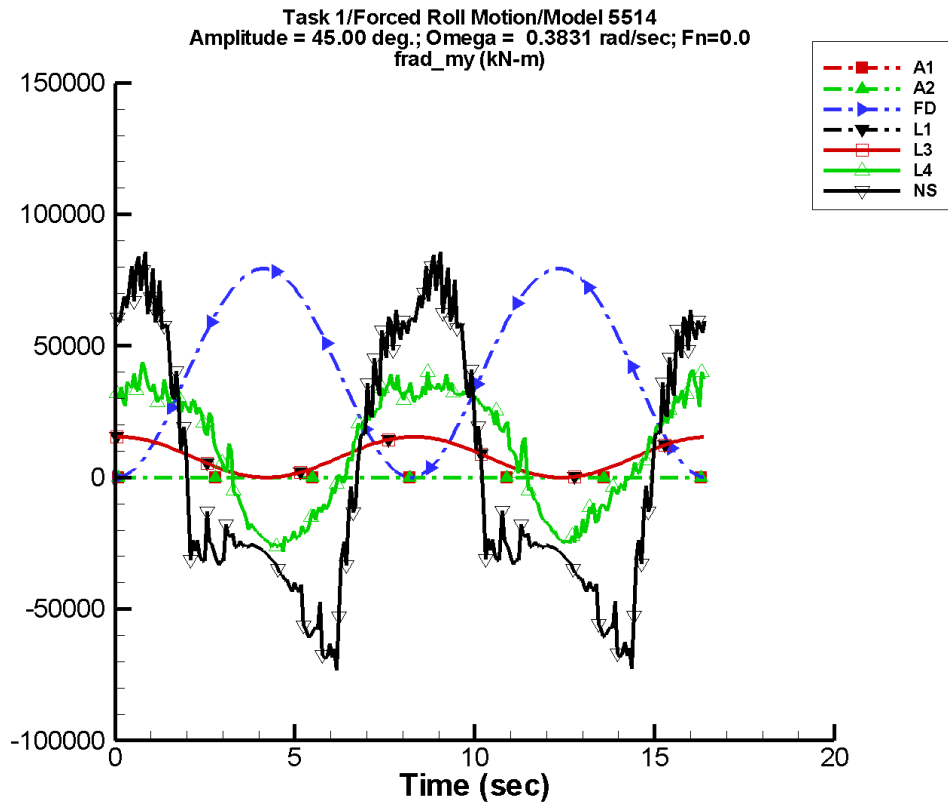
Table D–1035. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.20E-03	2.59	-17	5.80E-02	129
A2	3.20E-03	2.59	-17	5.80E-02	129
FD	1.89E+04	10.4	-60	1.87E+04	-91
L1	3.44E+03	0.271	-117	3.44E+03	85
L3	3.44E+03	0.272	-117	3.44E+03	85
L4	3.92E+03	518.	-160	2.12E+04	50
NF	—	—	—	—	—
NS	-1.26E+03	39.1	-146	3.48E+04	67

Table D–1036. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.09	3.23	-2.59	2.79
A2	-4.09	3.23	-2.59	2.79
FD	7.34	3.74E+04	140.	3.71E+04
L1	0.779	6.88E+03	19.2	6.87E+03
L3	0.776	6.88E+03	19.1	6.87E+03
L4	-2.00E+04	2.74E+04	-1.86E+04	2.50E+04
NF	—	—	—	—
NS	-3.63E+04	3.81E+04	-3.50E+04	3.39E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-519. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

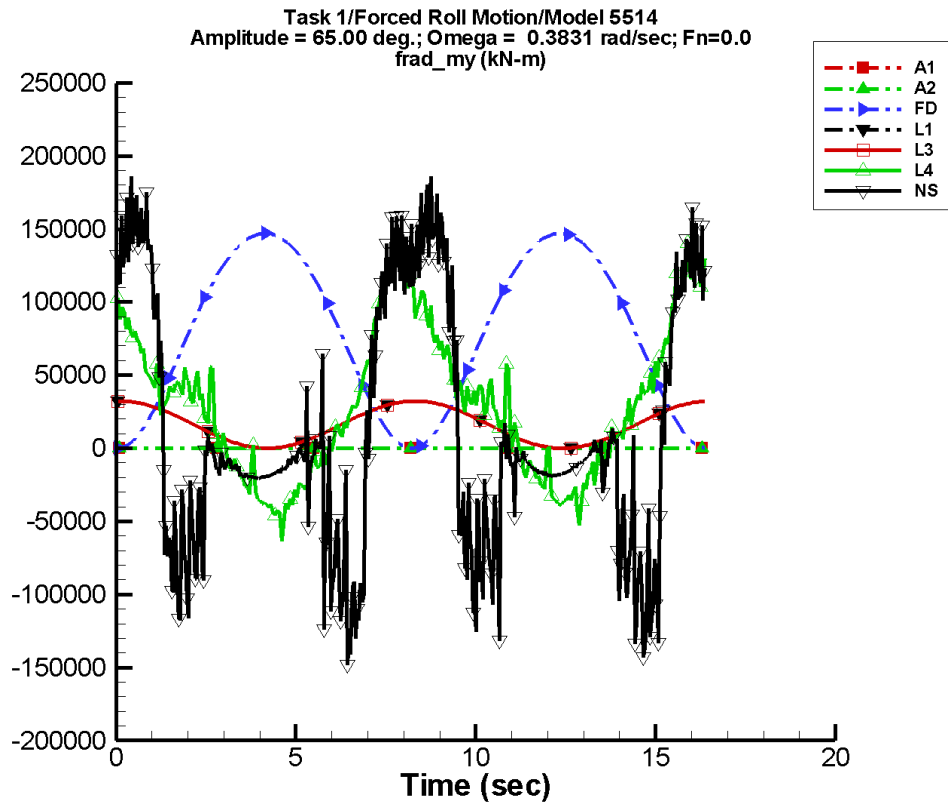
Table D–1037. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	4.81E-03	3.88	-17	8.71E-02	129
A2	4.81E-03	3.88	-17	8.71E-02	129
FD	4.08E+04	51.2	-60	3.96E+04	-91
L1	7.73E+03	0.514	-105	7.73E+03	85
L3	7.73E+03	0.519	-105	7.73E+03	85
L4	1.04E+04	1.23E+03	177	2.94E+04	64
NF	—	—	—	—	—
NS	1.41E+03	74.7	-147	5.92E+04	68

Table D–1038. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.14	4.85	-3.88	4.18
A2	-6.14	4.85	-3.88	4.18
FD	16.5	7.94E+04	318.	7.88E+04
L1	1.60	1.55E+04	43.0	1.55E+04
L3	1.61	1.55E+04	43.0	1.55E+04
L4	-2.81E+04	4.39E+04	-2.56E+04	3.74E+04
NF	—	—	—	—
NS	-7.32E+04	8.62E+04	-6.43E+04	7.65E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-520. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

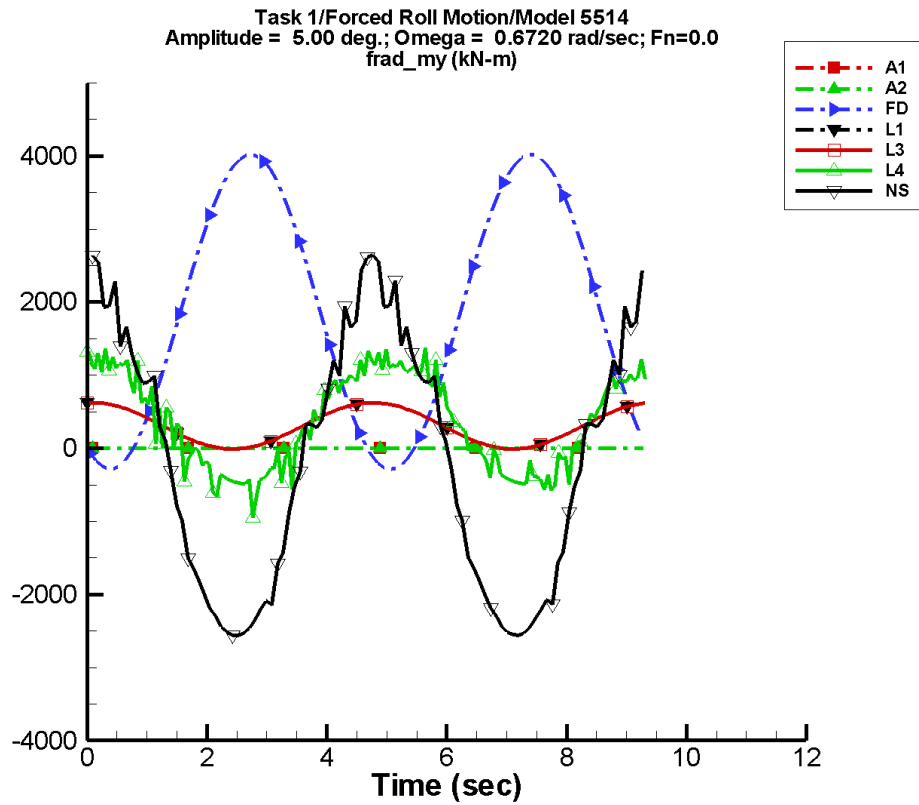
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	6.94E-03	5.61	-17	0.126	129
A2	6.94E-03	5.61	-17	0.126	129
FD	7.80E+04	211.	-60	7.32E+04	-91
L1	1.61E+04	1.01	-97	1.61E+04	85
L3	1.61E+04	1.01	-97	1.61E+04	85
L4	3.01E+04	4.11E+03	-173	6.41E+04	88
NF	—	—	—	—	—
NS	9.86E+03	324.	-108	6.53E+04	80

Table D–1040. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.87	7.00	-5.61	6.04
A2	-8.87	7.00	-5.61	6.04
FD	34.5	1.47E+05	676.	1.46E+05
L1	3.18	3.23E+04	89.5	3.23E+04
L3	3.17	3.23E+04	89.5	3.23E+04
L4	-6.36E+04	1.44E+05	-4.56E+04	1.32E+05
NF	—	—	—	—
NS	-1.48E+05	1.86E+05	-1.13E+05	1.57E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-521. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

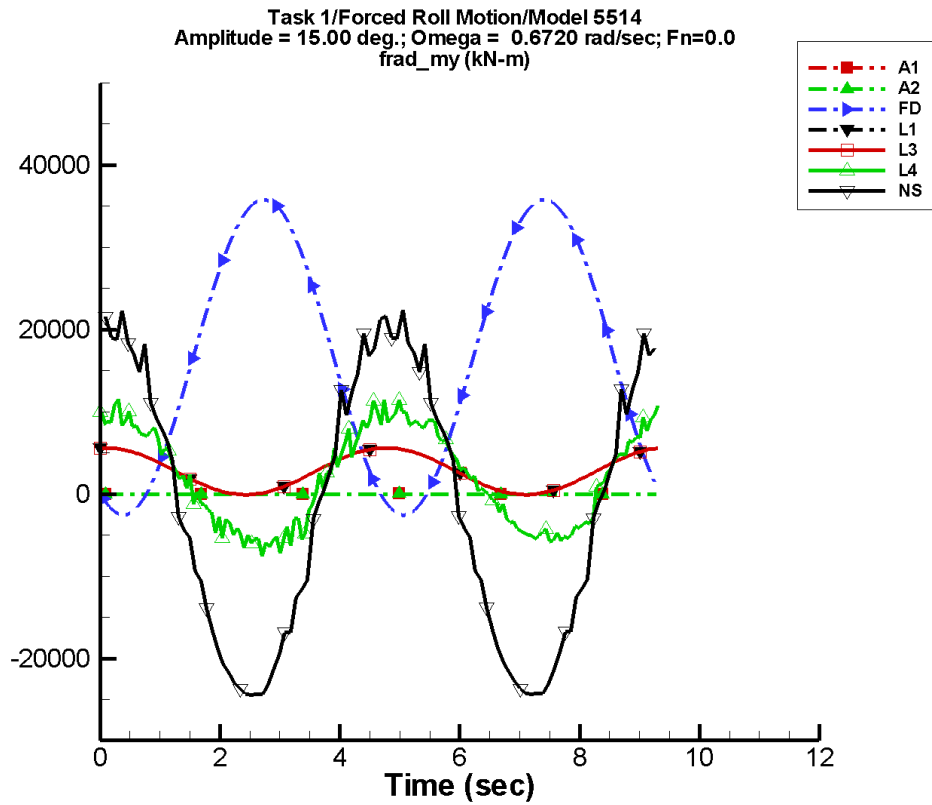
Table D–1041. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	9.94E-03	2.82	-116	1.75E-02	134
A2	9.94E-03	2.82	-116	1.75E-02	134
FD	1.86E+03	4.93E-02	-66	2.15E+03	-120
L1	306.	9.64E-02	175	316.	83
L3	306.	9.60E-02	175	316.	83
L4	356.	88.0	-151	862.	71
NF	—	—	—	—	—
NS	-144.	3.24	-170	2.41E+03	79

Table D–1042. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.54	3.72	-2.96	2.85
A2	-3.54	3.72	-2.96	2.85
FD	-289.	4.02E+03	-198.	3.93E+03
L1	-10.1	622.	-4.95	623.
L3	-10.1	622.	-4.95	623.
L4	-948.	1.37E+03	-530.	1.20E+03
NF	—	—	—	—
NS	-2.56E+03	2.65E+03	-2.47E+03	2.49E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-522. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

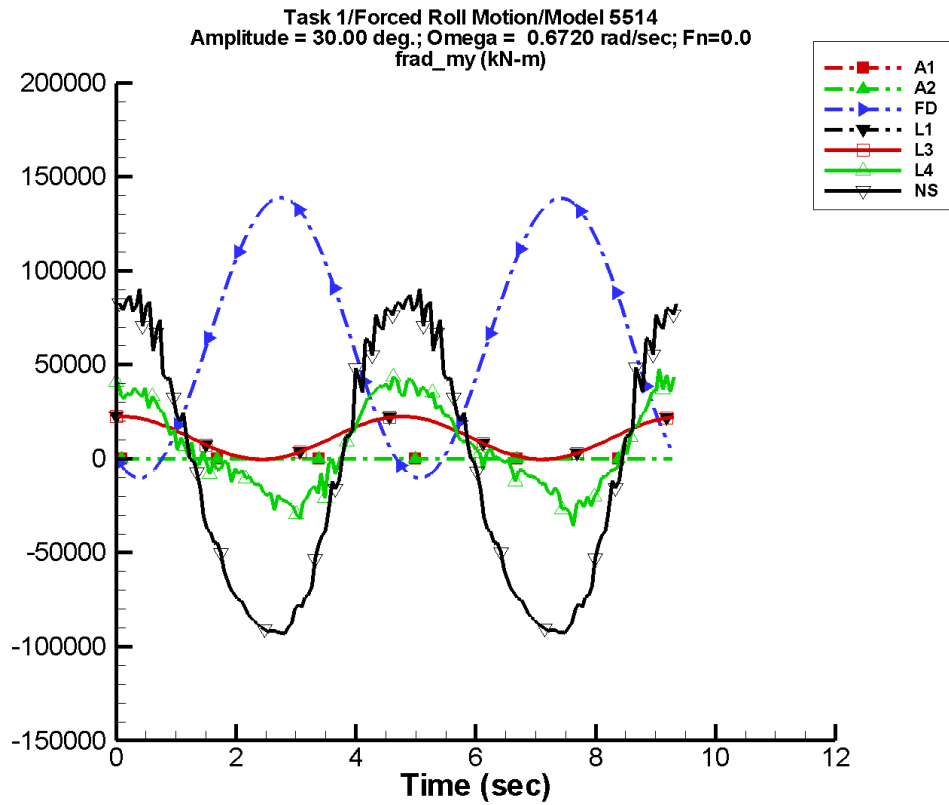
Table D–1043. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	2.98E-02	8.45	-116	5.23E-02	134
A2	2.98E-02	8.45	-116	5.23E-02	134
FD	1.67E+04	4.05	-56	1.92E+04	-120
L1	2.75E+03	0.236	-125	2.84E+03	83
L3	2.75E+03	0.233	-126	2.84E+03	83
L4	1.98E+03	609.	-151	7.94E+03	67
NF	—	—	—	—	—
NS	-1.60E+03	29.7	-175	2.26E+04	77

Table D–1044. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-10.6	11.2	-8.87	8.56
A2	-10.6	11.2	-8.87	8.56
FD	-2.60E+03	3.58E+04	-1.78E+03	3.51E+04
L1	-90.8	5.60E+03	-43.7	5.61E+03
L3	-90.7	5.60E+03	-43.7	5.61E+03
L4	-7.57E+03	1.16E+04	-6.09E+03	9.94E+03
NF	—	—	—	—
NS	-2.45E+04	2.24E+04	-2.37E+04	2.08E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-523. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

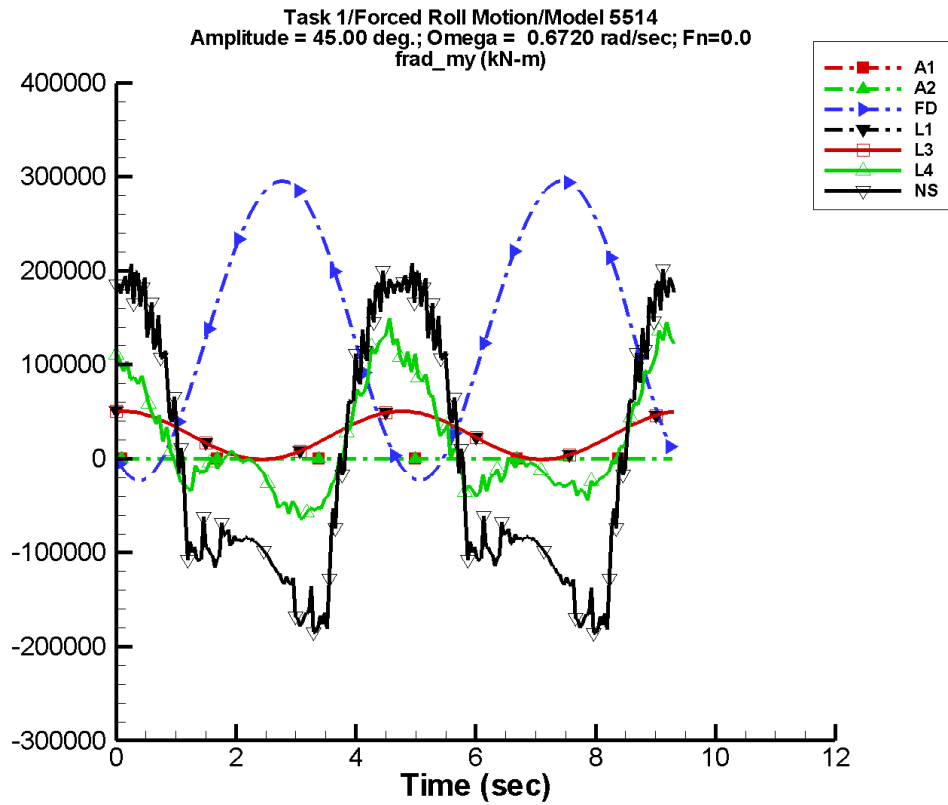
Table D–1045. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	5.96E-02	16.9	-116	0.105	134
A2	5.96E-02	16.9	-116	0.105	134
FD	6.49E+04	64.1	-55	7.45E+04	-121
L1	1.10E+04	1.02	-82	1.14E+04	83
L3	1.10E+04	1.02	-81	1.14E+04	83
L4	5.85E+03	2.09E+03	-133	2.94E+04	72
NF	—	—	—	—	—
NS	-6.69E+03	123.	-174	9.05E+04	76

Table D–1046. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-21.2	22.3	-17.7	17.1
A2	-21.2	22.3	-17.7	17.1
FD	-1.04E+04	1.39E+05	-7.08E+03	1.36E+05
L1	-362.	2.24E+04	-174.	2.24E+04
L3	-362.	2.24E+04	-174.	2.24E+04
L4	-3.56E+04	4.79E+04	-2.61E+04	3.94E+04
NF	—	—	—	—
NS	-9.32E+04	9.08E+04	-9.15E+04	8.33E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-524. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

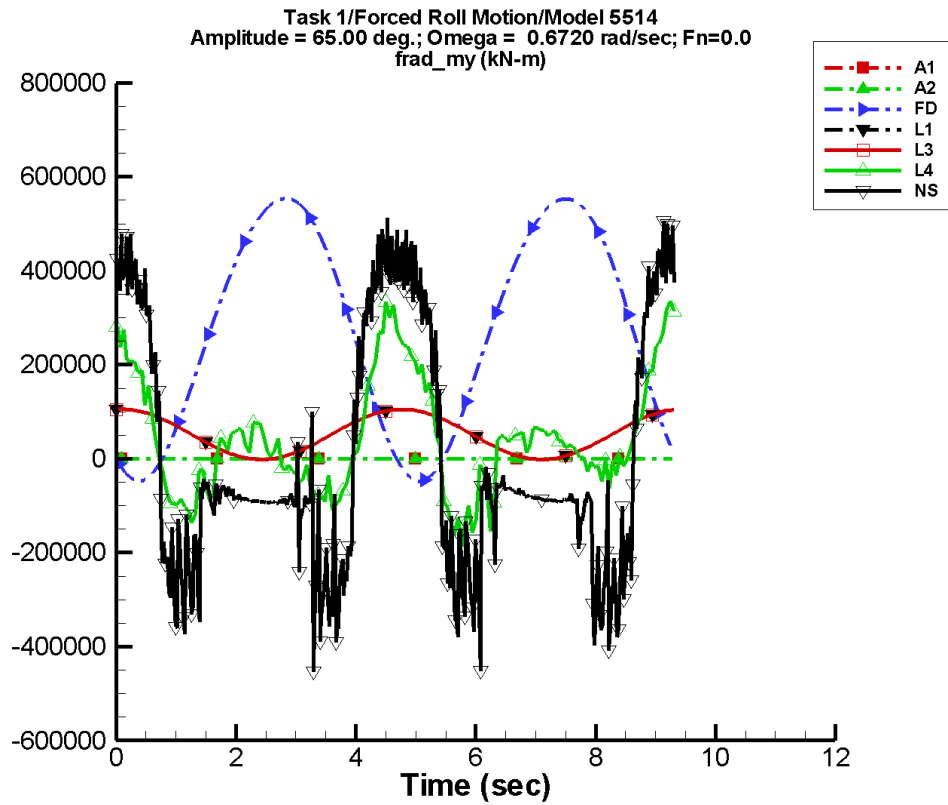
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	8.94E-02	25.4	-116	0.157	134
A2	8.94E-02	25.4	-116	0.157	134
FD	1.40E+05	317.	-55	1.59E+05	-121
L1	2.48E+04	2.59	-71	2.56E+04	83
L3	2.48E+04	2.60	-71	2.56E+04	83
L4	1.69E+04	5.68E+03	174	6.60E+04	89
NF	—	—	—	—	—
NS	-6.13E+03	135.	-150	1.64E+05	77

Table D–1048. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-31.9	33.5	-26.6	25.7
A2	-31.9	33.5	-26.6	25.7
FD	-2.32E+04	2.96E+05	-1.58E+04	2.89E+05
L1	-814.	5.04E+04	-391.	5.04E+04
L3	-814.	5.04E+04	-391.	5.04E+04
L4	-6.35E+04	1.50E+05	-5.62E+04	1.25E+05
NF	—	—	—	—
NS	-1.87E+05	2.09E+05	-1.75E+05	1.90E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-525. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

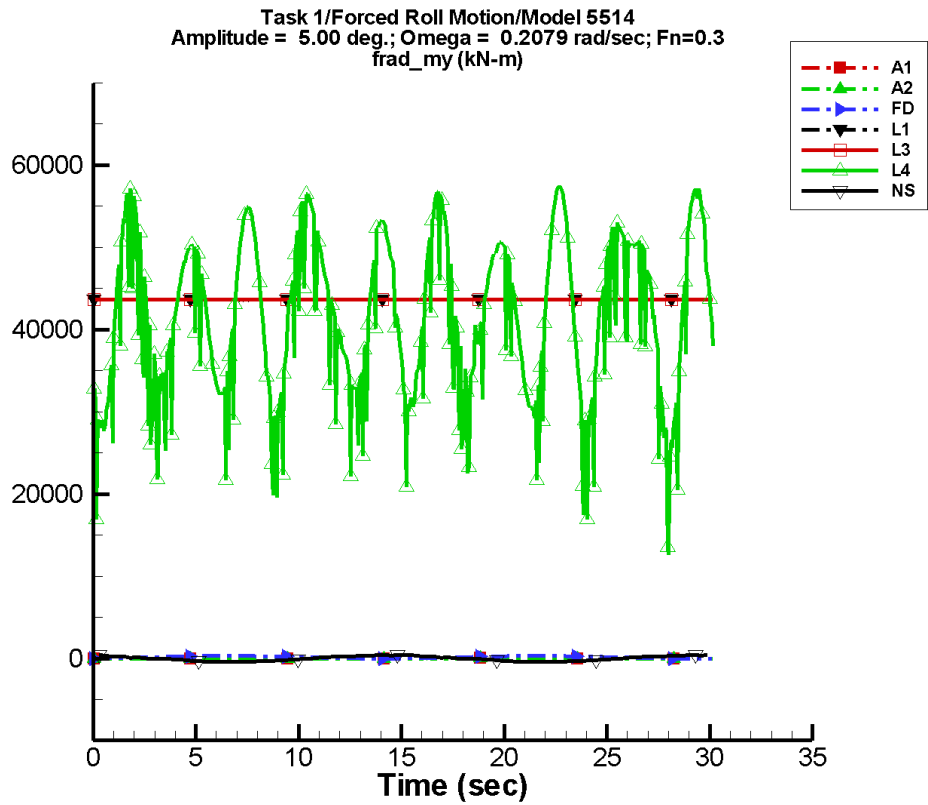
Table D–1049. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.129	36.6	-116	0.227	134
A2	0.129	36.6	-116	0.227	134
FD	2.67E+05	1.32E+03	-56	3.00E+05	-123
L1	5.17E+04	5.91	-66	5.34E+04	83
L3	5.17E+04	5.93	-66	5.34E+04	83
L4	3.94E+04	2.05E+04	150	9.89E+04	107
NF	—	—	—	—	—
NS	-2.18E+03	1.30E+03	-32	2.21E+05	86

Table D–1050. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-46.0	48.4	-38.4	37.1
A2	-46.0	48.4	-38.4	37.1
FD	-4.81E+04	5.54E+05	-3.27E+04	5.42E+05
L1	-1.70E+03	1.05E+05	-816.	1.05E+05
L3	-1.70E+03	1.05E+05	-816.	1.05E+05
L4	-1.86E+05	3.35E+05	-1.36E+05	2.83E+05
NF	—	—	—	—
NS	-4.61E+05	5.15E+05	-2.97E+05	4.38E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-526. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

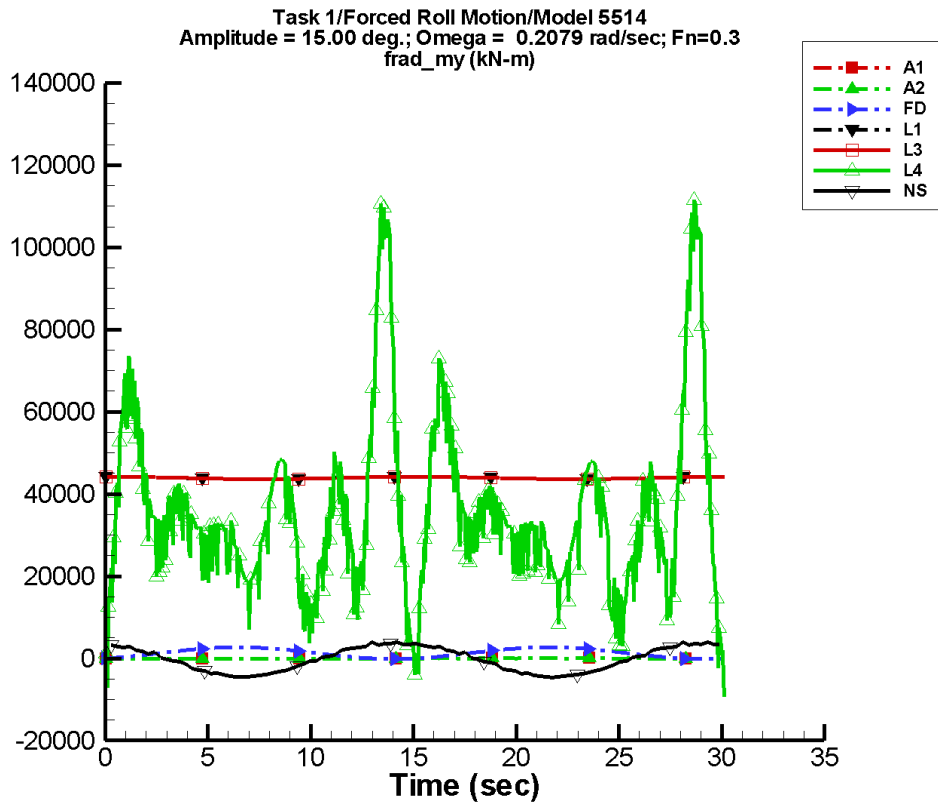
Table D–1051. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.91E-03	2.20	-157	1.68E-02	86
A2	-9.91E-03	2.20	-157	1.68E-02	86
FD	145.	1.47E-03	103	160.	-65
L1	4.36E+04	4.27	-158	30.1	88
L3	4.36E+04	3.31	-146	30.5	88
L4	4.12E+04	52.5	-103	881.	-104
NF	—	—	—	—	—
NS	-22.0	0.989	101	410.	110

Table D–1052. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.14	4.08	-3.10	3.06
A2	-4.14	4.08	-3.10	3.06
FD	-15.0	304.	-14.3	304.
L1	4.36E+04	4.37E+04	4.36E+04	4.37E+04
L3	4.36E+04	4.37E+04	4.36E+04	4.37E+04
L4	1.27E+04	5.75E+04	2.31E+04	5.67E+04
NF	—	—	—	—
NS	-443.	449.	-429.	397.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-527. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

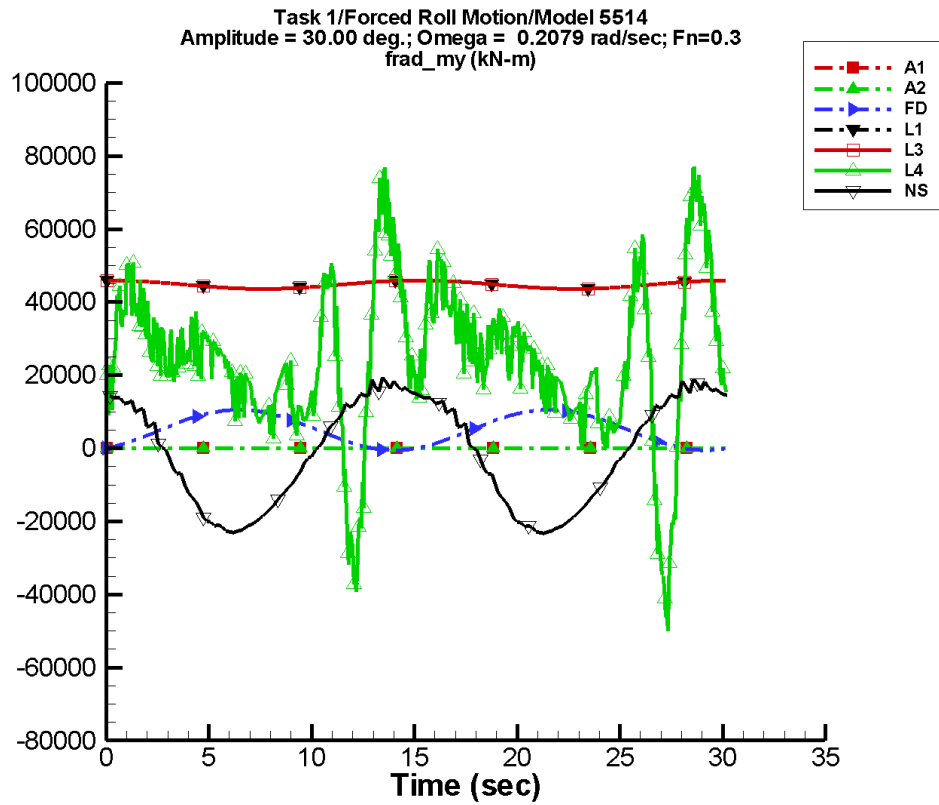
Table D–1053. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.97E-02	6.59	-157	5.05E-02	86
A2	-2.97E-02	6.59	-157	5.05E-02	86
FD	1.29E+03	0.120	102	1.42E+03	-65
L1	4.39E+04	4.35	-158	290.	88
L3	4.39E+04	3.35	-146	290.	88
L4	3.54E+04	339.	-126	1.03E+04	96
NF	—	—	—	—	—
NS	-267.	20.7	21	4.11E+03	110

Table D–1054. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-12.4	12.2	-9.31	9.17
A2	-12.4	12.2	-9.31	9.17
FD	-135.	2.71E+03	-129.	2.71E+03
L1	4.36E+04	4.42E+04	4.36E+04	4.42E+04
L3	4.36E+04	4.42E+04	4.36E+04	4.42E+04
L4	-9.34E+03	1.11E+05	-1.74E+03	1.05E+05
NF	—	—	—	—
NS	-4.71E+03	3.98E+03	-4.44E+03	3.55E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-528. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

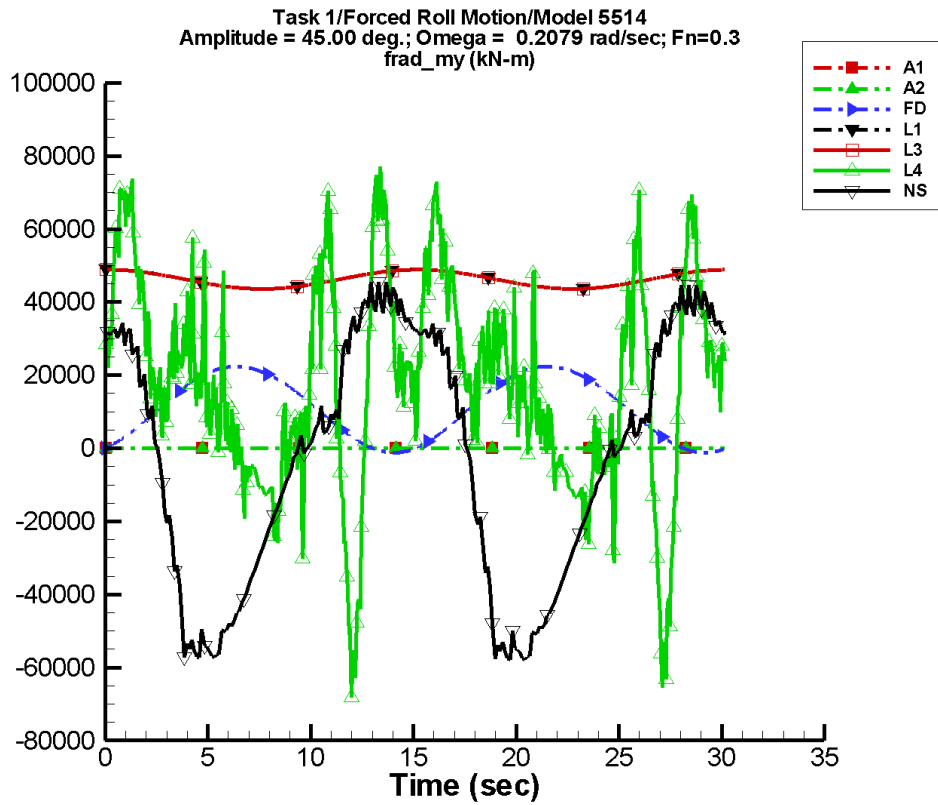
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.95E-02	13.2	-157	0.101	86
A2	-5.95E-02	13.2	-157	0.101	86
FD	5.04E+03	1.90	102	5.52E+03	-64
L1	4.48E+04	4.47	-159	1.17E+03	88
L3	4.48E+04	3.47	-148	1.17E+03	88
L4	2.38E+04	339.	-157	1.23E+04	55
NF	—	—	—	—	—
NS	-1.42E+03	76.0	34	2.02E+04	116

Table D–1056. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-24.8	24.5	-18.6	18.3
A2	-24.8	24.5	-18.6	18.3
FD	-539.	1.05E+04	-514.	1.05E+04
L1	4.36E+04	4.60E+04	4.36E+04	4.59E+04
L3	4.36E+04	4.60E+04	4.36E+04	4.59E+04
L4	-5.30E+04	7.86E+04	-4.21E+04	7.26E+04
NF	—	—	—	—
NS	-2.39E+04	1.93E+04	-2.31E+04	1.73E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-529. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

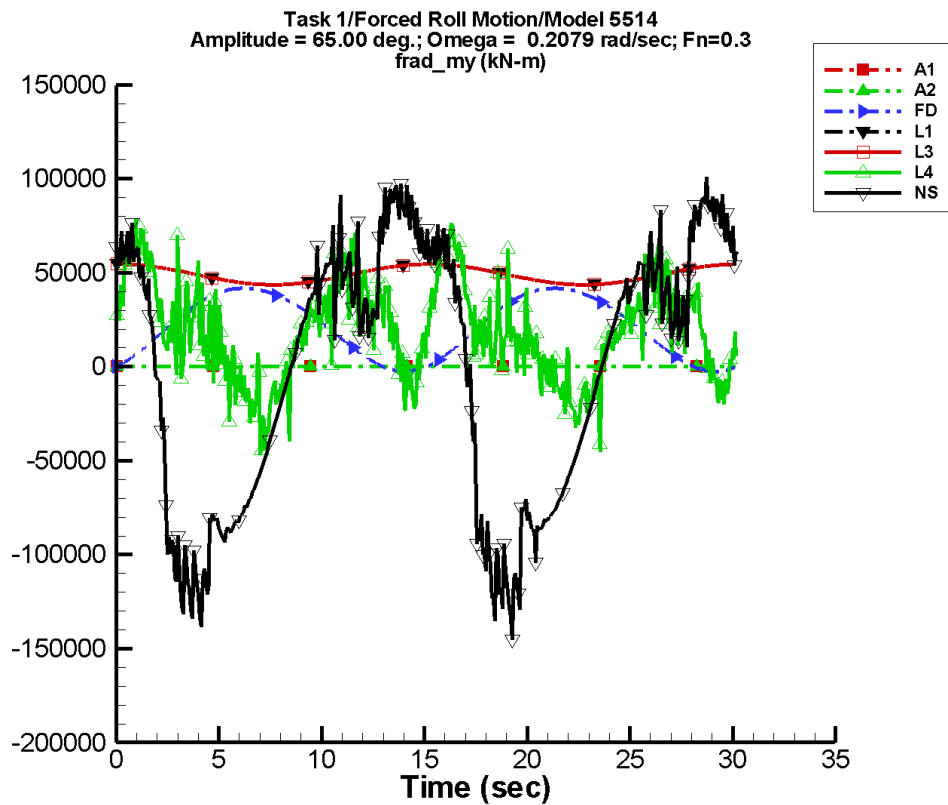
Table D–1057. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-8.92E-02	19.8	-157	0.151	86
A2	-8.92E-02	19.8	-157	0.151	86
FD	1.09E+04	9.49	102	1.18E+04	-64
L1	4.63E+04	4.54	-159	2.63E+03	88
L3	4.63E+04	3.64	-149	2.63E+03	88
L4	1.78E+04	798.	51	2.11E+04	69
NF	—	—	—	—	—
NS	-3.32E+03	232.	31	4.62E+04	128

Table D–1058. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-37.2	36.7	-27.9	27.5
A2	-37.2	36.7	-27.9	27.5
FD	-1.21E+03	2.24E+04	-1.15E+03	2.23E+04
L1	4.36E+04	4.89E+04	4.36E+04	4.89E+04
L3	4.36E+04	4.89E+04	4.36E+04	4.89E+04
L4	-6.82E+04	7.71E+04	-5.43E+04	7.05E+04
NF	—	—	—	—
NS	-5.96E+04	4.55E+04	-5.75E+04	4.15E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-530. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

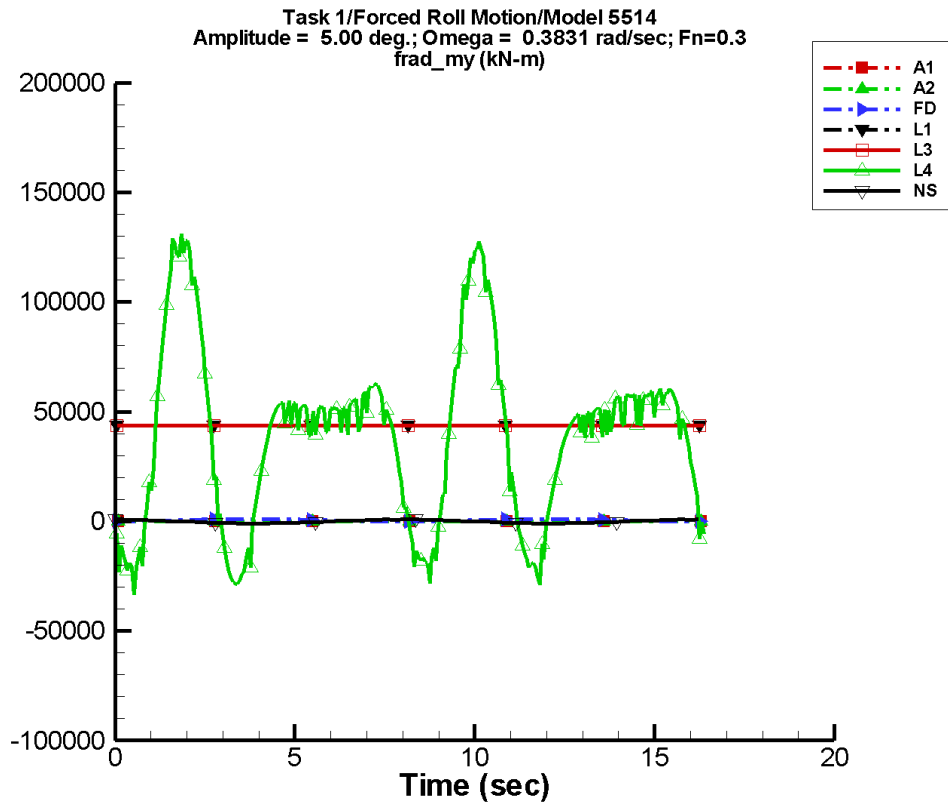
Table D–1059. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.129	28.5	-157	0.219	86
A2	-0.129	28.5	-157	0.219	86
FD	2.08E+04	40.0	103	2.21E+04	-62
L1	4.91E+04	4.57	-159	5.49E+03	88
L3	4.91E+04	3.68	-149	5.49E+03	88
L4	2.03E+04	1.45E+03	22	2.29E+04	106
NF	—	—	—	—	—
NS	-3.50E+03	560.	-144	8.83E+04	147

Table D–1060. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-53.8	53.0	-40.3	39.8
A2	-53.8	53.0	-40.3	39.8
FD	-2.51E+03	4.17E+04	-2.39E+03	4.17E+04
L1	4.36E+04	5.46E+04	4.36E+04	5.46E+04
L3	4.36E+04	5.46E+04	4.36E+04	5.46E+04
L4	-4.64E+04	8.08E+04	-3.31E+04	7.00E+04
NF	—	—	—	—
NS	-1.47E+05	1.02E+05	-1.24E+05	8.92E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-531. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

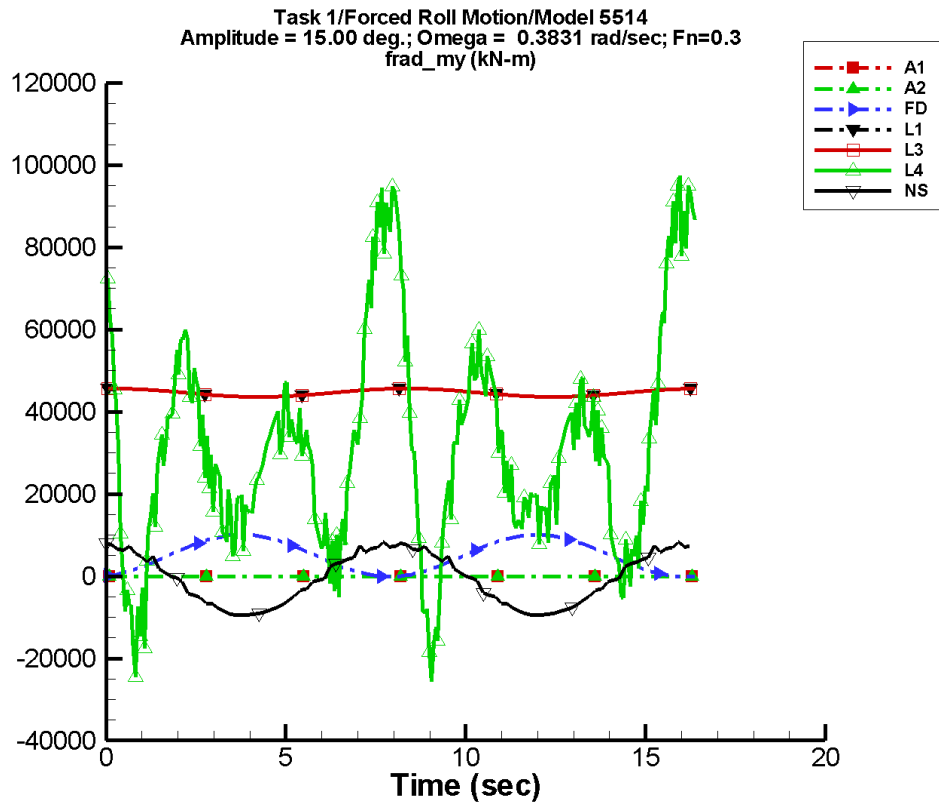
Table D-1061. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	3.21E-02	1.85	-161	0.145	166
A2	3.21E-02	1.85	-161	0.145	166
FD	557.	8.73E-03	-46	574.	-76
L1	4.37E+04	1.19	107	113.	83
L3	4.37E+04	1.32	123	113.	83
L4	3.97E+04	3.93E+03	-7	8.05E+03	-21
NF	—	—	—	—	—
NS	-58.9	1.63	-30	892.	98

Table D-1062. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.00	1.98	-1.91	1.88
A2	-3.00	1.98	-1.91	1.88
FD	-16.9	1.13E+03	-8.32	1.12E+03
L1	4.36E+04	4.38E+04	4.36E+04	4.38E+04
L3	4.36E+04	4.38E+04	4.36E+04	4.38E+04
L4	-3.75E+04	1.45E+05	-2.91E+04	1.34E+05
NF	—	—	—	—
NS	-964.	982.	-930.	881.

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-532. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

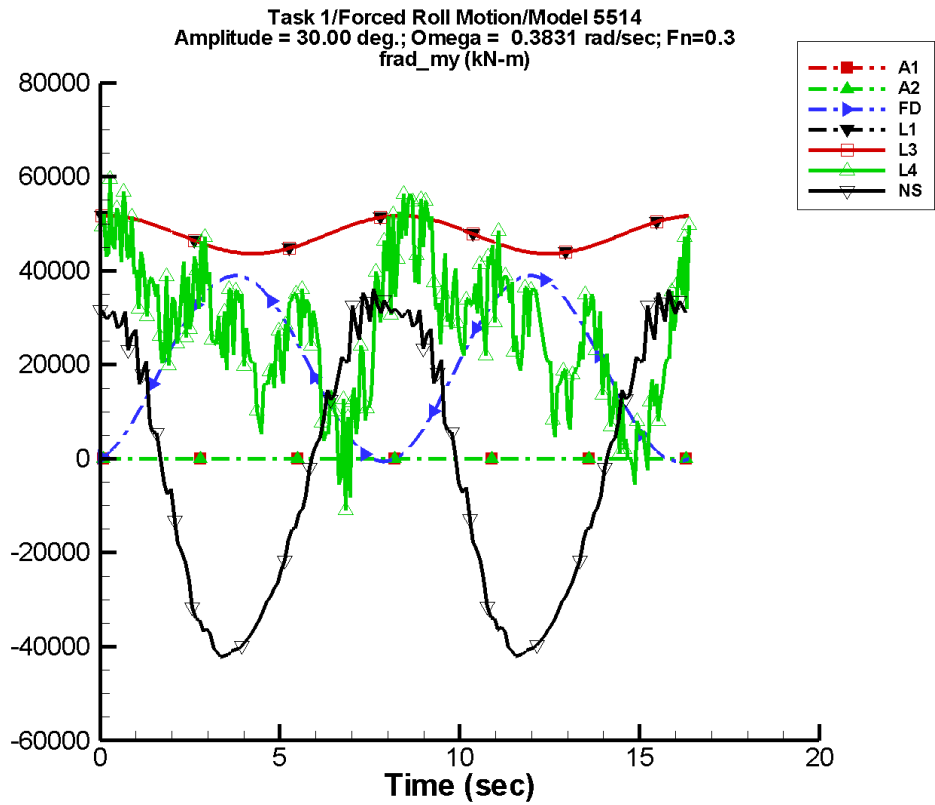
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	9.62E-02	5.54	-161	0.435	166
A2	9.62E-02	5.54	-161	0.435	166
FD	4.98E+03	0.685	-47	5.11E+03	-76
L1	4.46E+04	1.13	107	1.01E+03	83
L3	4.46E+04	1.28	129	1.01E+03	83
L4	3.11E+04	2.53E+03	-96	8.36E+03	113
NF	—	—	—	—	—
NS	-615.	22.1	-25	8.65E+03	98

Table D–1064. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.99	5.93	-5.73	5.63
A2	-8.99	5.93	-5.73	5.63
FD	-152.	1.01E+04	-74.9	1.00E+04
L1	4.36E+04	4.56E+04	4.36E+04	4.56E+04
L3	4.36E+04	4.56E+04	4.36E+04	4.56E+04
L4	-2.57E+04	9.74E+04	-1.35E+04	8.91E+04
NF	—	—	—	—
NS	-9.63E+03	8.33E+03	-9.25E+03	7.53E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-533. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

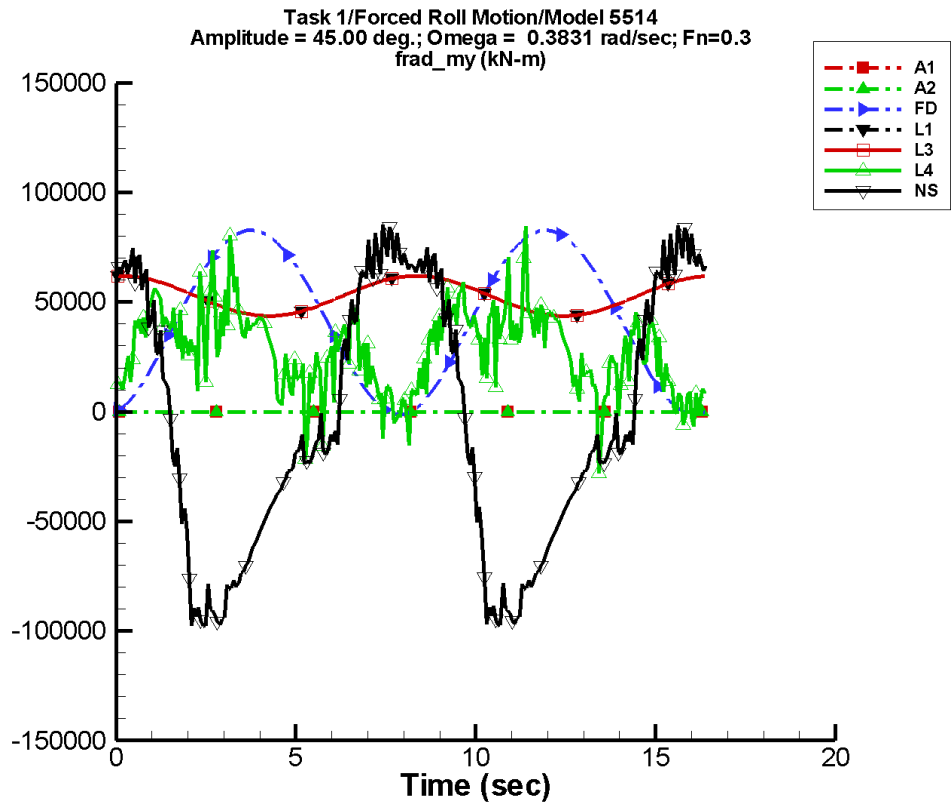
Table D–1065. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.192	11.1	-161	0.871	166
A2	0.192	11.1	-161	0.871	166
FD	1.94E+04	10.8	-47	1.98E+04	-76
L1	4.77E+04	1.06	110	4.05E+03	83
L3	4.77E+04	1.40	139	4.05E+03	83
L4	2.81E+04	394.	-46	1.28E+04	27
NF	—	—	—	—	—
NS	-3.07E+03	150.	-18	3.84E+04	104

Table D–1066. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-18.0	11.9	-11.5	11.3
A2	-18.0	11.9	-11.5	11.3
FD	-607.	3.90E+04	-299.	3.87E+04
L1	4.36E+04	5.17E+04	4.37E+04	5.17E+04
L3	4.36E+04	5.17E+04	4.37E+04	5.17E+04
L4	-1.09E+04	5.96E+04	1.63E+03	5.22E+04
NF	—	—	—	—
NS	-4.30E+04	3.61E+04	-4.18E+04	3.26E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-534. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

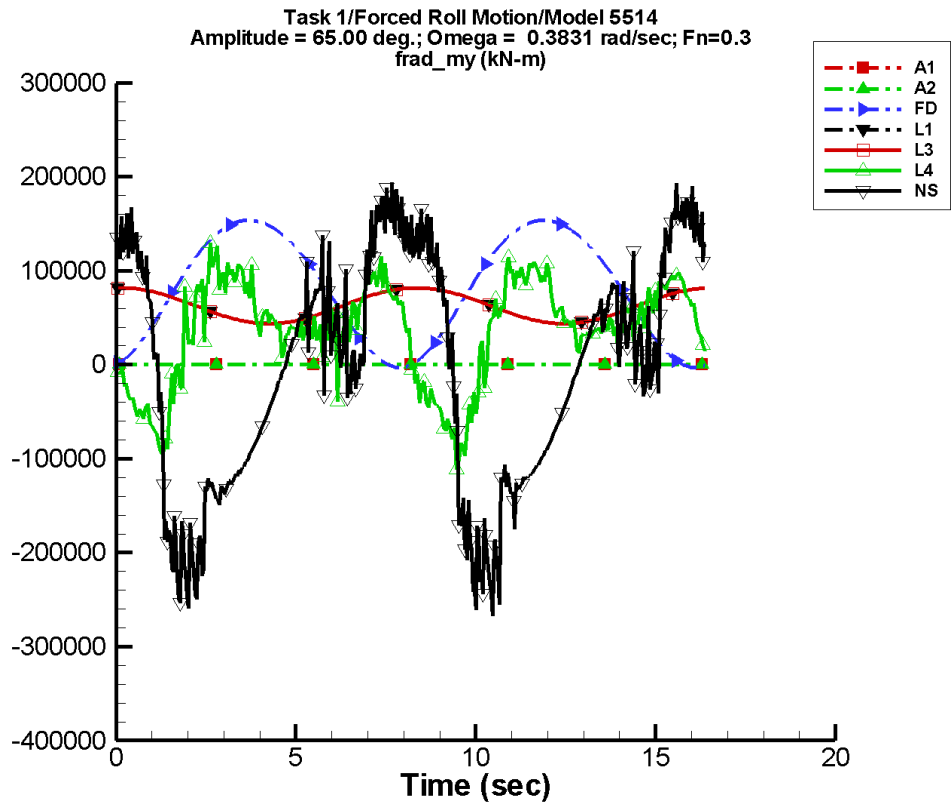
Table D–1067. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.289	16.6	-161	1.31	166
A2	0.289	16.6	-161	1.31	166
FD	4.18E+04	53.0	-46	4.20E+04	-75
L1	5.28E+04	0.924	112	9.12E+03	83
L3	5.28E+04	1.39	147	9.12E+03	83
L4	2.81E+04	922.	78	1.54E+04	-21
NF	—	—	—	—	—
NS	-5.69E+03	525.	-12	7.86E+04	116

Table D–1068. Minimum and maximum of of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-27.0	17.8	-17.2	16.9
A2	-27.0	17.8	-17.2	16.9
FD	-1.36E+03	8.27E+04	-672.	8.22E+04
L1	4.37E+04	6.19E+04	4.37E+04	6.19E+04
L3	4.37E+04	6.19E+04	4.37E+04	6.19E+04
L4	-2.79E+04	8.46E+04	183.	5.46E+04
NF	—	—	—	—
NS	-1.00E+05	8.53E+04	-9.54E+04	7.63E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-535. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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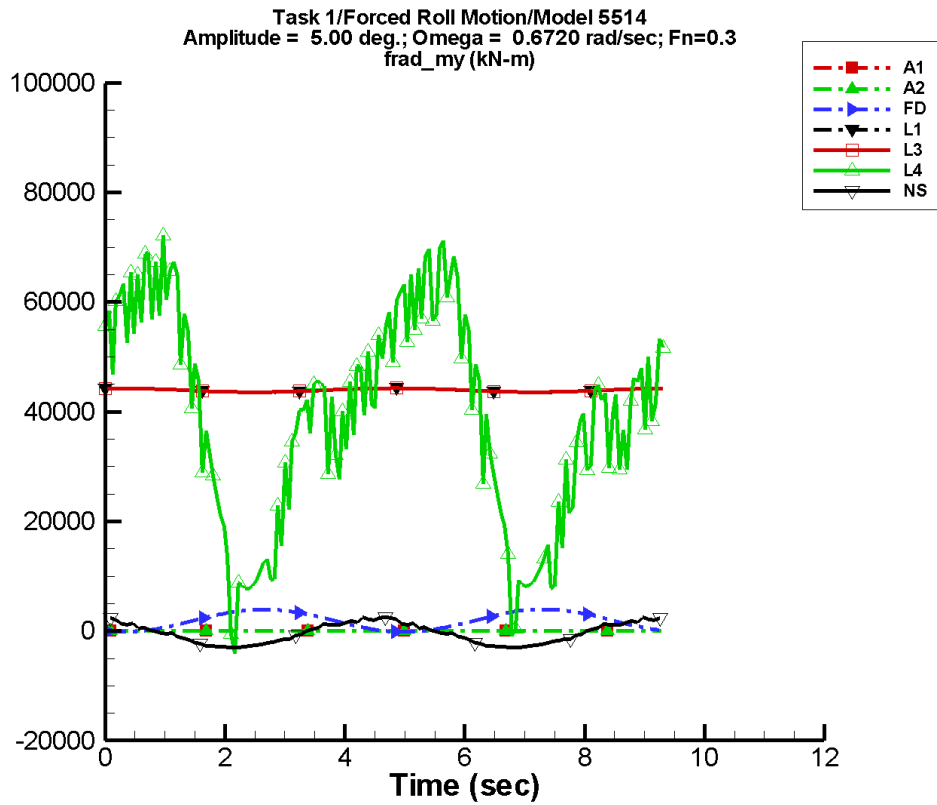
Table D–1069. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	0.417	24.0	-161	1.89	166
A2	0.417	24.0	-161	1.89	166
FD	8.00E+04	218.	-46	7.77E+04	-74
L1	6.28E+04	0.798	114	1.90E+04	83
L3	6.28E+04	1.51	157	1.90E+04	83
L4	3.29E+04	2.13E+03	-120	4.41E+04	-124
NF	—	—	—	—	—
NS	-9.15E+03	1.19E+03	-59	1.41E+05	141

Table D–1070. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-39.0	25.7	-24.8	24.4
A2	-39.0	25.7	-24.8	24.4
FD	-2.84E+03	1.54E+05	-1.40E+03	1.53E+05
L1	4.37E+04	8.18E+04	4.39E+04	8.18E+04
L3	4.37E+04	8.18E+04	4.39E+04	8.18E+04
L4	-1.11E+05	1.29E+05	-8.57E+04	1.02E+05
NF	—	—	—	—
NS	-2.72E+05	1.94E+05	-2.25E+05	1.66E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-536. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D–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  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

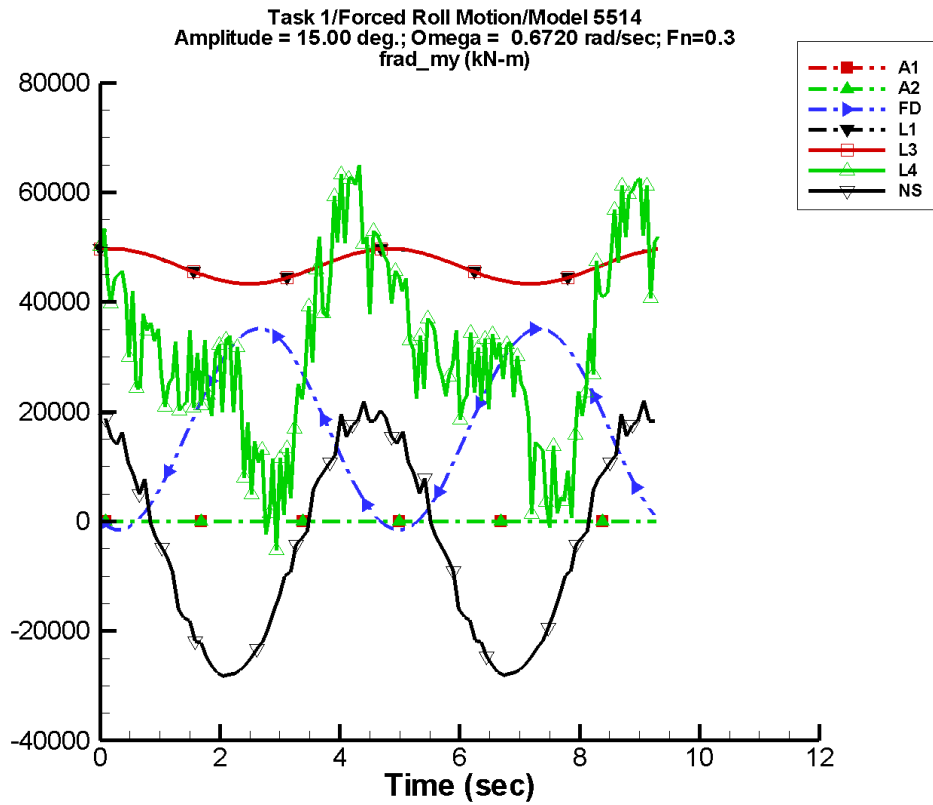
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-9.01E-03	3.49	142	1.25E-02	39
A2	-9.01E-03	3.49	142	1.25E-02	39
FD	1.89E+03	4.73E-02	-61	2.06E+03	-114
L1	4.39E+04	1.07	162	358.	78
L3	4.39E+04	0.921	170	358.	78
L4	3.93E+04	869.	-7	2.36E+04	59
NF	—	—	—	—	—
NS	-388.	2.34	-96	2.57E+03	105

Table D–1072. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.37	3.33	-3.33	3.26
A2	-3.37	3.33	-3.33	3.26
FD	-176.	3.95E+03	-125.	3.91E+03
L1	4.36E+04	4.43E+04	4.36E+04	4.43E+04
L3	4.36E+04	4.43E+04	4.36E+04	4.43E+04
L4	-4.14E+03	7.21E+04	6.73E+03	6.49E+04
NF	—	—	—	—
NS	-2.99E+03	2.49E+03	-2.90E+03	2.23E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-537. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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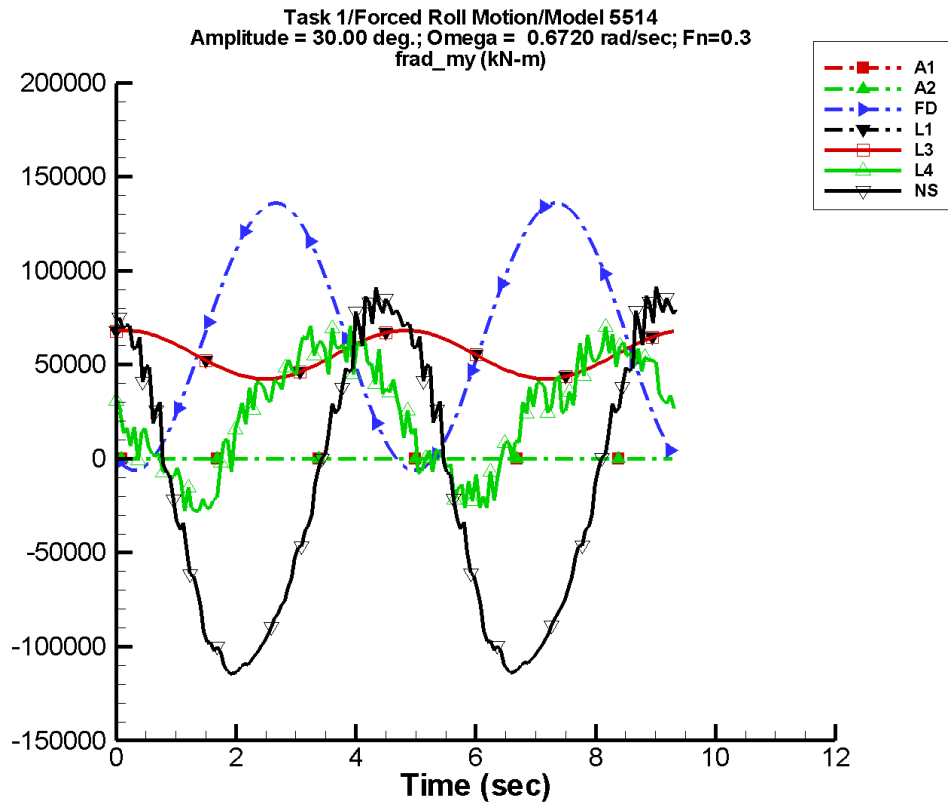
Table D-1073. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.70E-02	10.5	142	3.76E-02	39
A2	-2.70E-02	10.5	142	3.76E-02	39
FD	1.68E+04	3.88	-51	1.84E+04	-114
L1	4.65E+04	1.49	179	3.22E+03	78
L3	4.65E+04	1.38	167	3.22E+03	78
L4	3.12E+04	1.20E+03	-122	1.68E+04	96
NF	—	—	—	—	—
NS	-3.82E+03	19.5	-87	2.39E+04	104

Table D-1074. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-10.1	9.98	-9.99	9.79
A2	-10.1	9.98	-9.99	9.79
FD	-1.58E+03	3.52E+04	-1.13E+03	3.49E+04
L1	4.33E+04	4.98E+04	4.34E+04	4.98E+04
L3	4.33E+04	4.98E+04	4.34E+04	4.98E+04
L4	-5.18E+03	6.49E+04	4.94E+03	5.80E+04
NF	—	—	—	—
NS	-2.82E+04	2.20E+04	-2.71E+04	1.88E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-538. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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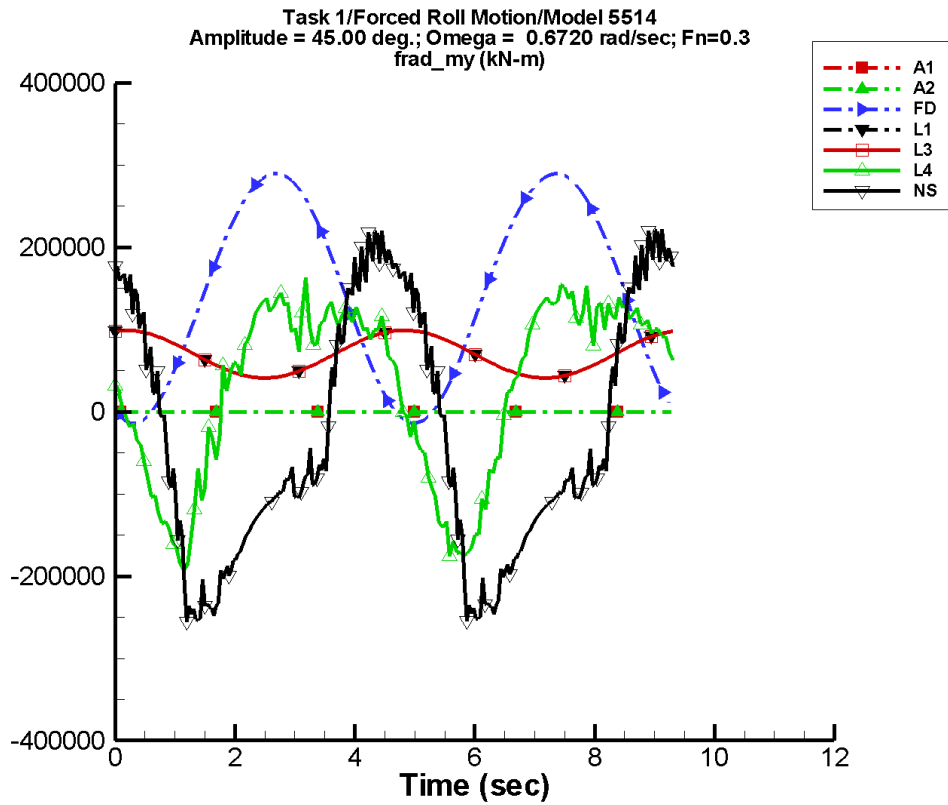
Table D-1075. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.40E-02	20.9	142	7.52E-02	39
A2	-5.40E-02	20.9	142	7.52E-02	39
FD	6.56E+04	61.4	-50	7.12E+04	-114
L1	5.53E+04	2.27	-161	1.29E+04	78
L3	5.53E+04	1.85	177	1.29E+04	78
L4	2.42E+04	1.81E+03	-69	3.88E+04	177
NF	—	—	—	—	—
NS	-1.67E+04	125.	-49	9.86E+04	107

Table D-1076. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-20.2	20.0	-20.0	19.6
A2	-20.2	20.0	-20.0	19.6
FD	-6.32E+03	1.36E+05	-4.47E+03	1.35E+05
L1	4.24E+04	6.82E+04	4.26E+04	6.82E+04
L3	4.24E+04	6.82E+04	4.26E+04	6.82E+04
L4	-2.78E+04	7.06E+04	-2.44E+04	6.09E+04
NF	—	—	—	—
NS	-1.15E+05	9.14E+04	-1.11E+05	8.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-539. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

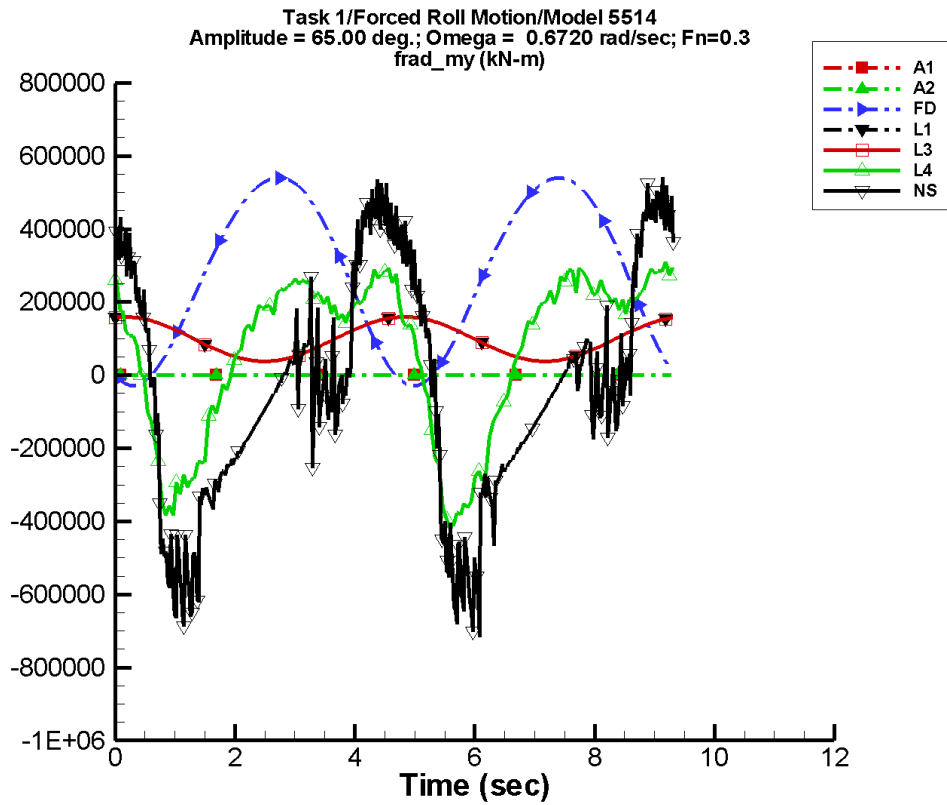
Table D–1077. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-8.10E-02	31.4	142	0.113	39
A2	-8.10E-02	31.4	142	0.113	39
FD	1.41E+05	303.	-50	1.52E+05	-115
L1	6.99E+04	3.35	-154	2.90E+04	78
L3	6.99E+04	2.36	179	2.90E+04	78
L4	2.86E+04	2.53E+03	145	1.41E+05	-168
NF	—	—	—	—	—
NS	-2.90E+04	336.	-33	1.97E+05	115

Table D–1078. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-30.3	29.9	-30.0	29.4
A2	-30.3	29.9	-30.0	29.4
FD	-1.42E+04	2.90E+05	-9.95E+03	2.87E+05
L1	4.10E+04	9.89E+04	4.14E+04	9.90E+04
L3	4.10E+04	9.89E+04	4.14E+04	9.90E+04
L4	-1.95E+05	1.63E+05	-1.68E+05	1.40E+05
NF	—	—	—	—
NS	-2.56E+05	2.22E+05	-2.43E+05	2.03E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-540. Time history of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

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Table D-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  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

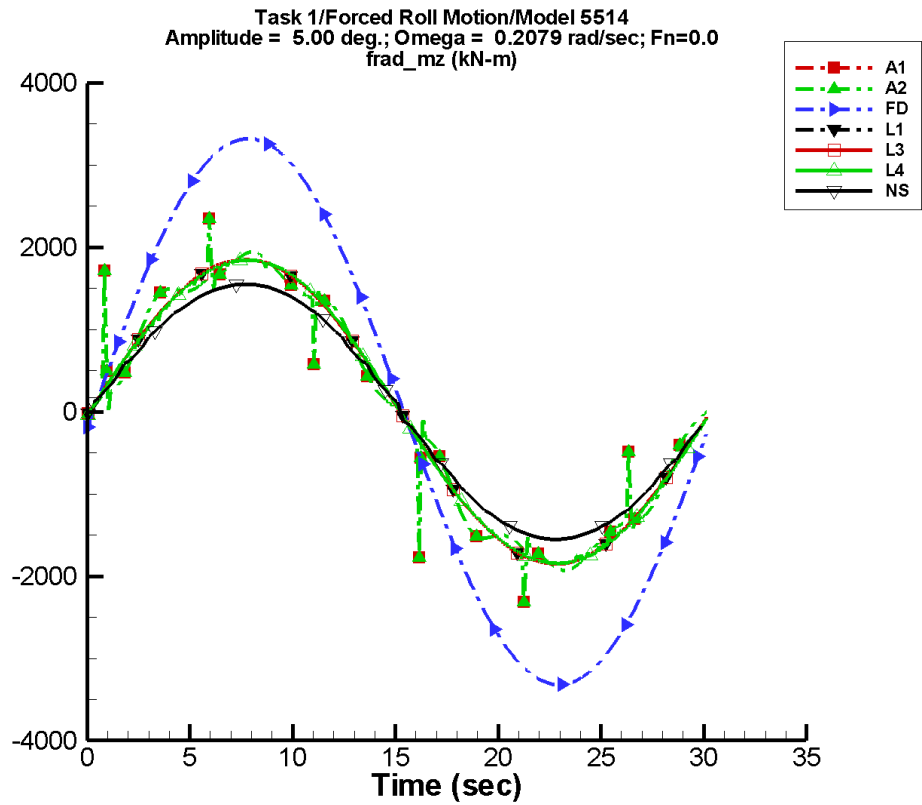
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-0.117	45.3	142	0.163	39
A2	-0.117	45.3	142	0.163	39
FD	2.70E+05	1.26E+03	-50	2.84E+05	-116
L1	9.86E+04	4.57	-151	6.05E+04	78
L3	9.86E+04	3.26	179	6.05E+04	78
L4	6.24E+04	1.28E+04	121	2.75E+05	177
NF	—	—	—	—	—
NS	-3.98E+04	1.37E+03	-55	3.38E+05	136

Table D-1080. Minimum and maximum of  $M_y^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-43.8	43.3	-43.3	42.4
A2	-43.8	43.3	-43.3	42.4
FD	-2.94E+04	5.40E+05	-2.03E+04	5.32E+05
L1	3.81E+04	1.59E+05	3.91E+04	1.59E+05
L3	3.81E+04	1.59E+05	3.91E+04	1.59E+05
L4	-4.20E+05	3.10E+05	-3.80E+05	2.82E+05
NF	—	—	—	—
NS	-7.16E+05	5.43E+05	-5.93E+05	4.72E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-541. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

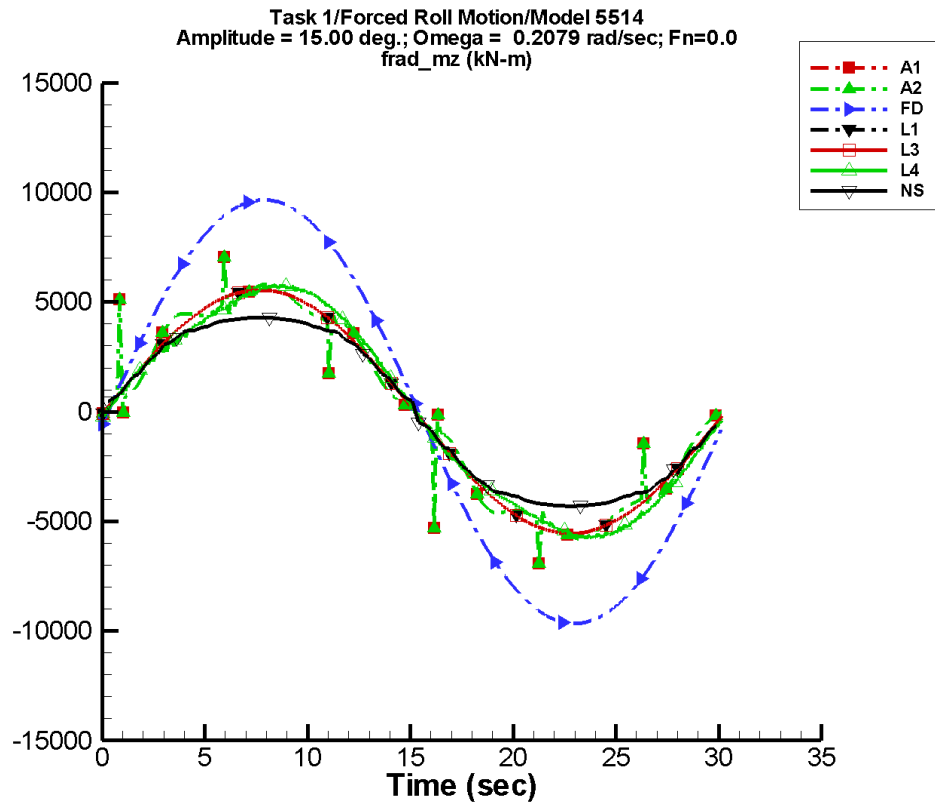
Table D–1081. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-2.97	1.83E+03	0	1.84	23
A2	-2.97	1.83E+03	0	1.84	23
FD	9.84E-02	3.32E+03	-4	0.456	54
L1	7.04E-02	1.85E+03	-1	0.154	86
L3	7.04E-02	1.85E+03	-1	0.154	86
L4	-0.410	1.85E+03	-2	6.06	180
NF	—	—	—	—	—
NS	-7.73E-03	1.57E+03	-2	4.57E-02	-26

Table D–1082. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.32E+03	2.34E+03	-1.92E+03	1.93E+03
A2	-2.32E+03	2.34E+03	-1.92E+03	1.93E+03
FD	-3.32E+03	3.32E+03	-3.32E+03	3.32E+03
L1	-1.85E+03	1.85E+03	-1.85E+03	1.85E+03
L3	-1.85E+03	1.85E+03	-1.85E+03	1.85E+03
L4	-1.84E+03	1.84E+03	-1.84E+03	1.84E+03
NF	—	—	—	—
NS	-1.55E+03	1.55E+03	-1.54E+03	1.54E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-542. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

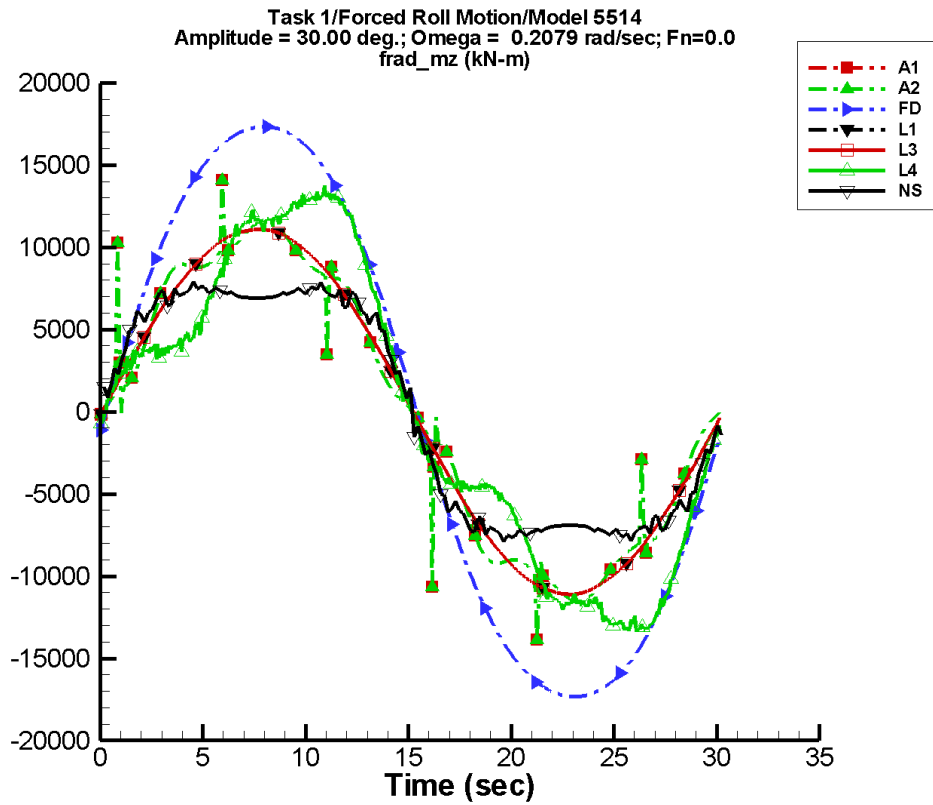
Table D–1083. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-8.90	5.50E+03	0	5.53	23
A2	-8.90	5.50E+03	0	5.53	23
FD	2.65	9.74E+03	-4	12.2	54
L1	0.212	5.55E+03	-1	0.464	87
L3	0.211	5.55E+03	-1	0.465	87
L4	-8.30	5.64E+03	-5	94.0	162
NF	—	—	—	—	—
NS	-3.02E-03	4.61E+03	-2	0.273	-5

Table D–1084. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.95E+03	7.03E+03	-5.75E+03	5.79E+03
A2	-6.95E+03	7.03E+03	-5.75E+03	5.79E+03
FD	-9.66E+03	9.66E+03	-9.65E+03	9.65E+03
L1	-5.55E+03	5.56E+03	-5.55E+03	5.56E+03
L3	-5.55E+03	5.56E+03	-5.55E+03	5.56E+03
L4	-5.74E+03	5.75E+03	-5.72E+03	5.73E+03
NF	—	—	—	—
NS	-4.30E+03	4.30E+03	-4.28E+03	4.28E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-543. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

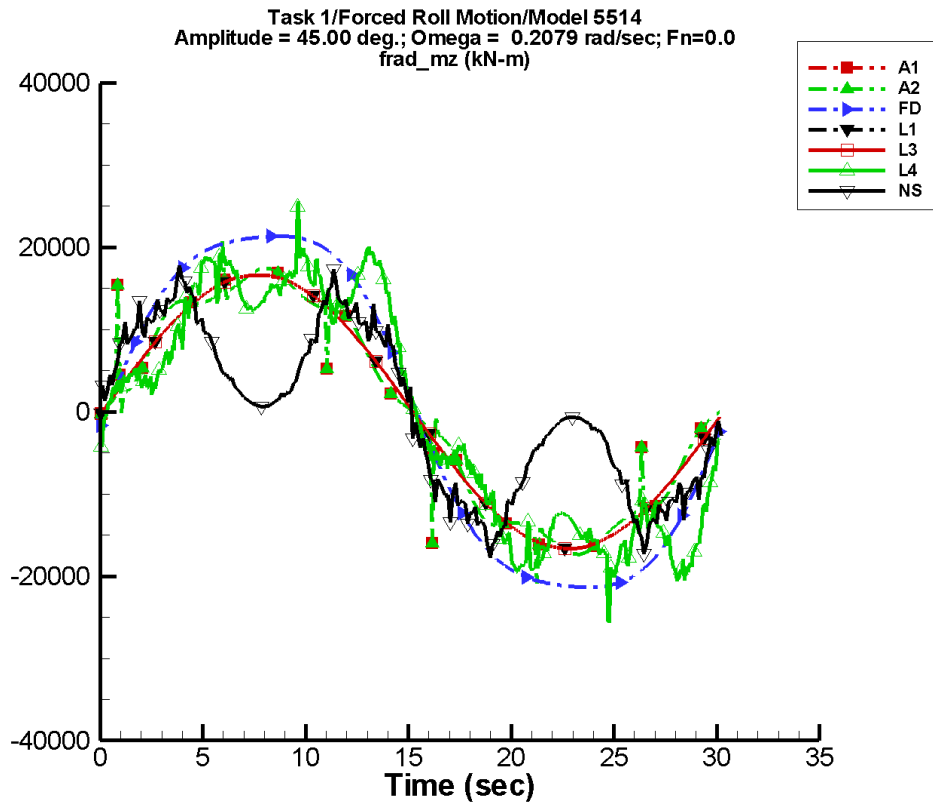
Table D–1085. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-17.8	1.10E+04	0	11.1	23
A2	-17.8	1.10E+04	0	11.1	23
FD	20.8	1.80E+04	-4	96.0	54
L1	0.423	1.11E+04	-1	0.931	87
L3	0.423	1.11E+04	-1	0.930	87
L4	16.9	1.22E+04	-14	615.	152
NF	—	—	—	—	—
NS	0.204	8.74E+03	-1	0.539	16

Table D–1086. Minimum and maximum of of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.39E+04	1.41E+04	-1.15E+04	1.16E+04
A2	-1.39E+04	1.41E+04	-1.15E+04	1.16E+04
FD	-1.73E+04	1.73E+04	-1.73E+04	1.73E+04
L1	-1.11E+04	1.11E+04	-1.11E+04	1.11E+04
L3	-1.11E+04	1.11E+04	-1.11E+04	1.11E+04
L4	-1.34E+04	1.37E+04	-1.32E+04	1.32E+04
NF	—	—	—	—
NS	-7.93E+03	7.93E+03	-7.49E+03	7.49E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-544. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

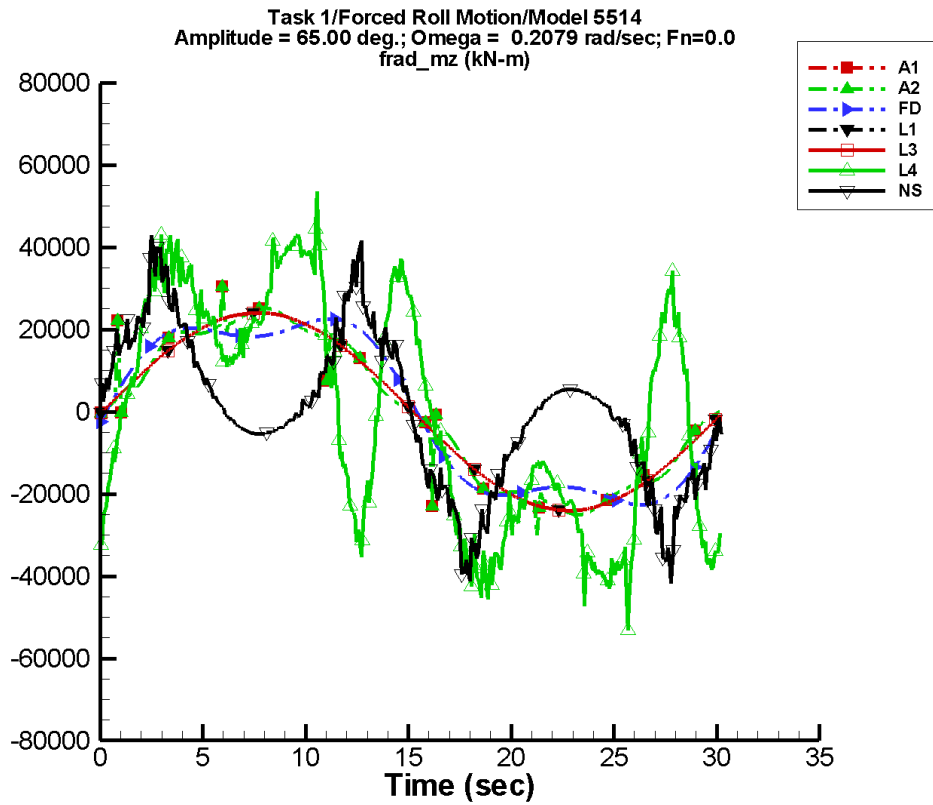
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-26.7	1.65E+04	0	16.6	23
A2	-26.7	1.65E+04	0	16.6	23
FD	68.0	2.34E+04	-4	313.	54
L1	0.640	1.66E+04	-1	1.40	87
L3	0.637	1.66E+04	-1	1.41	87
L4	-137.	1.85E+04	-13	373.	84
NF	—	—	—	—	—
NS	4.87	9.76E+03	2	4.56	-99

Table D–1088. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.08E+04	2.11E+04	-1.73E+04	1.74E+04
A2	-2.08E+04	2.11E+04	-1.73E+04	1.74E+04
FD	-2.13E+04	2.13E+04	-2.13E+04	2.13E+04
L1	-1.67E+04	1.67E+04	-1.66E+04	1.67E+04
L3	-1.67E+04	1.67E+04	-1.66E+04	1.67E+04
L4	-2.57E+04	2.55E+04	-2.06E+04	2.03E+04
NF	—	—	—	—
NS	-1.78E+04	1.78E+04	-1.54E+04	1.54E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-545. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

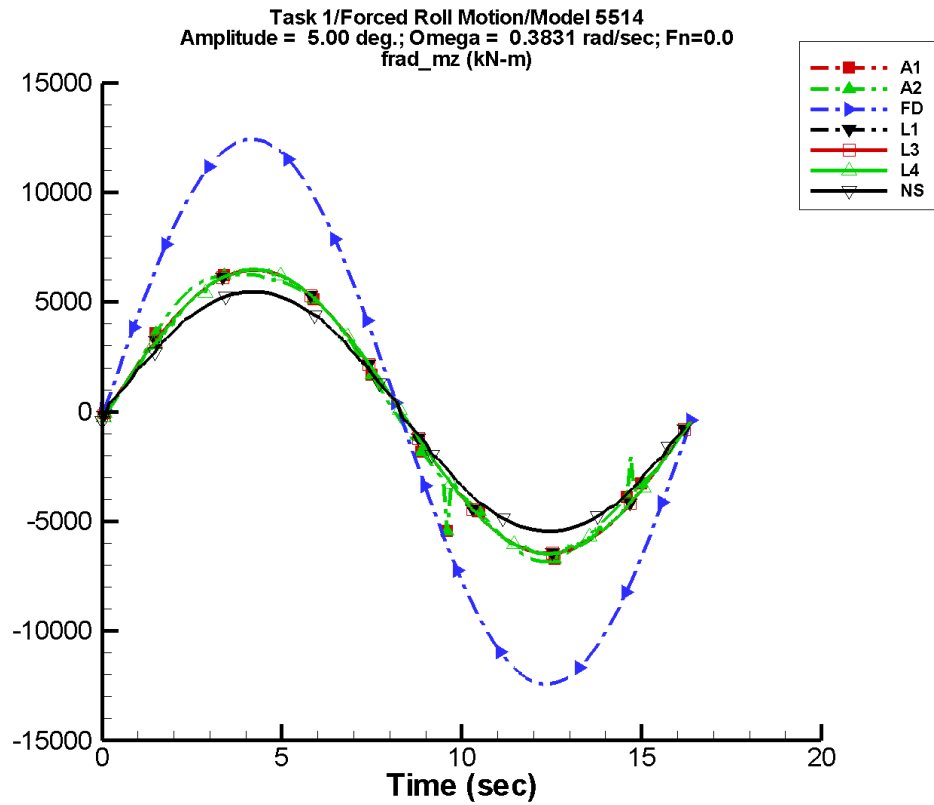
Table D–1089. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-38.5	2.38E+04	0	24.0	23
A2	-38.5	2.38E+04	0	24.0	23
FD	192.	2.42E+04	-4	881.	54
L1	0.924	2.40E+04	-1	2.03	87
L3	0.924	2.40E+04	-1	2.03	87
L4	-1.52E+03	2.84E+04	8	2.99E+03	-60
NF	—	—	—	—	—
NS	44.8	1.15E+04	10	16.1	105

Table D–1090. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.01E+04	3.05E+04	-2.49E+04	2.51E+04
A2	-3.01E+04	3.05E+04	-2.49E+04	2.51E+04
FD	-2.26E+04	2.26E+04	-2.25E+04	2.25E+04
L1	-2.41E+04	2.41E+04	-2.40E+04	2.41E+04
L3	-2.41E+04	2.41E+04	-2.40E+04	2.41E+04
L4	-5.31E+04	5.35E+04	-4.13E+04	4.14E+04
NF	—	—	—	—
NS	-4.18E+04	4.28E+04	-3.67E+04	3.72E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-546. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

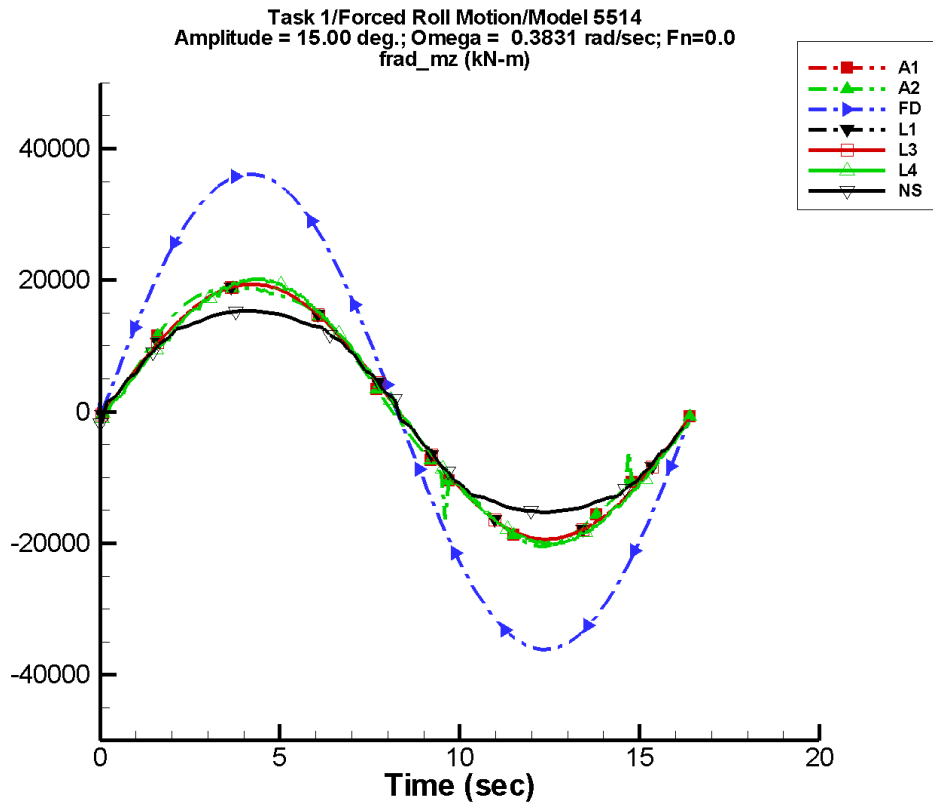
Table D-1091. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-14.8	6.46E+03	0	31.4	-12
A2	-14.8	6.46E+03	0	31.4	-12
FD	0.345	1.24E+04	-1	2.39	75
L1	2.46E-02	6.46E+03	-3	0.409	-171
L3	2.42E-02	6.46E+03	-3	0.410	-171
L4	-5.81	6.45E+03	-3	30.2	-151
NF	—	—	—	—	—
NS	7.15E-02	5.51E+03	-2	0.619	162

Table D-1092. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.83E+03	6.97E+03	-6.78E+03	6.26E+03
A2	-6.83E+03	6.97E+03	-6.78E+03	6.26E+03
FD	-1.24E+04	1.24E+04	-1.24E+04	1.24E+04
L1	-6.46E+03	6.46E+03	-6.45E+03	6.45E+03
L3	-6.46E+03	6.46E+03	-6.45E+03	6.45E+03
L4	-6.49E+03	6.48E+03	-6.48E+03	6.48E+03
NF	—	—	—	—
NS	-5.47E+03	5.48E+03	-5.41E+03	5.42E+03

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-547. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

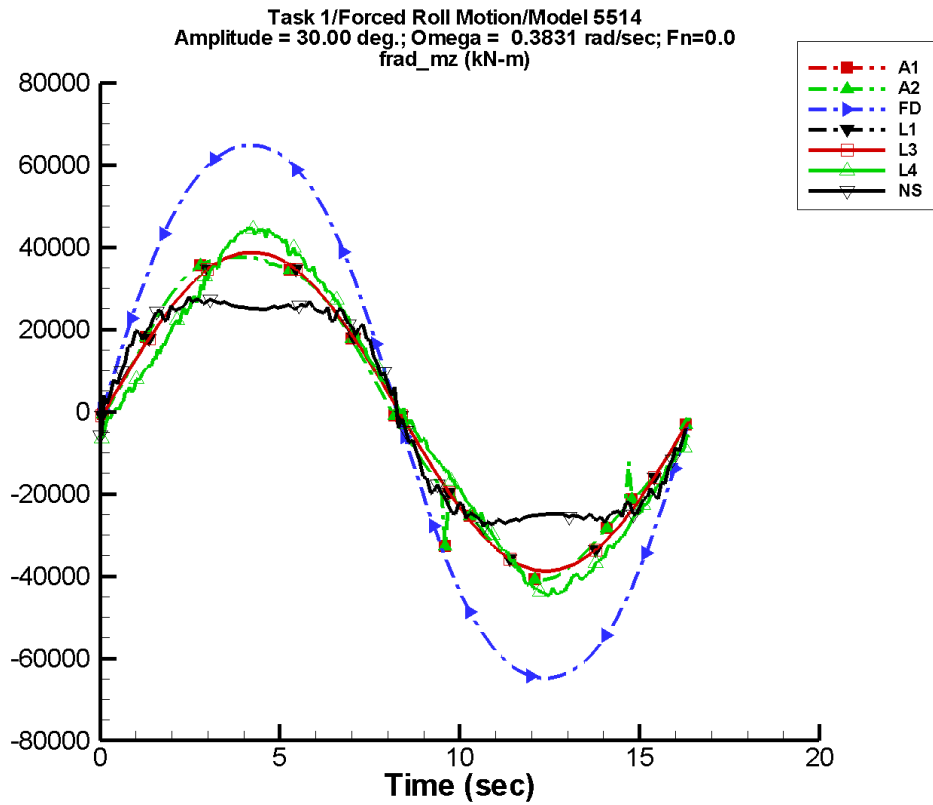
Table D–1093. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-44.2	1.94E+04	0	94.1	-12
A2	-44.2	1.94E+04	0	94.1	-12
FD	9.21	3.65E+04	-1	64.0	75
L1	6.89E-02	1.94E+04	-3	1.23	-171
L3	7.05E-02	1.94E+04	-3	1.22	-171
L4	-127.	1.97E+04	-4	216.	-141
NF	—	—	—	—	—
NS	0.206	1.62E+04	-2	1.62	168

Table D–1094. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.05E+04	2.09E+04	-2.03E+04	1.88E+04
A2	-2.05E+04	2.09E+04	-2.03E+04	1.88E+04
FD	-3.61E+04	3.61E+04	-3.60E+04	3.60E+04
L1	-1.94E+04	1.94E+04	-1.94E+04	1.94E+04
L3	-1.94E+04	1.94E+04	-1.94E+04	1.94E+04
L4	-2.02E+04	2.02E+04	-2.00E+04	2.01E+04
NF	—	—	—	—
NS	-1.53E+04	1.53E+04	-1.52E+04	1.52E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-548. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

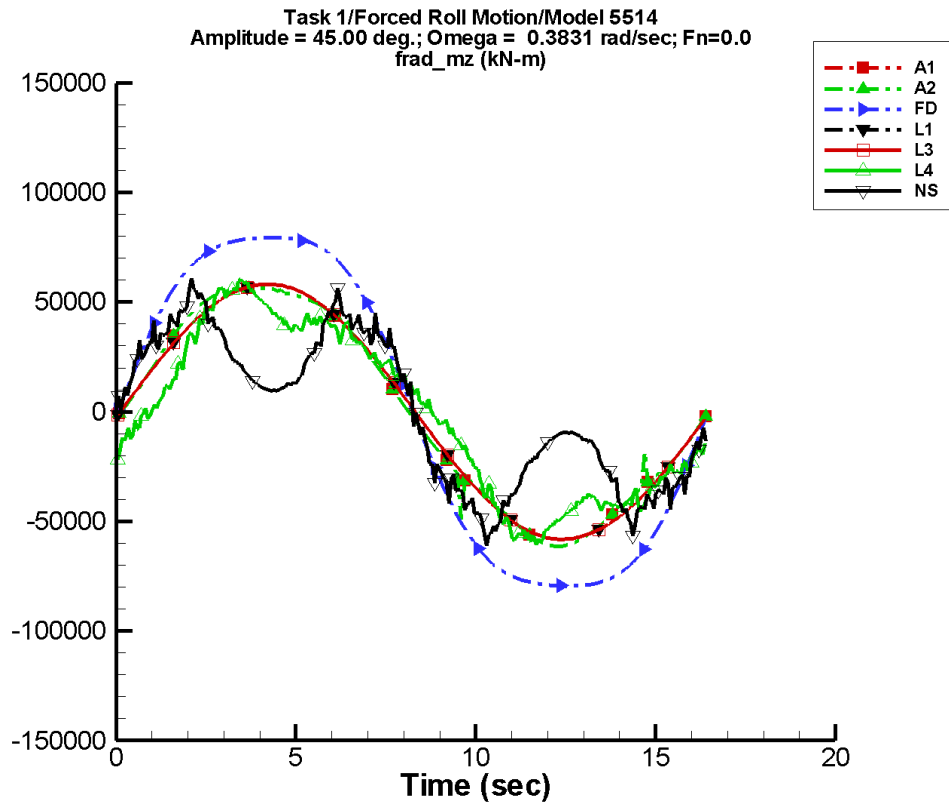
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-88.5	3.88E+04	0	188.	-12
A2	-88.5	3.88E+04	0	188.	-12
FD	72.1	6.72E+04	-1	502.	74
L1	0.156	3.88E+04	-3	2.46	-171
L3	0.156	3.88E+04	-3	2.46	-171
L4	-636.	4.05E+04	-9	989.	-130
NF	—	—	—	—	—
NS	0.331	3.08E+04	-2	2.58	157

Table D–1096. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-4.09E+04	4.18E+04	-4.06E+04	3.75E+04
A2	-4.09E+04	4.18E+04	-4.06E+04	3.75E+04
FD	-6.48E+04	6.48E+04	-6.47E+04	6.47E+04
L1	-3.88E+04	3.88E+04	-3.87E+04	3.87E+04
L3	-3.88E+04	3.88E+04	-3.87E+04	3.87E+04
L4	-4.46E+04	4.46E+04	-4.42E+04	4.42E+04
NF	—	—	—	—
NS	-2.81E+04	2.81E+04	-2.69E+04	2.70E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-549. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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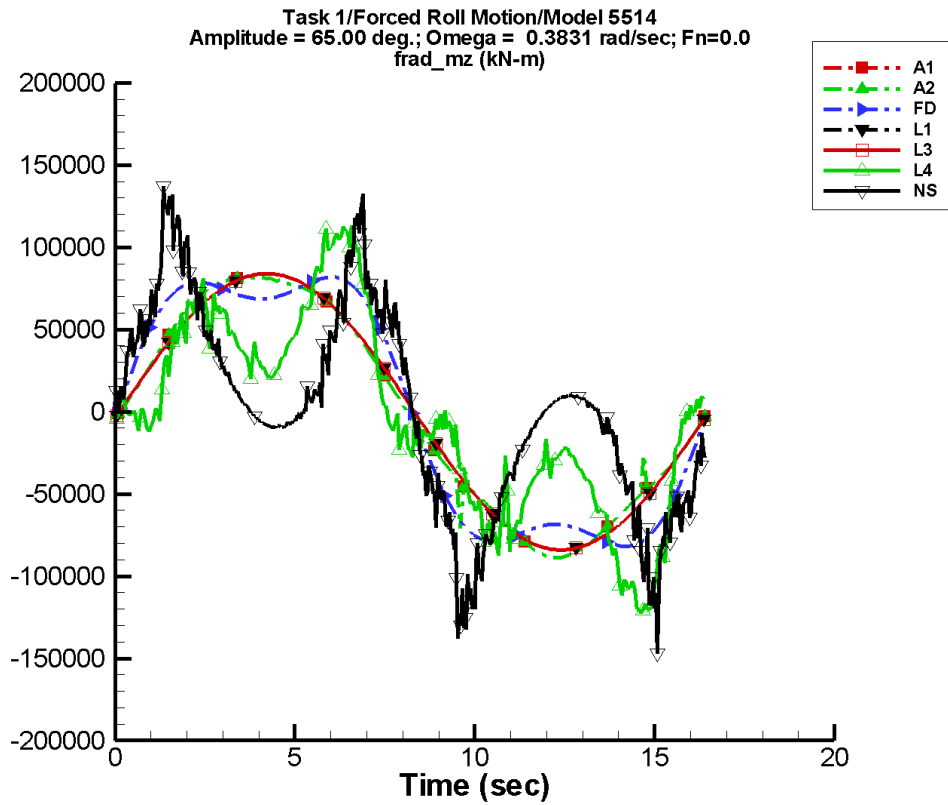
Table D–1097. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-133.	5.81E+04	0	282.	-12
A2	-133.	5.81E+04	0	282.	-12
FD	234.	8.72E+04	-1	1.63E+03	74
L1	0.240	5.82E+04	-3	3.68	-171
L3	0.238	5.82E+04	-3	3.69	-171
L4	-1.83E+03	5.14E+04	-10	2.20E+03	-107
NF	—	—	—	—	—
NS	-4.88	3.75E+04	0	13.0	126

Table D–1098. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-6.14E+04	6.27E+04	-6.10E+04	5.63E+04
A2	-6.14E+04	6.27E+04	-6.10E+04	5.63E+04
FD	-7.95E+04	7.95E+04	-7.94E+04	7.94E+04
L1	-5.82E+04	5.81E+04	-5.81E+04	5.81E+04
L3	-5.82E+04	5.81E+04	-5.81E+04	5.81E+04
L4	-6.06E+04	6.03E+04	-5.82E+04	5.79E+04
NF	—	—	—	—
NS	-6.12E+04	6.11E+04	-5.39E+04	5.38E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-550. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

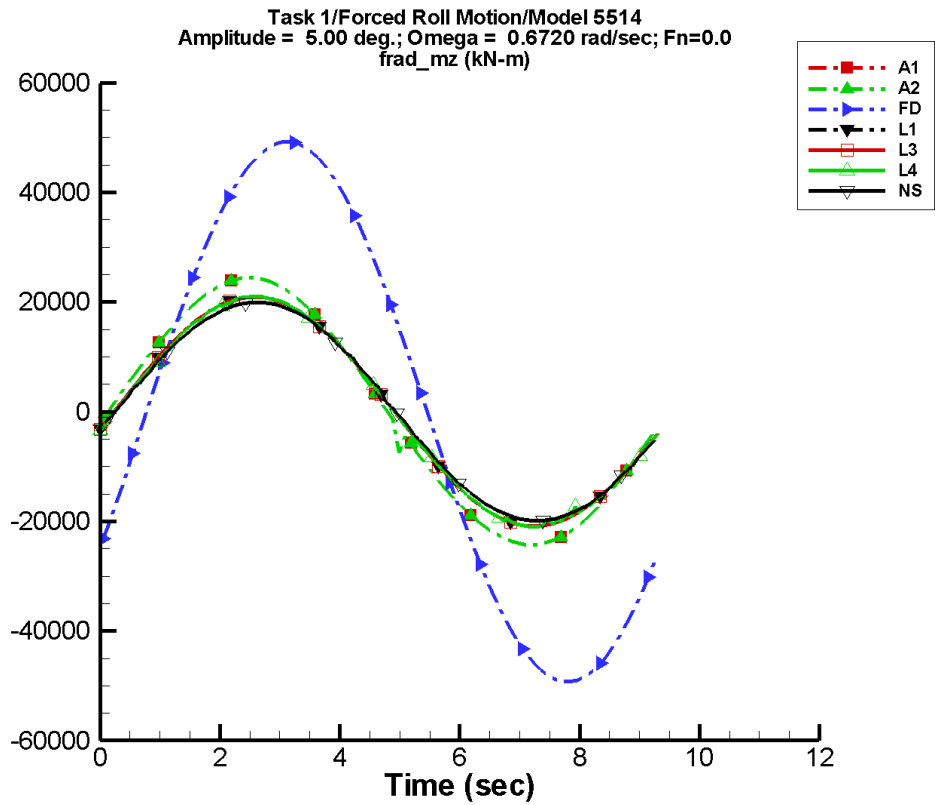
Table D–1099. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-192.	8.40E+04	0	408.	-12
A2	-192.	8.40E+04	0	408.	-12
FD	657.	9.00E+04	-1	4.59E+03	74
L1	0.356	8.40E+04	-3	5.31	-171
L3	0.348	8.40E+04	-3	5.31	-171
L4	-2.23E+03	7.04E+04	-12	3.11E+03	-75
NF	—	—	—	—	—
NS	11.0	4.57E+04	5	203.	72

Table D–1100. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.87E+04	9.06E+04	-8.80E+04	8.13E+04
A2	-8.87E+04	9.06E+04	-8.80E+04	8.13E+04
FD	-8.18E+04	8.18E+04	-8.12E+04	8.12E+04
L1	-8.40E+04	8.40E+04	-8.39E+04	8.39E+04
L3	-8.40E+04	8.40E+04	-8.39E+04	8.39E+04
L4	-1.23E+05	1.13E+05	-1.18E+05	1.08E+05
NF	—	—	—	—
NS	-1.47E+05	1.38E+05	-1.22E+05	1.25E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-551. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.0$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

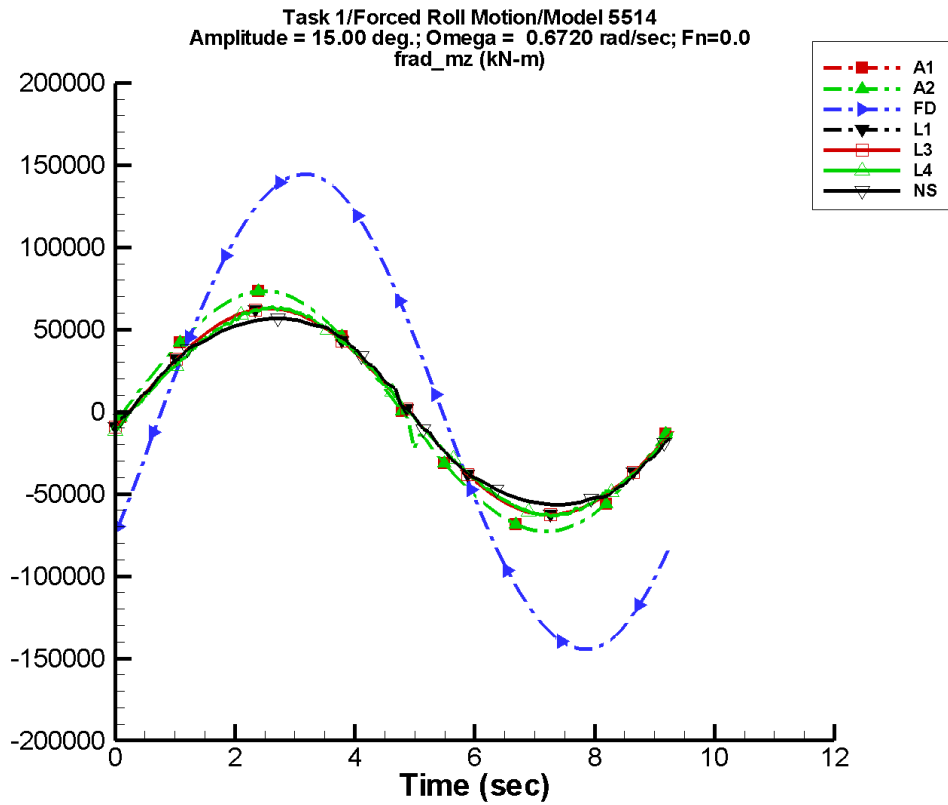
Table D–1101. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-33.6	2.41E+04	-5	87.2	-81
A2	-33.6	2.41E+04	-5	87.2	-81
FD	2.16	4.93E+04	-30	6.13	118
L1	0.561	2.09E+04	-9	1.25	-131
L3	0.560	2.09E+04	-9	1.25	-131
L4	-16.7	2.08E+04	-9	160.	-158
NF	—	—	—	—	—
NS	-1.07	2.00E+04	-10	3.40	-158

Table D–1102. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.43E+04	2.45E+04	-2.40E+04	2.41E+04
A2	-2.43E+04	2.45E+04	-2.40E+04	2.41E+04
FD	-4.92E+04	4.93E+04	-4.87E+04	4.87E+04
L1	-2.09E+04	2.09E+04	-2.08E+04	2.08E+04
L3	-2.09E+04	2.09E+04	-2.08E+04	2.08E+04
L4	-2.10E+04	2.10E+04	-2.08E+04	2.09E+04
NF	—	—	—	—
NS	-1.99E+04	1.99E+04	-1.97E+04	1.97E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-552. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

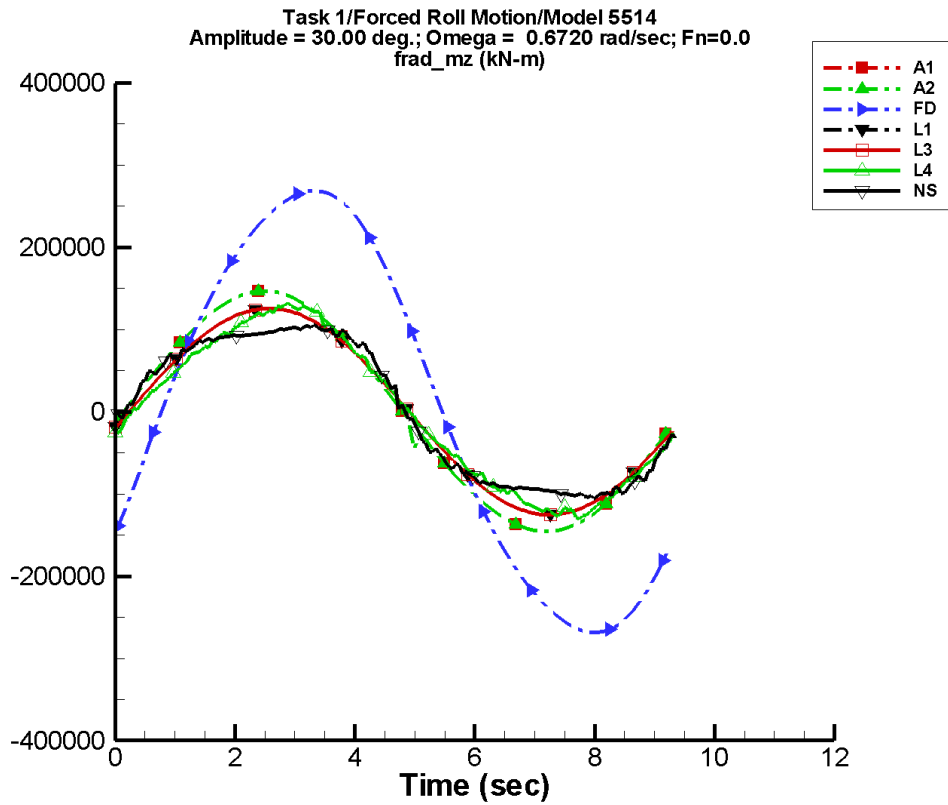
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-101.	7.23E+04	-5	261.	-81
A2	-101.	7.23E+04	-5	261.	-81
FD	60.3	1.45E+05	-30	164.	117
L1	1.71	6.27E+04	-9	3.74	-132
L3	1.71	6.27E+04	-9	3.74	-132
L4	-418.	6.20E+04	-10	853.	-161
NF	—	—	—	—	—
NS	-3.19	5.90E+04	-11	10.2	176

Table D–1104. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.28E+04	7.33E+04	-7.19E+04	7.24E+04
A2	-7.28E+04	7.33E+04	-7.19E+04	7.24E+04
FD	-1.44E+05	1.44E+05	-1.43E+05	1.43E+05
L1	-6.27E+04	6.27E+04	-6.24E+04	6.25E+04
L3	-6.27E+04	6.27E+04	-6.24E+04	6.25E+04
L4	-6.33E+04	6.35E+04	-6.26E+04	6.27E+04
NF	—	—	—	—
NS	-5.65E+04	5.66E+04	-5.61E+04	5.62E+04



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-553. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

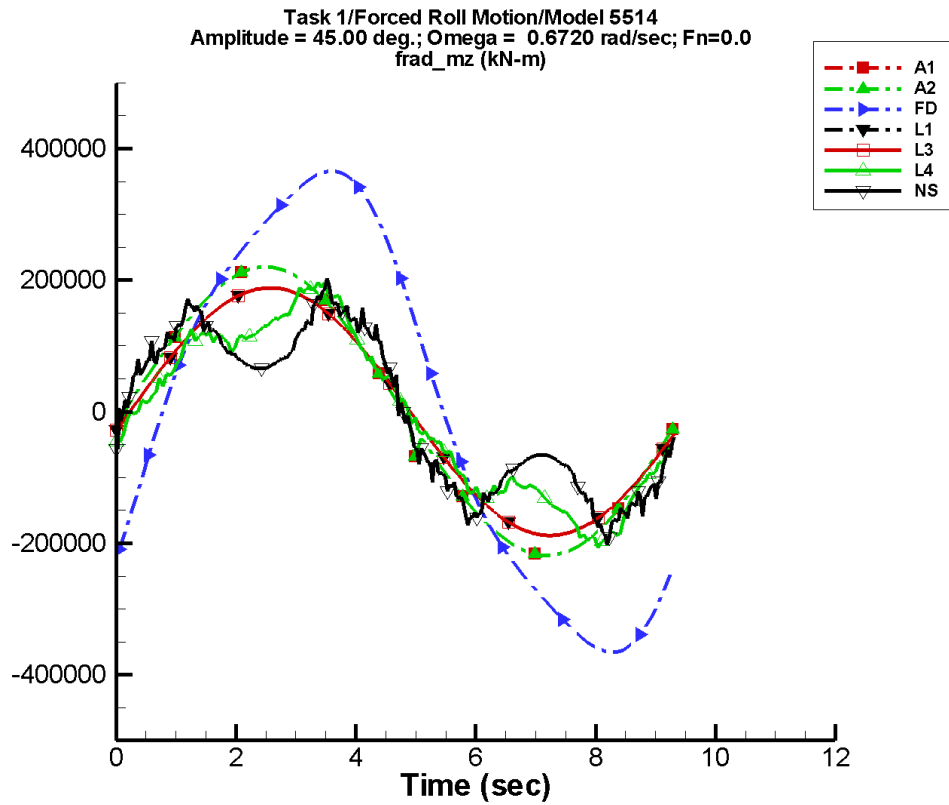
Table D–1105. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-202.	1.45E+05	-5	523.	-81
A2	-202.	1.45E+05	-5	523.	-81
FD	472.	2.71E+05	-32	1.29E+03	117
L1	3.44	1.25E+05	-9	7.40	-132
L3	3.44	1.25E+05	-9	7.39	-132
L4	-1.24E+03	1.22E+05	-13	2.21E+03	-145
NF	—	—	—	—	—
NS	-4.34	1.12E+05	-10	13.8	-143

Table D–1106. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.46E+05	1.47E+05	-1.44E+05	1.45E+05
A2	-1.46E+05	1.47E+05	-1.44E+05	1.45E+05
FD	-2.69E+05	2.69E+05	-2.66E+05	2.66E+05
L1	-1.25E+05	1.25E+05	-1.25E+05	1.25E+05
L3	-1.25E+05	1.25E+05	-1.25E+05	1.25E+05
L4	-1.31E+05	1.33E+05	-1.24E+05	1.28E+05
NF	—	—	—	—
NS	-1.06E+05	1.06E+05	-1.02E+05	1.03E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-554. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

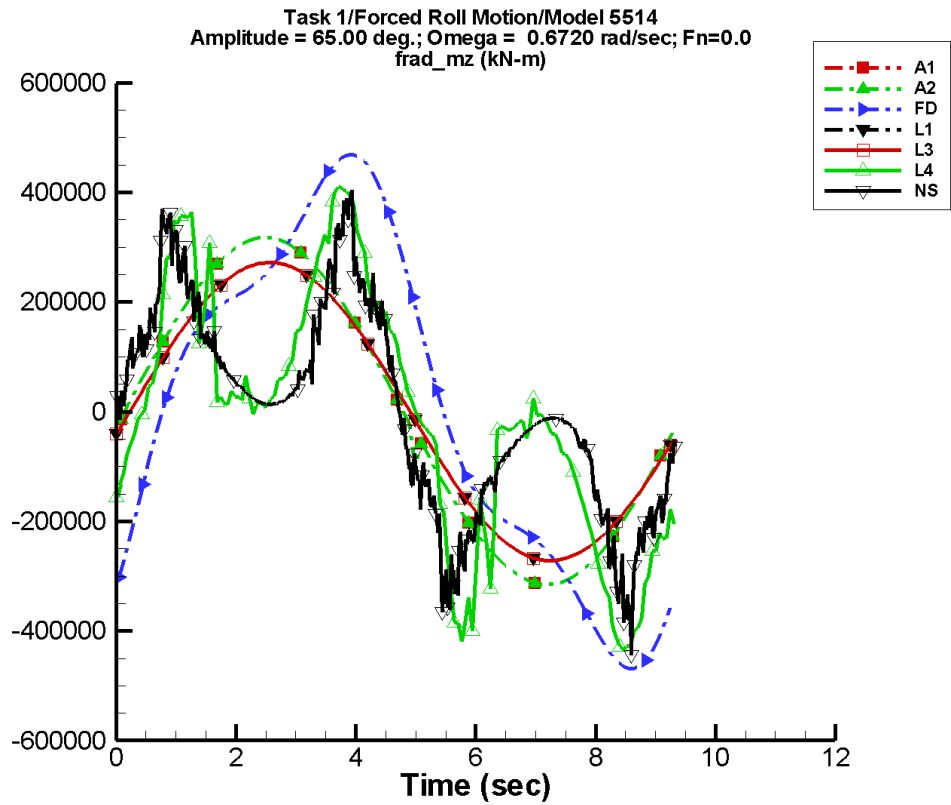
Table D–1107. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-302.	2.17E+05	-5	784.	-81
A2	-302.	2.17E+05	-5	784.	-81
FD	1.53E+03	3.61E+05	-34	4.20E+03	116
L1	5.19	1.88E+05	-9	11.1	-131
L3	5.21	1.88E+05	-9	11.1	-131
L4	-2.65E+03	1.67E+05	-15	3.16E+03	-45
NF	—	—	—	—	—
NS	-16.5	1.43E+05	-9	33.8	-47

Table D–1108. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.18E+05	2.20E+05	-2.16E+05	2.17E+05
A2	-2.18E+05	2.20E+05	-2.16E+05	2.17E+05
FD	-3.66E+05	3.66E+05	-3.61E+05	3.60E+05
L1	-1.88E+05	1.88E+05	-1.87E+05	1.87E+05
L3	-1.88E+05	1.88E+05	-1.87E+05	1.87E+05
L4	-2.07E+05	1.97E+05	-1.95E+05	1.89E+05
NF	—	—	—	—
NS	-2.03E+05	2.03E+05	-1.80E+05	1.80E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-555. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

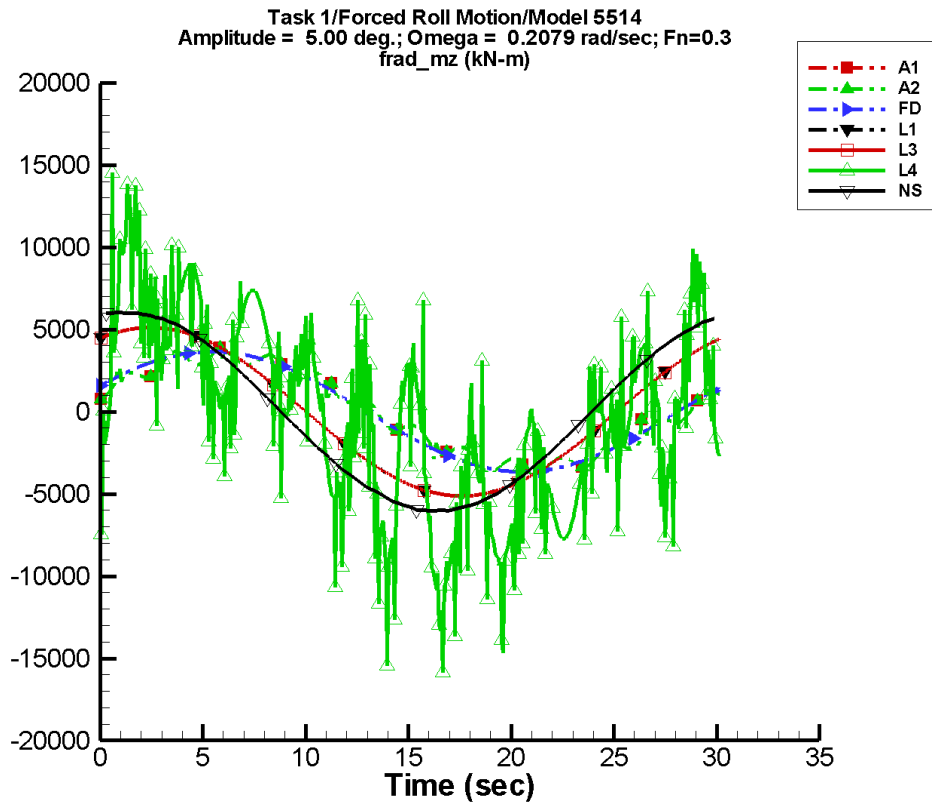
Table D–1109. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-437.	3.13E+05	-5	1.13E+03	-81
A2	-437.	3.13E+05	-5	1.13E+03	-81
FD	4.25E+03	4.06E+05	-40	1.19E+04	115
L1	7.65	2.72E+05	-9	15.9	-132
L3	7.62	2.72E+05	-9	15.9	-132
L4	3.92E+03	2.37E+05	-18	2.87E+04	-19
NF	—	—	—	—	—
NS	-108.	1.65E+05	-5	333.	145

Table D–1110. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.0 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.16E+05	3.18E+05	-3.12E+05	3.14E+05
A2	-3.16E+05	3.18E+05	-3.12E+05	3.14E+05
FD	-4.69E+05	4.69E+05	-4.56E+05	4.57E+05
L1	-2.72E+05	2.72E+05	-2.71E+05	2.71E+05
L3	-2.72E+05	2.72E+05	-2.71E+05	2.71E+05
L4	-4.34E+05	4.11E+05	-4.12E+05	3.86E+05
NF	—	—	—	—
NS	-4.43E+05	4.04E+05	-3.63E+05	3.69E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-556. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

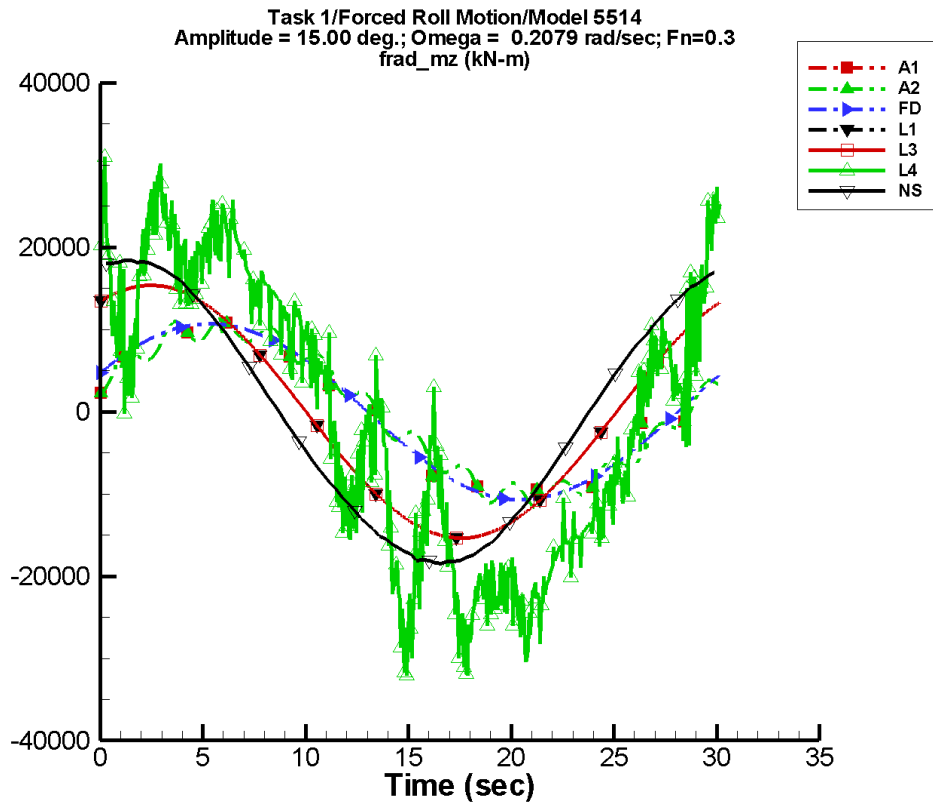
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-1.81	3.40E+03	21	5.02	-19
A2	-1.81	3.40E+03	21	5.02	-19
FD	5.89E-02	3.66E+03	25	0.626	78
L1	-0.836	5.12E+03	61	0.145	-158
L3	-1.45	5.12E+03	61	3.62E-02	-156
L4	-139.	6.11E+03	49	275.	77
NF	—	—	—	—	—
NS	1.79E-02	6.03E+03	75	7.61E-02	53

Table D–1112. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.89E+03	3.89E+03	-3.65E+03	3.66E+03
A2	-3.89E+03	3.89E+03	-3.65E+03	3.66E+03
FD	-3.65E+03	3.65E+03	-3.65E+03	3.65E+03
L1	-5.13E+03	5.12E+03	-5.12E+03	5.12E+03
L3	-5.12E+03	5.12E+03	-5.12E+03	5.12E+03
L4	-1.59E+04	1.49E+04	-1.20E+04	1.15E+04
NF	—	—	—	—
NS	-6.04E+03	6.04E+03	-5.97E+03	5.97E+03



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-557. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

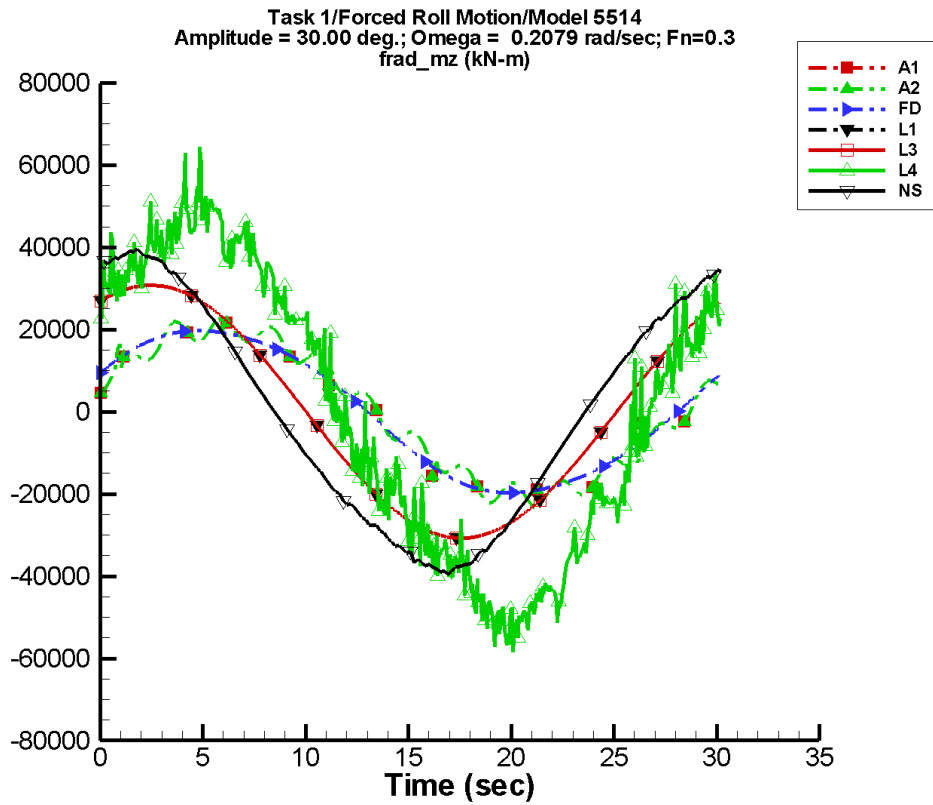
Table D–1113. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.42	1.02E+04	21	15.0	-19
A2	-5.42	1.02E+04	21	15.0	-19
FD	1.61	1.07E+04	25	16.8	78
L1	-0.920	1.54E+04	61	0.174	-157
L3	-1.50	1.54E+04	61	3.68E-02	-139
L4	-686.	2.20E+04	43	638.	-143
NF	—	—	—	—	—
NS	1.65E-02	1.82E+04	75	0.425	35

Table D–1114. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.17E+04	1.17E+04	-1.09E+04	1.10E+04
A2	-1.17E+04	1.17E+04	-1.09E+04	1.10E+04
FD	-1.07E+04	1.07E+04	-1.07E+04	1.07E+04
L1	-1.54E+04	1.54E+04	-1.54E+04	1.54E+04
L3	-1.54E+04	1.54E+04	-1.54E+04	1.54E+04
L4	-3.20E+04	3.10E+04	-2.82E+04	2.64E+04
NF	—	—	—	—
NS	-1.85E+04	1.85E+04	-1.82E+04	1.82E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-558. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

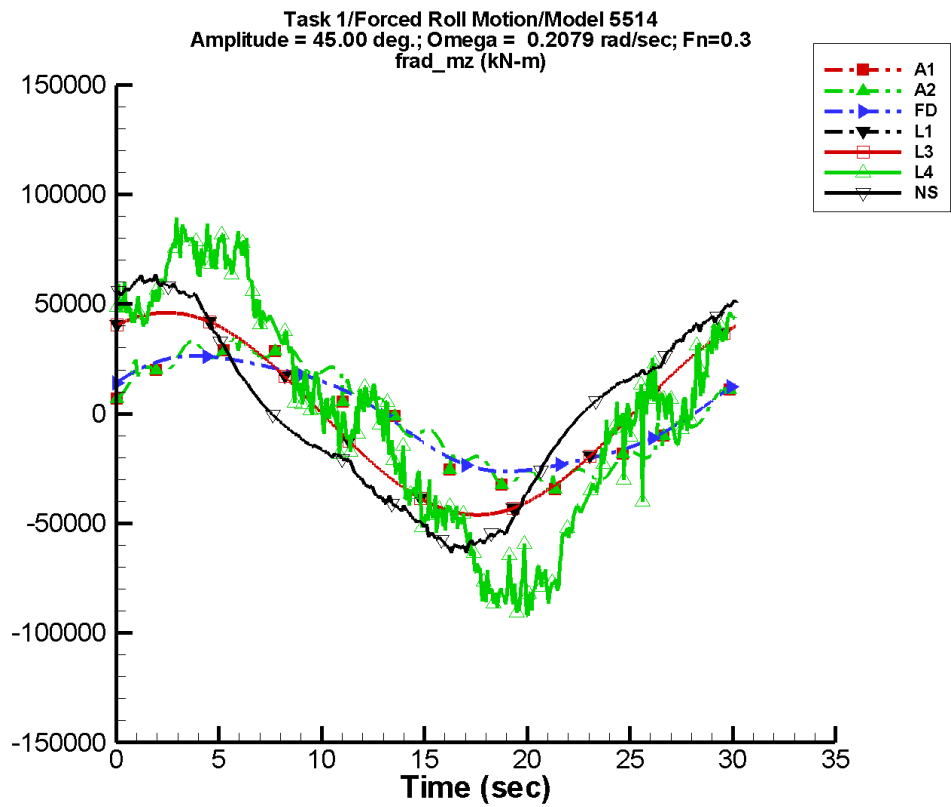
Table D–1115. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-10.8	2.04E+04	21	30.1	-19
A2	-10.8	2.04E+04	21	30.1	-19
FD	12.6	2.00E+04	27	132.	78
L1	-0.969	3.07E+04	61	0.143	-148
L3	-1.55	3.07E+04	61	4.75E-02	-43
L4	-249.	4.68E+04	38	619.	176
NF	—	—	—	—	—
NS	0.507	3.68E+04	76	1.16	44

Table D–1116. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.33E+04	2.33E+04	-2.19E+04	2.20E+04
A2	-2.33E+04	2.33E+04	-2.19E+04	2.20E+04
FD	-1.97E+04	1.97E+04	-1.97E+04	1.97E+04
L1	-3.07E+04	3.07E+04	-3.07E+04	3.07E+04
L3	-3.07E+04	3.07E+04	-3.07E+04	3.07E+04
L4	-5.84E+04	6.43E+04	-5.32E+04	5.35E+04
NF	—	—	—	—
NS	-3.96E+04	3.96E+04	-3.85E+04	3.85E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-559. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

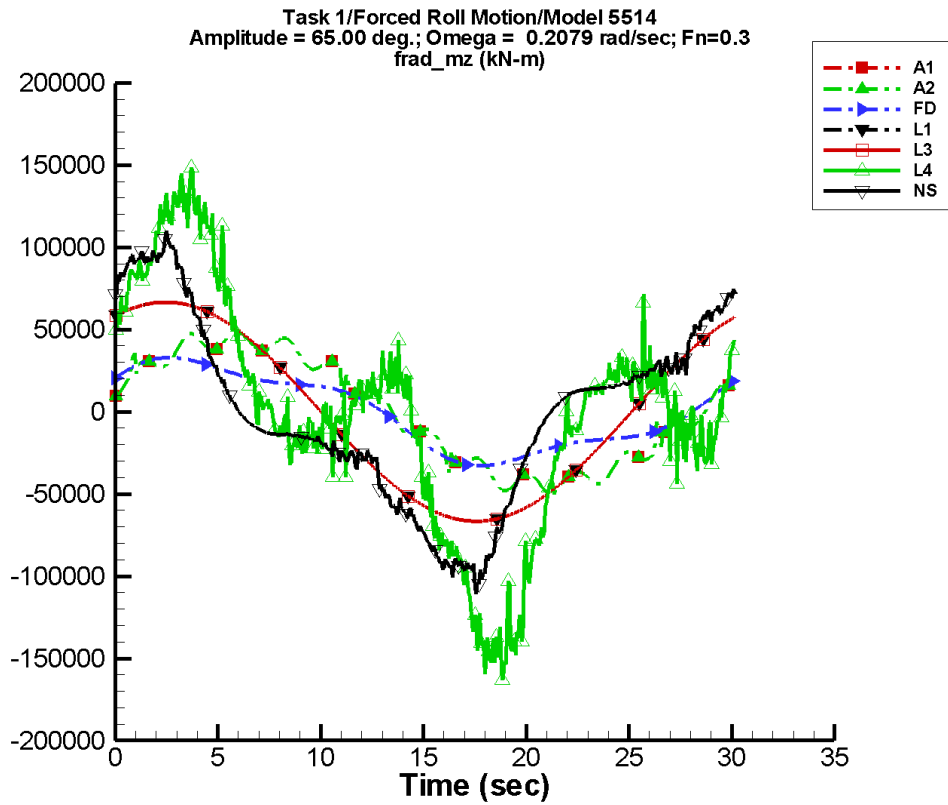
Table D–1117. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-16.3	3.06E+04	21	45.1	-19
A2	-16.3	3.06E+04	21	45.1	-19
FD	41.3	2.66E+04	30	432.	79
L1	-1.04	4.61E+04	61	0.187	-146
L3	-1.58	4.61E+04	61	8.07E-02	-73
L4	40.3	6.73E+04	45	1.81E+03	87
NF	—	—	—	—	—
NS	9.88	5.42E+04	80	10.7	-90

Table D–1118. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.50E+04	3.50E+04	-3.28E+04	3.29E+04
A2	-3.50E+04	3.50E+04	-3.28E+04	3.29E+04
FD	-2.63E+04	2.63E+04	-2.63E+04	2.63E+04
L1	-4.61E+04	4.61E+04	-4.61E+04	4.61E+04
L3	-4.61E+04	4.61E+04	-4.61E+04	4.61E+04
L4	-9.21E+04	9.31E+04	-8.41E+04	8.35E+04
NF	—	—	—	—
NS	-6.35E+04	6.35E+04	-6.09E+04	6.09E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-560. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

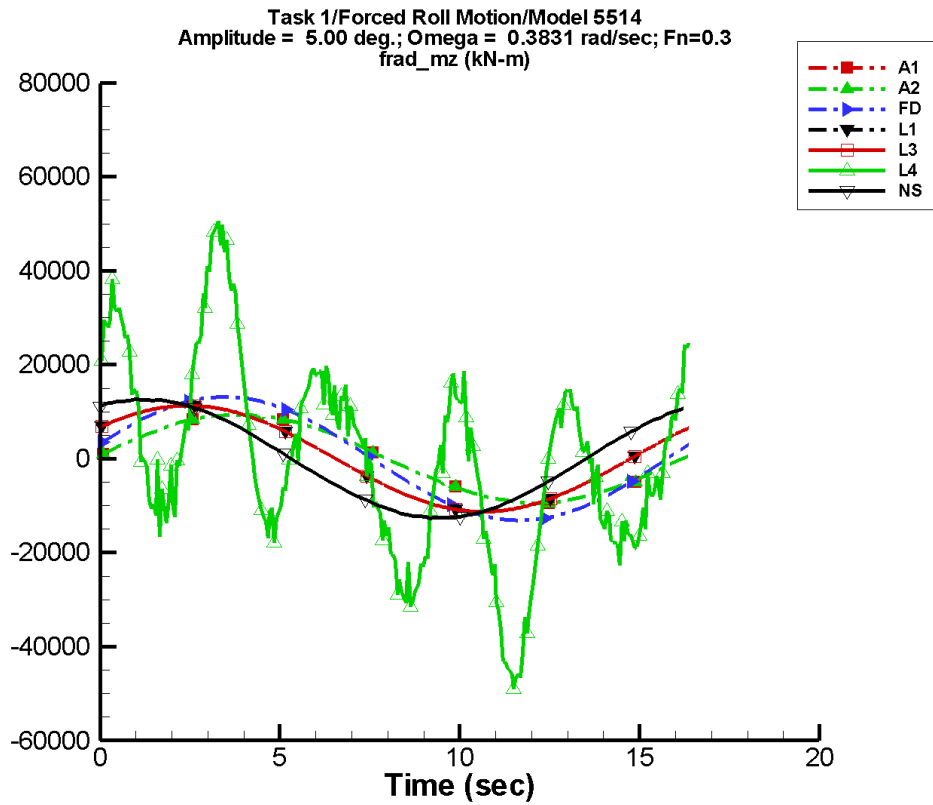
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-23.5	4.42E+04	21	65.2	-19
A2	-23.5	4.42E+04	21	65.2	-19
FD	116.	2.97E+04	37	1.23E+03	79
L1	-1.10	6.66E+04	61	0.251	-140
L3	-1.60	6.66E+04	61	0.143	-76
L4	2.10E+03	7.88E+04	56	1.05E+04	90
NF	—	—	—	—	—
NS	-77.8	7.17E+04	85	163.	93

Table D–1120. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.2079 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.05E+04	5.06E+04	-4.74E+04	4.76E+04
A2	-5.05E+04	5.06E+04	-4.74E+04	4.76E+04
FD	-3.30E+04	3.30E+04	-3.29E+04	3.29E+04
L1	-6.66E+04	6.66E+04	-6.66E+04	6.66E+04
L3	-6.66E+04	6.66E+04	-6.66E+04	6.66E+04
L4	-1.63E+05	1.54E+05	-1.48E+05	1.34E+05
NF	—	—	—	—
NS	-1.11E+05	1.10E+05	-1.01E+05	1.02E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-561. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

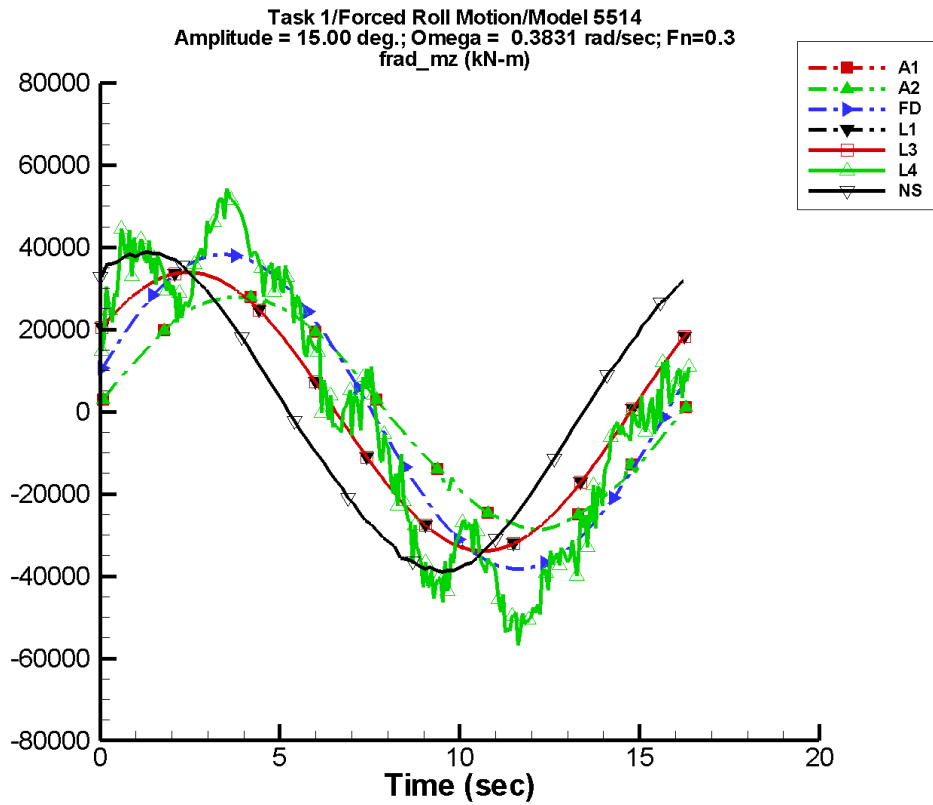
Table D–1121. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-5.06	9.36E+03	5	36.0	46
A2	-5.06	9.36E+03	5	36.0	46
FD	0.509	1.31E+04	14	2.65	90
L1	-0.669	1.13E+04	36	1.98E-02	56
L3	-1.49	1.13E+04	36	6.99E-02	38
L4	-286.	1.47E+04	30	1.95E+03	143
NF	—	—	—	—	—
NS	-0.331	1.26E+04	63	1.04	-127

Table D–1122. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-9.56E+03	9.64E+03	-9.50E+03	9.31E+03
A2	-9.56E+03	9.64E+03	-9.50E+03	9.31E+03
FD	-1.31E+04	1.31E+04	-1.31E+04	1.31E+04
L1	-1.13E+04	1.13E+04	-1.13E+04	1.13E+04
L3	-1.13E+04	1.13E+04	-1.13E+04	1.13E+04
L4	-4.90E+04	5.05E+04	-4.57E+04	4.70E+04
NF	—	—	—	—
NS	-1.26E+04	1.26E+04	-1.25E+04	1.24E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-562. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

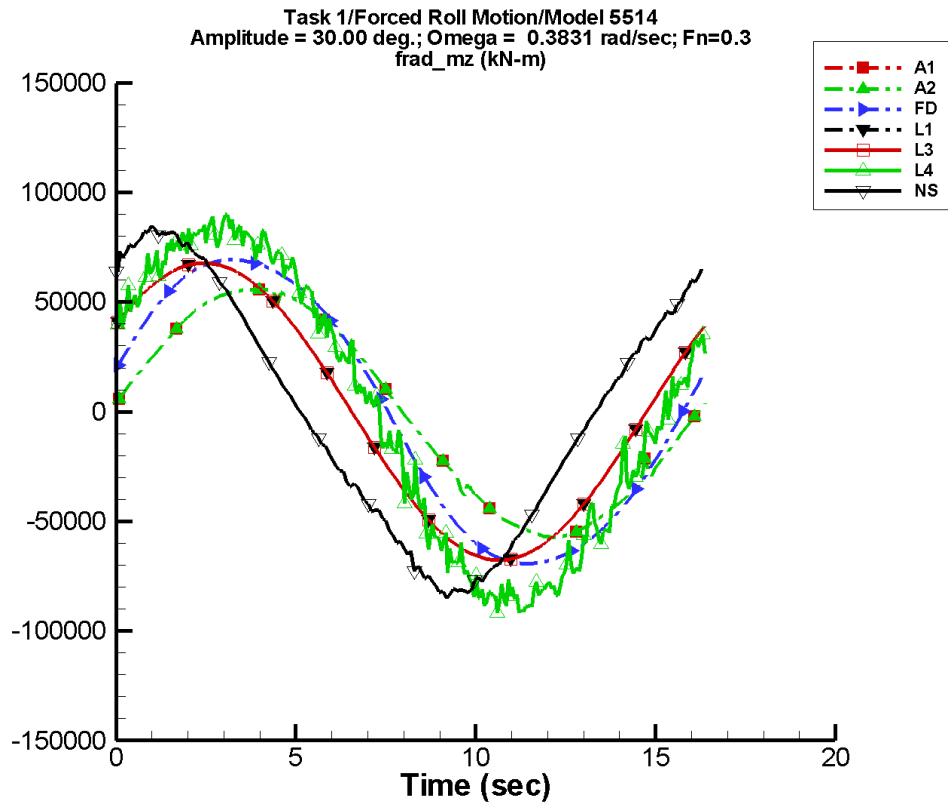
Table D–1123. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-15.2	2.81E+04	5	108.	46
A2	-15.2	2.81E+04	5	108.	46
FD	13.6	3.85E+04	14	71.1	90
L1	-0.699	3.39E+04	36	5.23E-02	-132
L3	-1.52	3.39E+04	36	3.15E-02	-155
L4	-8.39	4.34E+04	26	1.67E+03	121
NF	—	—	—	—	—
NS	-0.807	3.78E+04	64	3.73	-126

Table D–1124. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.87E+04	2.89E+04	-2.85E+04	2.79E+04
A2	-2.87E+04	2.89E+04	-2.85E+04	2.79E+04
FD	-3.82E+04	3.82E+04	-3.81E+04	3.81E+04
L1	-3.39E+04	3.39E+04	-3.38E+04	3.38E+04
L3	-3.39E+04	3.39E+04	-3.38E+04	3.38E+04
L4	-5.67E+04	5.42E+04	-5.18E+04	5.15E+04
NF	—	—	—	—
NS	-3.90E+04	3.89E+04	-3.84E+04	3.83E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-563. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

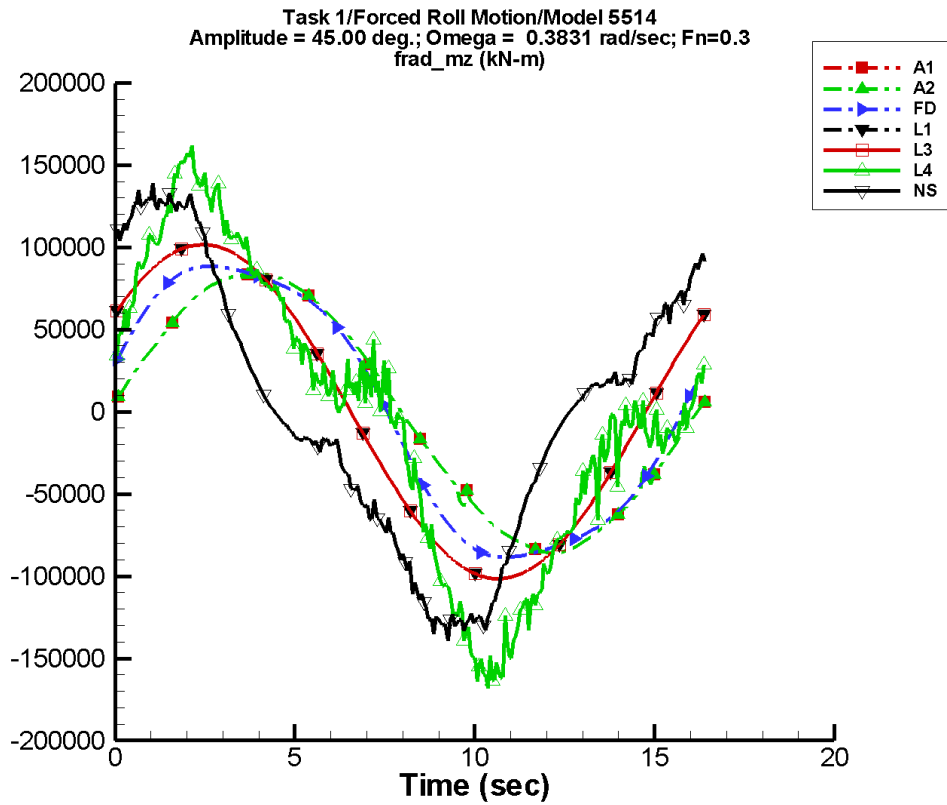
Table D–1125. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-30.3	5.61E+04	5	216.	46
A2	-30.3	5.61E+04	5	216.	46
FD	107.	7.14E+04	15	558.	90
L1	-0.722	6.77E+04	36	0.129	-142
L3	-1.56	6.77E+04	36	8.78E-02	-130
L4	759.	8.51E+04	25	2.01E+03	147
NF	—	—	—	—	—
NS	-1.48	7.59E+04	65	9.25	-132

Table D–1126. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-5.73E+04	5.78E+04	-5.70E+04	5.59E+04
A2	-5.73E+04	5.78E+04	-5.70E+04	5.59E+04
FD	-6.92E+04	6.92E+04	-6.90E+04	6.91E+04
L1	-6.77E+04	6.77E+04	-6.76E+04	6.76E+04
L3	-6.77E+04	6.77E+04	-6.76E+04	6.76E+04
L4	-9.17E+04	9.00E+04	-8.83E+04	8.45E+04
NF	—	—	—	—
NS	-8.50E+04	8.48E+04	-8.22E+04	8.20E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-564. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

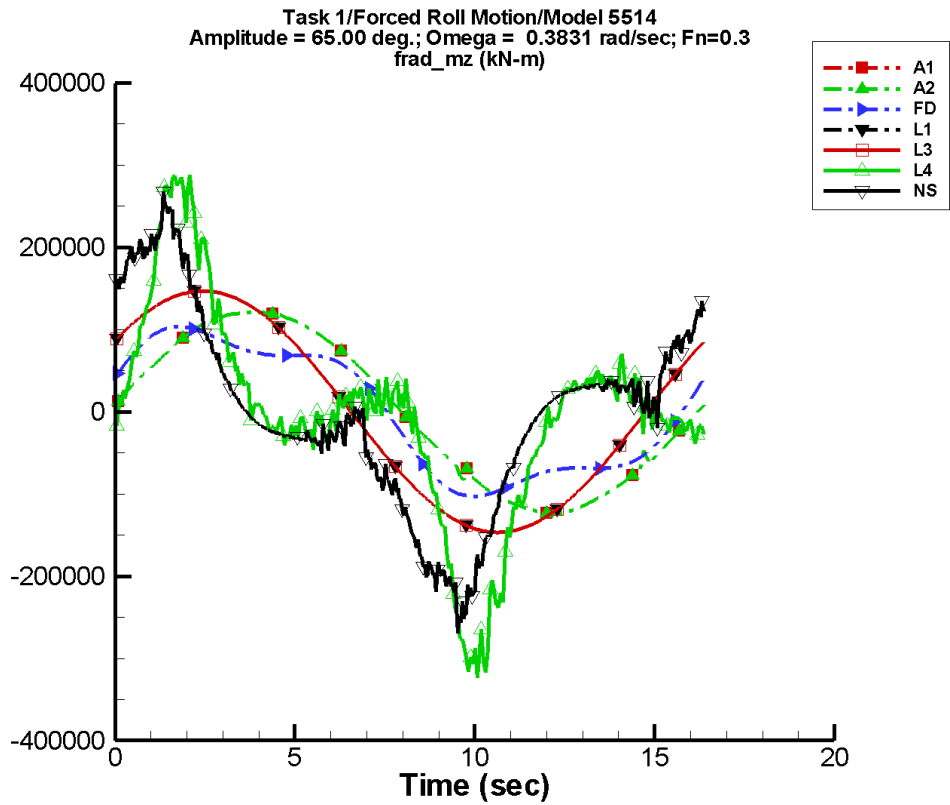
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-45.5	8.42E+04	5	324.	46
A2	-45.5	8.42E+04	5	324.	46
FD	349.	9.33E+04	17	1.82E+03	90
L1	-0.808	1.02E+05	36	0.109	-119
L3	-1.69	1.02E+05	36	0.144	-150
L4	564.	1.19E+05	32	1.06E+03	178
NF	—	—	—	—	—
NS	5.61	1.10E+05	70	29.0	-126

Table D–1128. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-8.60E+04	8.67E+04	-8.54E+04	8.38E+04
A2	-8.60E+04	8.67E+04	-8.54E+04	8.38E+04
FD	-8.86E+04	8.86E+04	-8.83E+04	8.83E+04
L1	-1.02E+05	1.02E+05	-1.01E+05	1.01E+05
L3	-1.02E+05	1.02E+05	-1.01E+05	1.01E+05
L4	-1.68E+05	1.63E+05	-1.59E+05	1.53E+05
NF	—	—	—	—
NS	-1.39E+05	1.39E+05	-1.29E+05	1.29E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-565. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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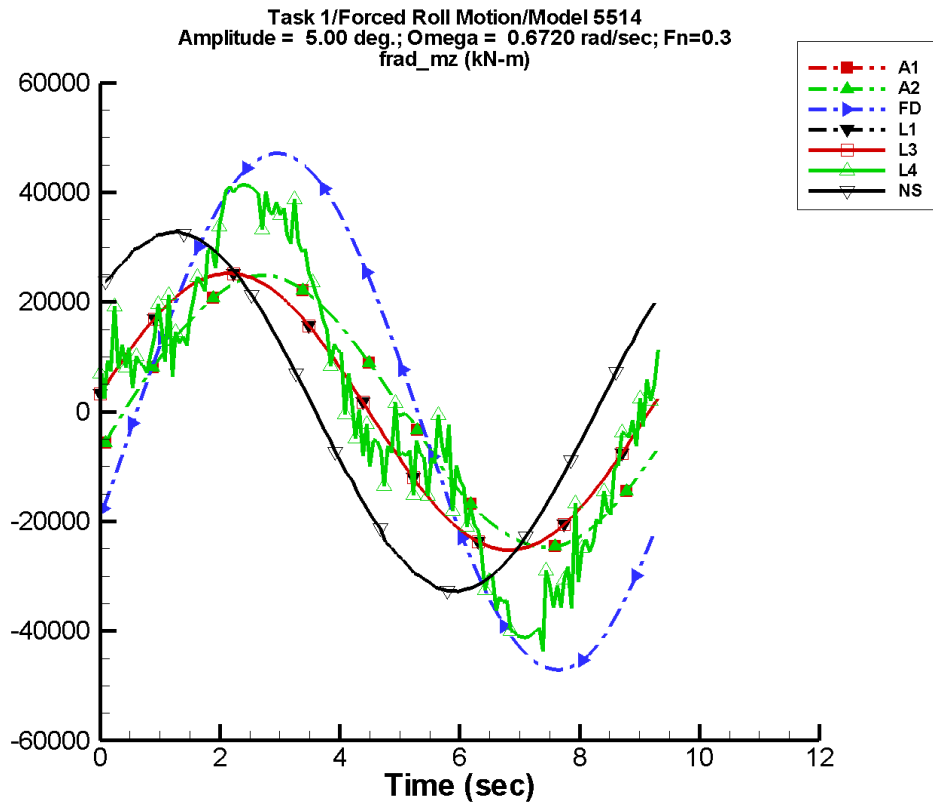
Table D–1129. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-65.7	1.22E+05	5	467.	46
A2	-65.7	1.22E+05	5	467.	46
FD	987.	9.93E+04	21	5.13E+03	91
L1	-1.03	1.47E+05	36	0.288	-123
L3	-1.84	1.47E+05	36	0.262	-127
L4	3.69E+03	1.36E+05	51	4.54E+03	-44
NF	—	—	—	—	—
NS	-17.2	1.44E+05	74	163.	43

Table D–1130. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.3831 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.24E+05	1.25E+05	-1.23E+05	1.21E+05
A2	-1.24E+05	1.25E+05	-1.23E+05	1.21E+05
FD	-1.03E+05	1.03E+05	-1.02E+05	1.02E+05
L1	-1.47E+05	1.47E+05	-1.47E+05	1.47E+05
L3	-1.47E+05	1.47E+05	-1.47E+05	1.47E+05
L4	-3.24E+05	2.88E+05	-3.03E+05	2.77E+05
NF	—	—	—	—
NS	-2.69E+05	2.68E+05	-2.44E+05	2.47E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-566. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s,  $F_n = 0.3$  in the case of prescribed roll motion of Model 5514 scaled to  $L = 142$  m.

TASK 1/ROLL MOTION/MODEL 5514

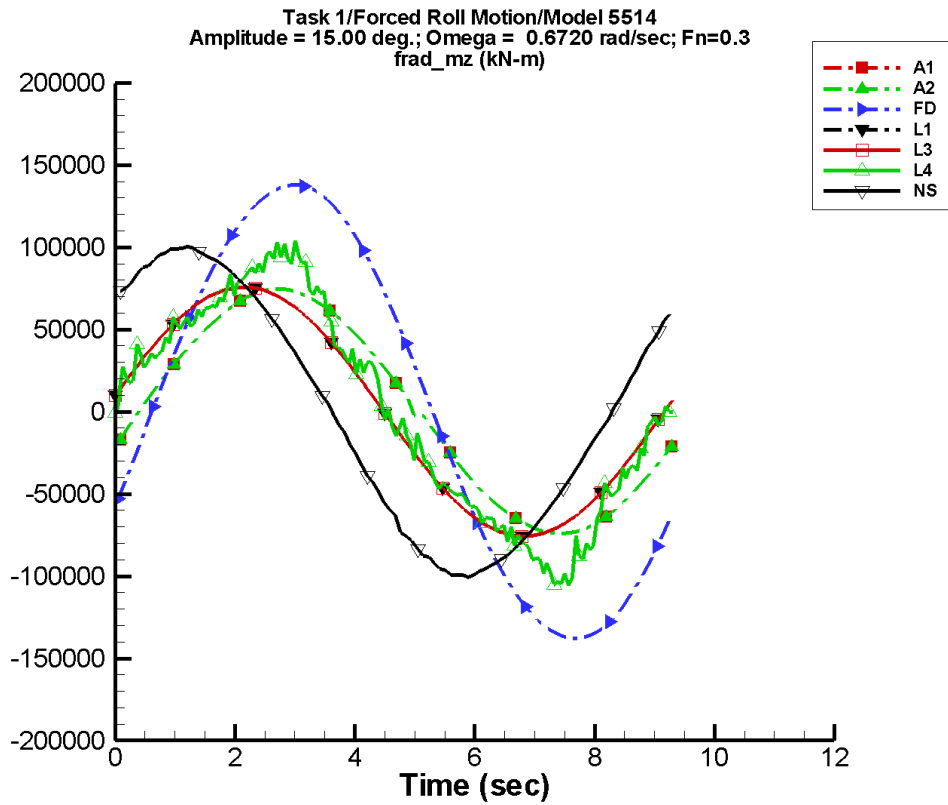
Table D–1131. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-20.3	2.46E+04	-15	67.5	-88
A2	-20.3	2.46E+04	-15	67.5	-88
FD	2.41	4.72E+04	-24	6.01	125
L1	-0.634	2.52E+04	7	0.251	-148
L3	-1.45	2.52E+04	7	6.81E-02	-33
L4	9.50	3.13E+04	-2	1.15E+03	161
NF	—	—	—	—	—
NS	-1.80	3.26E+04	42	5.07	-144

Table D–1132. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 5.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.47E+04	2.49E+04	-2.44E+04	2.45E+04
A2	-2.47E+04	2.49E+04	-2.44E+04	2.45E+04
FD	-4.71E+04	4.71E+04	-4.66E+04	4.66E+04
L1	-2.52E+04	2.52E+04	-2.51E+04	2.51E+04
L3	-2.52E+04	2.52E+04	-2.51E+04	2.51E+04
L4	-4.36E+04	4.13E+04	-4.04E+04	4.09E+04
NF	—	—	—	—
NS	-3.29E+04	3.28E+04	-3.24E+04	3.24E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-567. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

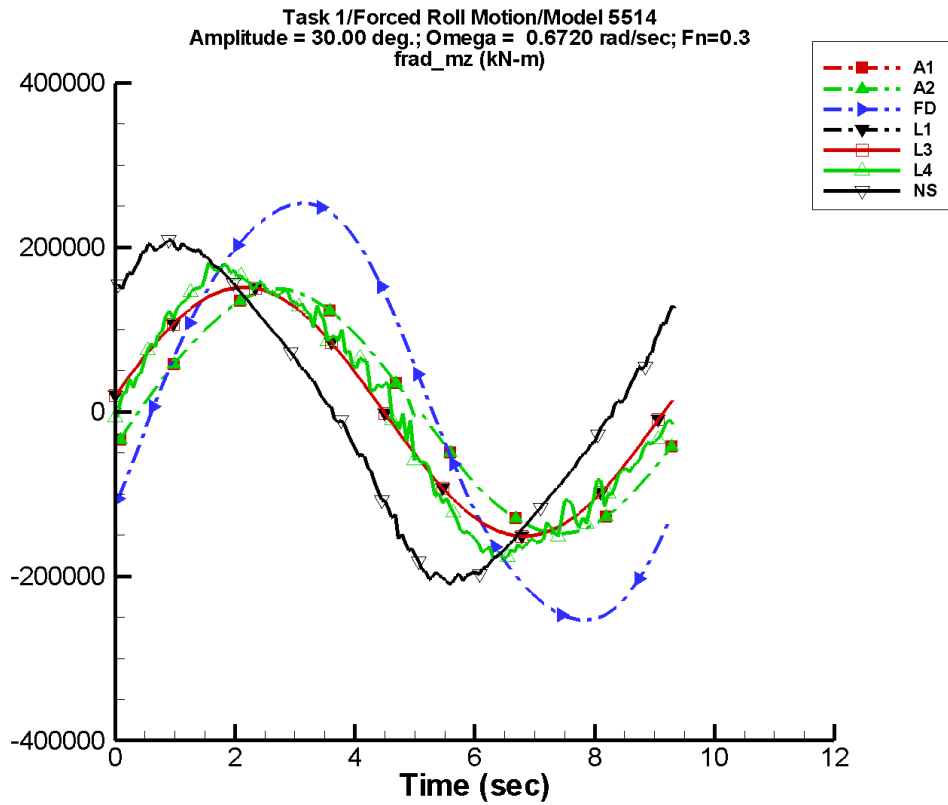
Table D–1133. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-60.9	7.36E+04	-15	202.	-88
A2	-60.9	7.36E+04	-15	202.	-88
FD	66.5	1.39E+05	-24	160.	124
L1	-0.643	7.57E+04	7	0.309	-167
L3	-1.45	7.57E+04	7	7.09E-02	92
L4	300.	8.57E+04	0	2.85E+03	129
NF	—	—	—	—	—
NS	-5.49	9.75E+04	42	9.14	-172

Table D–1134. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 15.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-7.42E+04	7.46E+04	-7.32E+04	7.36E+04
A2	-7.42E+04	7.46E+04	-7.32E+04	7.36E+04
FD	-1.38E+05	1.38E+05	-1.36E+05	1.36E+05
L1	-7.57E+04	7.57E+04	-7.54E+04	7.54E+04
L3	-7.57E+04	7.57E+04	-7.54E+04	7.54E+04
L4	-1.06E+05	1.04E+05	-1.00E+05	9.67E+04
NF	—	—	—	—
NS	-1.01E+05	1.01E+05	-9.84E+04	9.84E+04

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-568. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

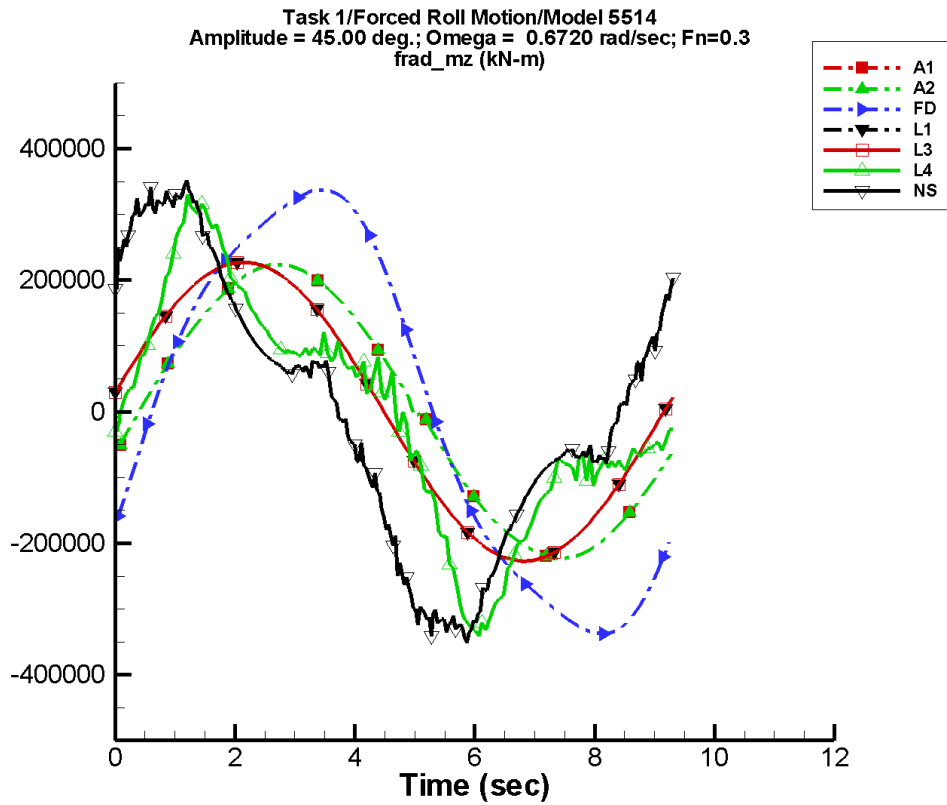
Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-122.	1.47E+05	-15	405.	-88
A2	-122.	1.47E+05	-15	405.	-88
FD	521.	2.58E+05	-25	1.26E+03	123
L1	-0.712	1.51E+05	7	0.715	-179
L3	-1.52	1.51E+05	7	0.271	151
L4	755.	1.67E+05	6	3.07E+03	-127
NF	—	—	—	—	—
NS	-10.8	1.94E+05	44	5.62	-163

Table D–1136. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 30.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-1.48E+05	1.49E+05	-1.46E+05	1.47E+05
A2	-1.48E+05	1.49E+05	-1.46E+05	1.47E+05
FD	-2.54E+05	2.54E+05	-2.51E+05	2.51E+05
L1	-1.51E+05	1.51E+05	-1.51E+05	1.51E+05
L3	-1.51E+05	1.51E+05	-1.51E+05	1.51E+05
L4	-1.79E+05	1.84E+05	-1.73E+05	1.75E+05
NF	—	—	—	—
NS	-2.09E+05	2.09E+05	-2.03E+05	2.03E+05



TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-569. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

TASK 1/ROLL MOTION/MODEL 5514

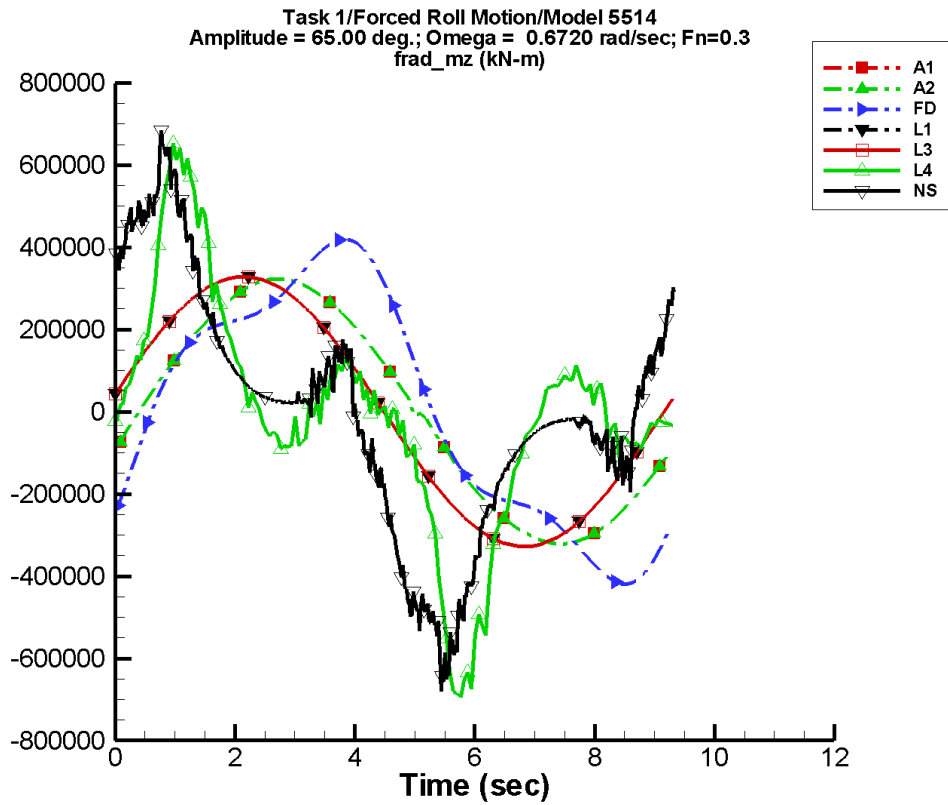
Table D–1137. Coefficients of the Fourier fit  $a_0 + a_1 \sin(\omega t + \Phi_1) + a_2 \sin(2\omega t + \Phi_2) + \dots$  of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-183.	2.21E+05	-15	607.	-88
A2	-183.	2.21E+05	-15	607.	-88
FD	1.69E+03	3.40E+05	-27	4.10E+03	123
L1	-0.797	2.27E+05	7	1.18	178
L3	-1.69	2.27E+05	7	0.705	161
L4	571.	2.25E+05	17	9.33E+03	-62
NF	—	—	—	—	—
NS	-2.37	2.74E+05	48	62.3	-31

Table D–1138. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 45.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-2.23E+05	2.24E+05	-2.20E+05	2.21E+05
A2	-2.23E+05	2.24E+05	-2.20E+05	2.21E+05
FD	-3.37E+05	3.37E+05	-3.33E+05	3.33E+05
L1	-2.27E+05	2.27E+05	-2.26E+05	2.26E+05
L3	-2.27E+05	2.27E+05	-2.26E+05	2.26E+05
L4	-3.41E+05	3.37E+05	-3.26E+05	3.09E+05
NF	—	—	—	—
NS	-3.52E+05	3.52E+05	-3.33E+05	3.33E+05

TASK 1/ROLL MOTION/MODEL 5514



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

Figure D-570. Time history of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

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Table D–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  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	$a_0$ (kN-m)	$a_1$ (kN-m)	$\Phi_1$ (deg)	$a_2$ (kN-m)	$\Phi_2$ (deg)
A1	-264.	3.19E+05	-15	877.	-88
A2	-264.	3.19E+05	-15	877.	-88
FD	4.71E+03	3.71E+05	-33	1.16E+04	122
L1	-1.03	3.28E+05	7	1.78	180
L3	-2.05	3.28E+05	7	0.918	165
L4	8.89E+03	3.04E+05	43	2.46E+04	-41
NF	—	—	—	—	—
NS	-194.	3.53E+05	54	153.	94

Table D–1140. Minimum and maximum of  $M_z^{\text{rad}}$  for one period at amplitude = 65.00 deg, frequency = 0.6720 rad/s, Fn = 0.3 in the case of prescribed roll motion of Model 5514 scaled to L = 142 m.

Code	Unfiltered		Filtered	
	Minimum (kN-m)	Maximum (kN-m)	Minimum (kN-m)	Maximum (kN-m)
A1	-3.21E+05	3.23E+05	-3.17E+05	3.19E+05
A2	-3.21E+05	3.23E+05	-3.17E+05	3.19E+05
FD	-4.19E+05	4.19E+05	-4.08E+05	4.08E+05
L1	-3.28E+05	3.28E+05	-3.27E+05	3.27E+05
L3	-3.28E+05	3.28E+05	-3.27E+05	3.27E+05
L4	-6.94E+05	6.53E+05	-6.46E+05	6.03E+05
NF	—	—	—	—
NS	-6.80E+05	6.83E+05	-6.23E+05	6.33E+05