AD-A167 273 COMMANDER FLEET ACTIVITIES SASEBO FLEET MOORINGS UNDERWATER INSPECTION REPORT(U) NAVAL FACILITIES ENGINEERING COMMAND WASHINGTON DC CHESAPEAKE DIV 1/2

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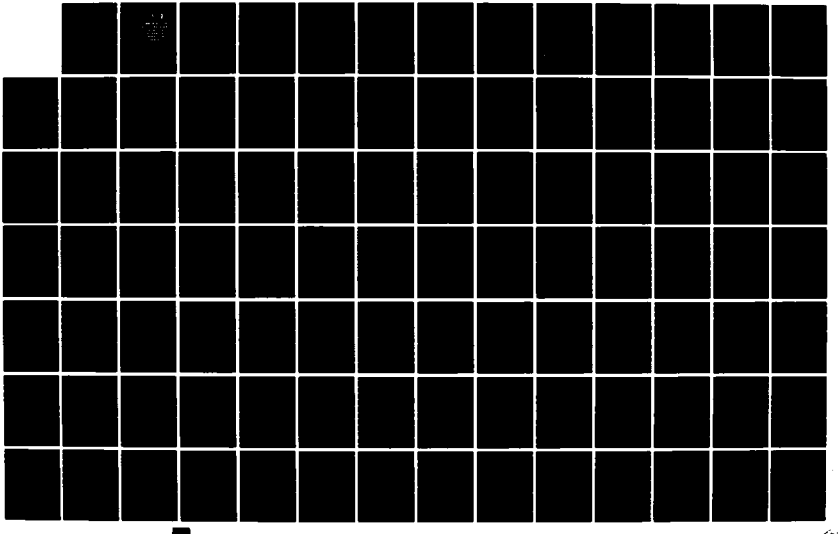

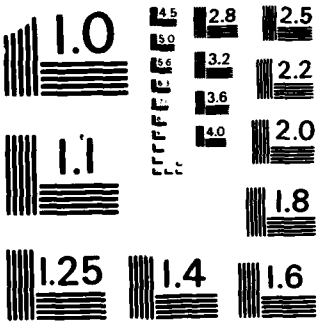

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COMMANDER FLEET ACTIVITIES SASEBO FLEET MOORINGS UNDERWATER INSPECTION REPORT

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SEPTEMBER 1983

OCEAN ENGINEERING
AND CONSTRUCTION PROJECT OFFICE
CHESAPEAKE DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
WASHINGTON, D.C. 20374

FPO-1-83(28)

Unclassified
SECURITY CLASSIFICATION OF THIS PAGE

REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified	1b. RESTRICTIVE MARKINGS
2a. SECURITY CLASSIFICATION AUTHORITY	3. DISTRIBUTION AVAILABILITY OF REP. Approved for public release; distribution is unlimited
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE	
4. PERFORMING ORGANIZATION REPORT NUMBER FPO-1-83(28)	5. MONITORING ORGANIZATION REPORT #
6a. NAME OF PERFORM. ORG. 6b. OFFICE SYM Ocean Engineering & Construction Project Office CHESNAVFACENGCOM	7a. NAME OF MONITORING ORGANIZATION
6c. ADDRESS (City, State, and Zip Code) BLDG. 212, Washington Navy Yard Washington, D.C. 20374-2121	7b. ADDRESS (City, State, and Zip)
8a. NAME OF FUNDING ORG. 8b. OFFICE SYM	9. PROCUREMENT INSTRUMENT INDENT #
8c. ADDRESS (City, State & Zip)	10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT # / PROJECT # / TASK # / WORK UNIT ACCESS #
11. TITLE (Including Security Classification) Commander Fleet Activities Sasebo Fleet Moorings Underwater Inspection Report	
12. PERSONAL AUTHOR(S)	
13a. TYPE OF REPORT 13b. TIME COVERED FROM TO	14. DATE OF REP. (YYMMDD) 83-09 / 15. PAGES 67
16. SUPPLEMENTARY NOTATION	
17. COSATI CODES FIELD GROUP SUB-GROUP	18. SUBJECT TERMS (Continue on reverse if nec.) Mooring inspection, Underwater inspection, Fleet moorings, Commander Fleet Activities Sasebo, Sasebo, Japan

19. ABSTRACT (Continue on reverse if necessary & identify by block number)
This report contains results of the inspection of 34 fleet moorings operated and maintained by the Commander Fleet Activities, Sasebo, Japan. A CHESNAV-ENGCOM-assigned Engineer-in-Charge and divers from Underwater Construction Team Two conducted the inspection from 10-20 May 1983. (Con't)

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT SAME AS RPT.	21. ABSTRACT SECURITY CLASSIFICATION
22a. NAME OF RESPONSIBLE INDIVIDUAL Jacqueline B. Riley	22b. TELEPHONE 202-433-3881 / 22c. OFFICE SYMBOL

DD FORM 1473, 84MAR SECURITY CLASSIFICATION OF THIS PAGE

BLOCK 19 (Con't)

Of the 34 moorings inspected, 31 were found to be satisfactory for continued use at their rated class. One required downgrading to a lower mooring classification, and two were found to be in poor condition and recommended for overhaul at the earliest practical time. Additionally, a thorough design review to determine the adequacy of these Japanese built moorings to withstand the forces associated with the mooring classes, as defined in NAVFACENGCOM's DM-26, is recommended. Specific comments concerning each of these moorings and recommendations for future actions are included in this report.

Abstract

This report contains results of the inspection of 34 fleet moorings operated and maintained by the Commander Fleet Activities, Sasebo, Japan. A CHESNAVFACENGCOM-assigned Engineer-in-Charge and divers from Underwater Construction Team Two conducted the inspection from 10-20 May 1983.

Of the 34 moorings inspected, 31 were found to be satisfactory for continued use at their rated class. One required downgrading to a lower mooring classification, and two were found to be in poor condition and recommended for overhaul at the earliest practical time. Additionally, a thorough design review to determine the adequacy of these Japanese built moorings to withstand the forces associated with the mooring classes, as defined in NAVFACENGCOM's DM-26, is recommended. Specific comments concerning each of these moorings and recommendations for future actions are included in this report.

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COMFLEACT SASEBO FLEET MOORING INSPECTION REPORT

1.0 INTRODUCTION

1.1 Background. Under the COMNAVFACENGCOM Fleet Mooring Maintenance (FMM) Program, CHESNAVFACENGCOM has been assigned the responsibility to plan and conduct periodic diver inspections of all fleet moorings worldwide. In carrying out this responsibility, CHESNAVFACENGCOM designated an Engineer-in-Charge (EIC) to provide inspection planning and onsite technical direction for the underwater inspection of fleet moorings located near Commander Fleet Activities, Sasebo, Japan. The actual underwater portion of the inspection was performed by divers of Underwater Construction Team Two (UCT TWO). The inspection was conducted 10-20 May 1983.

1.2 General Mooring History. COMFLEACT Sasebo currently operates and maintains 34 fleet moorings; one A, seven B, and 26 E class moorings. The A class mooring is a telephone-type mooring while the remaining moorings are riser type. Figure 1 shows the geographic location of Sasebo, figure 2 shows the geographic positions of the moorings located in Sasebo Bay, while Figures 3 and 4 show the locations of those moorings installed in Juliet Basin (south of the Main Base Area) and those located in the NOF Maebata Area respectively.

COMFLEACT Sasebo's message 150602Z April 83 to CHESNAVFACENGCOM contained a summation of the Sasebo mooring numbers, class, locations and dates of last mooring overhaul. A copy of this summation is contained in Table 1.

2.0 INSPECTION PROCEDURES

2.1 Inspection Objectives. The purpose of the mooring inspections was to determine the general physical condition of the buoys and chain assemblies and, when possible, to verify or update existing as-built and maintenance records. Divers inspected only a portion of the submerged buoy hull and chain assemblies in order to compile a general description of the mooring's condition. The existence of fairly consistent measurements during this inspection provides a good indication of the mooring's overall condition. It should be kept in mind that periodic underwater inspections are intended as

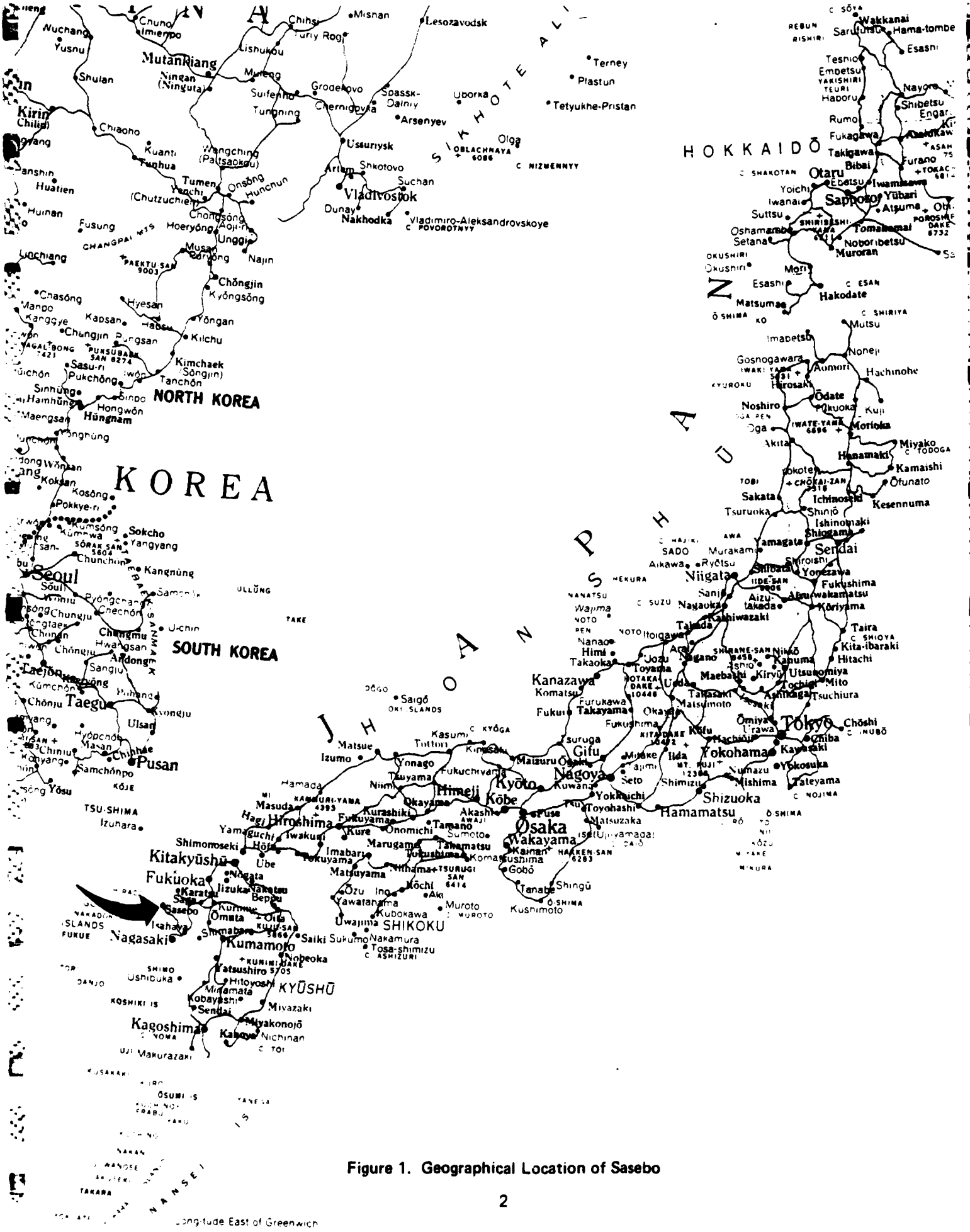
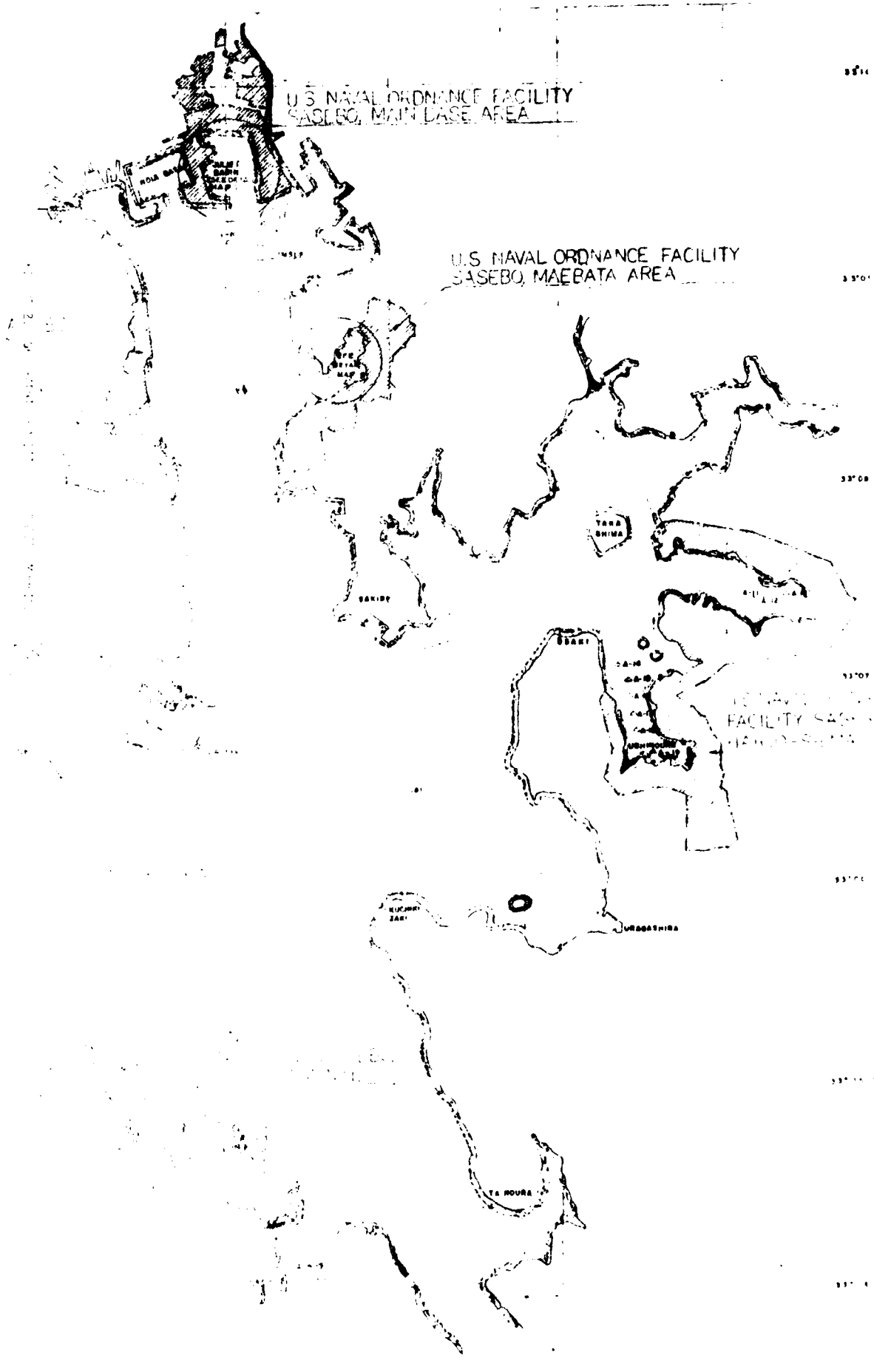


Figure 1. Geographical Location of Sasebo


U.S. NAVAL ORDNANCE FACILITY
SASEBO, MAIN BASE AREA
U.S. NAVAL ORDNANCE FACILITY
SASEBO, MAEBATA AREA

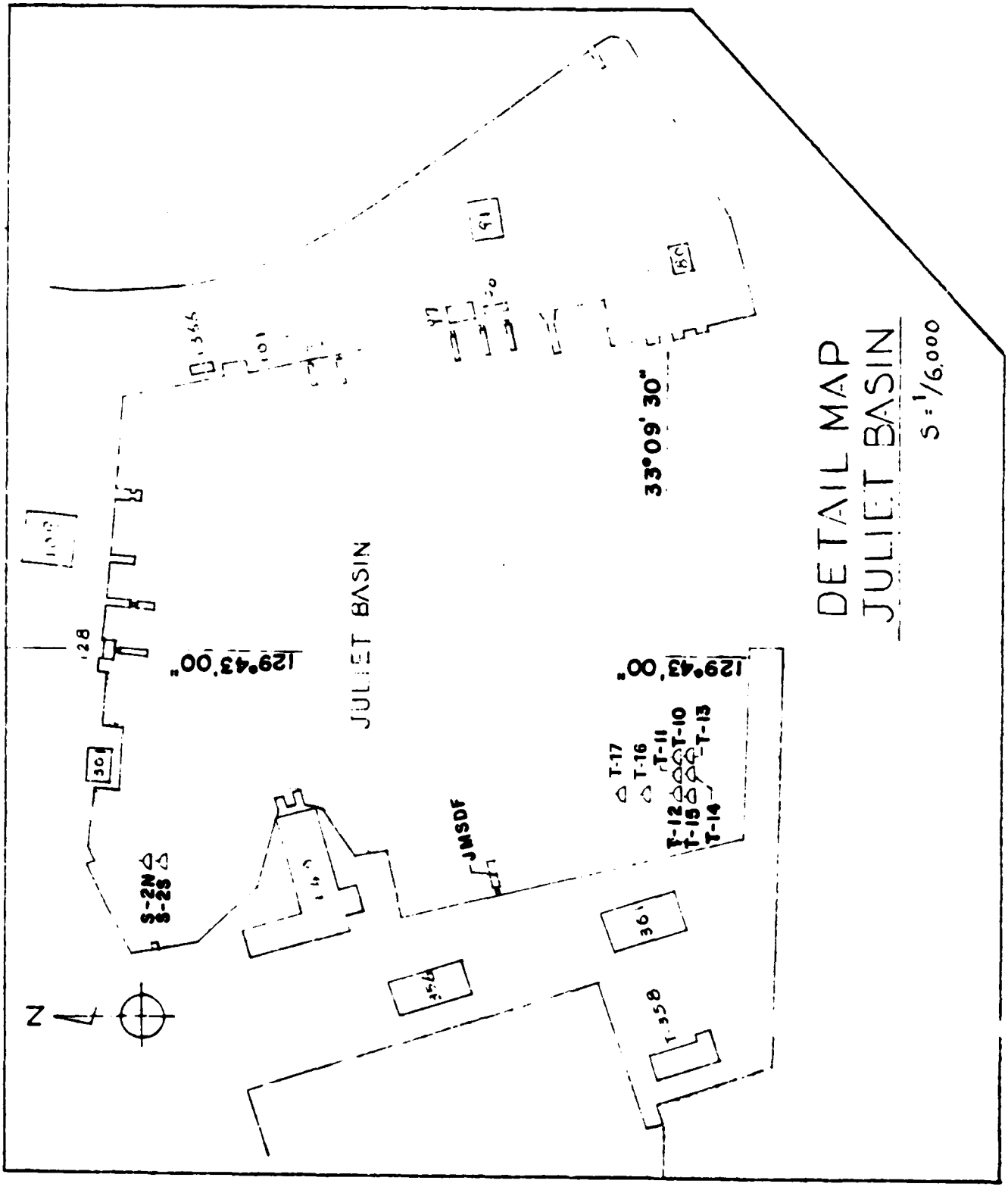


FIGURE 3. POSITIONS OF MOORINGS IN JULIET BASIN

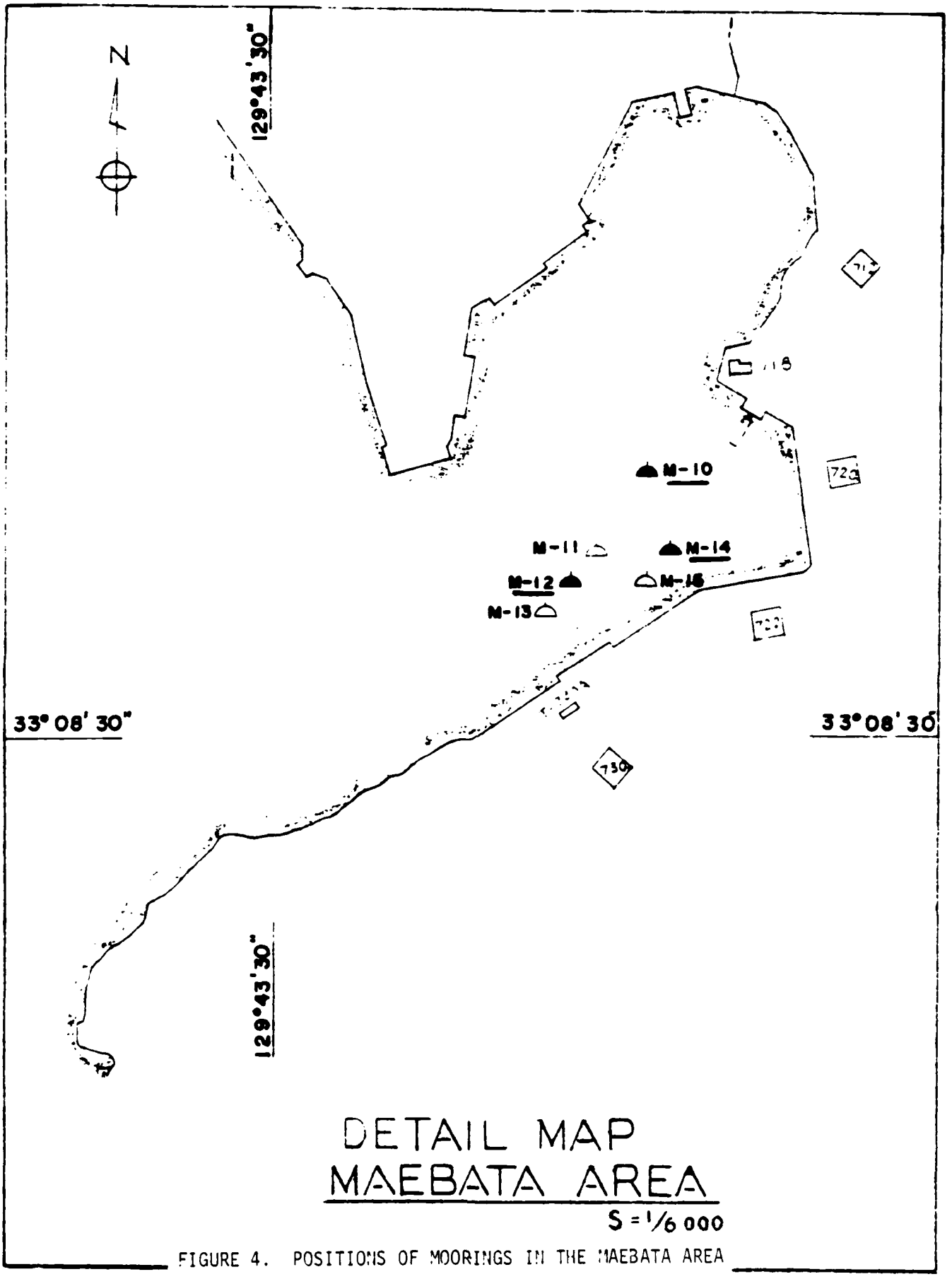


FIGURE 4. POSITIONS OF MOORINGS IN THE MAEBATA AREA

TABLE 1. COMFLEACT SASEBO FLEET MOORINGS

Mooring Number	Mooring Class	Location[1]	Water Depth (Ft)	Last Overhaul	Last Reported Condition
1N	AT	Sasebo Bay	40	5/79	Poor
1S	BR	Sasebo Bay	43	/82	Poor
61	BR	Sasebo Bay	58	3/82	Poor
A-11	ER	Hario Shima Area	30	/82	Good
A-12	ER	Hario Shima Area	26	/82	Good
A-13	ER	Hario Shima Area	25	/82	Good
A-14	ER	Hario Shima Area	40	9/77	Poor
A-15	ER	Hario Shima Area	41	9/78	Fair
A-16	ER	Hario Shima Area	41	9/78	Fair
A-17	ER	Hario Shima Area	40	11/80	Fair
A-18	ER	Hario Shima Area	37	/82	Good
A-19	ER	Hario Shima Area	30	11/79	Poor
I-1	BR	Orizaki Area	40	12/79	Fair
I-2	BR	Orizaki Area	60	12/79	Fair
M-10	ER	Maebata Area	40	11/79	Poor
M-11	ER	Maebata Area	40	12/77	Fair
M-12	ER	Maebata Area	40	11/79	Fair
M-13	ER	Maebata Area	42	12/77	Poor
M-14	ER	Maebata Area	33	11/79	Poor
M-15	ER	Maebata Area	30	12/77	Poor
M-20	ER	Yokose Terminal	52	11/79	Fair
S-2N	ER	Juliet Basin	14	2/81	Good
S-2S	ER	Juliet Basin	15	2/81	Good
T-10	ER	Juliet Basin	35	2/81	Fair
T-11	ER	Juliet Basin	32	12/77	Poor
T-12	ER	Juliet Basin	32	12/77	Poor
T-13	ER	Juliet Basin	29	/82	Good
T-14	ER	Juliet Basin	33	/82	Fair
T-15	ER	Juliet Basin	20	NR	Good
T-16	ER	Juliet Basin	30	NR	Fair
T-17	ER	Juliet Basin	30	NR	Fair
Y-1	BR	Yokose Terminal	112	1/81	Fair
Y-2	BR	Yokose Terminal	112	1/81	Fair
Y-3	BR	Yokose Terminal	74	1/81	Fair

NOTE. (1) See Figures 1 through 4

an expedient and relatively inexpensive supplement to accurate maintenance records. As such, they cannot fully substitute for a complete inspection involving recovery of the mooring and the measurement and evaluation of each component.

Chain wire diameter measurements are used to evaluate the condition of a mooring. After the chain was cleaned to bare metal, a selective sampling of the wire diameter of chain links and connecting hardware was taken in order to determine the amount of deterioration due to corrosion and wear. "Single link" measurements were taken where the chain was slack to detect corrosion loss. "Double link" measurements were taken where two links connected under tension to detect the combined effects of corrosion and wear. Chain links and other components which measured 90 percent or greater of original wire diameter are considered to be in "good" condition; measurement between 80 percent and 90 percent of original diameter is considered "fair" condition and is cause for the mooring to be downgraded in classification; any measurement less than 80 percent is considered "poor" and is cause for the mooring to be declared unsatisfactory for fleet use. When a mooring is constructed from oversized chain, a measurement between 80 and 90 percent of the original wire size results in a mooring being considered in "fair condition," but no downgrading is required if the worn chain is still larger than required in the original design.

Standard underwater inspection procedures do not call for the inspection of any part of the mooring which has been buried. Ground legs and risers were observed only to the point at which they became buried; no attempt was made to locate and inspect anchors or other mooring materials which were not readily visible.

2.2 Buoy.

2.2.1 Buoy Topside. Each buoy was inspected to determine its general condition. The buoy markings were checked for conformance to those noted in applicable charts. Physical damage such as holes, dents, or listing were noted. The fiberglass coatings were inspected for cracks, wear, peeling, or rust-bleeding.

The buoy fenders and chafing rails were checked for integrity and secure connection to the buoy. Buoy top jewelry was measured with calipers to find the overall outside dimensions and areas of most severe reduction in wire size.

2.2.2 **Buoy Lower Portion.** Divers inspected each buoy below the waterline. The thickness of marine growth was recorded, two 1-foot-square areas were selected and cleared of growth without damaging the fiberglass, and the condition of the fiberglass was noted.

2.3 **Riser.** To determine chain wear, each riser chain was inspected by taking three consecutive double link measurements, using precut gauges and/or calipers, at both ends and at the center of the riser. To determine original chain size, divers took single link caliper measurements of the wire diameter. When visible, divers also documented the type of hardware connecting the riser chain to the sinker. In many cases Japanese chain sizes between standard American sizes were used. When this occured, the next larger precut gauge was used, and all measurements below 80 percent were verified with calipers.

2.4 **Ground Legs.** Except for the telephone type mooring (1N) and Mooring T-15, where its single ground leg was exposed, all ground legs were buried in the bottom. The legs that were exposed were visually inspected and single link caliper measurements of their wire diameters taken.

2.5 **Sinker.** When visible the hairpin of each sinker was inspected for wear and the concrete around it checked for spalling. Caliper measurements were made of the hairpin.

2.6 **Anchors.** No anchors were sighted during the course of the inspection.

2.7 **Buoy Survey.** With the assistance of the Public Works Office, a rough geographic survey was conducted. Preliminary survey markers were created and marked with paint until more permanent concrete monuments can be installed. The data contained in Annex B gives the locations of these benchmarks and the transit angles to the buoys obtained by backsighting from points ashore. Until these new benchmarks are accurately surveyed and tied into the local gird, no precise determination of the buoy locations can be made from this data.

3.0 INSPECTION SUMMARY

An in-depth discussion of the inspection results is contained in Annex A. Annex B contains buoy location survey data, Annex C contains photographs, and Annex D contains a copy of the preliminary report of the results of the inspection. A detailed evaluation of the information gathered during the inspection indicates the following:

- Of the 34 moorings, 10 were in good condition and satisfactory for continued use at their rated class; 1 was in good condition but should be downgraded due to undersized chain; 21 were in fair condition and satisfactory for continued use at their rated class due to oversized chain; and 2 are in poor condition and recommended for overhaul. Table 2 presents a summary of the current status of the Sasebo fleet moorings.

- None of the COMFLEACT Sasebo fleet moorings have cathodic protection systems.

- No anchors were observed during the inspection.

- The construction of Mooring 1N is unique and does not comply with any of the standard designs described in DM-26. It consists of oversized chain and more ground legs than required for a class A mooring.

- The riser chain of Mooring M-11 has been worn to less than 80 percent of its original wire diameter. This mooring is in poor condition and unsafe for operational use.

- The wire diameter of the single ground leg of Mooring T-15 was measured to be 1 1/2 inches. Per DM-26, the ground leg chain of a class E mooring is required to be 1 3/4 inches as a minimum.

- The riser chain of Mooring Y-1 has been worn to less than 80 percent of its original wire diameter. This mooring is in poor condition and unsafe for operational use.

- Based upon the as-built documentation; 7 of the moorings have 2 anchor legs; 11 have just one leg; and 10 have no legs at all, with the riser connected directly to a single anchor. All have sinkers at the base of the riser. If a mooring is used as a free-swinging mooring, 3 legs are necessary. If these are bow-stern moorings, at least 2 legs per buoy are needed. Sinkers should not be used as substitutes for anchors.

- The ground legs of all but 2 (1N & T-15) of the 34 moorings inspected were completely buried in the mud bottom and inaccessible for inspection.

TABLE 2

INSPECTION SUMMARY

MOORING NUMBER	REPORTED CLASS	CONDITION			REMARKS	CURRENT STATUS
		GOOD	FAIR	POOR		
IN	A		✓		Repair Buoy. Complete design review to determine requirement for seven legs.	SAT
IS	B	✓			Riser chain worn	SAT
61	B		✓		Riser chain worn	SAT
A-11	E		✓		Riser chain worn	SAT
A-12	E		✓		Riser chain worn	SAT
A-13	E		✓		Riser chain worn	SAT
A-14	E		✓		Riser chain worn	SAT
A-15	E	✓				SAT
A-16	E		✓		Riser chain worn	SAT
A-17	E	✓				SAT
A-18	E		✓		Riser chain worn	SAT
A-19	E	✓				SAT
I-1	B		✓		Riser chain worn	SAT
I-2	B		✓		Riser chain worn	SAT
M-10	E	✓				SAT
M-11	E			✓	Riser chain badly worn. Remove from service. Replace riser	UNSAT
M-12	E		✓		Riser chain worn	SAT
M-13	E		✓		Riser chain worn	SAT
M-14	E		✓		Riser chain worn	SAT
M-15	E		✓		Riser chain worn	SAT
M-20	E		✓		Riser chain worn	SAT
S-2N	E	✓				SAT
S-2S	E	✓				SAT

TABLE 2 (CONT'D)

INSPECTION SUMMARY

MOORING NUMBER	REPORTED CLASS	CONDITION			REMARKS	CURRENT STATUS
		GOOD	FAIR	POOR		
T-10	E	✓				SAT
T-11	E	✓				SAT
T-12	E	✓				SAT
T-13	E		✓		Riser chain worn	SAT
T-14	E		✓		Riser chain worn	SAT
T-15	E	✓			Ground Leg Undersized for Class E Downgrade to class F	SAT
T-16	E		✓		Riser chain worn	SAT
T-17	E		✓		Riser chain worn	SAT
Y-1	B			✓	Riser chain badly worn. Remove from service. Replace riser.	UNSAT
Y-2	B		✓		Riser chain worn	SAT
Y-3	B		✓		Riser chain worn	SAT
TOTALS		11	21	2		

- The riser chains of nine of the moorings inspected (1S, 61, A-18, A-19, I-1, I-2, M-10, Y1, and Y2) were measured by the divers to be of different sizes than shown in the schematic drawings provided to CHESDIV by COMFLEACT Sasebo personnel.

4.0 COMMENTS AND RECOMMENDATIONS

As a result of an analysis of the data collected during the inspection the following comments/recommendations are pertinent:

- Since the vast majority of these moorings were designed and built by the Japanese many years ago (probably prior to World War II), a review of the design of each of these moorings should be conducted in order to determine whether the current configurations of these moorings are adequate to meet expected load requirements.

- A review of the unique design of Mooring IN has been completed by CHESNAVFACENGCOM and the results of this review forwarded to COMFLEACT Sasebo.

- Moorings M-11 and Y-1 should be removed from service and scheduled for complete overhaul at the earliest practical time.

- Mooring T-15 should be downgraded from a class E to a class F mooring.

- Based on the information contained in the diver data reporting sheets, the schematic drawings of these moorings should be updated.

ANNEX A

MOORING INSPECTION RESULTS

This Annex contains, for each mooring,

- a summation of the inspection data obtained by the CHESNAVFACENGCOM, EIC, and UCT TWO divers,
- a diver data reporting form, and
- a schematic drawing of the mooring which includes the latest as-built information. These drawings were submitted to CHESNAVFACENGCOM by COMFLEACT Sasebo in April 1983.

INSPECTION RESULTS

MOORING 1-N

General

The construction of this mooring is unique and does not comply with any of the standard mooring designs outlined in DM-26. This mooring consists of a telephone-type buoy and a riser chain attached to four ground legs and anchors via a ground ring. Moreover, this mooring has three additional ground legs and anchors attached directly to padeyes on the bottom of the buoy. A schematic drawing of the design of this mooring is contained in Figure A-1.

Buoy

This is a 15-foot-diameter Japanese designed telephone-type buoy with a hawsepipe. The buoy has three legs attached to its padeyes and a riser chain. A 6-foot section of the fender has been sheared off, and the chafing rail is bent and broken. The 6-inch shackle atop the buoy was freshly painted.

Riser

The riser is oversized 4-inch chain. Double link measurements taken showed that the chain is worn to between 80 and 90 percent of its original wire diameter. The riser does not have a marine growth covering and enters the bottom at a water depth of 39 feet. The remainder of the riser, the 25-ton sinker, ground legs, and anchors were not visible for inspection.

Ground Legs

The three ground legs attached to the buoy padeyes were inspected. Each consisted originally of 3-inch chain. Although most double link measurements were greater than 80 percent, one measurement of leg B, the south-southwest leg, was only 79 percent of its original wire diameter. The legs are covered with a medium covering of marine growth, and each of the legs has scattered areas of extreme rust.

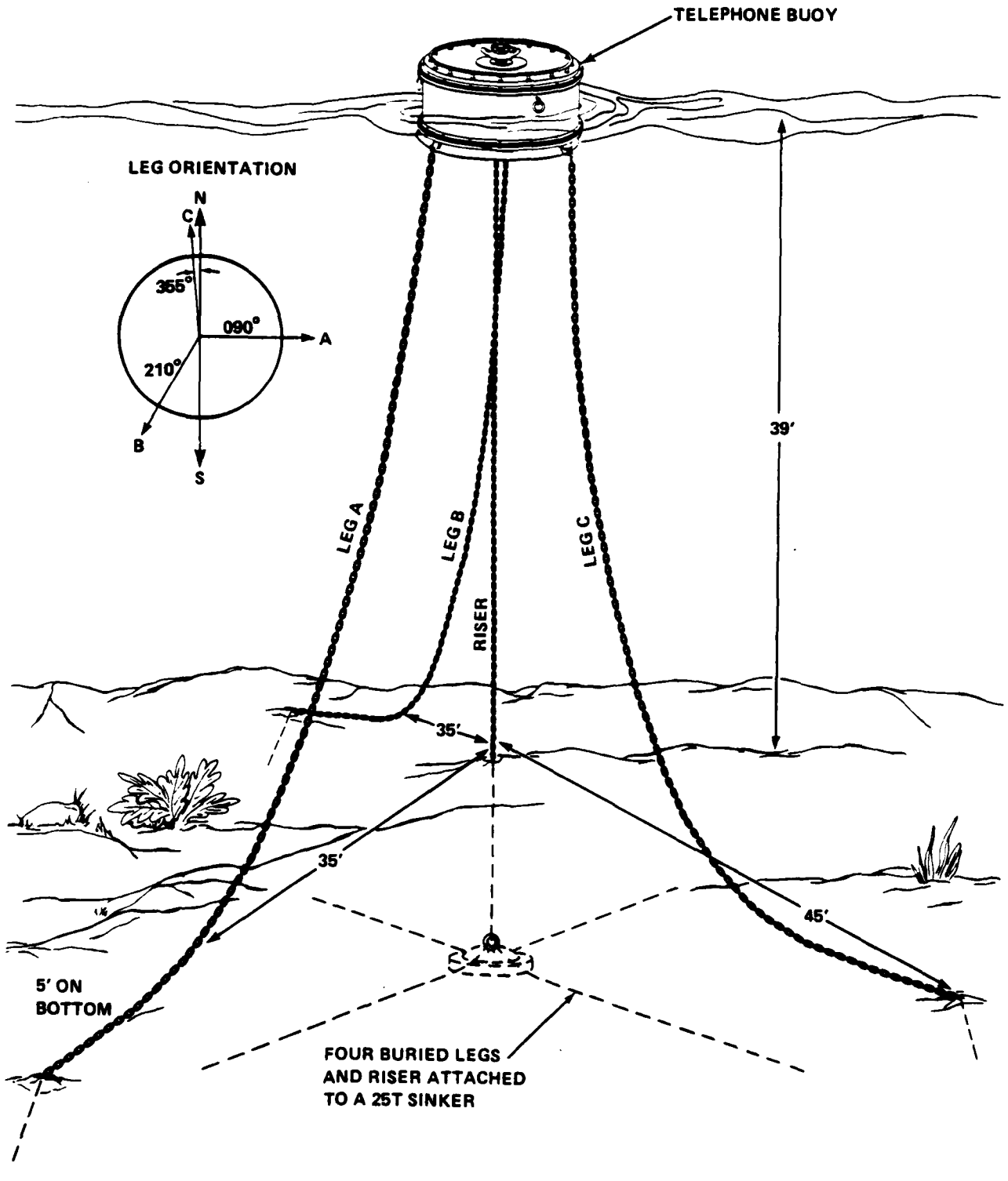


FIGURE A-1. SCHEMATIC DRAWING OF MOORING 1N

CIVILNAVFACENGCOM REPORT FPO-1-83(24), "COMPLEAT SASEBO FLEET MOORING [illegible]"

Sinkers/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

The design of this mooring is being reviewed to determine whether the mooring's current seven-leg configuration is required to meet the design loads anticipated. In addition, the buoy should be refurbished.

A measurement of less than 80 percent of any mooring component is normally cause for a mooring to be removed from service until an overhaul can be performed. However, in the case of this mooring, the oversized (4-inch) riser is more than capable of handling class A design loads. The worn section of the ground leg does not pose a threat to the safety of the mooring.

MOORING NO.: 1N CLASS: A LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 39' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5-10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											15' DIAMETER BUOY. 6' SECTION OF
3 3/4" END LINK											FENDER SHEARED OFF. CHAFING RAIL
6" SHACKLE											BENT - ONE POST BROKEN. TOPSIDE
											SHACKLE RECENTLY PAINTED. BUOY IN
											RELATIVELY POOR CONDITION.
RISER	NEAR BUOY		4"					√√√		<10'	NO GROWTH ON RISER CHAIN
	MIDDLE						√√√			20'	
	NEAR GRD RG							√√√		39'	ENTERS BOTTOM
GROUND RING		√									BURIED
GROUND LEG NO. A EAST	UPPER END		3"				√√√			<10'	6" / 5 3/4" / 5 7/8"
	MIDDLE		↓				√√√			20'	5 5/8" / 5 3/4" / 5 5/8"
	ENTERS BOTTOM		↓					√√√		39'	5 1/8" / 5 1/4" / 5 7/16"
GROUND LEG NO. B 55W	UPPER END		3"				√√√			<10'	5 3/4" / 5 5/8" / 5 9/16" DOUBLE LINK
	MIDDLE		↓				√√√			20'	5 5/8" / 5 5/8" / 5 3/4" CALIPER
	ENTERS BOTTOM		↓					√√	√	38'	4 3/4" / 4 7/8" / 5" MEASUREMENTS
GROUND LEG NO. C NNW	UPPER END		3"				√√√			<10'	6" / 5 7/8" / 5 1/2"
	MIDDLE		↓				√√	√		20'	5 5/8" / 5 1/2" / 5 3/8"
	ENTERS BOTTOM		↓				√√√			35'	5 9/16" / 5 1/2" / 5 1/2"
GROUND LEG NO. D	UPPER END										MEDIUM MARINE GROWTH ON LEGS.
	MIDDLE										HEAVY RUST SPOTS.
	ENTERS BOTTOM										

DATE: 16 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/DEMING/COTTELESSA

CHESNAVFACENGCOM REPORT FPO-1-83(29), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

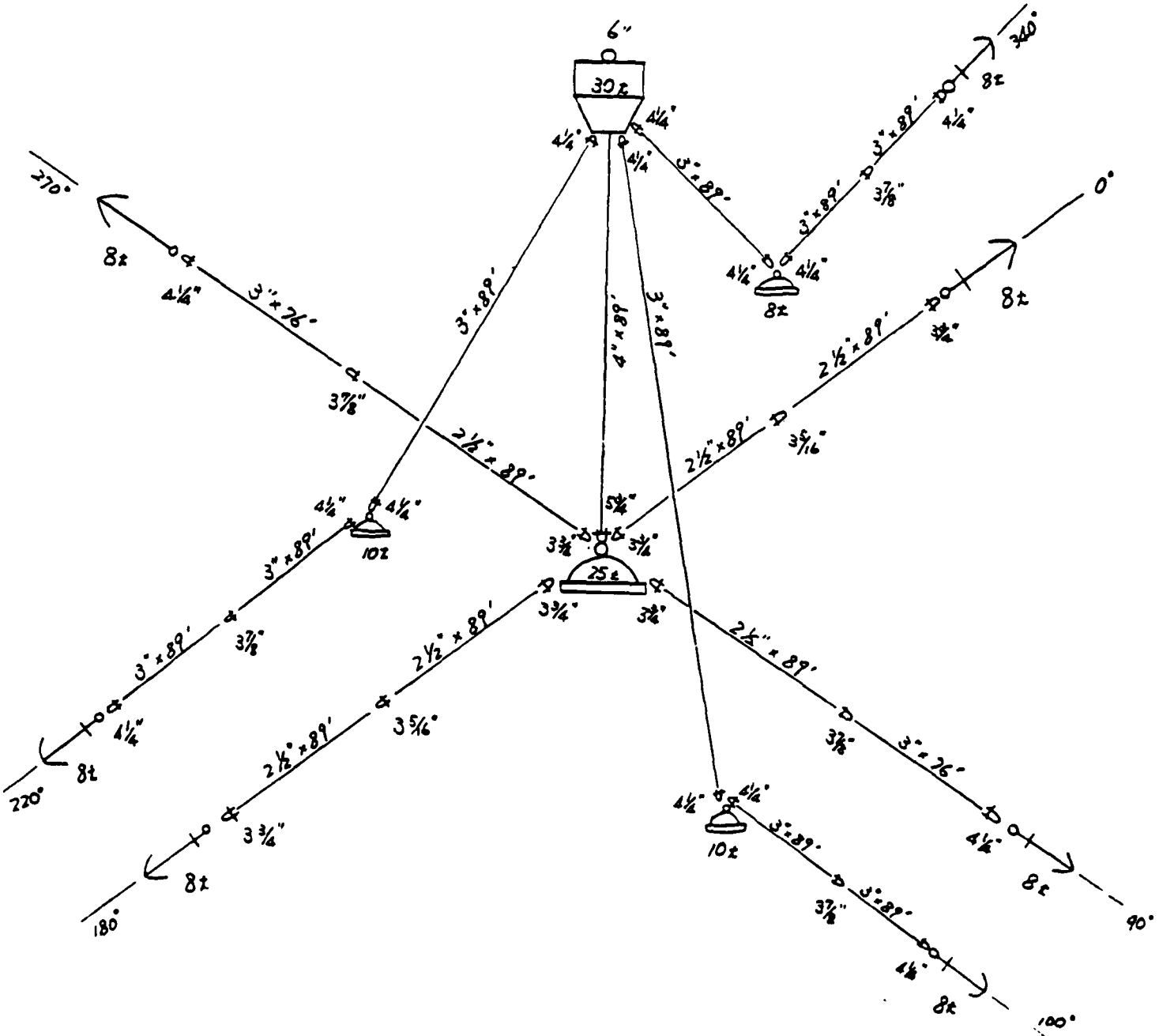
MOORING BUOY NO: 1-N BUOYANCY: 30 TONS TYPE: TELEPHONE

DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 5129 NEXT OVERHAUL: 5184

ANNUAL USAGE: 13 DAYS

ANTICIPATED USAGE/TYPE: UNKNOWN DATE: 4-1-83



INSPECTION RESULTS

MOORING I-S

Buoy

This is a Japanese-designed 11.5-foot-diameter drum-type buoy with a hawse-pipe. It has a freeboard of 38 inches, and its topside jewelry consists of 3 1/4-and 5 1/4-inch schackles. The buoy is in good condition.

Riser

The riser is 3 1/4- and 3 1/2-inch chain vice the 2 1/2-inch wire diameter required for a class B mooring. All double and single link measurements taken were larger than 80 percent of the riser's original wire diameter. The riser enters the bottom at a water depth of 40 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendations

This mooring is in good condition and satisfactory for continued use as a class B mooring. It is uncertain that the leg/sinker/anchor arrangement shown in the as-built drawing can adequately resist the 125,000 lb. design load of a class B mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. 15 CLASS: B LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 43' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5'-10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											11 1/2' DIAMETER. FREEBOARD
3 1/4" SHACKLE											38"
5 1/4" SHACKLE											
											CALIPER MEASUREMENTS
RISER	NEAR BUOY		3 1/2"				√√√			<10'	6 1/2" D.L (X3) 3 1/2" S.L. (X3)
	MIDDLE		↓				√√√			20'	6 1/2" D.L (X3) 3 1/2" S.L. (X3)
	NEAR GRD RG		3 1/4"	↰			√√√			40'	6 1/4" D.L (X2) 6 3/8" D.L 3 1/4" S.L (X3)
GROUND RING				3 1/2" GAUGE			USED				RISER ENTERS MUD AT 40'
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									
GROUND LEG NO. D	UPPER END	—									
	MIDDLE	—									
	ENTERS BOTTOM										

DATE: 16 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: SAKO/SCHEUREN/COTTELESSA

COMNAVFACENGCOM REPORT EPO-1-83(2R), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

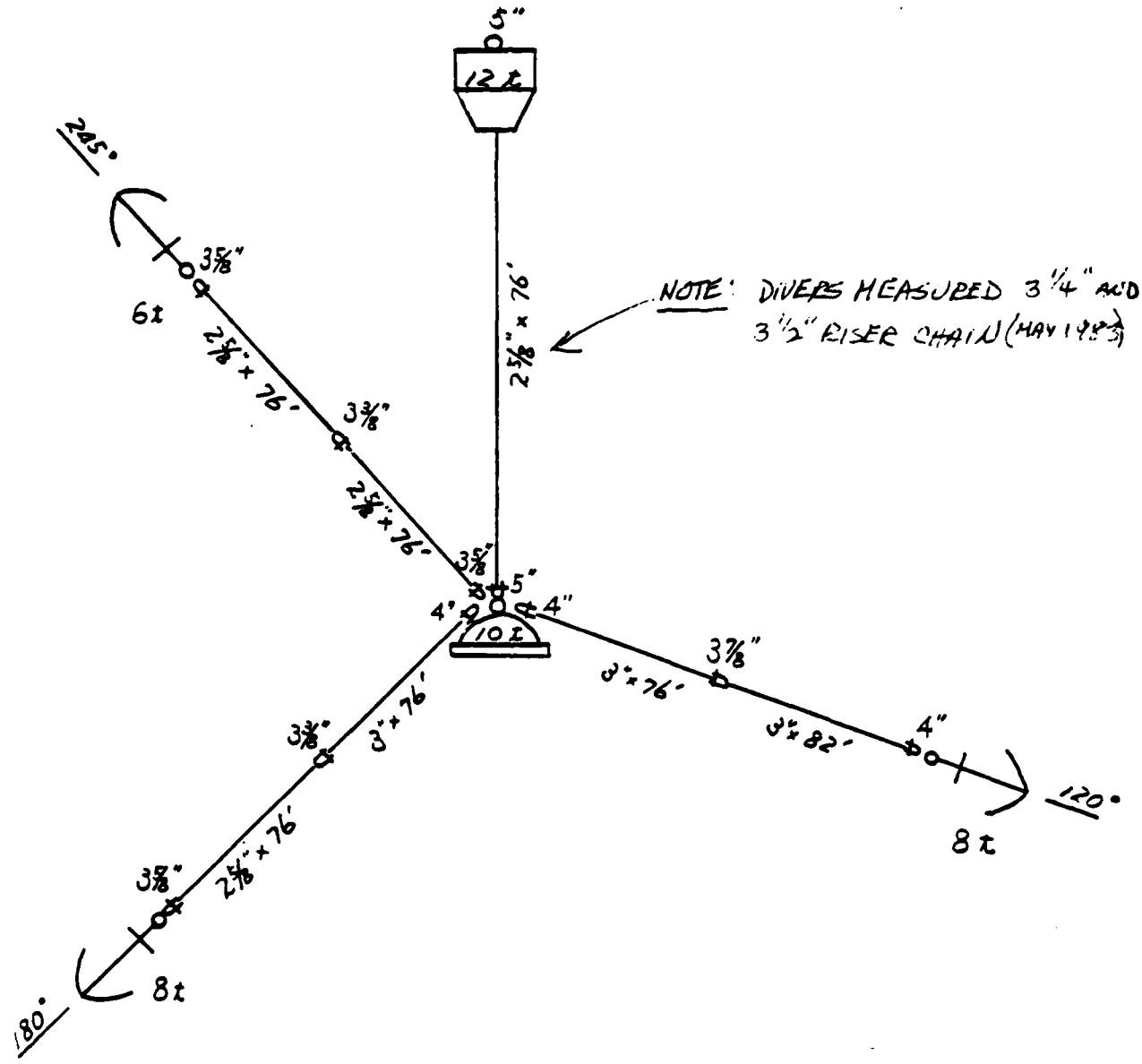
MOORING BUOY NO: 1-S **BUOYANCY:** 12 TONS **TYPE:** _____

DEPTH OF WATER: 43 FT **CONDITION OF BOTTOM:** MUD

LAST OVERHAULED: 3/75 **NEXT OVERHAUL:** 4/83 3/86

ANNUAL USAGE: 13 DAYS **DATE:** 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



INSPECTION RESULTS

MOORING 61

Buoy

This is a 12-foot-diameter Japanese designed drum-type buoy with a hawsepipe. The buoy has a 38-inch freeboard, and its chafing rail is badly dented. The top jewelry is heavily rusted, and the botttom of the buoy's hull is covered with about 2 inches of marine growth.

Riser

The riser is oversized 3 1/2-inch chain. All single and double link measurements were greater than 80 percent of the original wire diameter. Most of the riser chain is covered with about 2 inches of marine growth, but the lower 5 feet above the mudline are clean. The riser enters the bottom at a depth of 62 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendations

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class B mooring loads. It is uncertain that the leg/sinker/anchor arrangement shown in the as-built drawing can adequately resist the 125,000 lb. design load of a class B mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO.: 61 CLASS: B LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 62' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSE PIPE

BOTTOM TYPE: ☐ SAND ☒ ~~MUD~~ SILT ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							D	COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %				
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											12' DIAMETER. 38" FREEBOARD. CHAFING
5 1/4" SHACKLE											RAIL DENTED. HEAVY ROST AND FLAKING
											OF TOPSIDE SHACKLE. 2" GROWTH
											ON BOTTOM
											CALIPER MEASUREMENTS
RISER	NEAR BUOY		3 1/2"	√√√			√√√			<10'	6 1/2" D.L (X3) 3 1/2" S.L
	MIDDLE		↓	√√√			√√√			30'	6 1/2" D.L. (X2) 6 3/4" D.L 3 1/2" S.L.
	NEAR GRD RG		↓	√√	√		√√√			62'	6 1/2" D.L. (X3) 3" (S.L.)
GROUND RING		↓									2" MARINE GROWTH ON RISER EXCEPT
GROUND LEG NO. A	UPPER END	↓									FOR BOTTOM 3 FEET WHICH ARE
	MIDDLE	↓									CLEAN. RISER ENTERS BOTTOM AT
	ENTERS BOTTOM	↓									62 FEET.
GROUND LEG NO. B	UPPER END	↓									
	MIDDLE	↓									
	ENTERS BOTTOM	↓									
GROUND LEG NO. C	UPPER END	↓									
	MIDDLE	↓									
	ENTERS BOTTOM	↓									
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: SAKO / PATIERNE

CINCPACFLTENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

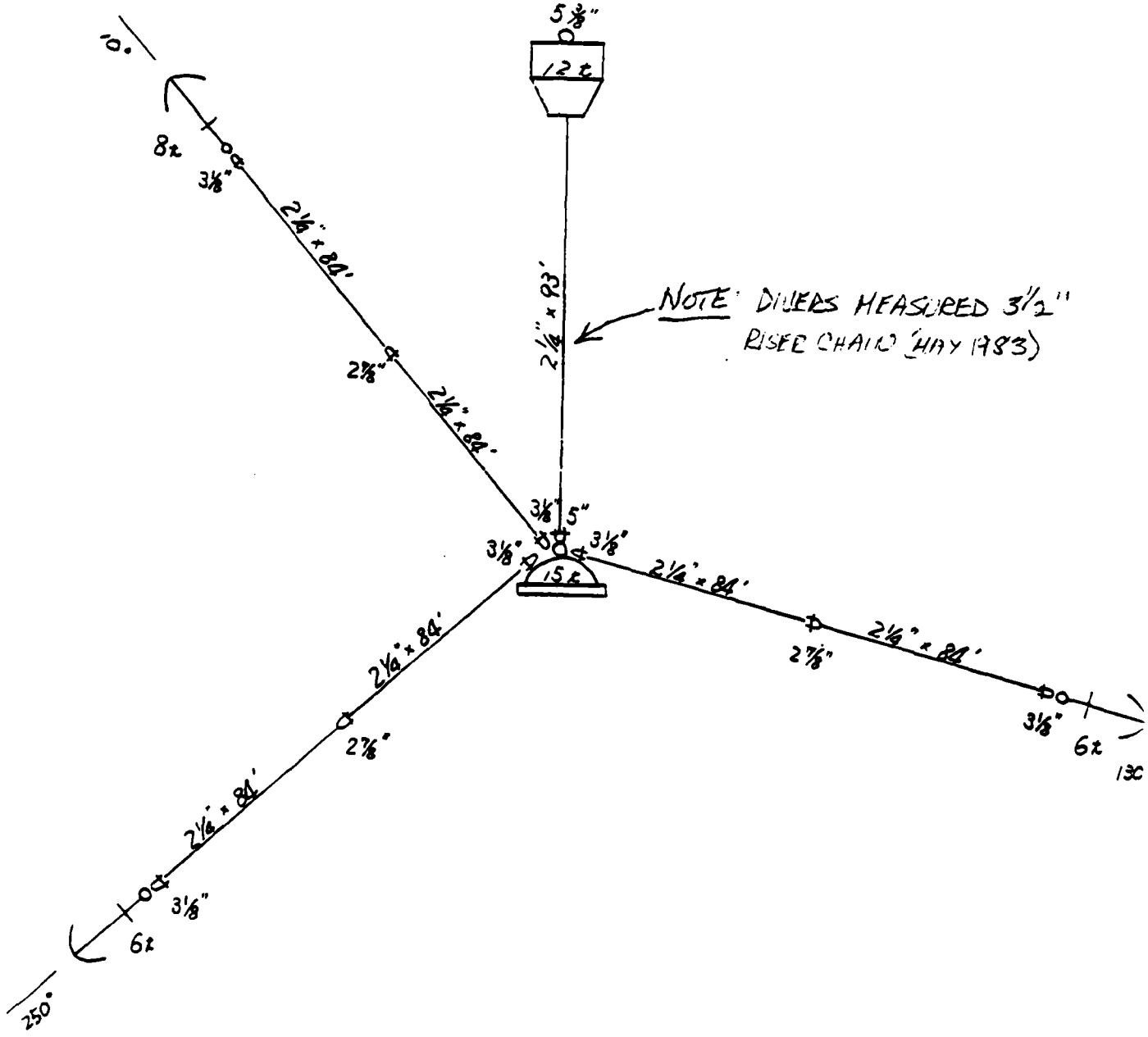
MOORING BUOY NO: 61 BUOYANCY: 12 TONS TYPE: _____

DEPTH OF WATER: 58 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 10/75 NEXT OVERHAUL: 4/83
3/86

ANNUAL USAGE: 26 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



INSPECTION RESULTS

MOORING A-II

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy has a 30-inch freeboard and is fiberglass coated. The fenders are in good condition but the underwater portion of the buoy's hull is covered with about 3 inches of marine growth.

Riser

The riser consists of 2-inch chain. Although double link measurements of the upper and center sections of the riser were all above 90 percent of its original wire diameter, the lower section measured between 80 and 90 percent. The lower end of the riser is attached to a 2 1/4-inch shackle which is attached to an end link partially buried in the bottom. The majority of the riser is covered with 2-to 3-inches of marine growth but the lower 5 feet are clean. The depth of the water is 39 feet.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO: A-11 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 40' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							D	COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %				
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER, 30" FREEBOARD.
3" SHACKLE											FIBERGLASS / FENDERS GOOD
											CONDITION. 3" MARINE GROWTH
											ON BUOY BOTTOM.
RISER	NEAR BUOY		2"	✓			√√√			6'	RISER TO 2¼" SHACKLE TO 2 1/16"
	MIDDLE		↓	✓			√√√			20'	END LINK IN THE MUD BOTTOM
	NEAR GRD RG		↓	✓				√√√		39'	LOWER FIVE FEET OF CHAIN CLEAN
GROUND RING											
GROUND LEG NO. A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER / SCHEUREN

NAVFACENGCOM REPORT FPO-1-81(29), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

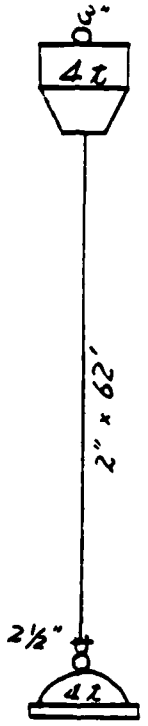
MOORING BUOY NO: A-11 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 30 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 7182 NEXT OVERHAUL: 4186

ANNUAL USAGE: 300 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING A-12

Buoy

This is a Japanese designed and built drum-type buoy with a hawsepipe. It has a 32-inch freeboard, and the chafing rail is covered with light rust. The buoy appears to be in good condition.

Riser

The riser consists of 2-inch chain as compared with the 1 3/4-inch size required for a class E mooring. Double link measurements near the lower end of the riser chain were between 80 and 90 percent of its original wire size. The riser is covered with marine growth from the surface to 26 feet. The 4 feet of chain between that point and the bottom has no marine growth but is rusty. The riser contains a shackle and an end link at 26 feet and a second shackle at the bottom.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO.: A-12 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 30' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											32" FREEBOARD. LIGHT RUST
3 1/16" SHACKLE											ON CHAFING RAIL
RISER	NEAR BUOY		2"	✓			VVV			<10'	2 1/8" SHACKLE & 2" END LINK OBSERVED
	MIDDLE		↓	✓			VV	✓		15'	IN RISER AT 24'. ANOTHER 2 1/8" SHACKLE AT
	NEAR GRD RG		↓	✓				VVV		30'	BOTTOM. MARINE GROWTH SURFACE TO 26'
GROUND RING											CHAIN RUSTY LAST 4 FEET
GROUND LEG NO. A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/SCHEUREN

COMFLEACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

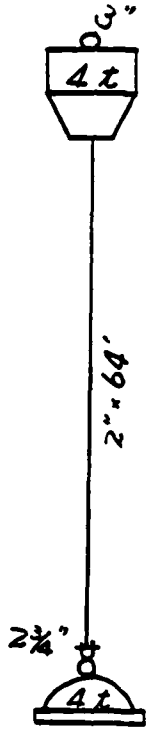
MOORING BUOY NO: A-12 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 26 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 8182 NEXT OVERHAUL: 5186

ANNUAL USAGE: 300 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING A-13

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy has a 30 to 35-inch freeboard and is fiberglass covered. The buoy appears to be in good condition.

Riser

The riser consists of 2-inch vice the 1 3/4-inch wire diameter required for a class E mooring. Double link measurements of the upper section of the riser proved that the chain in this area is between 80 and 90 percent of its original wire diameter. The riser contains a shackle and end link at the 22-foot level and vertically enters the bottom at a water depth of 25 feet.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO.: A-13 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 25' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER 30-35" FREEBOARD
3 1/16" SHACKLE											
RISER	NEAR BUOY		2"	√√√				√√√		<10'	
	MIDDLE			√√√			√√√			10'	2 1/2" SHACKLE AND 2" END LINK
	NEAR GRD RG			√√√			√√√			25'	AT 22' DEPTH. RISER ENTERS BOTTOM
GROUND RING											AT DEPTH OF 25'.
GROUND LEG NO. A	UPPER END		NO LEGS								
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

A-20

DATE: 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/SCHEUREN/CUTTELESSA

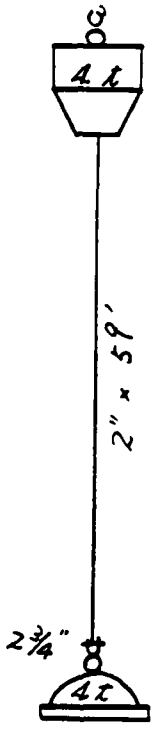
MOORING BUOY NO: A-13 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 25 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 9/82 NEXT OVERHAUL: 6186

ANNUAL USAGE: 300 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



[illegible]SURFACENGCOM REPORT FPO-1-83(28), "COMPLEACT SASEHO FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTIONS RESULTS

MOORING A-14

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a freeboard of about 35 inches. There is no rust on the top of the buoy, but the bottom is covered with 2-to 3-inches of marine growth. The buoy is in good condition.

Riser

The riser chain originally had a wire diameter of 2 1/4 inches, one-half-inch larger than required for a class E mooring. Double link measurements of the lower portion of the chain were between 80 and 90 percent of its initial wire size. The chain is covered with a moderately heavy marine growth and vertically enters the bottom at a water depth of 40 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO.: A-14 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 40' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER. 35" FREEBOARD. NO
3 3/8" SHACKLE											RUST TOPSIDE. FIBERGLASS OK.
											2"-3" GROWTH ON BOTTOM. GOOD
											CONDITION.
RISER	NEAR BUOY		2 1/4"	✓			✓✓✓			<10'	MODERATE GROWTH ON CHAIN
	MIDDLE			✓			✓✓✓			20'	
	NEAR GRD RG			✓				✓✓✓		40'	RISER ENTERS MUD
GROUND RING		TWO LEGS ↓									
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/SCHEUREN

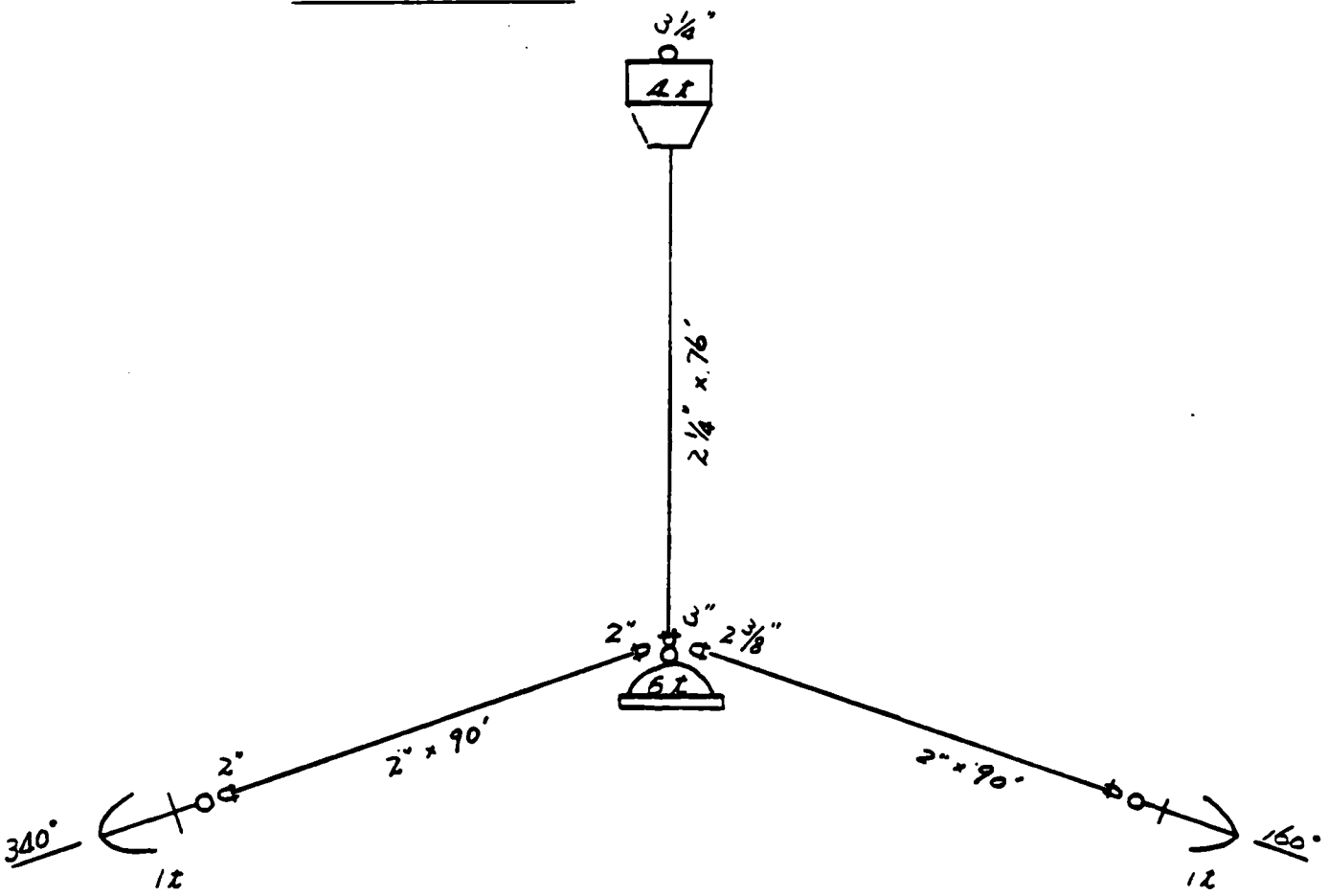
MOORING BUOY NO: A-14 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 7/77 NEXT OVERHAUL: 4/83 2/87

ANNUAL USAGE: 300 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING A-15

Buoy

This Japanese designed and built drum-type buoy has a diameter of 7 feet 10 inches. The buoy is fiberglass coated and has a 30-inch freeboard. The top of the buoy is slightly rusted at the base of the chafing rail. Overall, the buoy is in good condition.

Riser

The riser consists of 2 1/4-inch chain which is a one-half inch larger than required for a class E mooring. Double link measurements of the riser chain were all better than 90 percent of the chain's original wire size. About 4 feet of riser rests on the bottom before the chain enters the mud.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in good condition and satisfactory for continued use as a class E mooring.

It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. A-15 CLASS. E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 40' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											7'10" BUOY. 30" FREEBOARD.
3 1/2" SHACKLE											SLIGHT RUST AT BASE OF CHAFING
											RAIL. FIBERGLASS OK. GOOD
											CONDITION
RISER	NEAR BUOY		2 1/4"	✓			VVV			<10'	
	MIDDLE		↓	✓			VVV			20'	4' OF RISER ON BOTTOM BEFORE
	NEAR GRD RG		↓	✓			VV			40'	CHAIN ENTERS MUD
GROUND RING											
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

TWO LEGS

DATE 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/SCHEUREN

MOORING BUOY NO: A-15 **BUOYANCY:** 4 **TONS** **TYPE:** _____

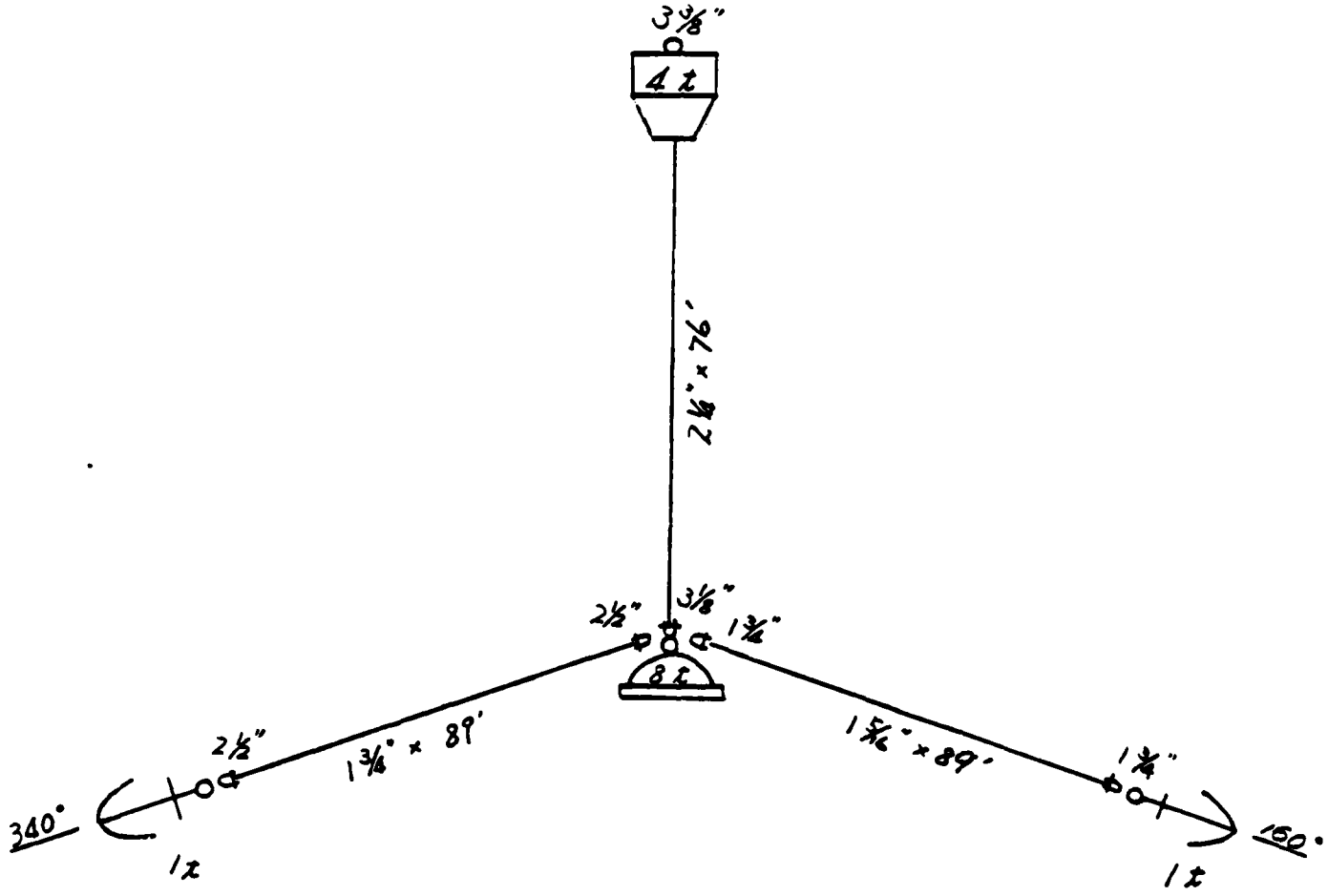
DEPTH OF WATER: 41 **FT** **CONDITION OF BOTTOM:** MUD

LAST OVERHAULED: 5178 **NEXT OVERHAUL:** 5183
3187

ANNUAL
USAGE: 300 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTIONS RESULTS

MOORING A-16

Buoy

This is an 8-foot-diameter Japanese-built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 31-inch freeboard. There is some rust on the top deck padeyes and in the hawsepipe. In addition there is some light rust on the top plate at the base of the chafing rail.

Riser

This is 2 1/4-inch riser chain, one-half-inch larger than required for a class E mooring. Double link measurements of the upper and center sections of the riser are between 80 and 90 percent of the chain's original wire diameter. About six chain links rest on the bottom before the riser enters the mud at a water depth of 35 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO: A-16 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 35' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											8' DIAMETER, 31" FREEBOARD MOD
3" SHACKLE											RUST ON DECK PADEYES AND
											HAWSEPIPE. LIGHT RUST BASE OF
											RUB RAIL
RISER	NEAR BUOY		2¼'		√√√			√√√		10'	
	MIDDLE				√√√			√√√		20'	
	NEAR GRD RG				√√√		√√√			35'	6 LINKS LIE ON BOTTOM BEFORE
GROUND RING											CHAIN ENTERS MUD
GROUND LEG NO. A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

TWO LEGS

DATE: 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING/LITTLE/CATTELLESSA

FOR COMFLEACT/COM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

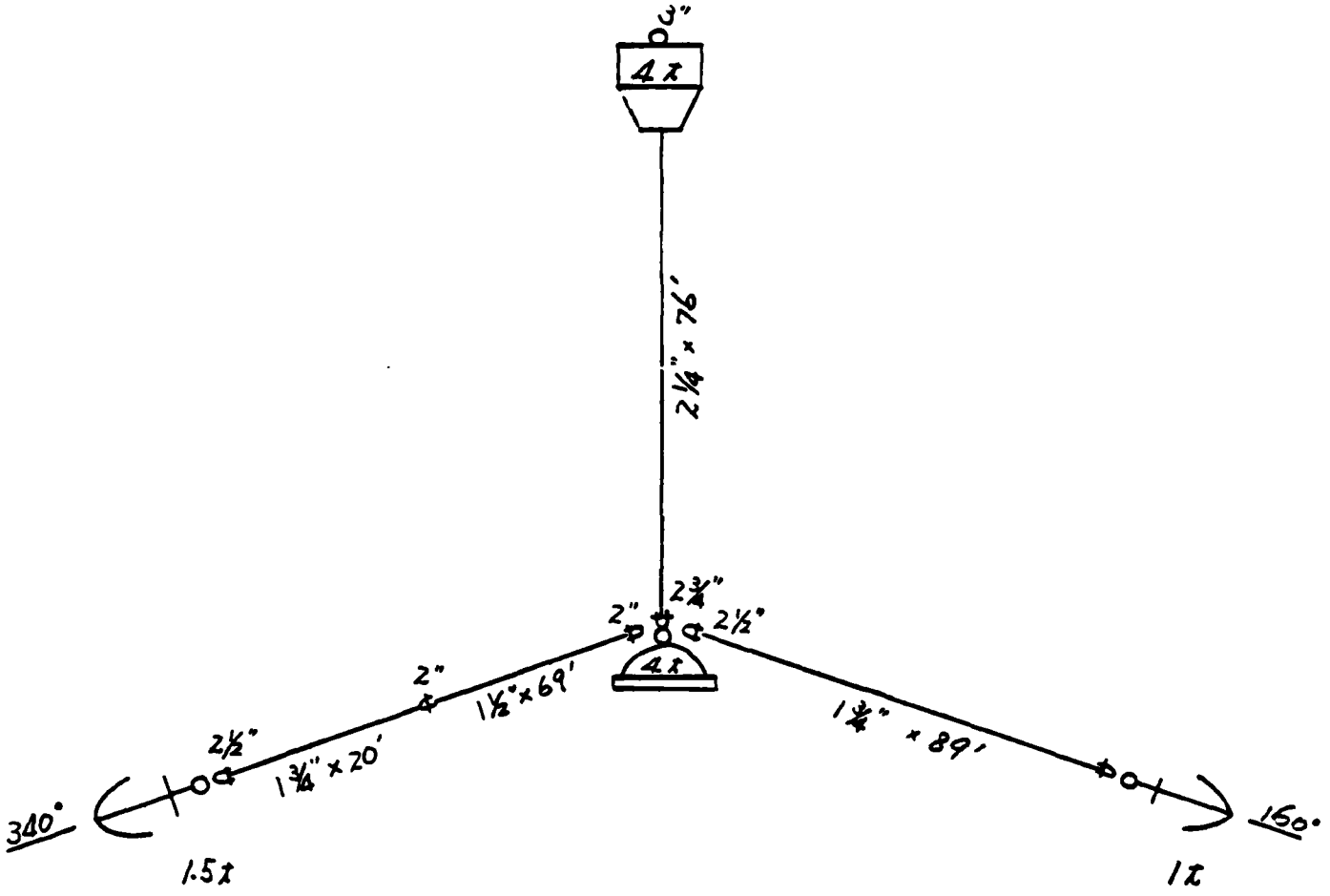
MOORING BUOY NO: A-16 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 41 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 5178 NEXT OVERHAUL: 6183 / 4187

ANNUAL USAGE: 300 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING A-17

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 33-inch freeboard. The hawsepipe, padeyes and base of the chafing rail are covered with light rust. The buoy is in good condition.

Riser

The riser chain consists of 2-inch chain vice the 1 3/4-inch chain required for a class E mooring. All double link measurements were greater than 90 percent of the chain's initial wire diameter. The riser is covered with moderate growth and vertically enters the bottom at a water depth of 32 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendations

This mooring is in good condition and satisfactory for continued use as a class E mooring.

It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO: A-17 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 32' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER. 33" FREEBOARD.
3 1/8" SHACKLE											LIGHT RUST IN HAWSEPIPE. MEDIUM
											RUST ON PADEYES AND BASE OF
											CHAFING RAIL. FIBERGLASS IN
											GOOD CONDITION.
RISER	NEAR BUOY		2"	V			VVV			10'	
	MIDDLE		↓	V			VVV			20'	1 7/8" S.L. CALIPER
	NEAR GRD RG		↓	V			VVV			32'	3 3/4" O.L. CALIPER
GROUND RING											MODERATE GROWTH ON CHAIN
GROUND LEG NO A	UPPER END	TWO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING/LITTLE/COTTELESSA

CNFESTGFACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT,"

MOORING BUOY NO: A-17 BUOYANCY: 4 TONS TYPE: _____

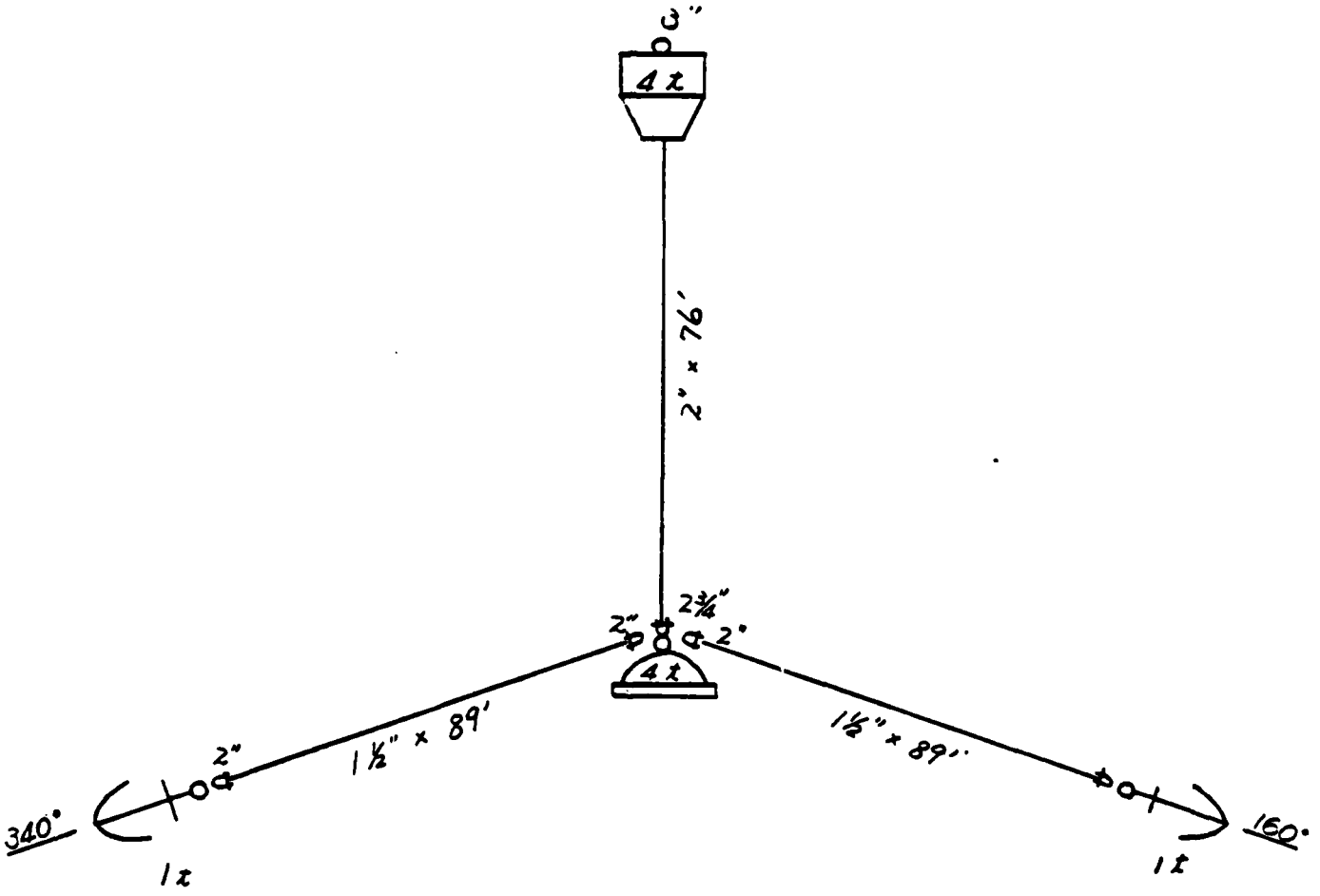
DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11180 NEXT OVERHAUL: 2185

ANNUAL USAGE: 300 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING A-18

Buoy

This Japanese designed and built drum-type buoy with a hawsepipe has a diameter of 7 feet 10 inches. The buoy is fiberglass coated and has a 33-inch freeboard. There is some light rust in the hawsepipe and on the top deck plate at the base of the chafing rail. The buoy is in good condition.

Riser

The riser consists of 2 1/4-inch chain which is one-half inch larger than required for a class E mooring. Double link and single link measurements were all between 80 and 90 percent of the chain's original wire size. At a depth of about 25 feet, the riser contained two end links connected by a shackle. The lower end link was attached to additional 2 1/4-inch chain. About 5 to 6 feet of this chain were visible on the bottom before the riser entered the mud. The lower section of the chain is rusty.

Sinker/Ground Leg/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. A-18 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 30' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											7'10" DIAMETER. 33" FREEBOARD.
3 3/8" SHACKLE											FIBERGLASS COATED. LIGHT
											RUST ON BASE OF CHAFING RAIL
											AND IN HAWSEPIPE
RISER	NEAR BUOY		2 1/4"		✓			√√√		< 10'	
	MIDDLE		↓		✓			√√√		20'	AT 25' RISER CHAIN ATTACHED TO AN
	NEAR GRD RG		↓		✓			√√√		30'	END LINK TO A 2 1/4" SHACKLE TO AN
GROUND RING											END LINK TO 2 1/4" CHAIN. ABOUT
GROUND LEG NO. A	UPPER END	ONE LEG									5'-6' OF CHAIN ON BOTTOM BEFORE
	MIDDLE										RISER ENTERS MUD. LOWER
	ENTERS BOTTOM										PORTION OF CHAIN RUSTY.
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 14 MAY 83 ENGINEER IN CHARGE T. JONES DIVERS: HARDING/LITTLE/COTTELESSA

CHESNAVFACENGCOM REPORT FPO-1-83(24), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

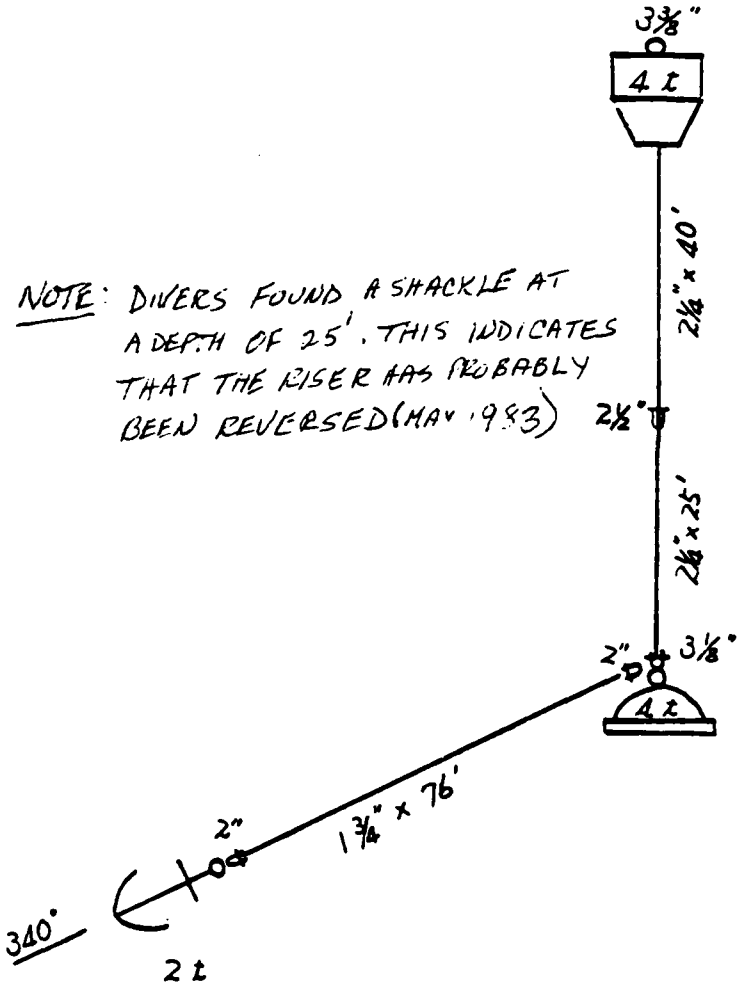
MOORING BUOY NO: A-18 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 37 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 1183 NEXT OVERHAUL: 7186

ANNUAL USAGE: 300 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING A-19

Buoy

This Japanese designed and built drum-type buoy with a hawsepipe has a diameter of 7 feet 10 inches. The buoy is fiberglass coated and has a 32-inch freeboard. The buoy is in good condition and looks recently overhauled.

Riser

The riser consists of 2 1/8-inch chain which is larger than required for a class E mooring. All double and single links measurements were greater than 90 percent of the original wire diameter. The riser enters the bottom vertically at 20 feet.

Sinkers/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in good condition and satisfactory for continued use as a class E mooring.

It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO: A-19 CLASS: E LOCATION: COMFLEACTS SASEBO LAT: — LONG: —

WATER DEPTH: 20' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 10'-15' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											7'.10" DIAMETER, 33" FREEBOARD.
3" SHACKLE											BUOY IN GOOD CONDITION — LOOKS NEW
											CALIPER MEASUREMENTS —
RISER	NEAR BUOY		2 1/8"	√√√			√√√			<10'	S.L 2 1/8" D.L 3 7/8" (x3)
	MIDDLE		↓	√√√			√√√			10'	S.L 2 1/8" D.L 4 1/8" (x3)
	NEAR GRD RG		↓	√√√			√√√			20'	S.L 2 1/8" D.L 4" (x3)
GROUND RING											RISER ENTERS BOTTOM AT 20' DEPTH
GROUND LEG NO A	UPPER END	ONE LEG									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 14 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING/LITTLE

MOORING BUOY NO: A-19 BUOYANCY: 4 TONS TYPE: _____

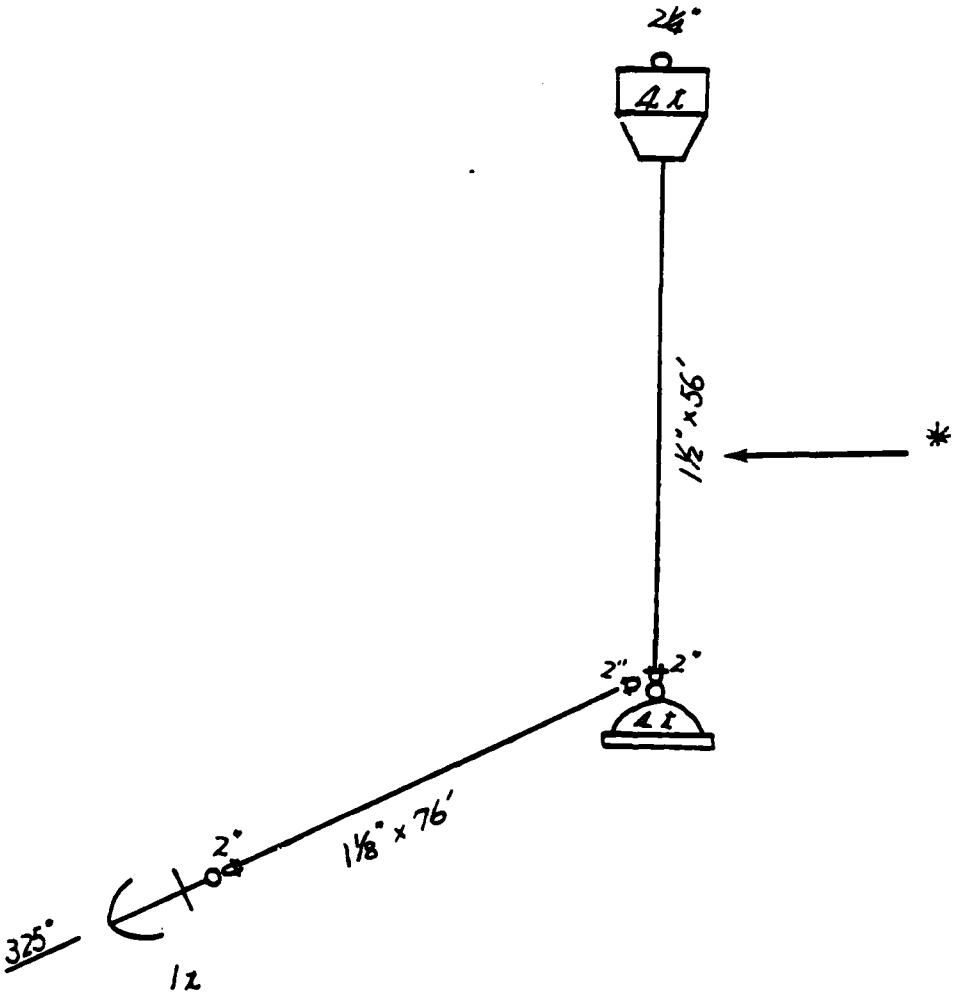
DEPTH OF WATER: 30 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/79 NEXT OVERHAUL: 2184

ANNUAL USAGE: 300 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



NOTE:
* DIVERS REPORTED 2⅛" CHAIN (MAY 83)

INSPECTION RESULTS

MOORING I-I

Buoy

This is an 11-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and a 49-inch freeboard. There is some light rust in the hawsepipe and 2 inches of marine growth on the bottom.

Riser

The riser consists of 3 1/2-inch chain which is about 1 inch larger than required for a class B mooring. The lower portion of the riser was measured to be between 80 and 90 percent of its original wire diameter. At a depth of 38 feet, the riser contains a shackle and an end link. About 10 feet of riser chain rests on the bottom before it enters the mud.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class B mooring loads. It is uncertain that the leg/sinker/anchor arrangement shown in the as-built drawing can adequately resist the 125,000 lb. design load of a class B mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. I-1 CLASS B LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 44' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											11' DIAMETER BUOY. 49" FREEBOARD
5 1/4" SHACKLE											SLIGHT RUST IN HAWSEPIPE. 2"
											GROWTH ON BOTTOM.
RISER	NEAR BUOY		3 1/2"	✓			√√√			<10'	AT 38', RISER HAS A 3 1/4" END LINK
	MIDDLE		↓	✓			√√√			20'	AND A 2 3/4" SHACKLE
	NEAR GRD RG		↓	✓				√√√		40'	≈ 10' RISER ON BOTTOM BEFORE ENTERING
GROUND RING											BOTTOM.
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

TWO LEGS

DATE 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: SAKO/PATIERNE

COMNAVFACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

A-41

MOORING BUOY NO: I - 1 BUOYANCY: 12 TONS TYPE: _____

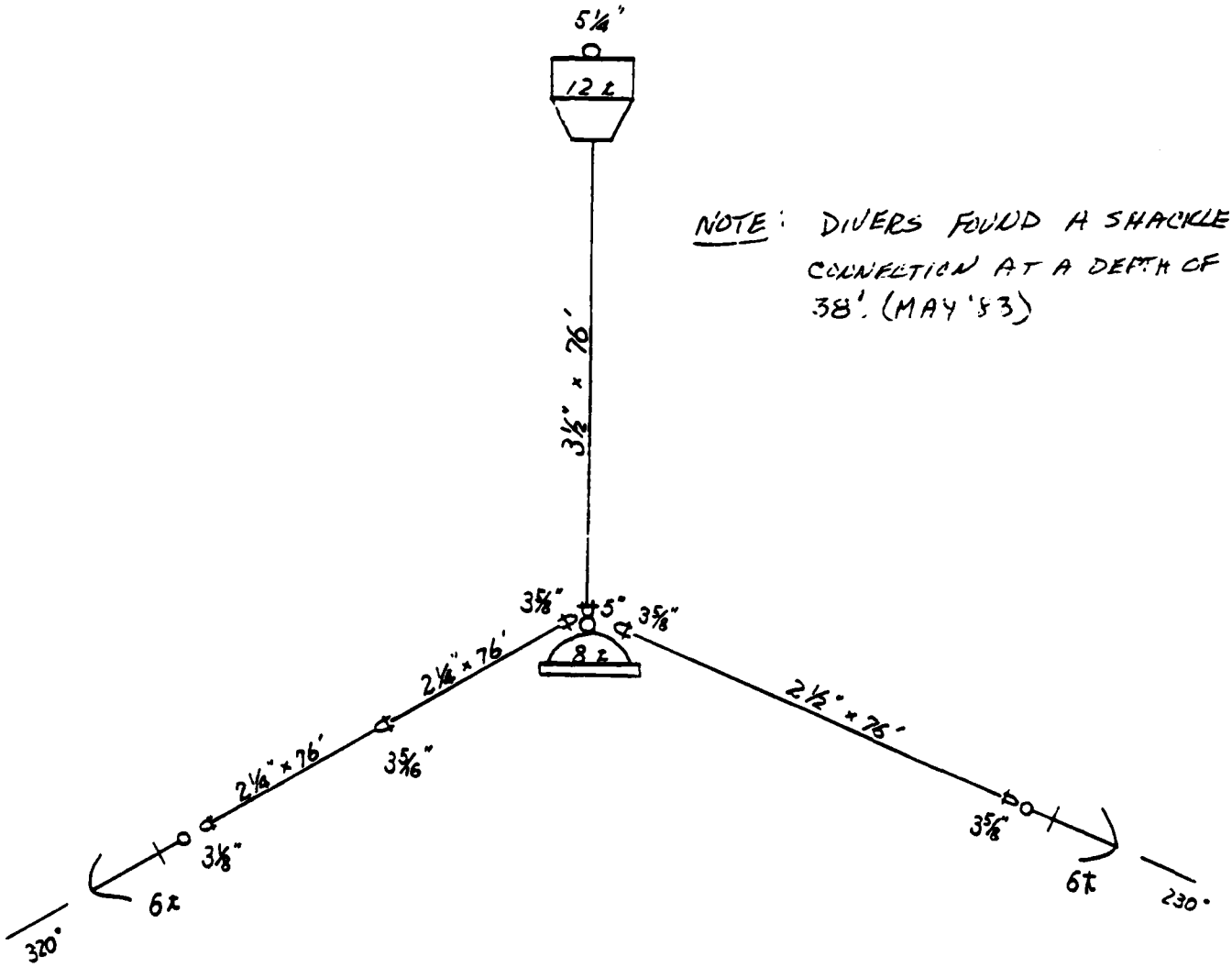
DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 12/79 NEXT OVERHAUL: 6/84

ANNUAL USAGE: 30 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



NOTE: DIVERS FOUND A SHACKLE CONNECTION AT A DEPTH OF 38'. (MAY '83)

INSPECTION RESULTS

MOORING I-2

Buoy

This is a 12-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 49-inch freeboard. Two attaching bolts have been pulled out of the fender.

Riser

The riser is 3 1/2-inch chain vice the 2 1/2-inch required for a class B mooring. Double link measurements taken near the middle and lower portion of the ground ring were between 80 and 90 percent of the chain's original wire diameter. The riser contains an end link and a shackle at the 30-foot depth and a second end link and shackle at the 60-foot depth. The riser enters the bottom at 63 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class B mooring loads. It is uncertain that the leg/sinker/anchor arrangement shown in the as-built drawing can adequately resist the 125,000 lb. design load of a class B mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO: I 2 CLASS: B LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 63' ANCHOR SIZE/TYPE: N.I BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											12' DIAMETER BUOY. 49" FREEBOARD
5¼" SHACKLE											TWO FENDER BOLTS PULLED OUT
RISER	NEAR BUOY		3⅛"	✓			√√√			<10'	6¾" D.L 6½" (x2) D.L } ABOVE SHACKLE
	MIDDLE			✓				√√√		30'	6" (x2) D.L. 6⅛" D.L }
	NEAR GRD RG			✓				√√√		63'	5¾" (x3) D.L } BELOW SHACKLE
GROUND RING											AT 30' RISER CONTAINS 3¼" END
GROUND LEG NO A	UPPER END										LINK AND 4¼" SHACKLE. AT 60'
	MIDDLE										4⅛" SHACKLE AND 3¼" END LINK.
	ENTERS BOTTOM										RISER ENTERS BOTTOM AT 63'
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

TWO LEGS

DATE: 19 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER / SCHEDREN / COTTELESSA

CHESAPEAKE COM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

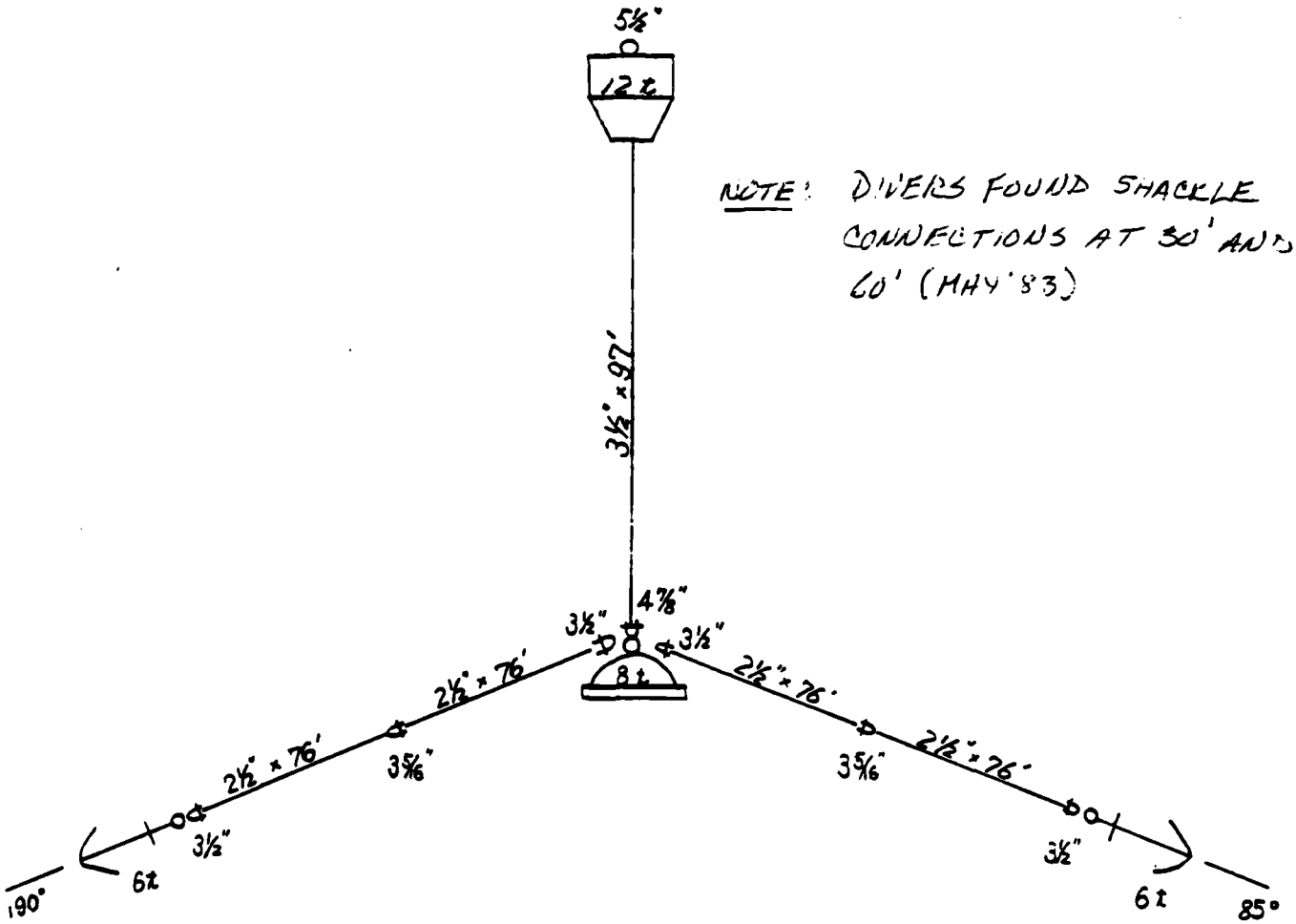
MOORING BUOY NO: I - 2 BUOYANCY: 12 TONS TYPE: _____

DEPTH OF WATER: 60 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 12 / 79 NEXT OVERHAUL: 7184

ANNUAL USAGE: 30 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



NOTE: DIVERS FOUND SHACKLE CONNECTIONS AT 30' AND 60' (MAY '83)

INSPECTIN RESULTS

MOORING M-10

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy has a fiberglass coating and a 24-inch freeboard. The sides of the buoy show evidence of rust bleeding. The 3 1/8-inch shackle atop the buoy has been recently painted.

Riser

The riser consists of 1 7/8-inch chain vice the required 1 3/4-inch. Double link measurements were all greater than 90 percent of the chain's original wire diameter. The riser contains two end links and two shackles near the bottom and the chain enters the mud at a depth of 32 feet.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in good condition and satisfactory for continued use as a class E mooring.

It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. M-10 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 32' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											8' DIAMETER. 24" FREEBOARD
3 1/8" SHACKLE											RUSTY SIDES. SHACKLE NEWLY
											PAINTED
RISER	NEAR BUOY		1 7/8"	✓			✓✓✓			10'	D.L. 3 1/2" S.L. 1 3/4"
	MIDDLE		↓	✓			✓✓✓			20'	D.L. 3 3/4" S.L. 1 7/8"
	NEAR GND RG		↓	✓			✓✓✓			32'	RISER ENTERS BOTTOM. NEAR
GROUND RING											BOTTOM RISER CHAIN TO 1 3/4" END
GROUND LEG NO A	UPPER END	ONE LEG									LINK TO 1 3/4" SHACKLE TO 1 3/4"
	MIDDLE	↓									END LINK (CALIPER MEASUREMENTS)
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING/LITTLE

COMSAVFACENGCOM REPORT FPO-1-83(24), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

MOORING BUOY NO: M-10 BUOYANCY: 2 TONS TYPE: _____

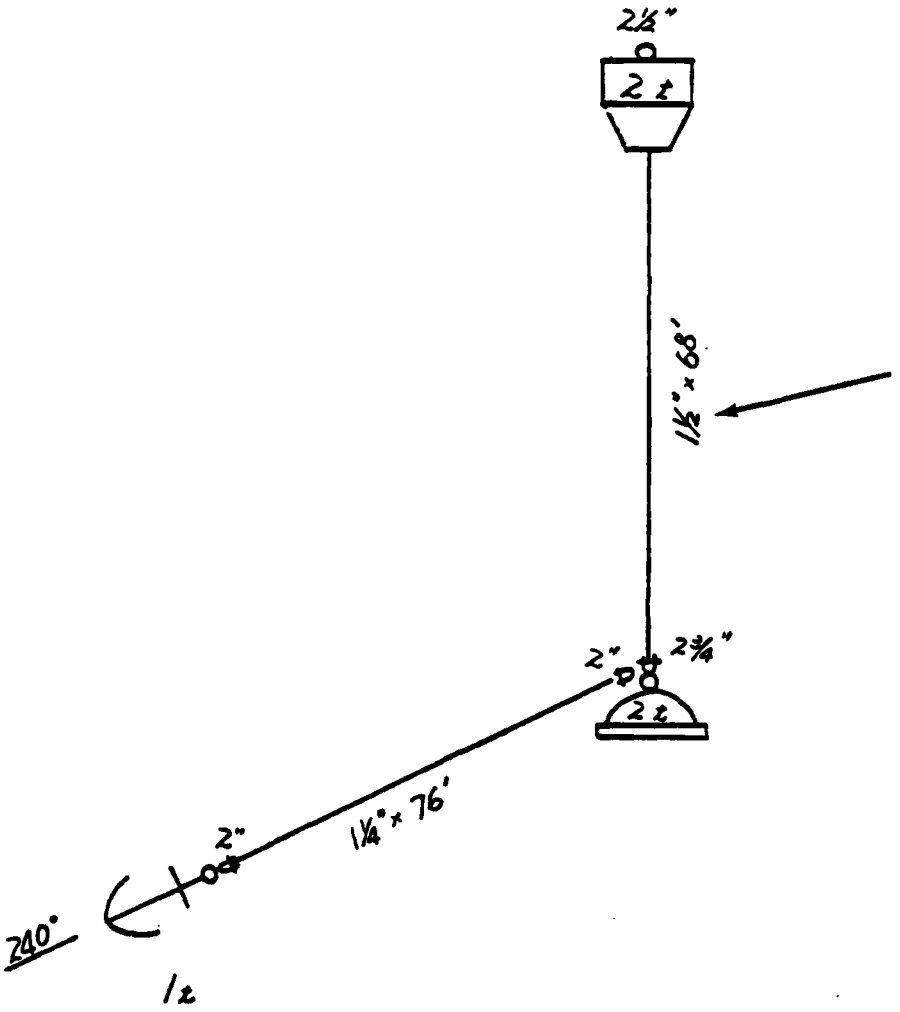
DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11179 NEXT OVERHAUL: 3184

ANNUAL USAGE: 340 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



NOTE: DIVERS FOUND 1⅞' RISER CHAIN AND A SHACKLE CONNECTION AT 32'. (MAY 83)

INSPECTION RESULTS

MOORING M-11

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 36-inch freeboard. The top deck padeyes are heavily rusted while the deck plate and chafing rail are moderately rusted.

Riser

The riser was initially 2-inch chain vice the 1 3/4-inch required for a class E mooring. Although double link measurements taken near the top and middle of the riser were above 90 percent, the measurements near the mud line were considerably lower, with one measurement less than 80 percent of the original wire diameter. The chain is covered with moderate marine growth above 30 feet, but there is no growth below this depth.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

Due to the riser chain being worn to less than 80 percent of its original size, this mooring is considered in poor condition and unsafe for operational service. Recommend that this mooring be overhauled, its riser replaced, and the buoy refurbished. It is uncertain that the leg/sinker/anchor arrangement and sizes shown in the as-built drawing can adequately resist the 50,000 lb. design load of a class Emooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO. M-11 CLASS E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 38' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											8' DIAMETER . 36" FREEBOARD
3½" SHACKLE											HEAVY RUSTON DECK PADEYES.
											MODERATE RUST ON DECK AND
											CHAFING RAIL.
RISER	NEAR BUOY		2"	✓			VVV			<10'	
	MIDDLE			✓			VVV			15'	NO GROWTH BELOW 30'
	NEAR GRD RG			VV		✓	✓	✓	VV	38'	D.L. CALIPER 3 7/8" / 3 3/16" / 3 1/16" at 38'
GROUND RING											
GROUND LEG NO A	UPPER END	ONE LEG									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/SCHEUREN/LITTLE/HARDING

CHESNAVFACENGCOM REPORT FPO-1-83(28), "COMLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

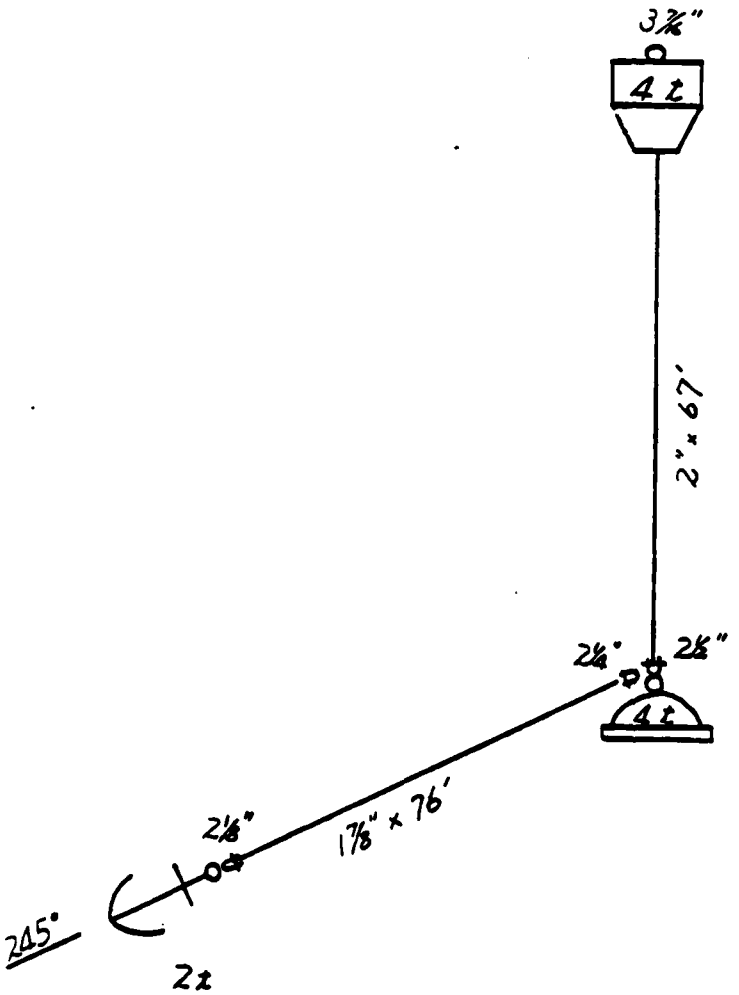
MOORING BUOY NO: M-11 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/77 NEXT OVERHAUL: 6183 / 5187

ANNUAL USAGE: 340 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING M-12

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 38-inch freeboard. The hawsepipe is severly rusted, and there is heavy rusting of the chafing rail and heavy rust bleeding of the buoy's sides. This buoy is in fair condition.

Riser

The riser was originally 2-inch chain vice the 1 3/4-inch required for a class E mooring. Double link measurements show that the middle section of the riser is worn to between 80 and 90 percent of the chain's initial wire size. The chain is covered with moderate marine growth from the bottom of the haswepipe to a depth of about 20 feet. Between this point and the bottom (38 feet), where the riser enters the mud, the chain is rusted.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. M-12 CLASS E LOCATION: COMFLEACTS SASEBO LAT: — LONG: —

WATER DEPTH: 38' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											8' DIAMETER. 38" FREEBOARD.
3½" SHACKLE											HAWSEPIPE SEVERELY RUSTED.
											HEAVY RUST ON CHAFING RAIL
											AND BUOY SIDES.
RISER	NEAR BUOY		2"	✓			VVV			10'	
	MIDDLE		↓	✓				VVV		20'	CHAIN RUSTY BELOW 20'
	NEAR GRD RG		↓	✓			VVV			38'	RISER ENTERS MUD
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DUE LEG

A-53

DATE 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING / LITTLE

MOORING BUOY NO: M-12 BUOYANCY: 4 TONS TYPE: _____

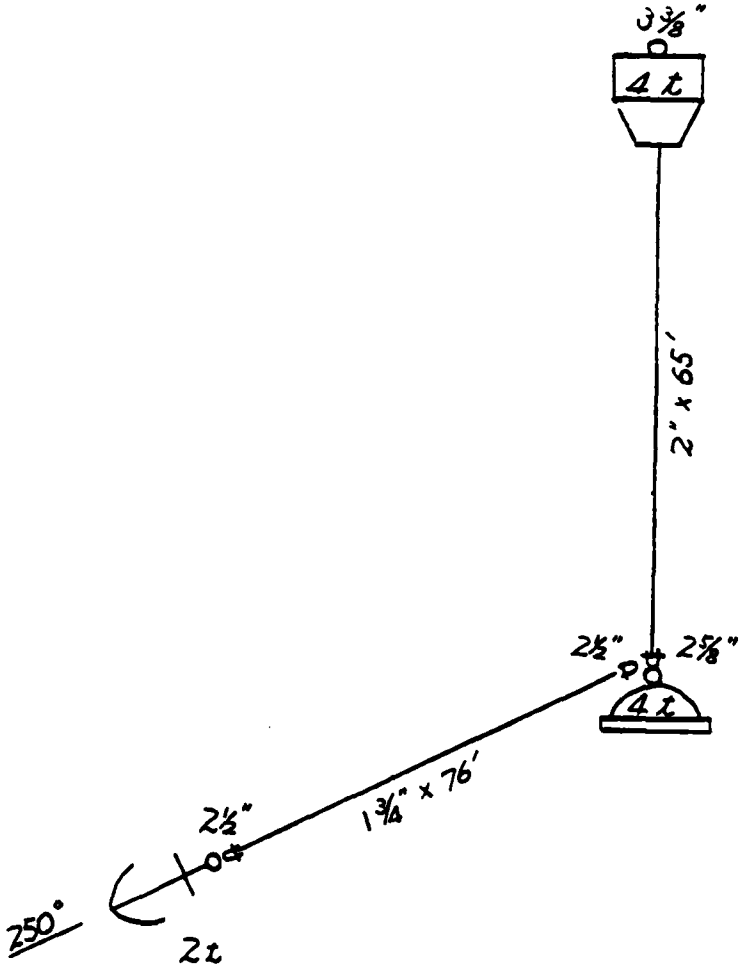
DEPTH OF WATER: 40 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/79 NEXT OVERHAUL: 4184

ANNUAL USAGE: 340 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING M-13

Buoy

This Japanese designed and built drum-type buoy with a hawsepipe has a diameter of 9 feet 2 inches. The buoy is fiberglass coated and has a 36-inch freeboard. The top plate is moderately rusted, and the chafing rail is badly dented. There is much rust bleeding on the sides of the buoy.

Riser

The riser originally consisted of 2 3/8-inch chain which is almost 5/8 of an inch larger than required for an E class mooring. All double link measurements of the riser were between 80 and 90 percent of the 2 1/2-inch wire size gauge used. Therefore the chain measured between 84 and 95 percent of its original wire size. The riser vertically enters the bottom at a water depth of 40 feet.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACTS

MOORING NO: M-13 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 40' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											9'3" DIAMETER, 36" FREEBOARD,
3 1/8" SHACKLE											SIDES RUST BLEEDING, CHAFING
											RAIL DENTED, TOP PLATE
											MODERATELY RUSTED
RISER	NEAR BUOY		2 3/8"	✓				VVV		10'	2 1/2" GO/NOGO GUAGE USED
	MIDDLE		↓	✓				VVV		20'	
	NEAR GRD RG		↓		✓			VVV		40'	RISER ENTERS BOTTOM
GROUND RING											
GROUND LEG NO A	UPPER END	ONE LEG									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING / LITTLE / COTTELESSA

CHESAPEAKENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

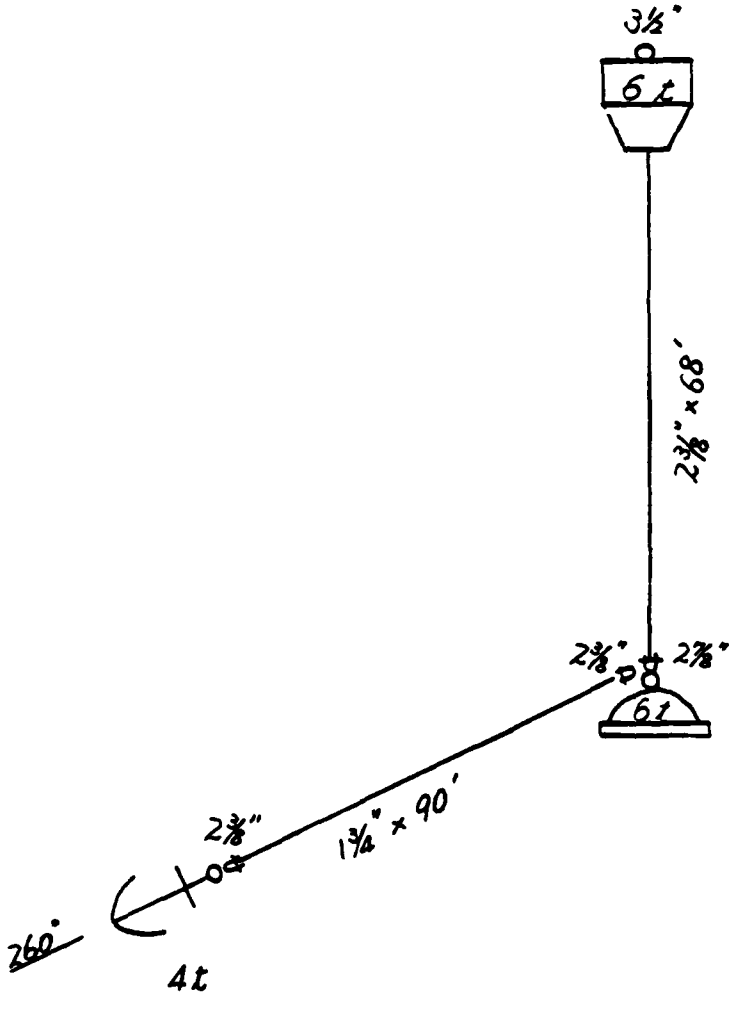
MOORING BUOY NO: M-13 BUOYANCY: 6 TONS TYPE: _____

DEPTH OF WATER: 42 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 10/77 NEXT OVERHAUL: 7/83
6/87

ANNUAL USAGE: 340 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING M-14

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 36-inch freeboard. The topside padeyes are heavily rusted and the galvanized pipe chafing rail has been scraped to bare metal. The buoy bottom has only a light covering of marine growth.

Riser

The riser originally consisted of 2-inch chain vice the 1 3/4-inch required for class E moorings. Double link measurements of the rise revealed that its lower portion is worn to between 80 and 90 percent of the chain's initial diameter. The riser enters the mud at a depth of 30 feet.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO: M-14 CLASS: E LOCATION: COMFLEACTS SASEBO LAT: — LONG: —

WATER DEPTH: 30' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER, 36" FREEBOARD.
3½" SHACKLE											TOP DECK PADEYES HEAVILY
											RUSTED. THE GALVANIZED PIPE
											CHAFING RAIL HAS BEEN SCRAPED
											TO BARE METAL. LIGHT GROWTH BOTTOM.
RISER	NEAR BUOY		2"	✓			VVV			<10'	MOD GROWTH ON CHAIN
	MIDDLE		↓	✓			VV	V		15'	
	NEAR GRD RG		↓		✓			VVV		30'	RISER INTO MUD
GROUND RING											
GROUND LEG NO. A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER / SCHEVREN / COTTELESSA

CINCSAVEACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

MOORING BUOY NO: M-14 BUOYANCY: 4 TONS TYPE: _____

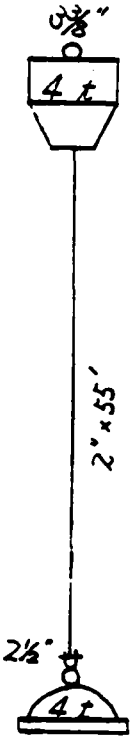
DEPTH OF WATER: 33 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/79 NEXT OVERHAUL: 8/84

ANNUAL USAGE: 340 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING M-15

Buoy

This Japanese designed and built drum-type buoy with a hawsepipe has a diameter of 9 feet 4 inches. The buoy is fiberglass coated and has a 39-inch freeboard. The chafing rail is severly dented, and one attaching bolt is missing from the fender. The bottom is covered with a 2-inch marine growth.

Riser

The riser is 2 3/8-inch chain vice the required 1 3/4-inches for an E class mooring. Double link measurements show that the chain is worn to between 80 and 90 percent of the 2 1/2-inch wire size. Therefore, the chain measured between 84 and 95 percent of its original size. There is moderate growth on the riser down to a depth of 22 feet. Some links are shiny and pitted below this point, and some of the chain link studs are worn.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACTS

MOORING NO: M-15 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 33' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											9'4" DIAMETER. 39" FREEBOARD.
3½" SHACKLE											SEVERELY DENTED CHAFING RAIL.
											ONE FENDER BOLT MISSING. 2"
											GROWTH ON BOTTOM
RISER	NEAR BUOY		2¾"	V			V	VV		10'	NO GROWTH BELOW 33'. SHINY
	MIDDLE		↓	V				VVV		15'	PITTED LINKS AT 25' CHAIN LINK
	NEAR GRD RG		↓	V				VVV		33'	STUDS WORN BETWEEN 22' and 30',
GROUND RING											2½" GUAGE USED
GROUND LEG NO A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 15 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/SCHEUREN

SAVEACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

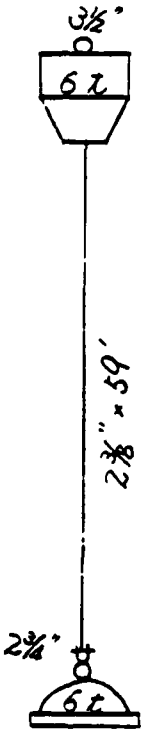
MOORING BUOY NO: M-15 BUOYANCY: 6 TONS TYPE: _____

DEPTH OF WATER: 30 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/77 NEXT OVERHAUL: 8/83
5/88

ANNUAL USAGE: 340 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



CHESNAVFACENGCOM REPORT FPO-1-83(29), "COMPLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

INSPECTION RESULTS

MOORING M-20

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 26-inch freeboard. The chafing rail is rusted and dented, and the deck plate at the base of the chafing rail is dented. The fiberglass coating and fender are in good condition.

Riser

The riser is 2 1/4-inch chain which is one-half inch larger than required for a class E mooring. With the exception of one caliper measurement which was less than 90 percent, all single and double link measurements were larger than 90 percent of the chain's original wire diameter. The bottom is at a depth of 50 feet, and about 20 feet of the riser rests on the bottom. The lower end of the riser is attached to a shackle to an end link to the sinker hairpin. There is no growth on the lower 25 feet of chain.

Sinker

The top of the partially buried sinker was observed. Its hairpin was measured with calipers to be 3 1/2 inches.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO.: M-20 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 50' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5'-10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							D	COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %				
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER. 26" FREEBOARD. RUB
3 1/2" SHACKLE											RAIL DENTED/RUSTED. FENDER/
											FIBERGLASS OK. RUST AT BASE OF
											CHAFINGRAIL. BOTTOM GOOD CONDITION
RISER	NEAR BUOY		2 1/4"	√√			√√			10'	2 3/8" S.L. 4 3/8" D.L. } CALIPERS
	MIDDLE			√√			√√			30'	2 3/8" S.L 4 1/4" D.L }
	NEAR GRD RG			√	√		√			50'	20' OF RISER ON BOTTOM. RISER TO
GROUND RING											2 1/2" SHACKLE TO 2 1/8" END LNK TO
GROUND LEG NO. A	UPPER END	NO LEGS									3 1/2" SINKER HAIR PIN
	MIDDLE										
	ENTERS BOTTOM										NO GROWTH ON BOTTOM 25' OF CHAIN
GROUND LEG NO. B	UPPER END										BOTTOM CHAIN SHINY
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 May 83 ENGINEER IN CHARGE: T. JONES DIVERS: REYNOLDS/LITTLE

MOORING BUOY NO: M-20 BUOYANCY: 4 TONS TYPE: _____

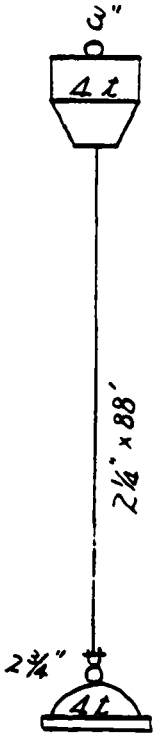
DEPTH OF WATER: 52 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/79 NEXT OVERHAUL: 9/84

ANNUAL USAGE: 340 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE



INSPECTION RESULTS

MOORING S-2N

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 36-inch freeboard. The buoy is in good condition and has two inches of growth on its bottom.

Riser

The riser is 2-inch chain which is larger than required for a class E mooring. Single and double link measurements of the chain were all greater than 90 percent of its initial wire diameter. About 15 feet of the riser rests on the bottom before entering the mud at a water depth of 10 feet.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in good condition and satisfactory for continued use as a class E mooring.

It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO.: S-2N CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 10' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSE PIPE

BOTTOM TYPE: ☐ SAND ☐ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER, 36" FREEBOARD.
3 1/16" SHACKLE											2" GROWTH ON BOTTOM. BUOY IN GOOD CONDITION
RISER	NEAR BUOY		2"	VVV			VVV			L10'	
	MIDDLE		↓	VVV						10'	15' OF CHAIN ON BOTTOM MEASURED
	NEAR GRD RG		↓								1 7/8" S.L. RISER ENTERS BOTTOM
GROUND RING											
GROUND LEG NO A	UPPER END	CW LEG									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING/COTTELLESSA

COMNAVFACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

MOORING BUOY NO: S-2N BUOYANCY: 2 TONS TYPE: _____

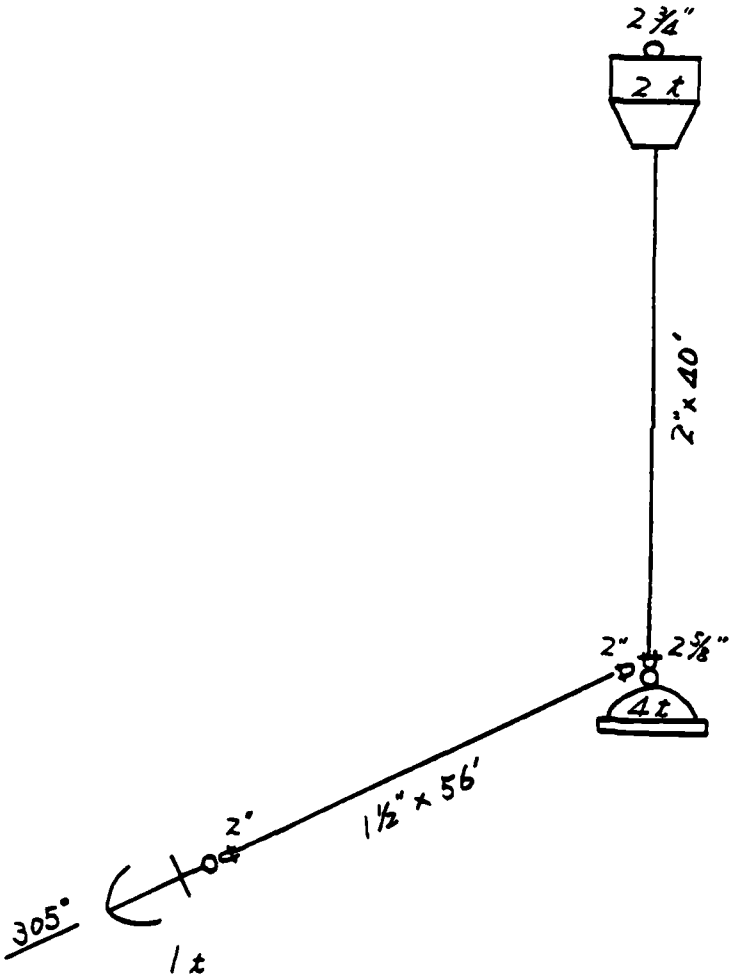
DEPTH OF WATER: 14 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 2181 NEXT OVERHAUL: 5185

ANNUAL USAGE: 300 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 0



INSPECTION RESULTS

MOORING S-2S

Buoy

This is an 8-foot-diameter Japanese designed and built drum type buoy with a hawsepipe. The buoy is fiberglass coated and has a 36-inch freeboard. Overall, the buoy is in good condition.

Riser

This is 2-inch chain which is larger than required for an E class mooring. Single and double link measurements are all greater than 90 percent of the chain's original wire diameter. The riser enters the bottom at a water depth of 10 feet.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in good condition and is satisfactory for continued use as a class E mooring.

It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO: S-25 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 10' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☐ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER, 36" FREEBOARD.
3 1/8" SHACKLE											GOOD CONDITION ALL OVER.
RISER	NEAR BUOY		2"	VVV			VVV			<10'	3 7/8" D.L. } CALIPERS
	MIDDLE			VVV			VVV			10'	3 5/8" D.L. } RISER ENTERS BOTTOM
	NEAR GRD RG										
GROUND RING											
GROUND LEG NO. A	UPPER END	ONE LEG									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING / COTTELLESSA

CHESNAVFACENGCOM REPORT FPO-1-83(2R), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

MOORING BUOY NO: S-25 BUOYANCY: 4 TONS TYPE: _____

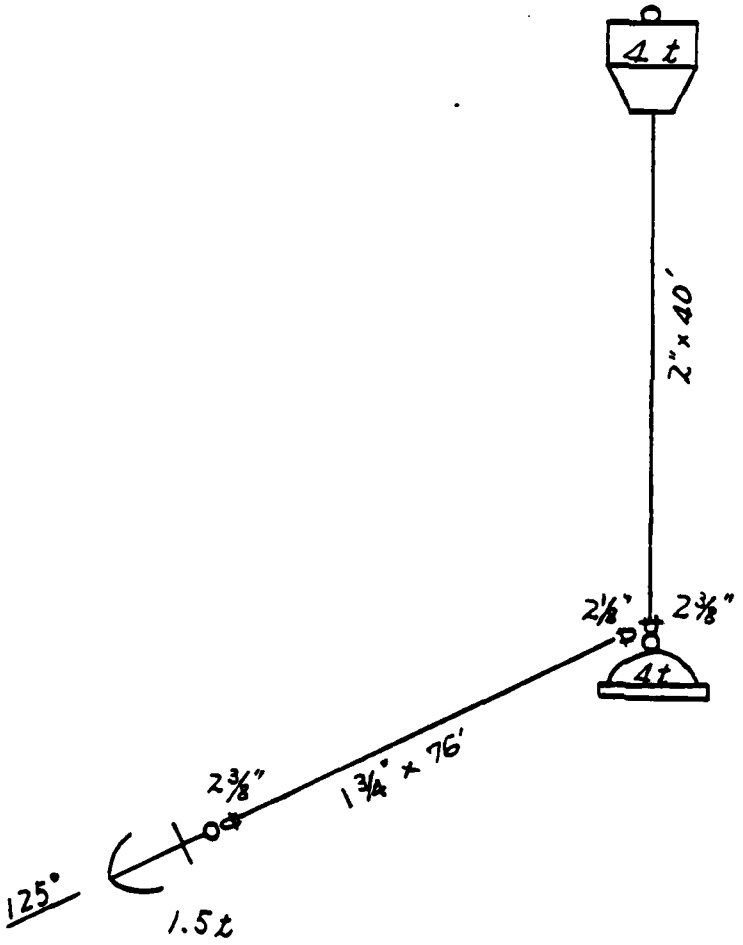
DEPTH OF WATER: 15 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 2181 NEXT OVERHAUL: 4185

ANNUAL USAGE: 300 DAYS

DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 0



INSPECTION RESULTS

MOORING T-10

Buoy

This is a 9-foot-diameter Japanese designed and built drum type buoy with a hawsepipe. The buoy is fiberglass coated and has a 34-inch freeboard. The topside jewelry consists of three shackles in good condition. The condition of the fiberglass is good, but the buoy has a 6 to 10-degree list. The buoy bottom has about 3 inches of marine growth.

Riser

The riser consists of 2 1/2-inch chain which is a 3/4 of an inch larger than required for a class E mooring. Double link measurements of the riser were all greater than 90 percent of the chain's original wire size. The riser has about 3 inches of marine growth. About 10 feet of riser chain is visible on the bottom before it enters the mud.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in good condition and is satisfactory for continued use as a class E mooring.

However, because of its slight list, the water-tight integrity of the buoy should be checked at the earliest opportunity. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO: T-10 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 25' ANCHOR SIZE/TYPE: N.I BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☐ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility _____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											9' DIAMETER. 34" FREEBOARD
2 3/8" SHACKLE											BOTH SMALLER TOPSIDE SHACKLES
2" SHACKLE											ATTACHED TO LARGER ONE. 5-10° BUOY
3 7/8" SHACKLE											LIST. FIBERGLASS OK.
RISER CHAIN											
RISER	NEAR BUOY		2 1/2"				VVV			40'	≈ 3" GROWTH ON CHAIN & BUOY BOTTOM
	MIDDLE						VVV			10'	
	NEAR GRD RG						VVV			25'	10' OF RISER ON BOTTOM THEN INTO MUD
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

TWO LEGS

DATE 12 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: LITTLE / PATERINE

CINCNAVFACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

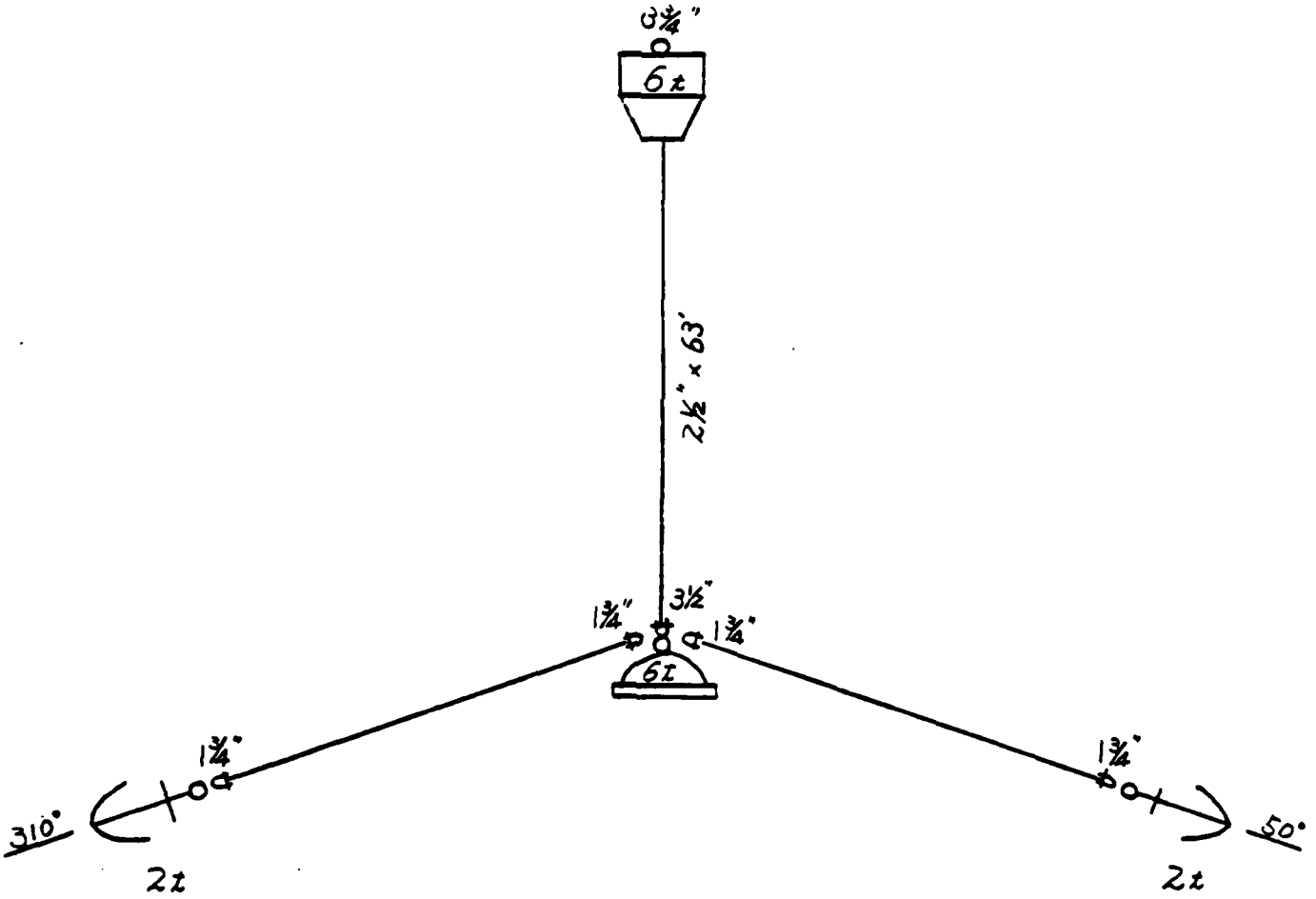
MOORING BUOY NO: T-10 **BUOYANCY:** 6 TONS **TYPE:** _____

DEPTH OF WATER: 35 FT **CONDITION OF BOTTOM:** MUD

LAST OVERHAULED: 2181 **NEXT OVERHAUL:** 3185

ANNUAL USAGE: 360 DAYS **DATE:** _____

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



INSPECTION RESULTS

MOORING T-11

Buoy

This is a 9-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 34-inch freeboard. A large section of the fiberglass coating has peeled off the side of the buoy, and the buoy's sides are heavily rusted. The chafing rail is dented and the top deck plate is covered with light rust.

Riser

The riser consists of 2 1/2-inch chain which is three-quarters of an inch larger than required for a class E mooring. All double link measurements were greater than 90 percent of the chain's initial wire diameter. The riser is covered with heavy marine growth and vertically enters the bottom at a depth of 30 feet.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in good condition and is satisfactory for continued use as a class E mooring.

It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO: T-11 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 30' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											9' DIAMETER. 34" FREEBOARD.
3¾" SHACKLE											LARGE SECTION OF FIBERGLASS
											CHIPPED OFF SIDE. HEAVY RUST ON
											SIDE. LIGHT RUST ON TOP DECK.
											CHAFING RAIL DENTED.
RISER	NEAR BUOY		2½"				VVV			<10'	THICK MARINE GROWTH
	MIDDLE		↓				VVV			15'	
	NEAR GRD RG		↓				VVV			30'	RISER ENTERS BOTTOM
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓ DUE LEGS									
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 12 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: LITTLE/PATIERNE

CHESNAVFACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT,"

MOORING BUOY NO: T-11 BUOYANCY: 6 TONS TYPE: _____

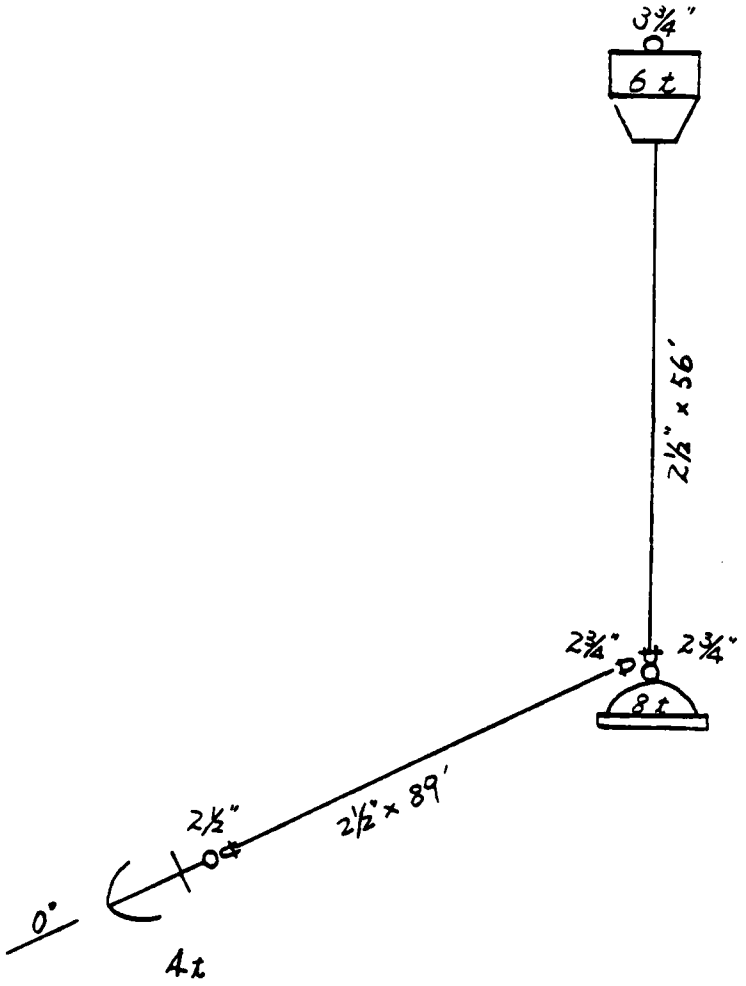
DEPTH OF WATER: 32 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 9177 NEXT OVERHAUL: 9183 / 6188

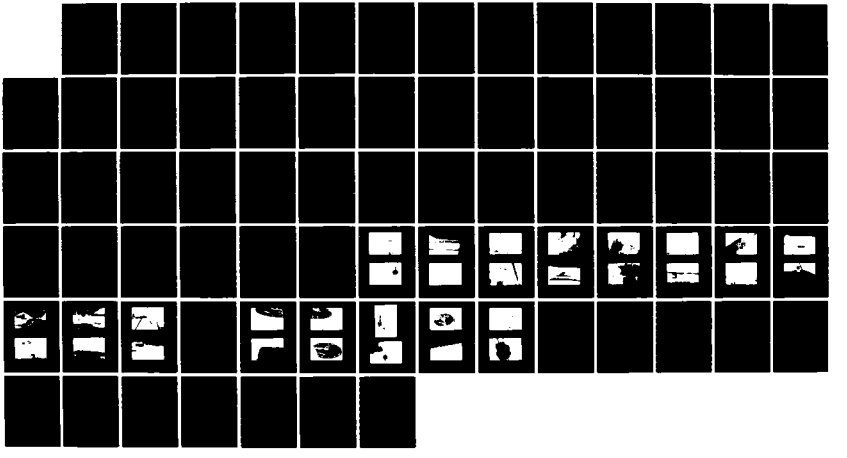
ANNUAL USAGE: 360 DAYS

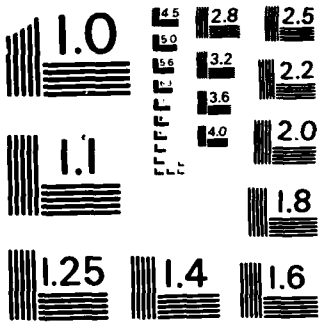
DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



AD-A167 273 COMMANDER FLEET ACTIVITIES SASEBO FLEET MOORINGS 2/2
UNDERWATER INSPECTION REPORT(U) NAVAL FACILITIES
ENGINEERING COMMAND WASHINGTON DC CHESAPEAKE DIV
UNCLASSIFIED SEP 83 CHES/NAVFAC-FPO-1-83(28) F/G 13/10 NL





INSPECTION RESULTS

MOORING T-12

Buoy

This is a 9-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 34-inch freeboard. There is little growth on the bottom of the buoy. The buoy is in good condition.

Riser

The riser consists of 2 1/2-inch chain which is three-quarters of an inch larger than required for a class E mooring. All double link measurements were larger than 90 percent of the chain's original wire diameter. The riser is covered with a heavy marine growth and enters the bottom at a depth of 22 feet.

Sinker/Ground Leg/Anchor

Not visible for inspection.

Recommendation

This mooring is in good condition and is satisfactory for continued use as a class E mooring.

It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO. T-12 CLASS E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 22' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSE PIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											9' DIAMETER · 34" FREEBOARD
3 3/4" SHACKLE											LITTLE GROWTH ON BOTTOM. BUOY
											IN GOOD CONDITION.
RISER	NEAR BUOY		2 1/2"				VVV			10'	HEAVY GROWTH
	MIDDLE		↓				VVV			10'	
	NEAR GRD RG		↓				VVV			22'	RISER ENTERS BOTTOM
GROUND RING											
GROUND LEG NO A	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

← DUE LEG

DATE 12 MAY 83 ENGINEER IN CHARGE: T JONES DIVERS: LITTLE/PATIERNE

COMFLEACT SASEBO REPORT EPD-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

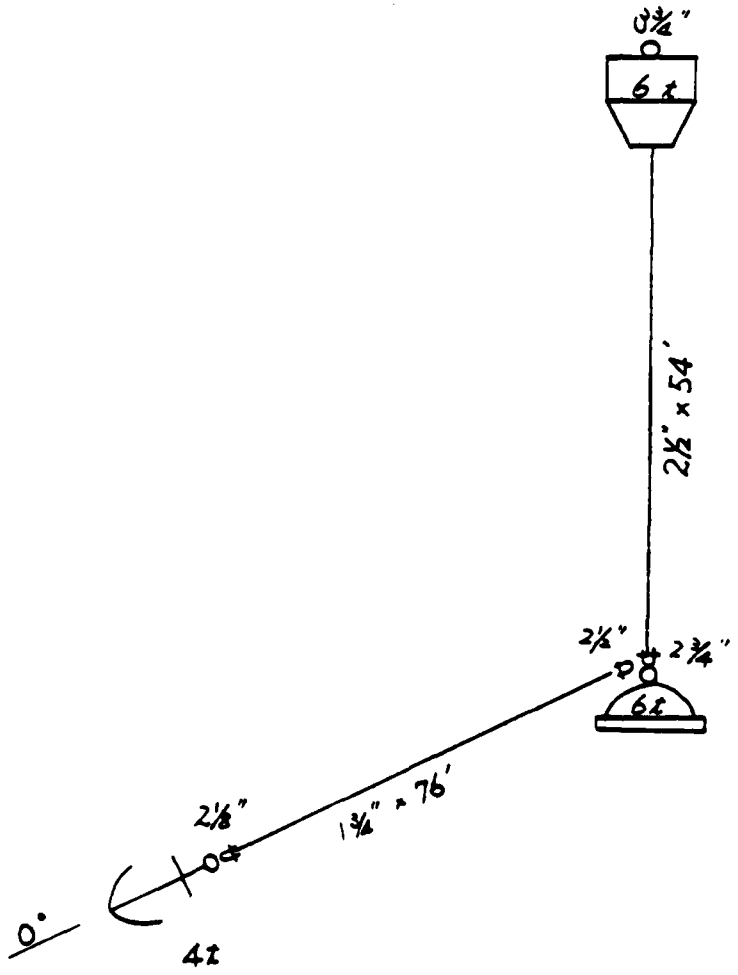
MOORING BUOY NO: T-12 BUOYANCY: 6 TONS TYPE: _____

DEPTH OF WATER: 32 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 9177 NEXT OVERHAUL: 9183
7188

ANNUAL USAGE: 360 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



INSPECTION RESULTS

MOORING T-13

Buoy

This is an 9-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 33-inch freeboard. The buoy's identification number is badly worn and needs repainting. The buoy has only a light coating of marine growth on its bottom but has a 10- to 15-degree list.

Riser

The riser consists of 2 1/2-inch chain which is three quarters of an inch larger than required for a class E mooring. Some of the double link measurements of the riser are between 80 and 90 percent of the chain's original wire diameter. About 10 feet of the riser rests on the bottom before the chain enters the bottom at a depth of 21 feet.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring. In addition, due to its list, the watertight integrity of the buoy should be checked at the earliest opportunity.

MOORING NO: T-13 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 21' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											9' DIAMETER, 33" FREEBOARD.
4 1/8" SHACKLE											BUOY'S ID NUMBER NEEDS
											REPAINTING. 10-15° BUOY LIST. LIGHT
											GROWTH ON BOTTOM. GOOD CONDITION
RISER	NEAR BUOY		2 1/2"				VV	V		L10'	AT 18', RISER HAS A 2 1/4" SHACKLE
	MIDDLE		↓								AND A 2 1/2" END LINK
	NEAR GRD RG		↓					VVV		20'	10' ON BOTTOM BEFORE ENTERS MUD
GROUND RING											
GROUND LEG NO A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE: 12 MAY 83 ENGINEER IN CHARGE: T JONES DIVERS: LITTLE / PATERINE

C:\SAVEFACE\NCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

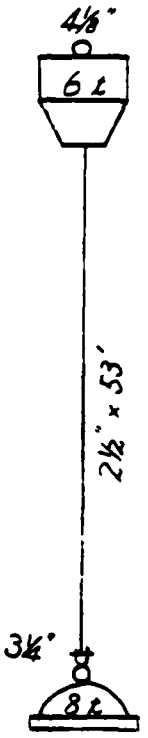
MOORING BUOY NO: T-13 BUOYANCY: 6 TONS TYPE: _____

DEPTH OF WATER: 29 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 1183 NEXT OVERHAUL: 5186

ANNUAL USAGE: 360 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



FSNAVFACENGCOM REPORT FPU-1-83(29), "COMPLEACT SASEBO [illegible] INSPECTION REPORT"

INSPECTION RESULTS

MOORING T-14

Buoy

This is an 9-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 35-inch freeboard. There is some light rust bleeding of the buoy's sides, otherwise the buoy is in good condition.

Riser

The riser consists of 2 1/2-inch chain which is three-quarters of an inch larger than required for a class E mooring. Double link caliper measurements of the riser were between 80 and 90 percent of the chain's original wire size. About 10- to 15-feet of the riser rests on the bottom before being connected to a sinker hairpin by an end link and a shackle. The bottom is at a depth of 23 feet.

Sinker

The top of a partially submerged sinker was visible. Its hairpin was measured to be 4 7/8-inches in diameter.

Recommendation

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in, this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO. T-14 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 23' ANCHOR SIZE/TYPE: SINKER BUOY TYPE: HAWSE PIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											9' DIAMETER. 35" FREEBOARD
4 1/8" SHACKLE											LIGHT RUST BLEEDING OF SIDES
											GOOD CONDITION
RISER	NEAR BUOY		2 1/2"				✓	VV		210'	
	MIDDLE		↓								
	NEAR GROUND		↓					VVV		23'	D.L. CAUPER 4". 10'-15' CHAIN ON BOTTOM. RISER TO AJL TO 3 1/8" SHACKLE TO 4 7/8" SINKER HAIR PIN
GROUND RING											
GROUND LEG NO A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 10 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: LITTLE/PATIERNE

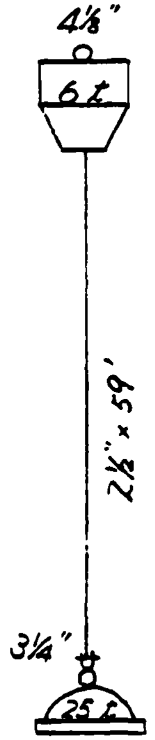
MOORING BUOY NO: T-14 BUOYANCY: 6 TONS TYPE: ______

DEPTH OF WATER: 33 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11/74 NEXT OVERHAUL: 4/83 7/87

ANNUAL USAGE: 360 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



INSPECTION RESULTS

MOORING T-15

Buoy

This is a 9-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 32- to 36-inch freeboard with a 5- to 10- degree list. The top jewelry consist of three shackles. The buoy is in good conditon.

Riser

This riser consists of 2 1/2-inch chain which is 3/4 of an inch larger than required for a class E mooring. Double link measurements are all larger than 90 percent of the chain's original wire diameter. At a depth of 20 feet, the riser is attached to a sinker hairpin.

Sinker

The top of a partially buried sinker is visible. The sinker has 4-inch hairpin, which is attached to the lower end of the riser and a single chain leg by the connecting hardware shown in Figure A-2.

Ground Leg

This mooring has a single 1 1/2-inch diameter ground leg. One end of this leg is attached to a sinker and the other end to a bollard located ashore at the Helipad. DM-26 requires 1 3/4-inch diameter ground legs as a minimum for a class E mooring, and therefore, this leg is undersized. A schematic drawing of this mooring is shown in Figure A-2.

Recommendation

This mooring is in good condition. Due to its undersized ground leg, this mooring should be downgraded from a class E to a class F mooring. Due to its list, the water-tight integrity of the buoy should be checked at the earliest possible time. Additionally, the forces on the moored barge and the design of the mooring should be reviewed

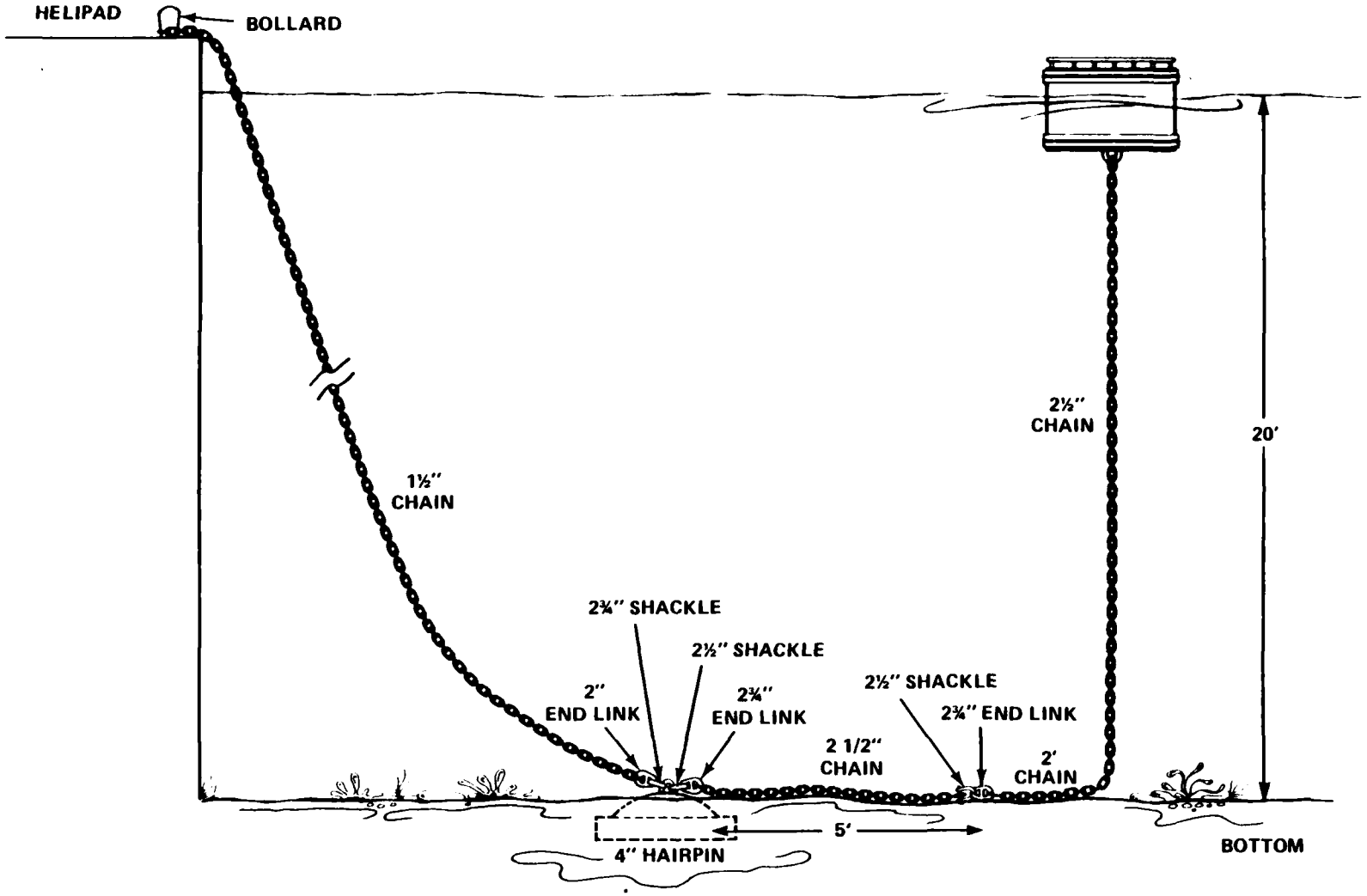


Figure A-2. Schematic Drawing Of Mooring T-15

COMFLEACT

MOORING NO: T-15 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 20' ANCHOR SIZE/TYPE: SINKER BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											9' DIAMETER. 32-36" FREEBOARD
2 1/4" SHACKLE											BUOY HAS 5-10° LIST. BOTH
2 1/4" SHACKLE											SMALLER TOP JEWELRY SHACKLES
4 1/8" SHACKLE											ARE ATTACHED TO THE RISER
RISER CHAIN											BY THE LARGER SHACKLE. BUOY OK
RISER	NEAR BUOY		2 1/2"				VVV			<10'	
	MIDDLE		↓				VVV			10'	
	NEAR GRD RG		↓				VVV			20'	RISER ATTACHED TO SINKER
GROUND RING											HAIRPIN AT 20'. THEN 1 1/2" CHAIN
GROUND LEG NO A	UPPER END	ONE LEG	1 1/2				VVV			20'	IS ATTACHED TO THE SINKER AND
	MIDDLE		↓				VVV			10'	THEN RUNS TO SHORE WHERE IT
	ENTERS BOTTOM										IS ANCHORED.
GROUND LEG NO B	UPPER END										AS BUILT FOLLOWS:
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										RISER CHAIN / SINKER HAIRPIN
	MIDDLE										2 3/4" END LINK / 2 3/4" SHACKLE
	ENTERS BOTTOM										2 1/2" SHACKLE / 2" END LINK
GROUND LEG NO D	UPPER END										2 1/2" CHAIN (5') / 1 1/2" CHAIN
	MIDDLE										2 3/4" END LINK / TO SHORE
	ENTERS BOTTOM										3" SHACKLE
											4" HAIRPIN (SINKER)

DATE 12/MAY/83 ENGINEER IN CHARGE: T. JONES DIVERS: LITTLE/PATIERNE

COMFLEACTSASEBO FLEET MOORING UNDERWATER INSPECTION REPORT, "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

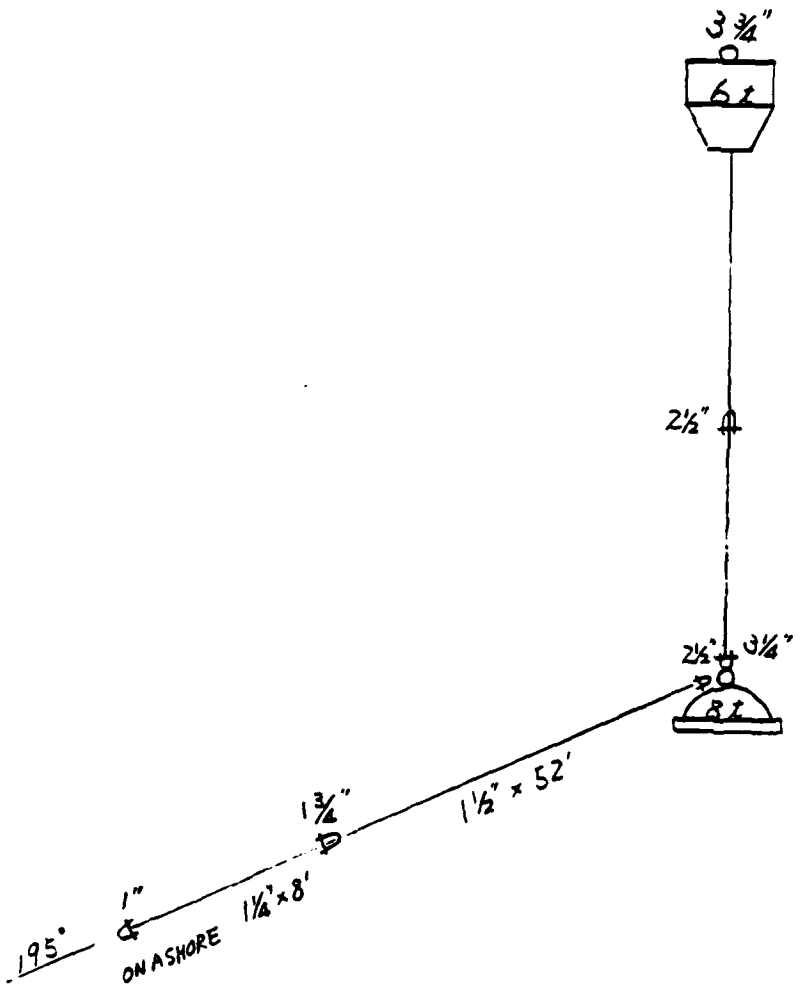
MOORING BUOY NO: T-15 BUOYANCY: 6 TONS TYPE: _____

DEPTH OF WATER: 20 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 1183 NEXT OVERHAUL: 8187

ANNUAL USAGE: 360 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



INSPECTION RESULTS

MOORING T-16

Buoy

This is an 8-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 30-inch freeboard. The fiberglass is in good condition but the topside chafing rail is severely damaged.

Riser

This riser consists of 2 3/8-inch chain which is 5/8 of an inch larger than required for a class E mooring. Double link measurements near the middle of the exposed riser were between 80 and 90 percent of the 2 1/2-inch diameter gauge used. Therefore, the chain was between 84 and 95 percent of its original wire diameter. The riser contains an end link and a shackle at a depth of about 18 feet. The riser chain enters the bottom at a depth of 30 feet.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class E mooring loads. It is uncertain that the leg/anchor/sinker arrangement and sizes shown in the as-built can adequately resist the 50,000 lb. design load of a class E mooring. Recommended a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO. T-16 CLASS: E LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 30' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSE PIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											8' DIAMETER. 30" FREEBOARD
3 1/4" SHACKLE											FIBERGLASS GOOD. CHAFING RAIL
											BENT AND DAMAGED. PAINT OK
RISER	NEAR BUOY		2 3/8"				VVV			<10'	2 1/2" GO/NO-GO GAUGE USED
	MIDDLE		↓					VVV		18'	2 1/8" END LINK & 2 3/4" SHACKLE AT 18'
	NEAR GRID RG		↓				VVV			30'	RISER ENTERS BOTTOM
GROUND RING											
GROUND LEG NO. A	UPPER END	NO LEGS									
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 10 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: —

[illegible]ACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

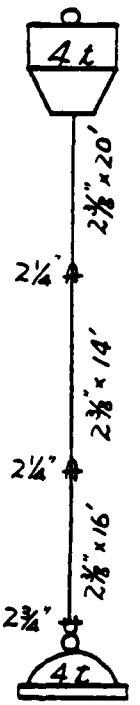
MOORING BUOY NO: T-16 BUOYANCY: 4 TONS TYPE: _____

DEPTH OF WATER: 30 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 3183 NEXT OVERHAUL: 3188

ANNUAL USAGE: 0 (Installed in FY-83) DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



INSPECTION RESULTS

MOORING T-17

Buoy

This Japanese designed and built drum-type buoy with a hawsepipe has a diameter of 9 feet 4 inches. The buoy is fiberglass coated and has a 40-inch freeboard. The buoy has a 5- to 10-degree list, and its chafing rail is badly damaged. The fiberglass coating is in good condition.

Riser

The riser consists of 2 3/8-inch chain which is 5/8 of an inch larger than required for a class E mooring. Although the middle and upper portions of the riser were found to be in good condition, the results of double link measurements of the lower portion were between 80 and 90 percent of the 2 1/2-inch wire diameter gauge used. Therefore the chain measured between 84 and 95 percent of its original wire diameter. The riser is covered with light marine growth and enters the mud at a water depth of 30 feet.

Sinker

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows this mooring to be still capable of withstanding class E mooring loads. Because of its list, the water-tight integrity of the buoy should be checked at the earliest opportunity. Additionally, the forces on the moored barge and the design of the mooring should be reviewed.

MOORING NO.: T-17 CLASS: E LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 30' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility ____ D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION								COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											9'4" DIAMETER. 40" FREEBOARD
3 7/8" SHACKLE											5-10° LIST. RUB RAIL DAMAGED
											FIBERGLASS GOOD CONDITION
											2 1/2" GO/NO-GO GUAGE USED
RISER	NEAR BUOY		2 3/4" 2 7/8"				√√√			<10'	AT 20' - 2 1/8" END LINK & 2 3/4" SHACKLE
	MIDDLE		↓				√√√			20'	IN RISER. MEASUREMENTS ABOVE SHACKLE
	NEAR GRD RG		↓					√√√		30'	>90% BELOW SHACKLE >80% <90%
GROUND RING											RISER ENTERS MUD AT 30'. LIGHT
GROUND LEG NO. A	UPPER END	NO LEGS									GROWTH ON RISER
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO. D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 12 MAY 83 ENGINEER IN CHARGE T. JONES DIVERS: ____

CF: NAVFAC ENGCOM REPORT FPO-1-83(20), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

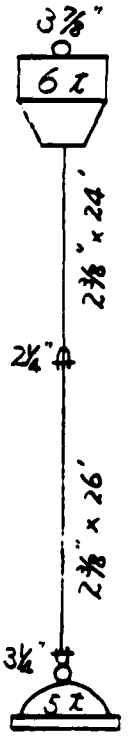
MOORING BUOY NO: I-17 BUOYANCY: 6 TONS TYPE: _____

DEPTH OF WATER: 30 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 3/83 NEXT OVERHAUL: 3/88

ANNUAL USAGE: 0 (Installed in FY-83) DATE: 4-1-83

ANTICIPATED USAGE/TYPE: 20 DAYS/BARGE, FLOAT, CAMEL



INSPECTION RESULTS

MOORING Y-1

Buoy

This is a 13-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 39-inch freeboard. The chafing rail has been scraped but shows little rust. There are some rust spots where the chafing rail stanchions are welded to the top deck plating.

Riser

The first 65 feet of riser consists of 3 1/2-inch chain. The lower end of this section of the riser is connected by a 5 5/8-inch shackle to the lower portion of the riser, which consists of 3-inch chain. Both of these sections of the riser are comprised of chain considerably larger than the 2 1/2-inch chain required for a class B mooring. However, double link measurements taken at the 40-foot level and near the mud line were less than 80 percent of the chain's original wire size. The lowest double link measurement recorded was 4 5/8 inches (77 percent). This measurement was obtained at the bottom. About 20 feet of chain rests on the bottom before the riser enters the sand.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in poor condition.

With a portion of the riser chain worn to less than 80 percent of its original wire diameter, recommend that this mooring be removed from service, overhauled, and its riser chain replaced.

MOORING NO: Y-1 CLASS: B LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH: 121' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSE PIPE

BOTTOM TYPE: ☒ SAND ☐ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5'-10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											13' DIAMETER. 39" FREEBOARD
5 1/4" SHACKLE											NO GROWTH ON SIDES. RUB RAIL
											SCRAPED - LITTLE RUST. SOME
											RUST SPOTS WHERE RUB RAIL
				CALIPER MEASUREMENTS							STANCHIONS ARE WELDED TO TOP PLATE.
RISER	NEAR BUOY		3 1/2"	6 3/4"	6 3/4"	6 3/4"	VV			8'	
	MIDDLE			6 3/4"	6 3/4"	6 5/8"	VV			15'	HARD GROWTH ON RISER
	NEAR GRD RG			5 5/8"	5 5/8"	5 1/2"			VV	42'	
~~GROUND RING~~				7 1/8"	7 1/8"	7 1/16"	VV			65'	5 5/8" SHACKLE BETWEEN 3 1/2" & 3"
GROUND LEG ~~NO A~~	~~UPPER END~~		3"	6 1/4"	6 1/4"	6 1/8"	VV			76'	RISER CHAIN
	~~MIDDLE~~			4 7/8"	4 7/8"	4 5/8"		V	V	121'	ABOUT 20' CHAIN ON BOTTOM BEFORE
	~~ENTERS BOTTOM~~										ENTERING SAND
GROUND LEG NO ~~A~~	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO ~~B~~	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO ~~C~~	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER/MESERVE/SAKO/SCHEUREN

CINCPACFLTENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

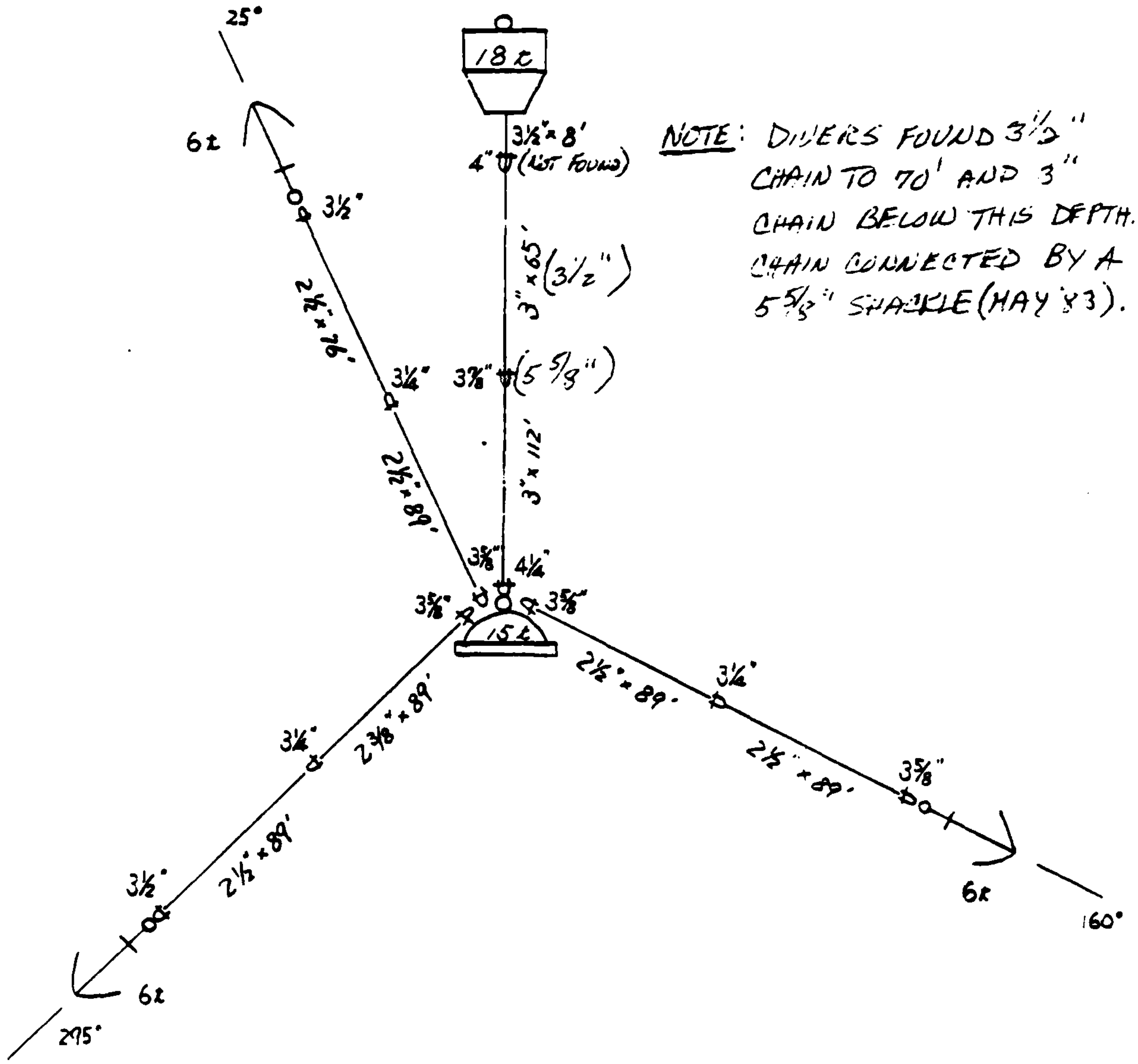
MOORING BUOY NO: Y-1 BUOYANCY: 18 TONS TYPE: ________

DEPTH OF WATER: 112 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 1181 NEXT OVERHAUL: 6185

NNUAL USAGE: 30 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



CHESNAVFACENGCOM REPORT FPO-1-83(29), ... ERWATER INSPECTION REPORT

INSPECTION RESULTS

MOORING Y-2

Buoy

This is an 13-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 54-inch freeboard. The chafing rail is dented but has no rust. The fiberglass coating and fenders are in good condition. The bottom is covered with 3 inches of marine growth.

Riser

The first 60 feet of the riser is 3 1/2-inch chain. From the 60-foot level to the bottom (120 feet), the riser consists of 3-inch chain. All measurements were greater than 90 percent of the chain's original wire diameter except near the bottom where double link measurements taken were between 80 and 90 percent. About 20 feet of the riser rests on the bottom before the chain enters the mud.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class B mooring loads. It is uncertain that the leg/sinker/anchor arrangement shown in the as-built drawing can adequately resist the 125,000 lb. design load of a class B mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

MOORING NO Y-2 CLASS: B LOCATION: COMFLEACT SASEBO LAT: — LONG: —

WATER DEPTH 120' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE ☒ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5'-10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION: NEW	SINGLE LINK % 90+	SINGLE LINK % 80+	SINGLE LINK % 80-	DOUBLE LINK % 90+	DOUBLE LINK % 80+	DOUBLE LINK % 80-	D	COMMENT
BUOY HARDWARE											13' BUOY. 54" FREEBOARD. RUB
5 1/4" SHACKLE											RAIL DENTED - NO RUST.
											FIBERGLASS/FENDERS OK. 3"
											GROWTH ON BOTTOM.
											CALIPER MEASUREMENTS
RISER	NEAR BUOY		3 1/2"	✓✓✓			✓✓✓			10'	6 3/8" D.L. (x3)
	MIDDLE		3"	✓✓✓			✓✓✓			60'	5 3/4", 5 7/8", 5 7/8" DL.
	NEAR GRD RG		↓	✓✓✓			✓✓✓			110'	5 1/2" (x3) D.L.
~~GROUND RING~~			↓	✓✓✓			✓✓✓			112'	6" (x3) D.L. / 3 3/4" SHACKLE AT 115'
~~GROUND LEG NO A~~	~~UPPER END~~		↓					✓✓✓		118'	20' OF RISER ON BOTTOM BEFORE
	~~MIDDLE~~		↓								ENTERING MUD. 4 7/8" (x3) D.L.
	~~ENTERS BOTTOM~~										
GROUND LEG NO A	UPPER END	↓									
	MIDDLE	↓									
	ENTERS BOTTOM	↓									
GROUND LEG NO B	UPPER END	↓									
	MIDDLE	↓									
	ENTERS BOTTOM	↓									
GROUND LEG NO C	UPPER END	↓									
	MIDDLE	↓									
	ENTERS BOTTOM	↓									

DATE 13 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: HARDING/COTTELLESSA/DEMING/PATIERNE/REYNOLDS/LITTLE

[illegible] "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

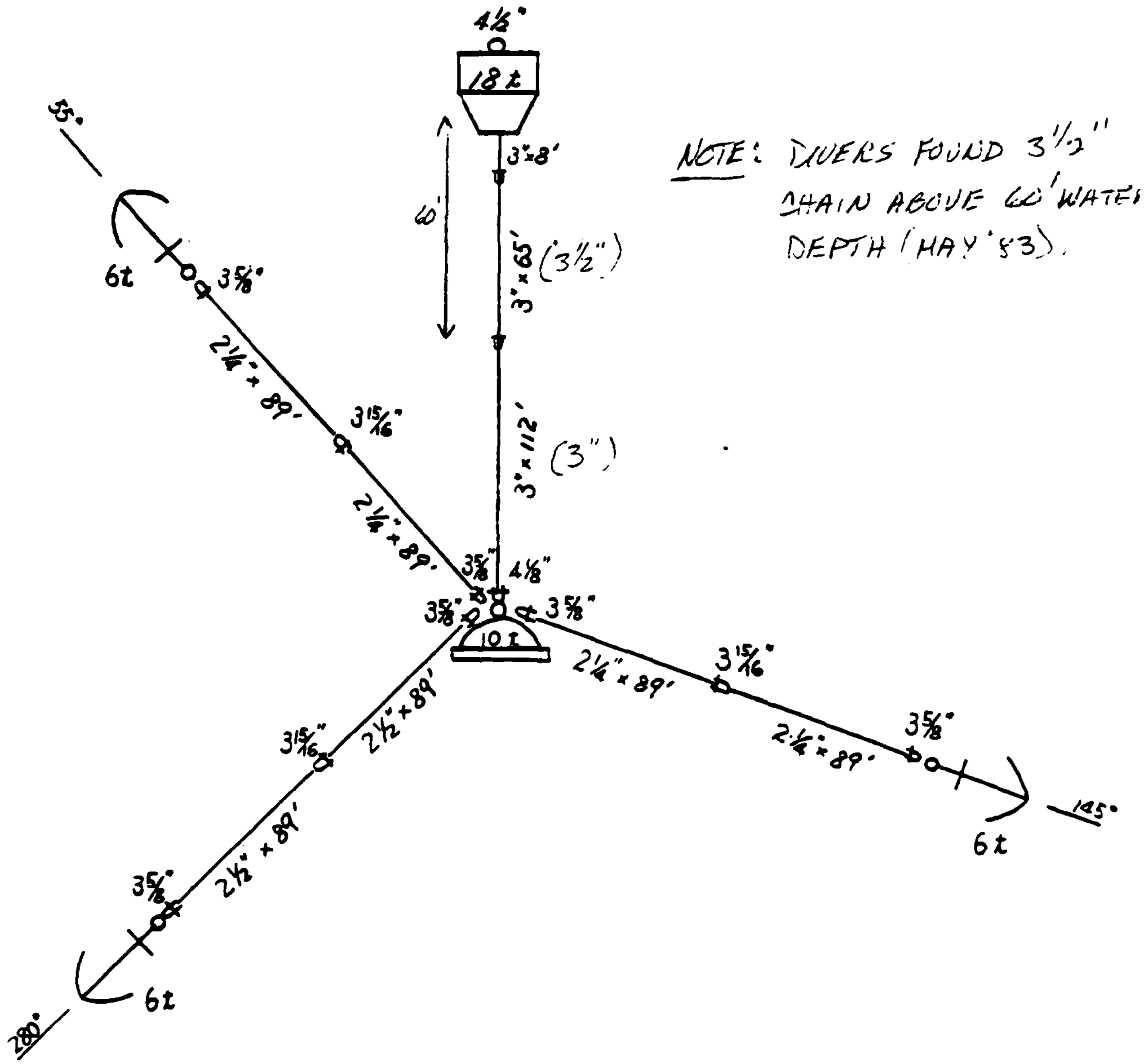
MOORING BUOY NO: Y-2 BUOYANCY: 18 TONS TYPE: ______

DEPTH OF WATER: 112 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 11.81 NEXT OVERHAUL: 71.85

ANNUAL USAGE: 30 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



FACENGCOM REPORT FPO-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT,"

INSPECTION RESULTS

MOORING Y-3

Buoy

This is an 13-foot-diameter Japanese designed and built drum-type buoy with a hawsepipe. The buoy is fiberglass coated and has a 46-inch freeboard. The hawsepipe and top jewelry have been recently painted. The top fender has several bolts that have pulled free. The buoy's bottom looks good.

Riser

The riser consists of 3 1/2- and 3 1/4-inch chain vice the 2 1/2-inch required for a class B mooring. Some of the double link measurements revealed that sections of the riser are worn to between 80 and 90 percent of the chain's original wire size. There are 12 chain links on the bottom before the riser enters the bottom. There is no marine growth on the riser chain.

Sinker/Ground Legs/Anchors

Not visible for inspection.

Recommendation

This mooring is in fair condition.

A measurement between 80 and 90 percent of any mooring component is normally cause for a mooring to be downgraded to the next lower class of mooring. However, in this case, the larger-than-required original wire diameter of the riser chain allows it to still be capable of withstanding class B mooring loads. It is uncertain that the leg/sinker/anchor arrangement shown in the as-built drawing can adequately resist the 125,000 lb. design load of a class B mooring. Recommend a review of the forces on the moored vessel(s) and the design of the mooring.

COMFLEACT

MOORING NO. Y-3 CLASS: B LOCATION: SASEBO LAT: — LONG: —

WATER DEPTH: 65' ANCHOR SIZE/TYPE: NI BUOY TYPE: HAWSEPIPE

BOTTOM TYPE: ☐ SAND ☒ MUD ☐ CLAY ☐ CORAL ☐ ROCK Visibility 5'-10' D = depth NI = not inspected, inaccessible

COMPONENTS		NI	CONDITION							COMMENT
			NEW	SINGLE LINK %			DOUBLE LINK %			D	
				90+	80+	80-	90+	80+	80-		
BUOY HARDWARE											13' DIAMETER. 46" FREEBOARD.
6" SHACKLE											HAWSEPIPE AND TOP JEWELRY
											RECENTLY PAINTED. SEVERAL
											SPRUNG FENDER BOLTS. BOTTOM
											LOOKS GOOD.
RISER	NEAR BUOY		3½"	✓			V	VV		<10'	3½" GO/NO-GO GUAGE USED
	MIDDLE		3¼"	✓			VVV			40'	
	NEAR GRD RG		↓	✓				VVV		65'	12 LINKS ON BOTTOM BEFORE
GROUND RING											ENTERING MUD. LAST 5' RUSTY
GROUND LEG NO A	UPPER END										NO MARINE GROWTH
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO B	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										
GROUND LEG NO C	UPPER END										
	MIDDLE										
	ENTERS BOTTOM	↓									
GROUND LEG NO D	UPPER END										
	MIDDLE										
	ENTERS BOTTOM										

DATE 13 MAY 83 ENGINEER IN CHARGE: T. JONES DIVERS: MILLER MESERVE

CINCPACFLTENGCOM REPORT EPD-1-83(28), "COMFLEACT SASEBO FLEET MOORING UNDERWATER INSPECTION REPORT."

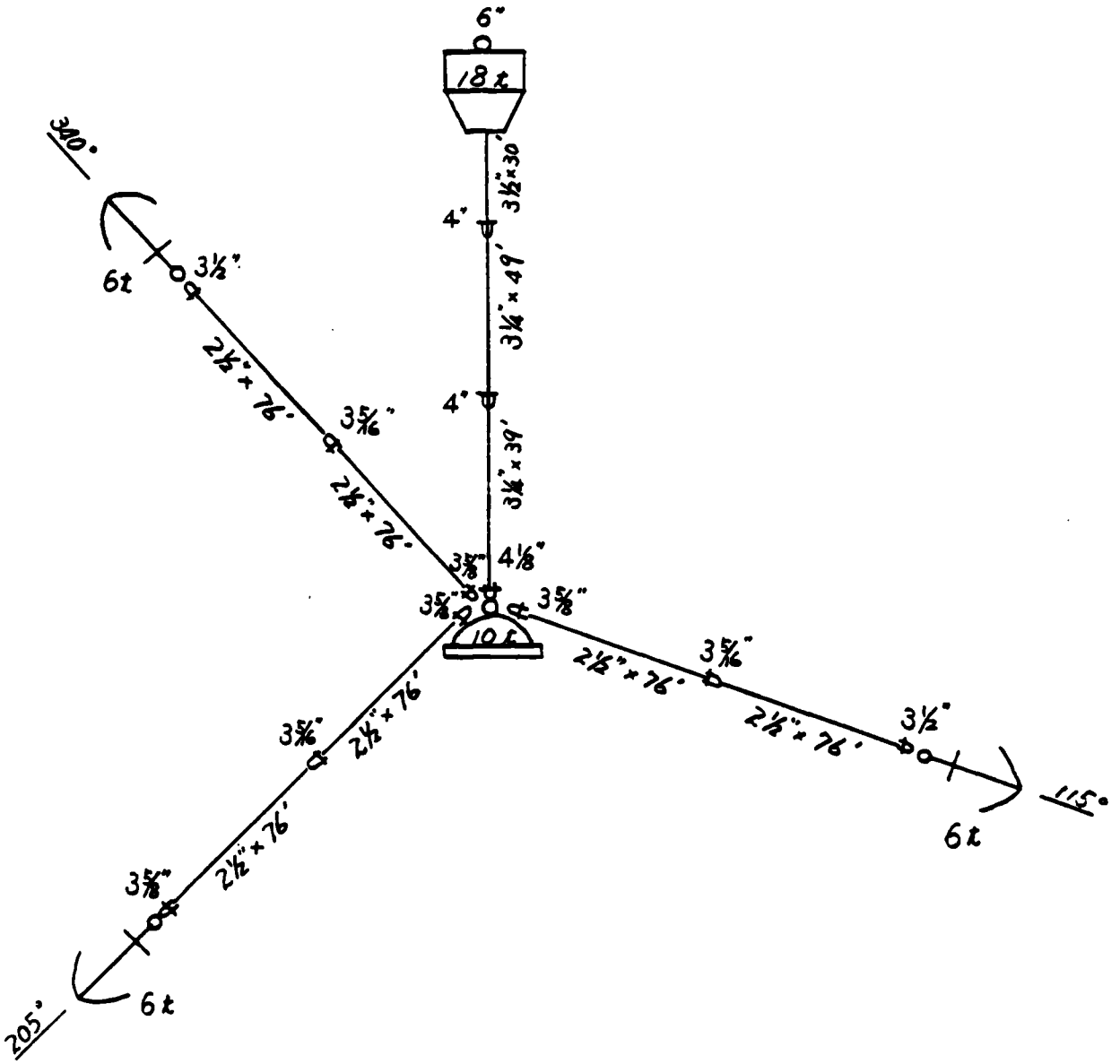
MOORING BUOY NO: Y-3 BUOYANCY: 18 TONS TYPE: _____

DEPTH OF WATER: 74 FT CONDITION OF BOTTOM: MUD

LAST OVERHAULED: 1181 NEXT OVERHAUL: 8185

ANNUAL USAGE: 30 DAYS DATE: 4-1-83

ANTICIPATED USAGE/TYPE: UNKNOWN



ANNEX B

BUOY LOCATION SURVEY DATA

ANNEX B

SASEBO BUOY LOCATION SURVEY DATA. PWC SASEBO provided the inspection team with maps of the six areas in Sasebo Bay which contain fleet moorings. These areas are as follows:

JULIET BASIN
MAEBATA AREA
HARIO SHIMA (NORTH END)
HARIO SHIMA (SOUTH END)
YOKOSE TERMINAL
IORIZAKI AREA

Applicable sections of these maps which depict the geographic locations of the benchmarks used to obtain the survey data are contained in this Annex. Descriptions of these benchmarks, their specific geographic locations, and the buoy angles measured from each benchmark follow. All photographs referenced in these descriptions are contained in Annex C.

Juliet Basin

Description of Benchmark J-1 - located on the western wall of Juliet Basin on a concrete jetty supporting a steel crane at the eastern end of building 140. The benchmark is a red X with an orange painted circle around it near a yellow bollard halfway between the end of the concrete and the crane footing. Photographs S-1 and S-2 show details of Benchmark J-1. See Figure B-1 for location of this benchmark on the map.

Description of Benchmark J-2 - located on the helipad at the western side of the entrance to Juliet Basin. The benchmark is a red plastic marker with an orange painted circle around it located approximately 15' west and 15' north of the SE inner corner of the low walk. See Figure B-1 for location on the map. Photographs S-3 and S-4 show Benchmark J-2.

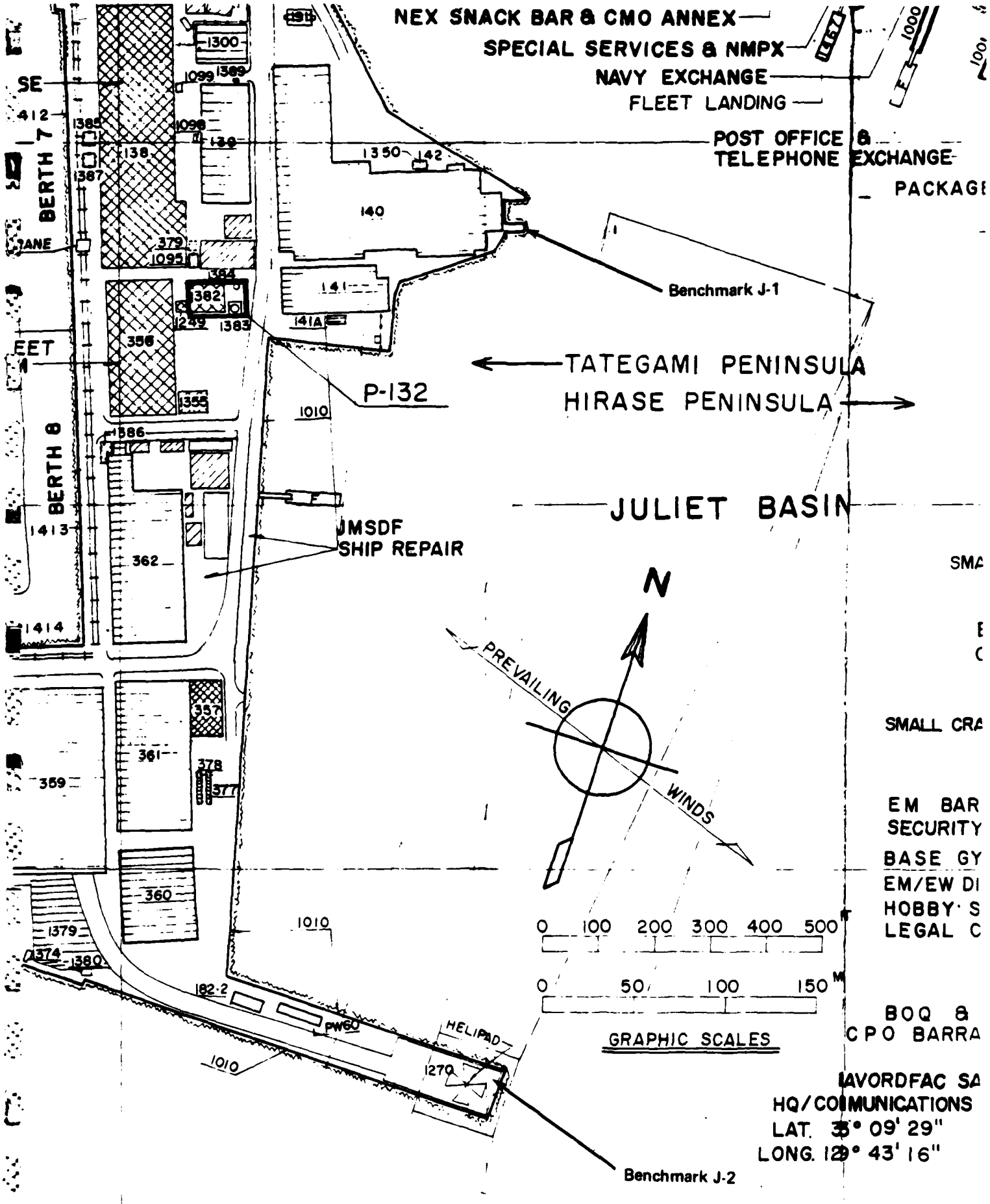


FIGURE B-1. JULIET BASIN (J-1/J-2)

Description of Benchmark J-3 - located on top of southern most concrete jetty on east side of the mouth of Juliet Basin. The benchmark is the NE corner of a steel plate located 2 feet south and 2 feet east of the NW corner of the jetty next to the HQ/Communications building (see Figure B-2). It also is marked by a painted red X and a circle. Photograph S-5 is a picture of Benchmark J-3.

Angles Measured at Benchmark J-1

Buoy	Clockwise Angle from "J-3"		
T-12	28°	32'	40"
T-17	28°	36'	00"
T-13	30°	38'	20"
T-16	30°	40'	00"
T-11	33°	47'	40"
T-14	35°	49'	40"
T-10	38°	23'	00"
T-15	38°	44'	00"
To "J-2"	33°	52'	00"
S2S	-150°	33'	20"
S2N	-166°	34'	00"

Angles Measured at Benchmark J-2

Buoy	Clockwise Angle from "J-3"		
1-S	97°	59'	00"
1-N	97°	38'	40"
T-13	-66°	29'	20"
T-12	-68°	41'	00"
T-17	-86°	14'	20"
T-16	-86°	18'	00"
T-11	-92°	25'	40"
T-14	-108°	31'	00"
T-10	-108°	52'	20"
T-15			
To "A"	-92°	32'	00"

Angles Measured at Benchmark J-3

Buoy	Clockwise Angle from "J-1"		
S-2S	5°	14'	40"
S-2N	3°	09'	40"
T-17	-20°	08'	40"
T-16	-26°	46'	40"
T-11	-37°	21'	20"
T-12	-37°	25'	40"
T-10	-38°	07'	40"
T-13	-44°	20'	00"
T-14	-45°	05'	20"
T-15	-45°	44'	20"
1N	-97°	39'	40"
1S	-111°	18'	20"
Approximate Angle to Benchmark J-2	-53o	49'	20"

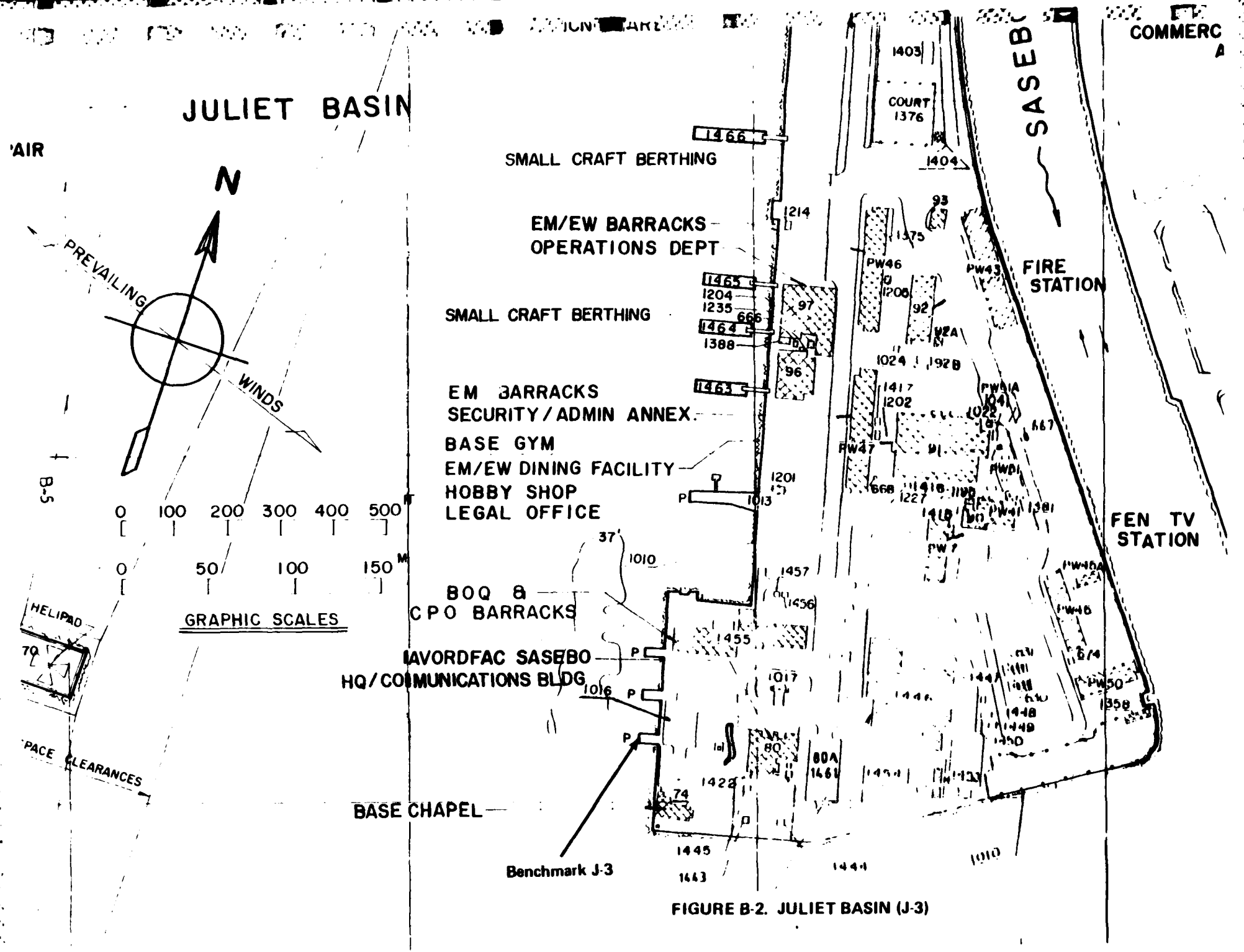


FIGURE B-2. JULIET BASIN (J-3)

Maebata Area

Description of M-1 - located on the seawall in front of building 728, 69 feet NE of the corner of the wall shown in Figure B-3. The benchmark is an orange painted circle with an X in the center on a rack about 2 feet from the edge of the wall. See Photograph S-6 for a close up view.

Description of M-2 - located on the same wall as M-1, 114 feet NE of M-1. The marker is an orange painted circle with an X in the center on concrete. Figure B-3 shows the location and Photograph S-7 is a close up view of the benchmark.

Description of Backsight - From both M-1 and M-2, the peaked front center of the roof of Building 728 shown in Photograph S-8.

Angles Measured at Benchmark M-1				Angles Measured at Benchmark M-2			
Buoy	Clockwise Angle from Bld. 728			Buoy	Clockwise Angle from Bld. 728		
M-12	189°	13'	40"	M-13	119°	21'	00"
M-11	214°	23'	00"	M-12	139°	04'	40"
M-10	230°	36'	20"	M-11	170°	41'	20"
M-15	250°	17'	40"	M-10	191°	52'	40"
M-14	250°	17'	40"	M-15	207°	16'	00"
M-13*				M-14	211°	25'	20"

* Note: M-13 in process of being overhauled.
YD blocking view of buoy.

Hario Shima - North End

Description of H-1 - located 3 feet north and 3 feet east of SW corner of pier with Building 984 on it. Figure B-4 shows the location. The marker is an orange painted circle with an X in the center. Photograph S-9 shows the details.

Description of H-2 - located 244' 10" east of H-1 on the same pier. See Figure B-4 for location and Photograph S-10 for details.

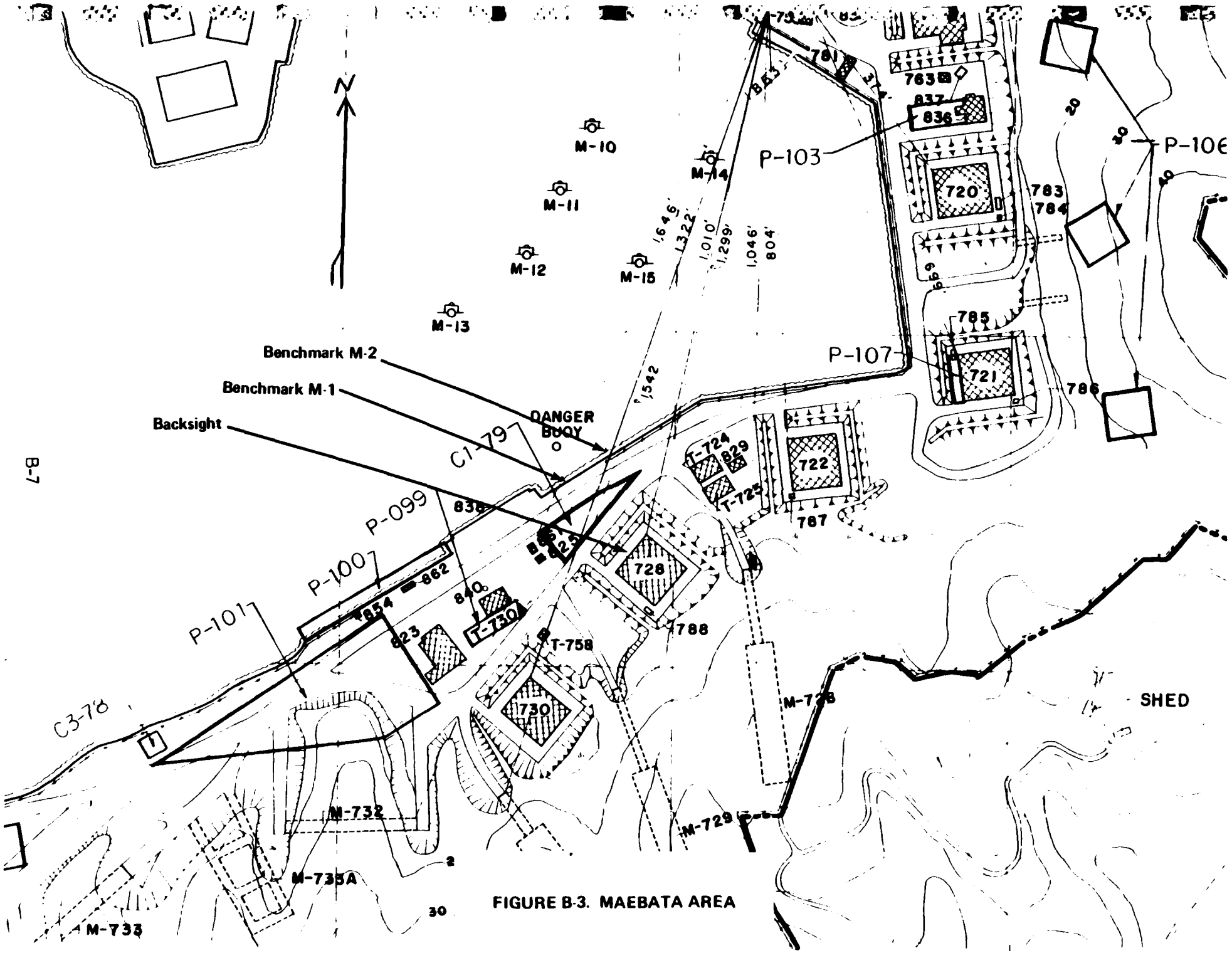


FIGURE B-3. MAEBATA AREA

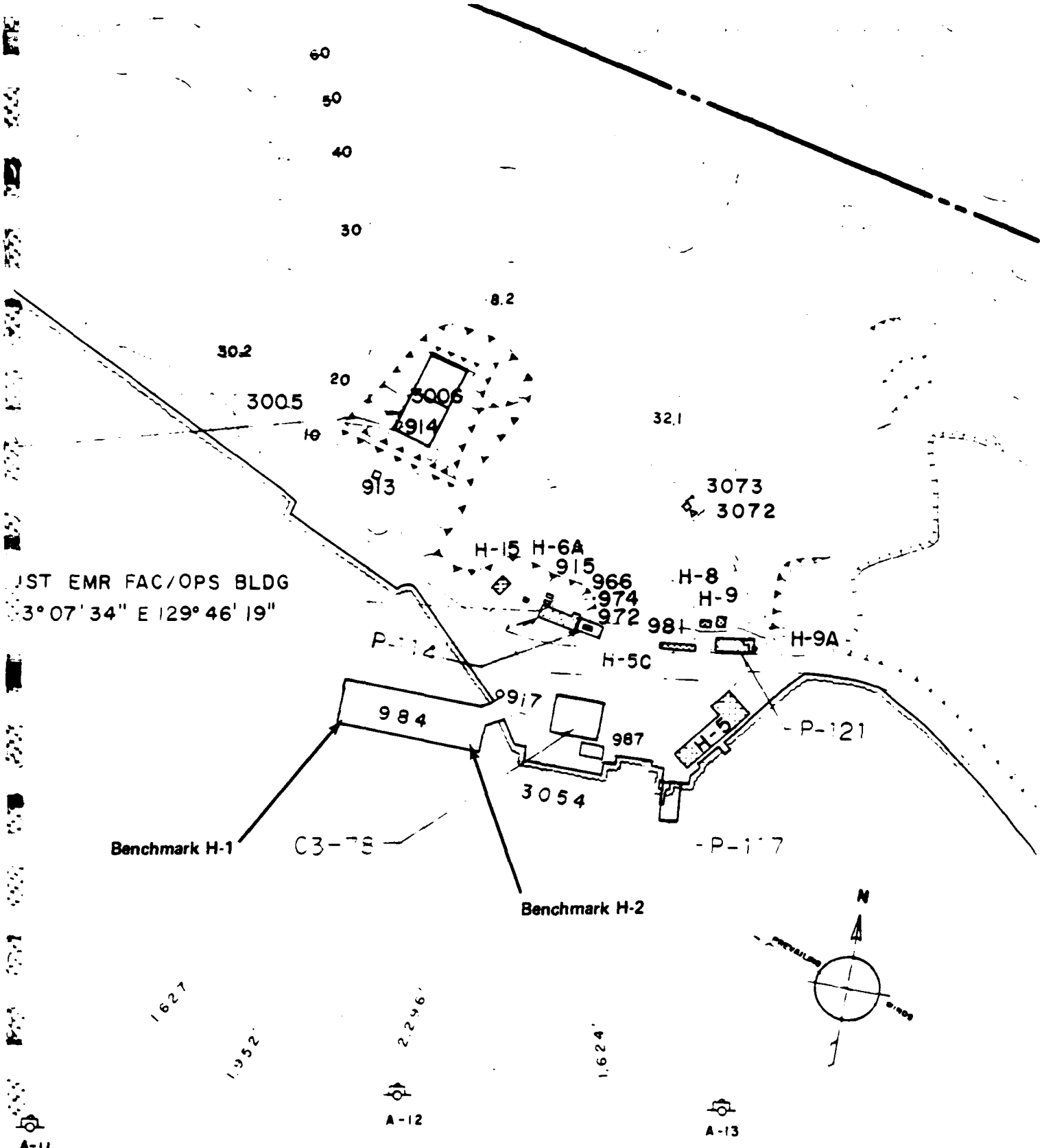


FIGURE B-4. HARIO SHIMA-NORTH END

Angles Measured at Benchmark H-1				Angles Measured at Benchmark H-2			
Buoy	Clockwise Angle from H-1			Buoy	Clockwise Angle from H-2		
A11	1°	10'	40"	A13	35°	47'	20"
A12	-102°	14'	00"	A12	53°	49'	20"
A13	-130°	34'	40"	A11	179°	20'	00"

Hario Shima - South End

Description of H-3 - located at bend in seawall near Buildings 772 and 3052B. The benchmark is an orange painted circle with an X in the center on the concrete cap of the wall. Figure B-5 shows the location on the base map and Figure B-6 shows the position of utility pole #16 (see utility pole map) which is near the benchmark. Photograph S-11 shows Benchmark H-3.

Description of H-4 - located on same wall as H-3, 273 feet north near utility pole #18 (see utility pole map). The marker is similar to H-3. See Figures B-5 and B-6. Photograph S-12 shows pole #18 while Photograph S-13 is a closeup of the H-4 marker.

Angles Measured at Benchmark H-3				Angles Measured at Benchmark H-4			
Buoy	Clockwise Angle from H-3			Buoy	Clockwise Angle from H-4		
A14	-352°	28'	00"	A14	-173°	48'	40"
A15	-347°	10'	40"	A15	-167°	34'	40"
A16	-341°	15'	40"	A16	-159°	06'	40"
A17	-332°	06'	00"	A17	-142°	45'	20"
A18	-294°	47'	40"	A18	-83°	15'	20"
A19	-252°	22'	40"	A19	-65°	22'	00"

Yokose Terminal

Description of Benchmark Y-A - located at corner of wall as shown in Figure B-7. The benchmark is an orange circle with an X in the center painted on the concrete top of the wall. Photograph S-14 shows the details of Y-A.

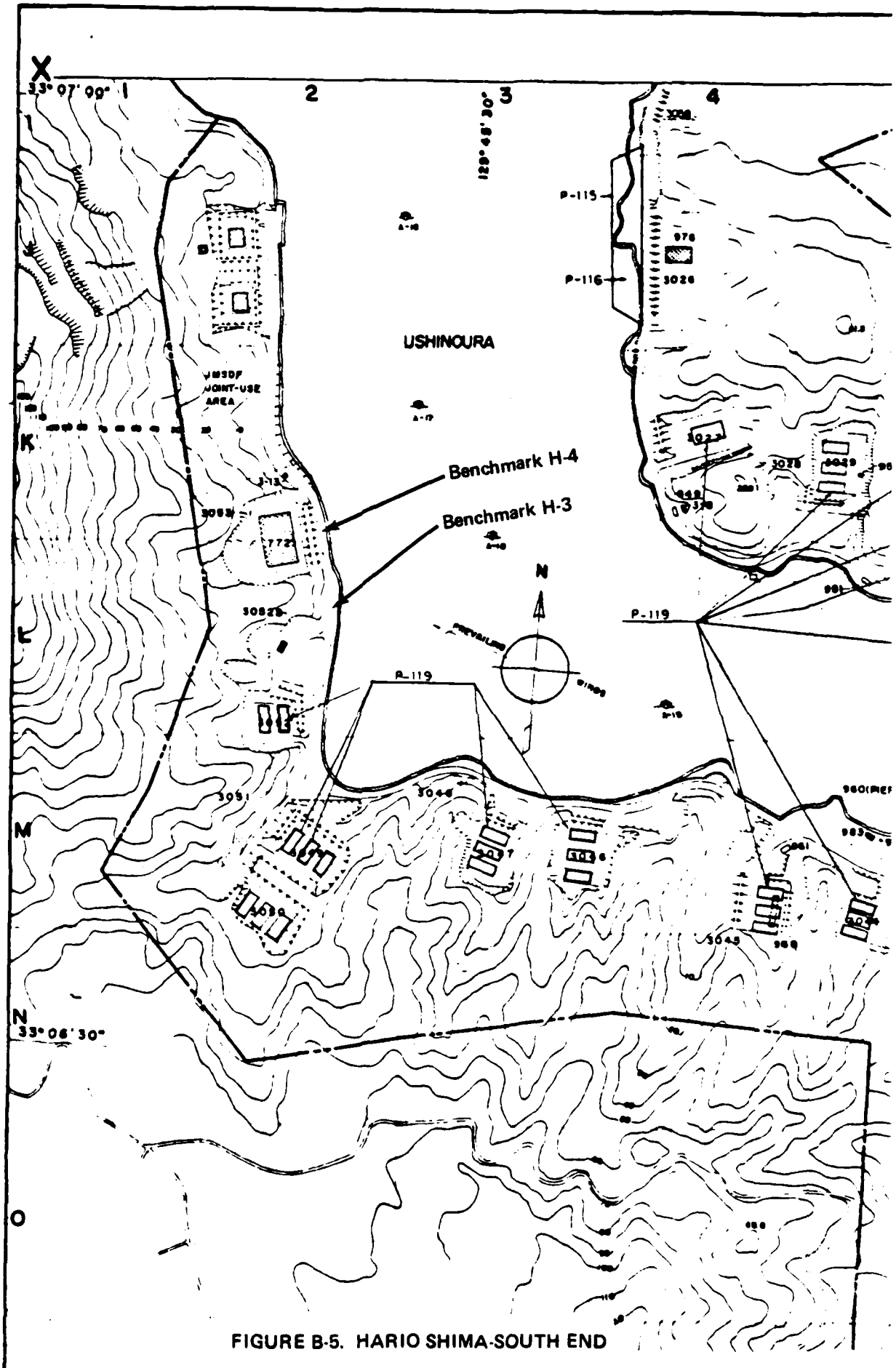


FIGURE B-5. HARIO SHIMA-SOUTH END

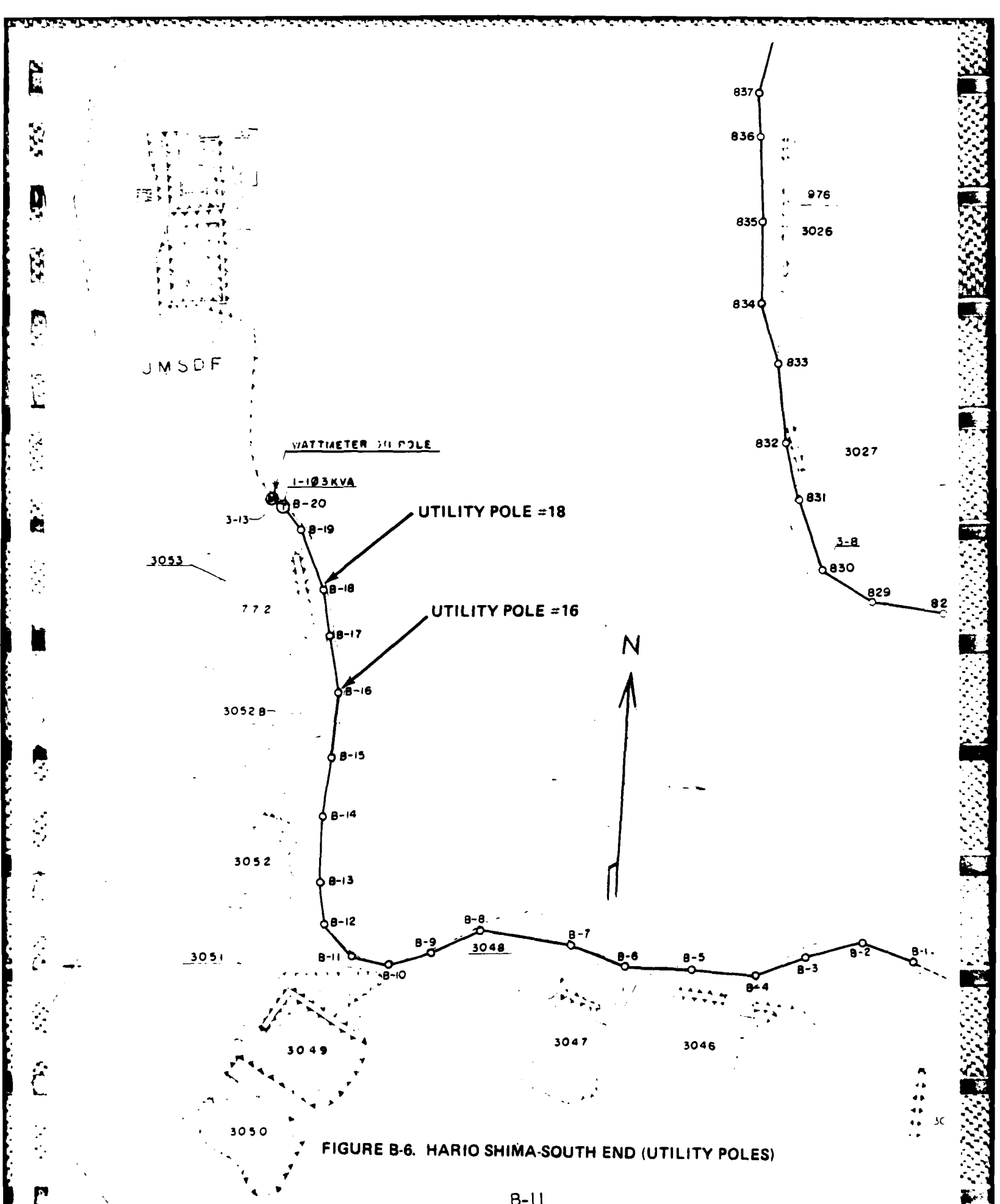


FIGURE B-6. HARIO SHIMA-SOUTH END (UTILITY POLES)

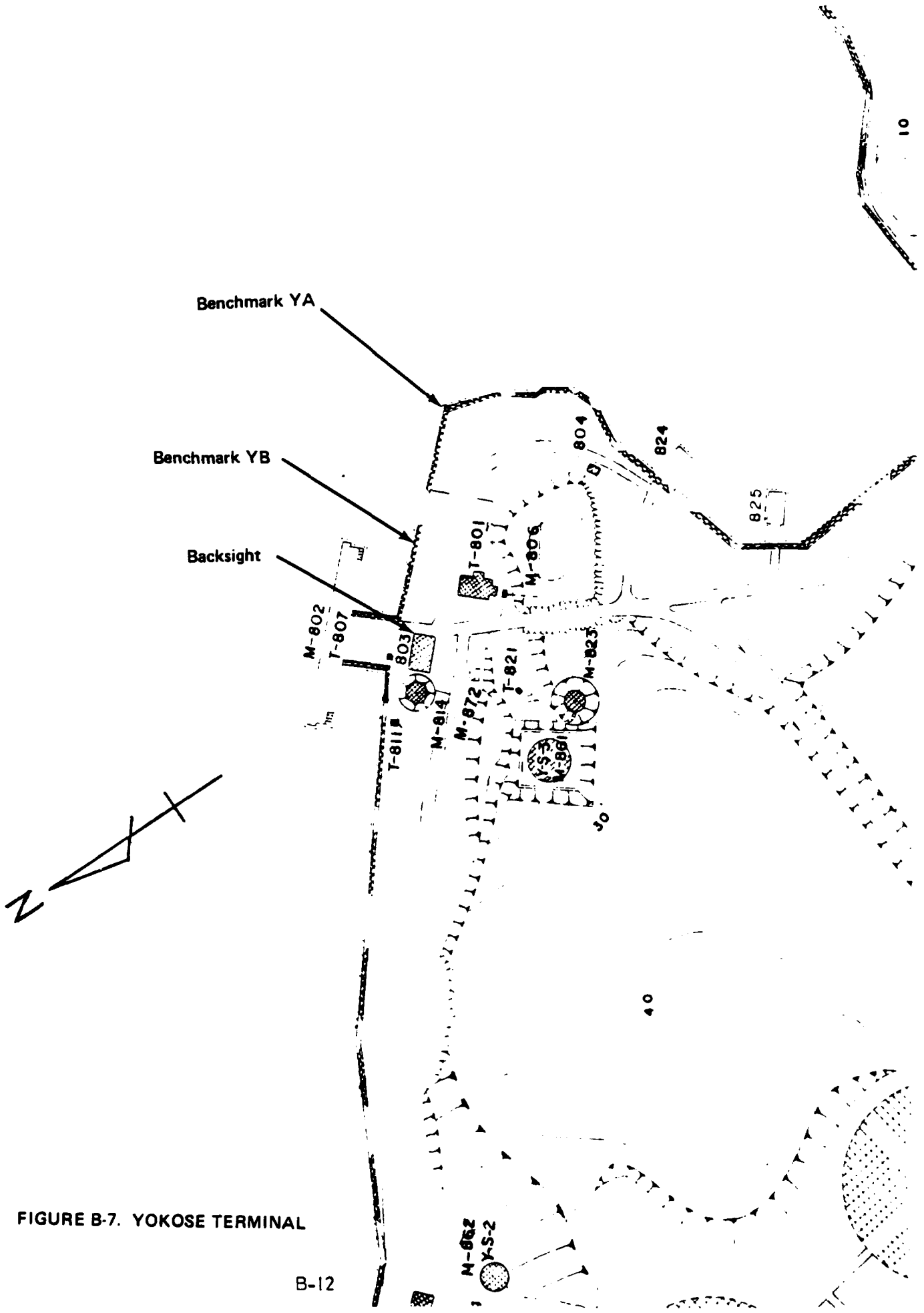


FIGURE B-7. YOKOSE TERMINAL

Description of Benchmark Y-B - located 181' 4" west of Y-A on the same wall and is similarly marked. See Figure B-7. Photograph S-15 shows a distant view of Y-B.

Description of Backsight - The NW corner of Building 803.

Angles Measured at Benchmark Y-A				Angles Measured at Benchmark Y-B			
Buoy	Clockwise Angle from Bld. 803			Buoy	Clockwise Angle from Bld. 803		
Y-1	20°	56'	40"	Y-1	24°	08'	00"
Y-2	154°	24'	00"	Y-2	159°	48'	20"
Y-3	196°	07'	40"	Y-3	190°	06'	40"
M-20	228°	55'	00"	M-20	214°	05'	40"
				to Y-A	79°	02'	00"

Iorizaki Area

Description of Benchmark I-A - located at NE corner of pier on top of a bollard. Figures B-8 and B-9 show the location of the mark. Photograph S-16 shows the bollard.

Description of Benchmark I-B - located on the same pier at the NW corner, 255' 6" west of I-A (see Figures B-8 and B-9, and Photograph S-18). The mark is an orange circle with an X in the center painted on the concrete.

Description pf Benchmark I-C - located at the concrete entrance to a storage tunnel labeled 710 on the facility map, see Figures B-8 and B-9. Photographs S-20 and S-21 show marker I-C and Photograph S-22 is the view of the pier from I-C looking back at I-A and I-B.

Description of Backsight - When sighting from I-A and I-B the backsight is the NW corner of Building 600, and when sighting from I-C use the NE corner of Building 600. Photograph S-17 is Building 600 from I-A. Photograph S-19 is view of Building 600 from I-B.

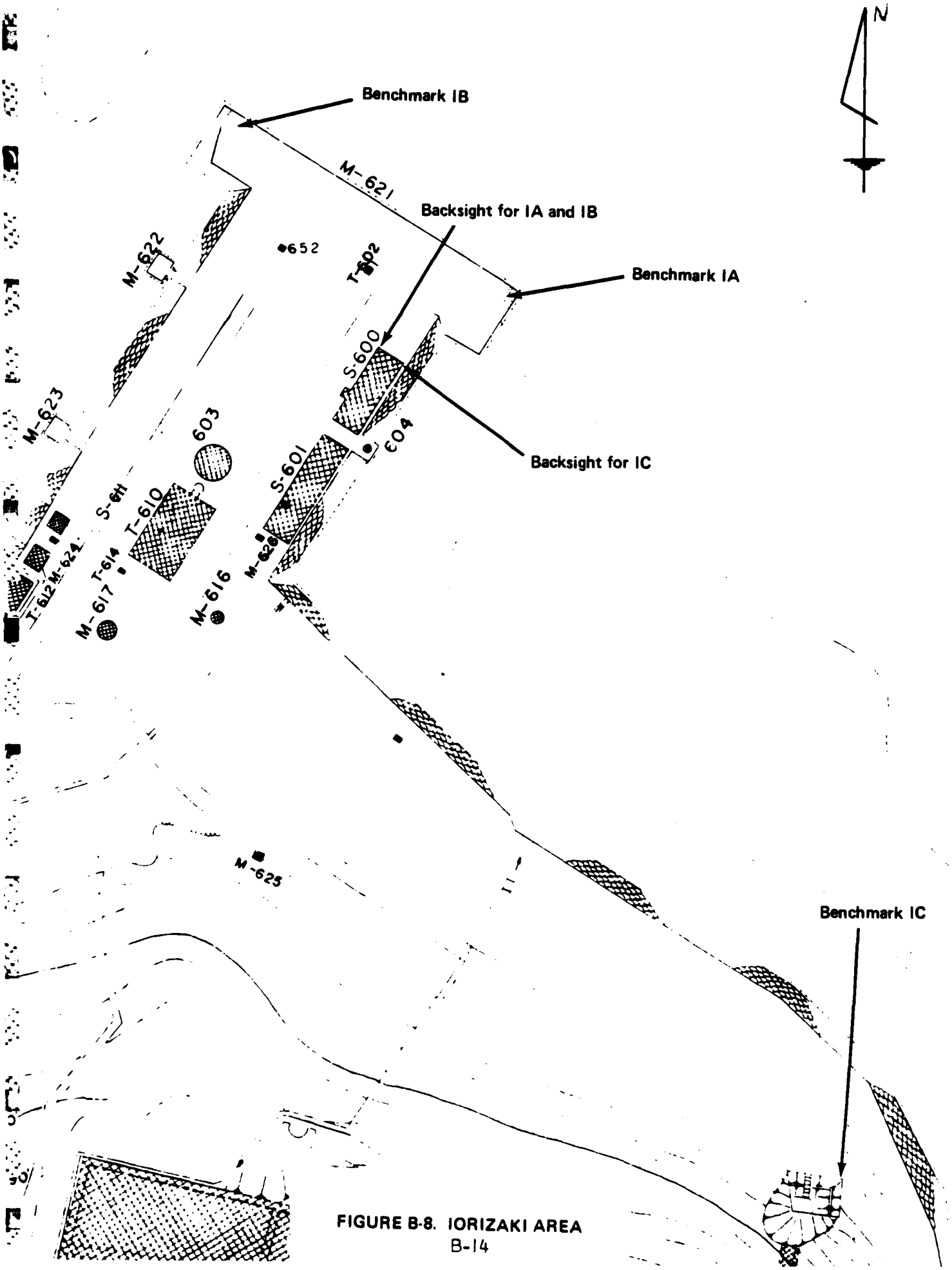


FIGURE B-8. IORIZAKI AREA

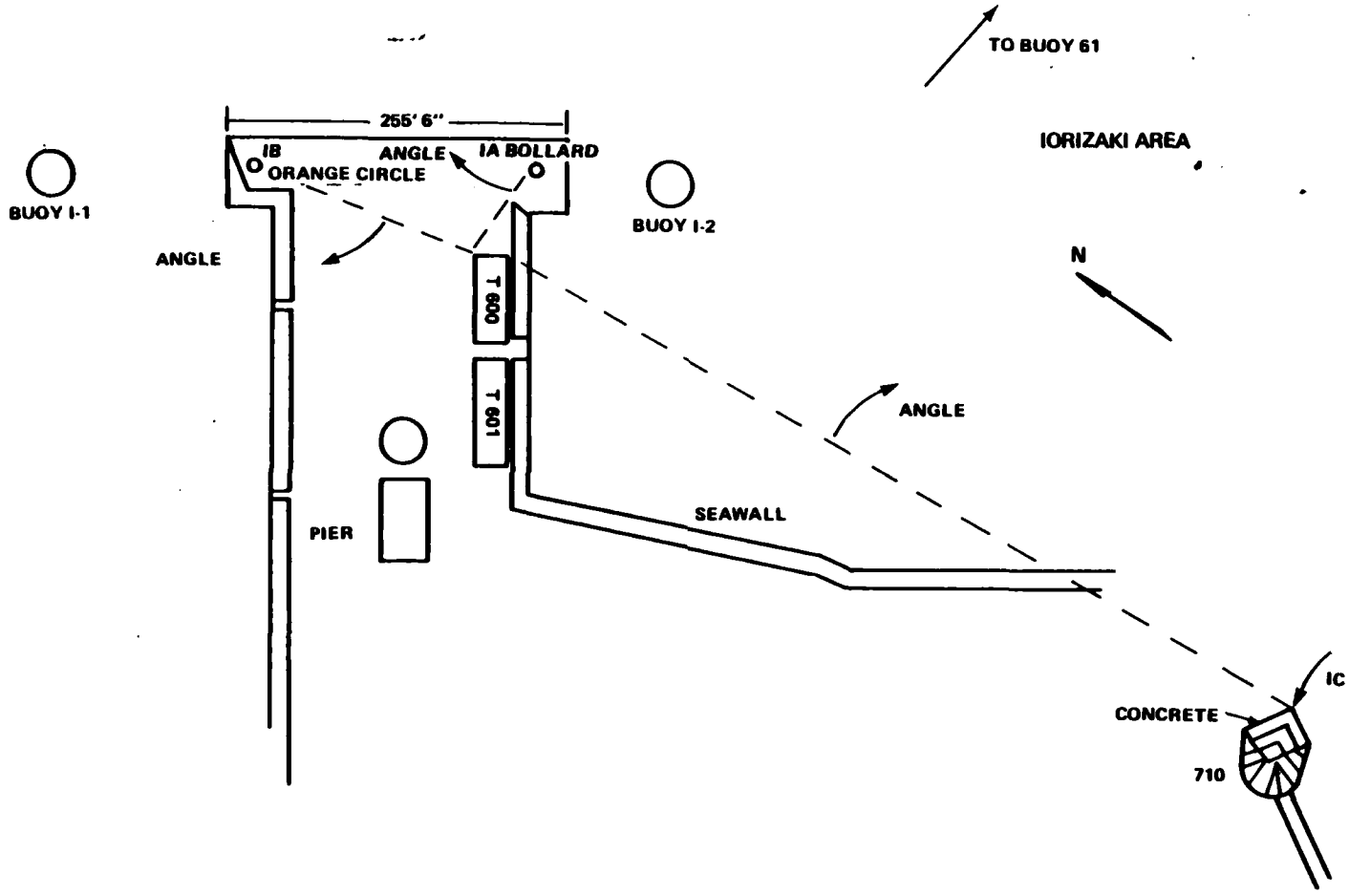


FIGURE B-9. IORIZAKI PIER

Angles Measured from Benchmark I-A

Clockwise Angle from I-A off NW Corner of T-600

Buoy I-1	54°	36'	40"	
Buoy I-2	242°	13'	40"	
Site I-B	58°	05'	00"	(as a check)
Buoy 61	211°	44'	40"	

Angles Measured from Benchmark I-B

Clockwise Angle from I-B off NW Corner of T-600

Buoy I-1	145°	44'	40"	
Buoy I-2	334°	22'	40"	
Site I-A	331°	47'	00"	(as a check)
Buoy 61	316°	01'	20"	

Angles Measured from Benchmark I-C

Clockwise Angle from I-C off NE Corner of T-600

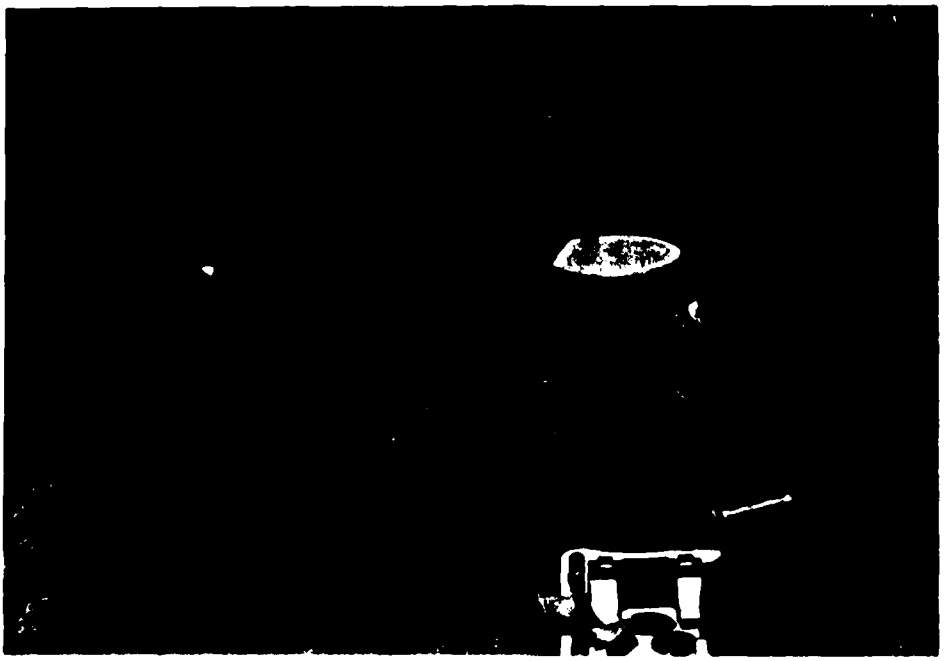
Site I-A	08°	25'	20"	(as a check)
Buoy I-2	40°	19'	00"	
Buoy 61	128°	03'	40"	

ANNEX C

PHOTOGRAPHS

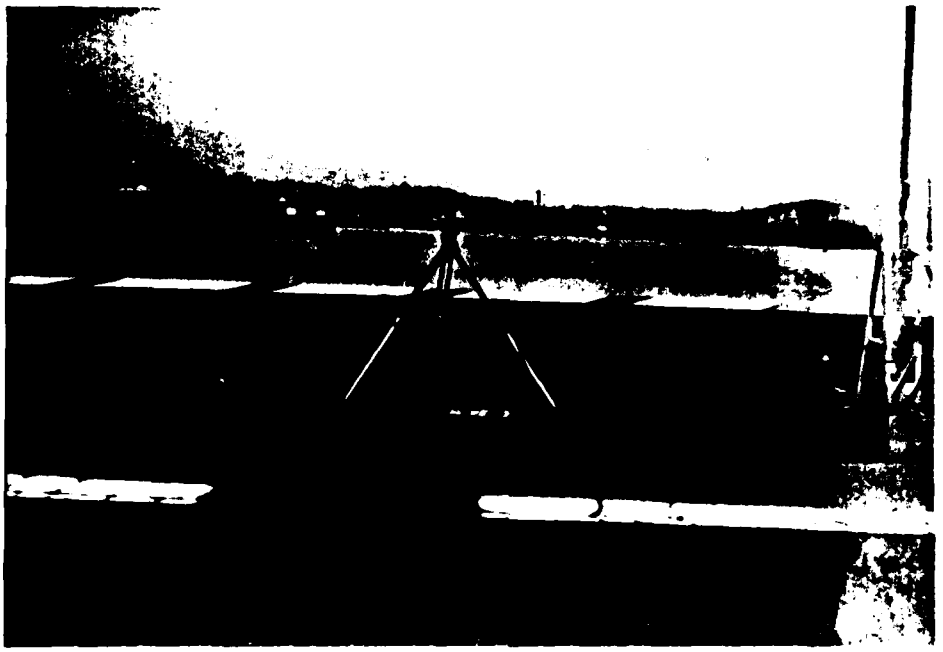
COMFLEACT SASEBO

SURVEY PHOTOGRAPHS

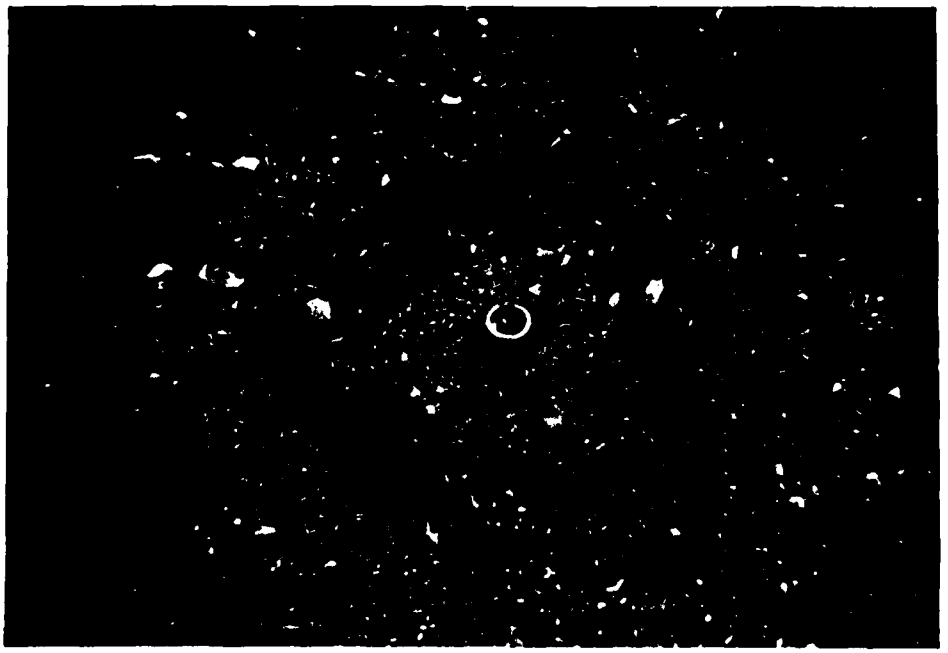


S-1. Benchmark J-1 at Juliet Basin

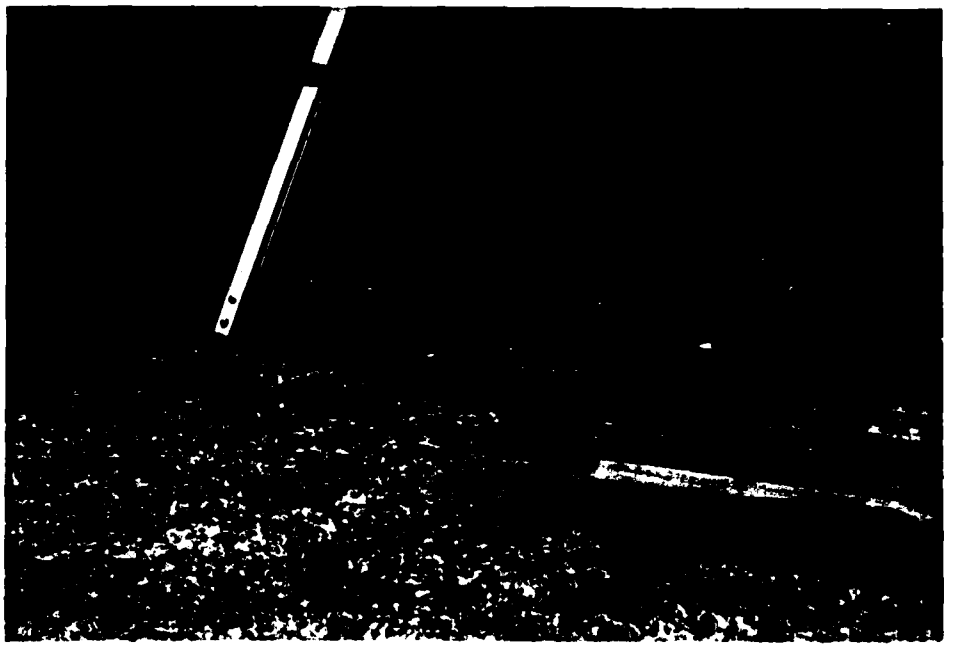
S-2. Closeup of Benchmark J-1



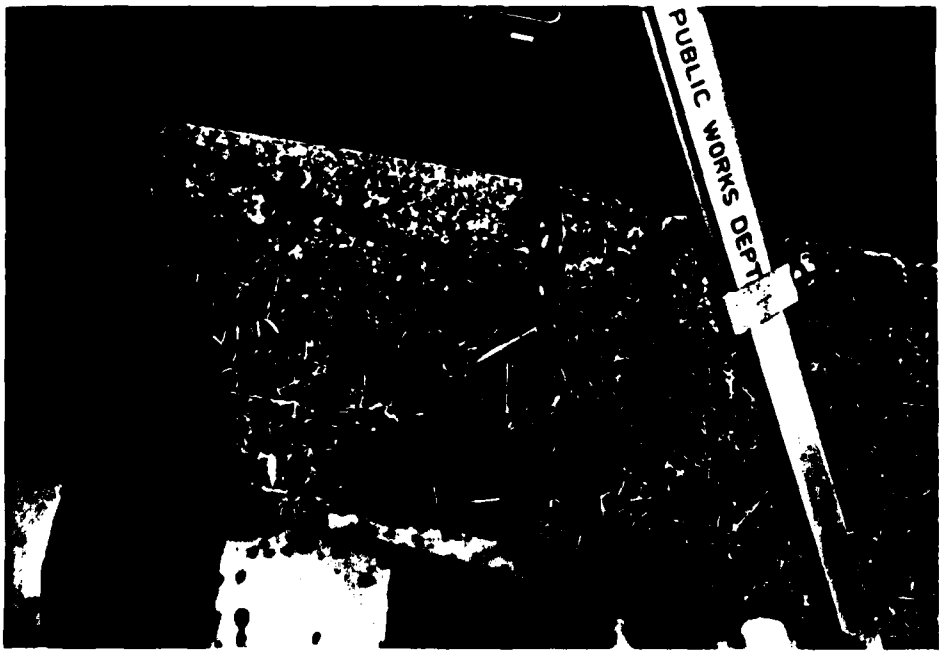
S-3. Benchmark J-2 on the Helipad at Juliet Basin



S-4. Closeup of Benchmark J-2

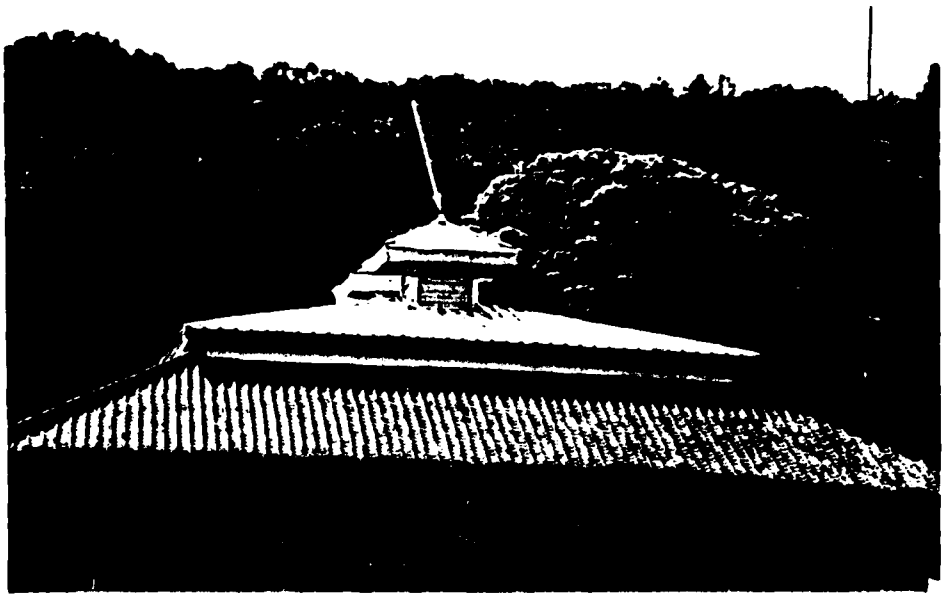


S-5. Benchmark J-3 at Juliet Basin



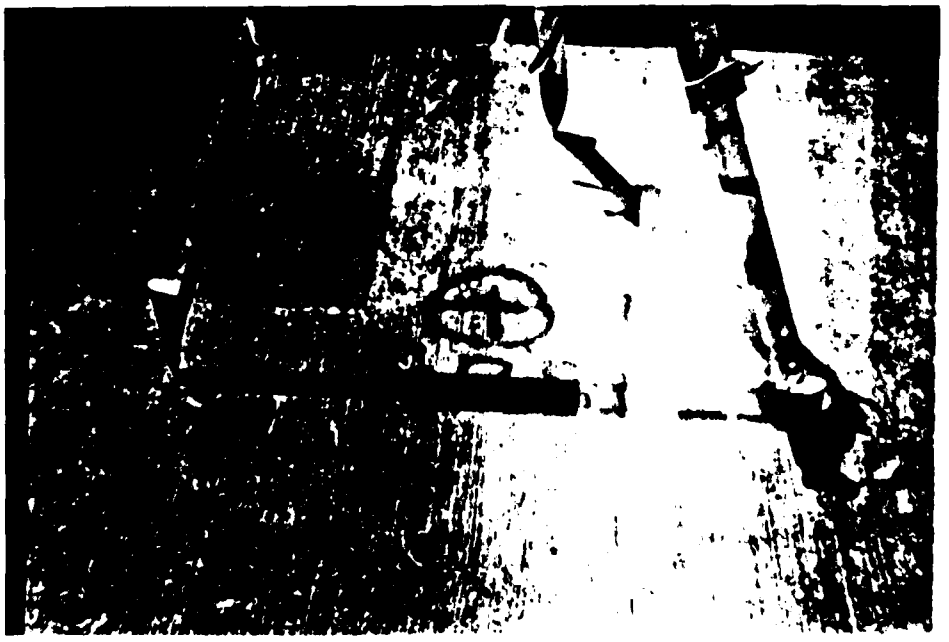
S-6. Benchmark M-1 on a Wall in the Maebata Area

S-7. Benchmark M-2 on a Wall in the Maebata Area



S-8. Building 728 at Maebata. Closer Roof Peak used as Backsight Point

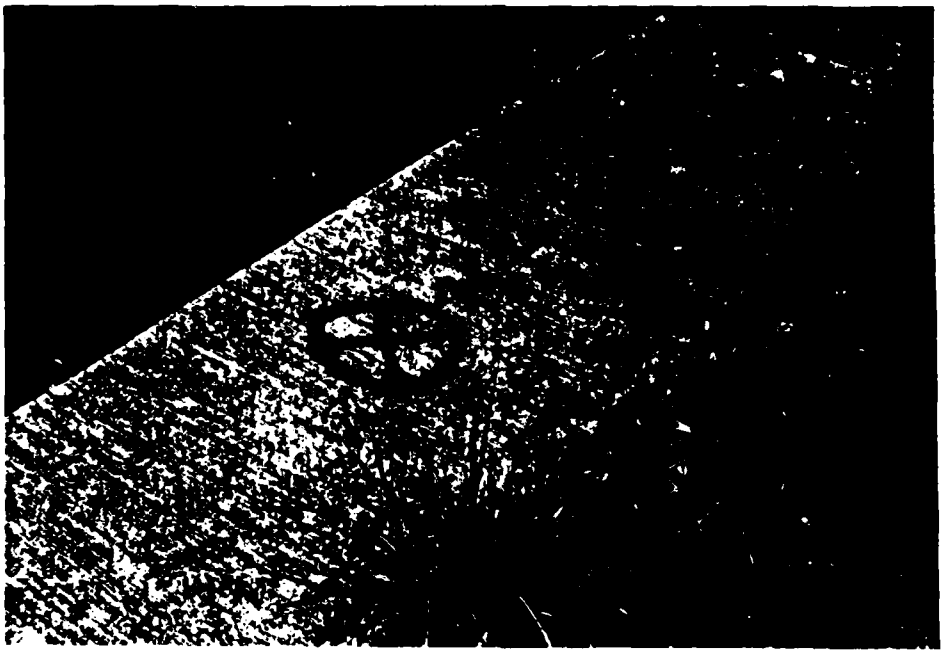
S-9. Benchmark H-1 at Hario Shima Area (North End)



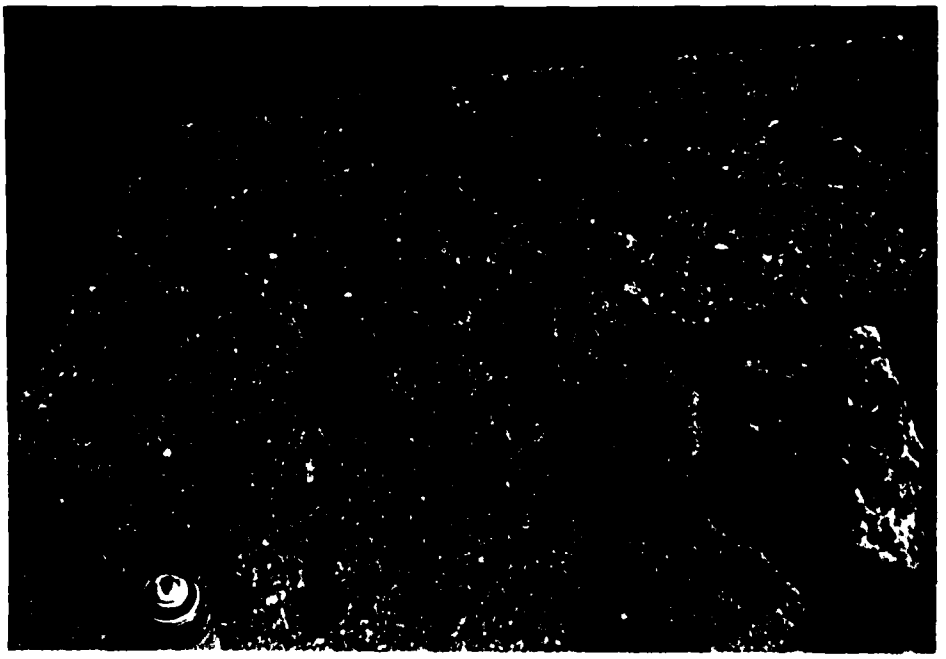
S-10. Benchmark H-2 at Hario Shima Area (North End)

S-11. Benchmark H-3 at Hario Shima Area (South End)

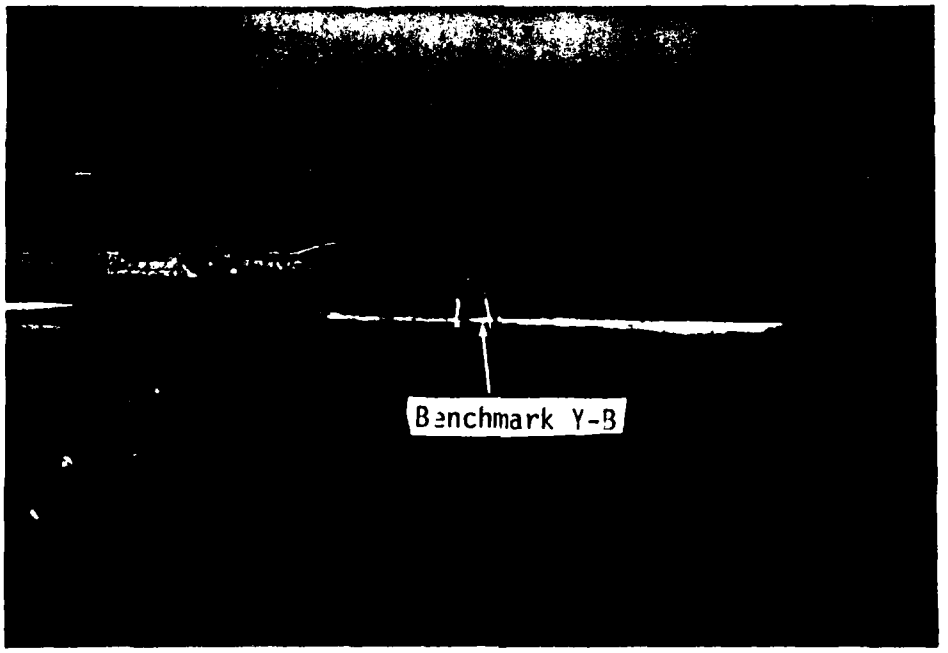
S-12. Benchmark H-4 Behind Utility Pole #18



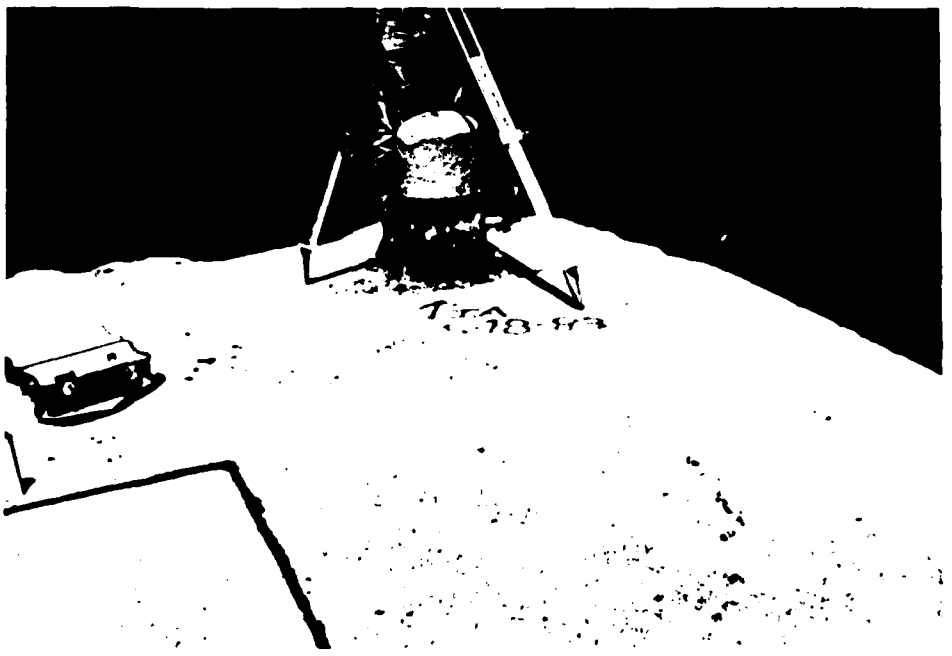
S-13. Closeup of Benchmark H-4 at Hario Shima (South End)



S-14. Benchmark Y-A at the Yokose Terminal



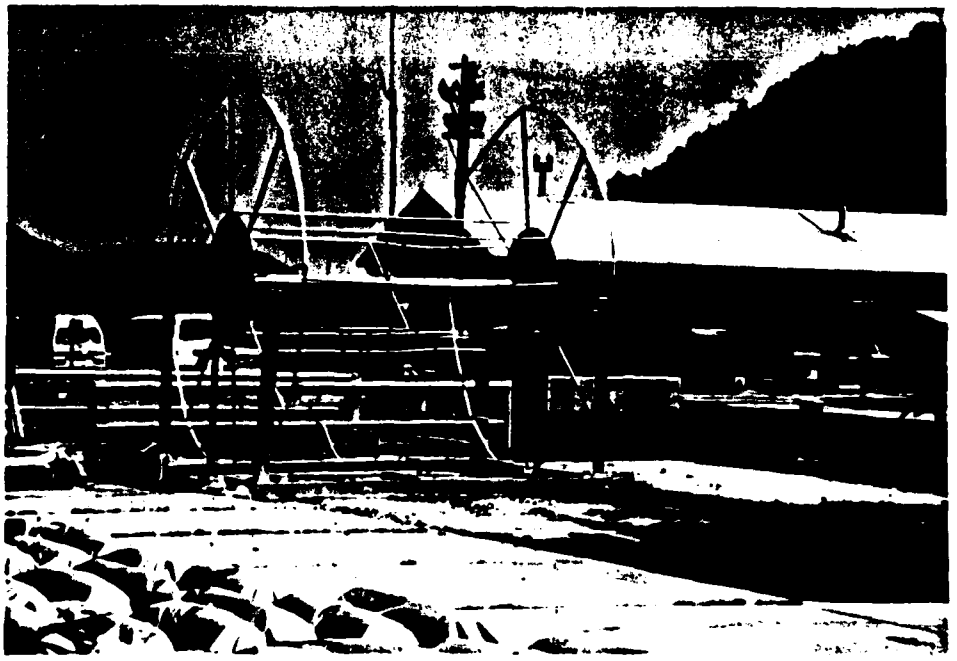
S-15. Benchmark Y-B at the Yokose Terminal



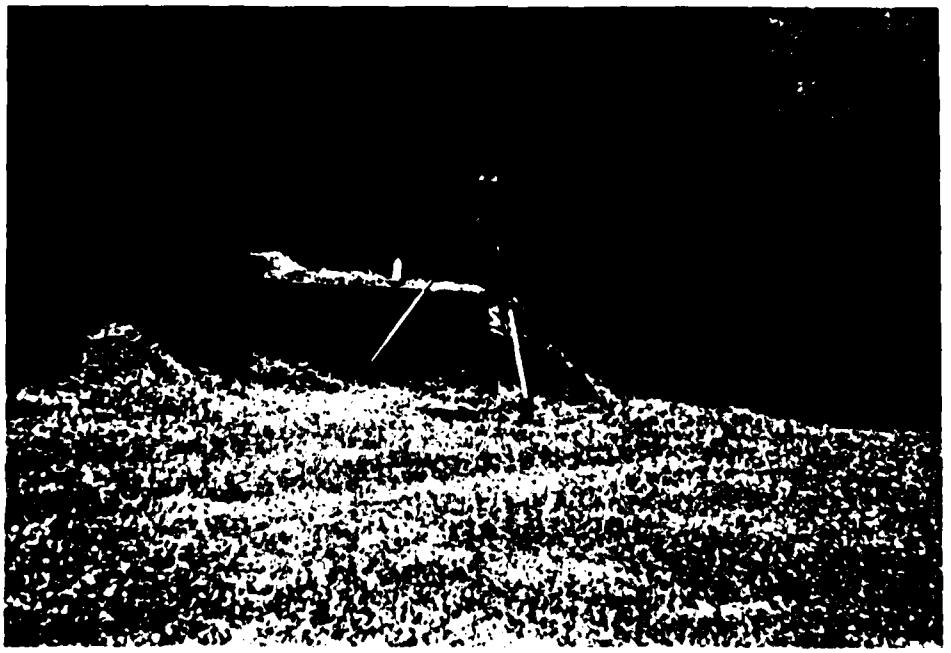
S-16. Benchmark I-A at the Iorizaki Area

S-17. View of Building 600 from Benchmark I-A

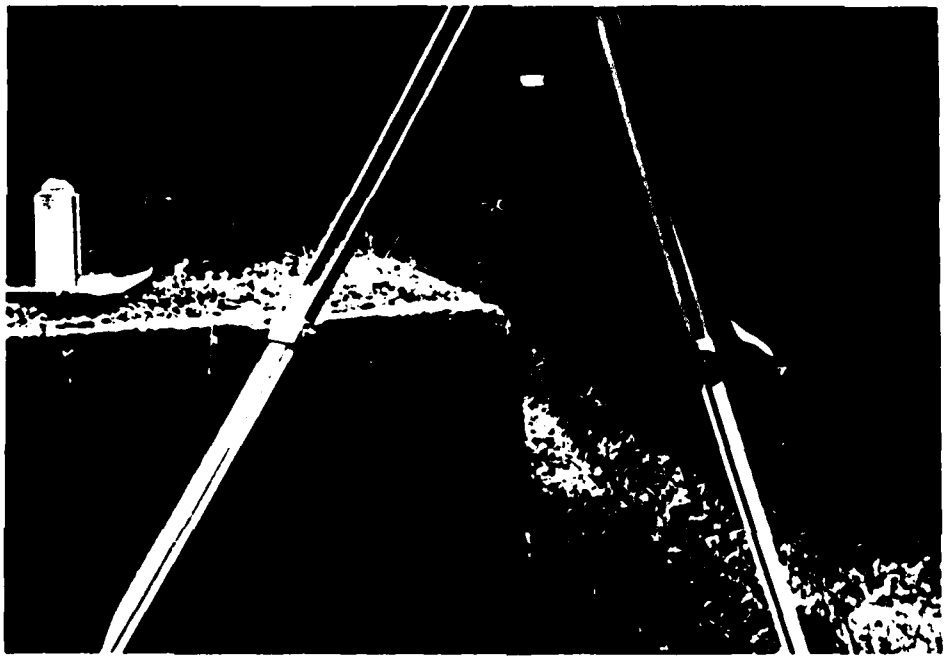
S-18. Benchmark I-B at the Iorizaki Area



S-19. View of Building 600 from Benchmark I-B



S-20. Benchmark I-C at the Iorizaki Area



S-21. Closeup of Benchmark I-C

S-22. View of the Iorizaki Pier from Benchmark I-C

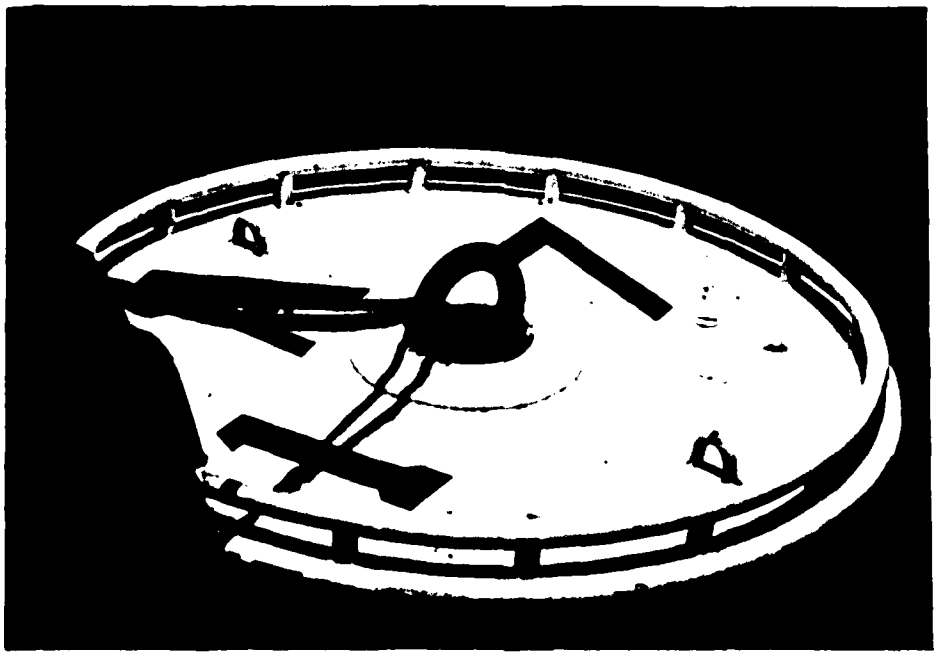
COMFLEACT SASEBO

INSPECTION PHOTOGRAPHS

Section of Lower Fender Sheared off Buoy I-N

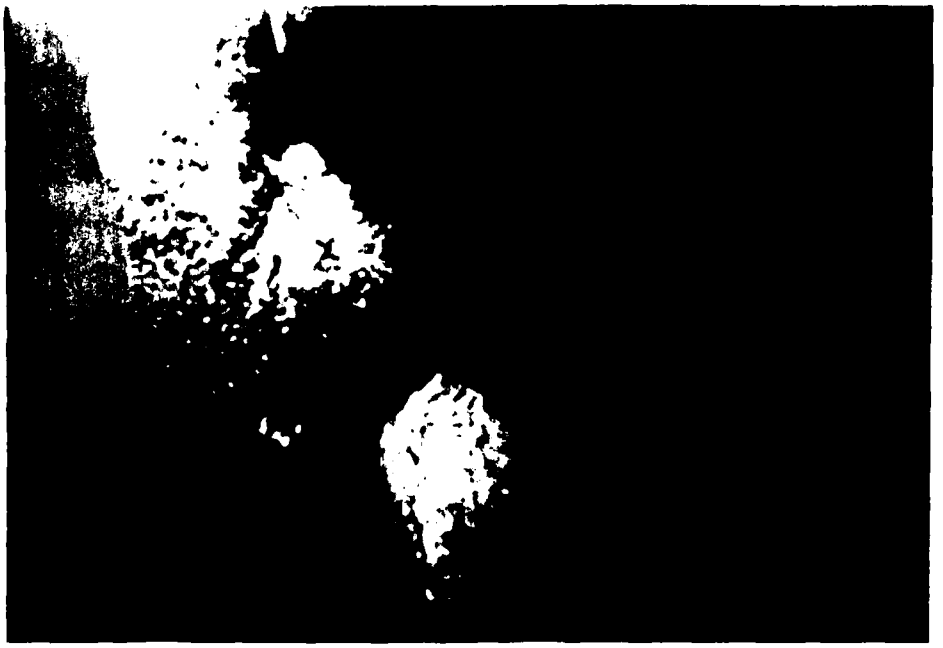
Mooring I-N. Clean, Shiny Chain Near Bottom

Damaged Fender of Buoy I-2



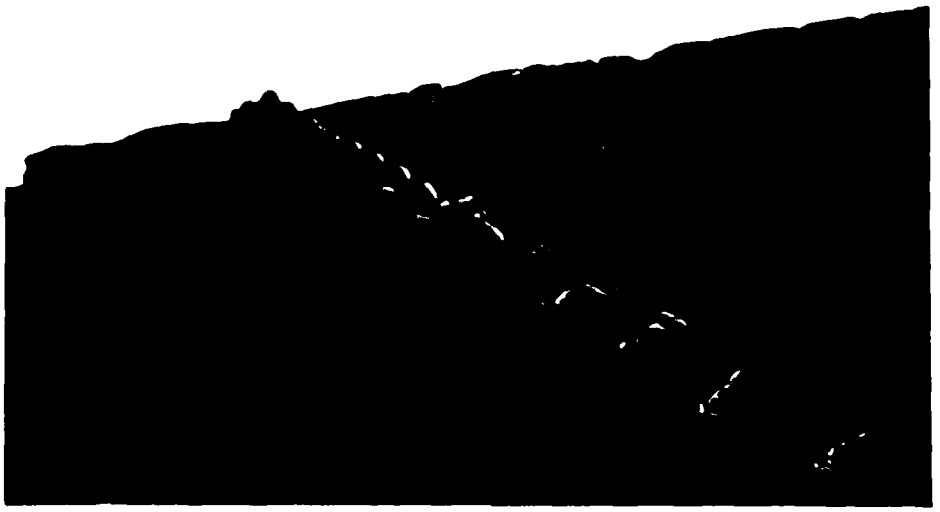
Buoy A-17. Excellent Topside Condition

Typical Shackle to End Link Connection in Riser



Worn Riser Chain of Mooring A-18

Buoy M-15 with Damaged Chafing Rail



Mooring T-15. Ground Leg Between Water Surface and the Bollard on the Helipad

Mooring T-15. Closeup of the Ground Leg in the Sea/Air Environment

Typical Condition of Fiberglassed Buoy Bottoms

ANNEX D

REFERENCES

JOINT MESSAGEFORM

DTG	PRECEDENCE	CLASS	SPECAT	CMC	CIC	CRIG MSG INIT
01 02	RR	UUUU				1791620

FROM: CHESNAVFACENGCOM WASHINGTON DC

TO: COMFLEACT SASEBO JA

INFO COMNAVFACENGCOM ALEXANDRIA VA

PACNAVFACENGCOM PEARL HARBOR HI

UNCLAS //N11000//

SUBJ: FLEET MOORING INSPECTION

1. A CHESNAVFACENGCOM/UCT TWO UNDERWATER INSPECTION OF THE 34 FLEET MOORINGS LOCATED AT SASEBO WAS CONDUCTED DURING THE PERIOD 10-20 MAY 1983. THIS IS A PRELIMINARY REPORT OF THE INSPECTION RESULTS TO PROVIDE AN ALERT TO SEVERAL SIGNIFICANT FINDINGS:

A. MOORINGS A-17, A-19, M-10, S-2-N, S-2-S, T-10, T-11, T-12: GOOD CONDITION.

B. MOORINGS 1-S, 61, A-11, A-12, A-13, A-14, A-15, A-16, A-18, I-1, I-2, M-12, M-13, M-14, M-15, M-20, T-13, T-14, T-16, T-17, Y-2, Y-3: OVERSIZED CHAIN FOUND WORN TO BETWEEN 80 AND 90 PERCENT OF ITS ORIGINAL SIZE - FAIR CONDITION. NO DOWNGRADING REQUIRED.

C. MOORING T-15: 1-3/4 INCH CHAIN FOUND WORN TO BETWEEN 80 AND 90 PERCENT OF ITS ORIGINAL SIZE - FAIR CONDITION. RECOMMEND DOWNGRADING FROM CLASS E TO CLASS F.

6 5 4 3 2 1 0

DISTR

DRAFTER TYPED NAME TITLE OFFICE SYMBOL PHONE	SPECIAL INSTRUCTIONS
TTJ THEODORE JONES, FPO-1C(PDC) 433-3881 29 JUN 1983	COPY TO: FPO-1C..09..OD..DAILY.. FPO-1C(PDC)..FPO-1C7..FPO-10P2.. 0161.
RELEASER: TYPED NAME TITLE OFFICE SYMBOL AND PHONE H. S. STEVENSON, CDR, CEC, USN	
SIGNATURE	SECURITY CLASSIFICATION / DATE TIME GROUP 291200Z

DD FORM 173/2 (OCR) PREVIOUS EDITION IS OBSOLETE S/N 0102 LF-000 1735 * U.S. GPO 1991 - 336-081 1 2193 321

JOINT MESSAGEFORM

PAGE	DTG: RELEASER TIME	MONTH	YR	PRECEDENCE ACT	PRECEDENCE INFO	CLASS	SPECAT	CMS	CIC	DRIG MSG SYS
02 OF 02				RR		UUUU				1791620

MESSAGE HANDLING INSTRUCTIONS

D. MOORING 1-N: CHESNAVFACENGCOM ALREADY TASKED TO ADVISE ON DISPOSITION OF MOORINGS 1-N AND 1-S. MR. BILL SEELIG HAS RESPONDED SEPARATELY. LARGE SECTION OF BUOY FENDER SHEARED OFF RECOMMENDED REPAIRING BUOY.

E. MOORING M-11: 2-INCH RISER WORN TO LESS THAN 80 PERCENT OF ORIGINAL SIZE - POOR CONDITION. RECOMMEND OVERHAUL.

F. MOORING Y-1: 3-INCH RISER WORN TO LESS THAN 80 PERCENT OF ITS ORIGINAL SIZE - POOR CONDITION. RECOMMEND OVERHAUL.

2. RECOMMENDATIONS PRESENTED HERE BASED ON DIVER MEASUREMENTS OF ACCESSIBLE CHAIN. AS DISCUSSED BETWEEN MR. K MUKAIGAWA (PACNAVFAC-ENGCOM) AND MR. T. JONES (CHESNAVFACENGCOM) ON 24 JUNE 1983, THERE ARE ADDITIONAL CONCERNS ABOUT THE MOORINGS HOLDING CAPACITIES DUE TO THE DIFFERENCE BETWEEN JAPANESE AND THE STANDARD DESIGNS SPECIFIED IN THE FLEET MOORING DESIGN MANUAL (DM-26). A DETAILED DISCUSSION WILL BE PRESENTED IN THE INSPECTION REPORT. ANTICIPATE DISTRIBUTION IN AUGUST 1983.

3. CHESNAVFACENGCOM POINT OF CONTACT IS MR. TED JONES AT AUTOVON 288-3881 OR (202) 433-3881.

b5 4 3 2 1 0

DISTR

DRAFTER TYPED NAME TITLE OFFICE SYMBOL PHONE	SPECIAL INSTRUCTIONS
RELEASER: TYPED NAME TITLE OFFICE SYMBOL AND PHONE	
SIGNATURE	SECURITY CLASSIFICATION / DATE TIME GROUP

DD FORM 1 MAR 79 173/2 (OCR) PREVIOUS EDITION IS OBSOLETE S/N 0102 LF 000 1735 * U.S. GPO 1981 - 336-081

U U N C L A S S I F I E D U
UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU

ROUTINE

R 150602Z APR 83

FM COMFLEACT SASEBO JA

TO CHESNAVFACENGCOM WASHINGTON DC

BT
UNCLAS //N11000//

ATTN: MR. TED JONES
SUBJ: FLEET MOORING INSPECTIONS

A. CHESNAVFACENGCOM WASHINGTON DC 062029Z APR 83

1. IN REPLY TO REF A, THE FOLLOWING INFORMATION IS FORWARDED FOR YOUR REFERENCE:

A. MAINTENANCE HISTORY
   DATE INSTALLED: UNKNOWN, EXCEPT THE FOLLOWING BUOYS
      T-16: MAR 1983
      T-17: MAR 1983
   DATE INSPECTED: ABOVE-WATER INSPECTION: JUN 82
      UNDER-WATER INSPECTION: AUG 81
   DATE OVERHAULED: REFER TO THE LIST BELOW
   CONDITION: REFER TO THE LIST BELOW

B. MOORING DESIGN CALCULATION AND DRAWINGS
   DESIGN CALCULATIONS: NOT AVAILABLE
   DRAWINGS: MAILED SEPARATELY

C. "AS-BUILT" MATERIAL LIST: MAILED SEPARATELY

D. LOCATION MAP OF ALL MOORINGS: MAILED SEPARATELY

E. ANTICIPATED MOORING USAGE DURING INSPECTION: REFER TO THE LIST BELOW

F. PLANNED REPAIRS AND OVERHAULS: REFER TO THE LIST BELOW

G. TYPES OF CLASSES OF SHIPS: AE, AD, CG, FF, TAE, SUB AND CARGO SHIPS

H. CATHODIC PROTECTION SYSTEM: NOT APPLIED

I. SPECIFIC DATA PER MOORING

NO.	LAST OVERHAULED	REPORTED CONDITION	ANTICIPATED USAGE	PLANNED OVERHAUL
1-N	MAY 79	POOR	UNKNOWN	MAY 84
61	DEC 76	POOR	UNKNOWN	JUN 83
I-1	DEC 79	FAIR	UNKNOWN	JUN 84
I-2	DEC 79	FAIR	UNKNOWN	JUL 84

DLVR:CHESNAVFACENGCOM WASHINGTON DC(9)...ACT

RTD:000-000/COPIES:0009

606456/105 1 OF 2 M1 0310 105/14:36Z 150602Z APR 83
CSN:RXOY00316 COMFLEACT SASEBO JA

UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU
U U N C L A S S I F I E D U
UUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUUU

Y-1	JAN 81	FAIR	UNKNOWN	JUN 85
Y-2	JAN 81	FAIR	UNKNOWN	JUL 85
Y-3	JAN 81	FAIR	UNKNOWN	AUG 85
1-S	JUN 79	POOR	UNKNOWN	JUN 83
A-11	JUL 82	GOOD	20 DAYS	APR 86
A-12	AUG 82	GOOD	20 DAYS	MAY 86
A-13	SEP 82	GOOD	20 DAYS	JUN 86
A-14	SEP 77	POOR	20 DAYS	APR 83
A-15	SEP 78	FAIR	20 DAYS	MAY 83
A-16	SEP 78	FAIR	20 DAYS	JUN 83
A-17	NOV 80	FAIR	20 DAYS	FEB 85
A-18	JAN 83	GOOD	20 DAYS	JUL 86
A-19	NOV 79	POOR	20 DAYS	FEB 84
M-10	NOV 79	POOR	20 DAYS	MAR 84
M-11	DEC 77	FAIR	20 DAYS	JUN 83
M-12	NOV 79	FAIR	20 DAYS	APR 84
M-13	DEC 77	POOR	20 DAYS	JUL 83
M-14	NOV 79	POOR	20 DAYS	AUG 84
M-15	DEC 77	POOR	20 DAYS	AUG 83
M-20	NOV 79	FAIR	20 DAYS	SEP 84
T-10	FEB 81	FAIR	20 DAYS	MAR 85
T-11	DEC 77	POOR	20 DAYS	SEP 83
T-12	DEC 77	POOR	20 DAYS	SEP 83
T-13	JAN 83	GOOD	20 DAYS	MAY 86
T-14	JAN 75	FAIR	20 DAYS	JUN 83
T-15	FEB 83	GOOD	20 DAYS	AUG 87
T-16	NEW	GOOD	20 DAYS	MAR 88
T-17	NEW	GOOD	20 DAYS	APR 88
S-2S	FEB 81	GOOD	0	APR 85
S-2N	FEB 81	GOOD	0	MAY 85

2. ADDITIONAL INFORMATION PACKAGE MAILED UNDER SEPARATE COVER TO CHESNAVFACENGCOM
BT

01 03 | RR | UUUU | 0961400

FM CHESNAVFACENGCOM WASHINGTON DC

COMFLEACT SASEBO JA

INFO COMNAVFACENGCOM ALEXANDRIA VA

PACNAVFACENGCOM PEARL HARBOR HI

UCT TWO

UNCLAS //N11000//

SUBJ: FLEET MOORING INSPECTIONS

1. AS DISCUSSED IN TELEPHONE CONVERSATION BETWEEN MR. SUGA (SASEBO) AND MR. TED JONES (CHESNAVFACENGCOM) ON 29 MAR 83, CHESNAVFACENGCOM WITH SUPPORT FROM UCT TWO, PLANS TO CONDUCT AN UNDERWATER INSPECTION OF THE 34 MOORINGS OPERATED AND MAINTAINED BY COMFLEACT SASEBO AS PART OF THE COMNAVFACENGCOM FLEET MOORING MAINTENANCE (FMM) PROGRAM DURING THE PERIOD 1-21 MAY 83. AVAILABLE DATA INDICATES 1 CLASS A TELEPHONE TYPE MOORING IN 30 FEET OF WATER, 7 CLASS B RISER TYPE MOORINGS IN 31-125 FEET OF WATER AND 26 CLASS E RISER TYPE MOORINGS IN 15-59 FEET OF WATER.

2. THE FLEET MOORING INSPECTION TEAM WILL CONSIST OF A CHESDIV ENGINEER-IN-CHARGE (EIC) AND A DET FROM UCT TWO. IN ORDER TO PREPARE A DETAILED INSPECTION PLAN, THE FOLLOWING INFORMATION IS REQUIRED

UNCLAS

TED JONES, FPO-1C(PDC)
433-3881 6 APR 1983

H. S. STEVENSON, CDR, CEC, USN

COPY TO: 09..00..FPO-1C..DAILY..
FPO-1C(PDC)..FPO-10P2..FPO-1C7..
0161. MINIMIZED CONSIDERED

062029ZAPR83

UL	03	KR	UUUU		0961400

PCR MOORING:

A. MAINTENANCE HISTORY - WHEN INSTALLED, WHEN INSPECTED, WHEN OVERHAULED, LAST REPORTED CONDITION, ETC.

B. COPIES OF MOORING DESIGN CALCULATIONS AND DRAWINGS.

C. COPIES OF "AS-BUILT" MATERIALS LIST.

D. FACILITY MAP SHOWING LOCATION OF ALL MOORINGS, WITH SPECIFIC LOCATIONS FOR THOSE CURRENTLY IN USE.

E. ANTICIPATED MOORING USAGE DURING THE INSPECTION PERIOD - TYPES OF SHIPS.

F. PLANNED REPAIRS AND OVERHAULS - PARTICULARLY THOSE BEFORE THIS INSPECTION.

G. TYPES OF CLASSES OF SHIPS USING MOORINGS.

H. WHETHER CATHODIC PROTECTION SYSTEMS ARE INSTALLED AND TYPE OF MATERIAL UTILIZED.

3. COMFLEACT SASEBO IS REQUESTED TO MAIL THE ABOVE INFORMATION AS SOON AS POSSIBLE TO CHESNAVFACENGCOM (CODE FPO-1C7), BLDG. 212, WASHINGTON NAVY YARD, WASHINGTON, D. C. 20374.

4. ADDITIONALLY, COMFLEACT SASEBO IS REQUESTED TO REPLY BY MESSAGE WITH THE ABOVE INFORMATION EXCEPT FOR DRAWINGS AND MAPS BY 15 APR 83.

DISTR

RELEASER: TYPED NAME, GRADE, OFFICE SYMBOL, PHONE	SPECIAL INSTRUCTIONS
SIGNATURE	SECURITY CLASSIFICATION / DATE TIME GROUP

DD FORM 173/2 (OCR)

03 03 RR UUUU 0961400

5. CHESNAVFACENGCOM POINT OF CONTACT IS MR. J. MCLAUGHLIN OR MR. T. JONES AT AUTOVON 288-3881 OR (202) 433-3881.

6. YOUR TIMELY SUPPORT WILL BE GREATLY APPRECIATED.

DISTR

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ROUTINE

R 2103312 AUG 82

FM CINCPACFLT PEARL HARBOR HI

TO CINCPAC PEARL HARBOR HI

INFO CHNAVMAT WASHINGTON DC
COMNAVAIRSYSCOM WASHINGTON DC
COMNAVFACENGCOM ALEXANDRIA VA
COMNAVTELCOM WASHINGTON DC
COMNAVSURFPAC SAN DIEGO CA
COMNAVAIRPAC SAN DIEGO CA
CG FMFPAC
COMOCEANSYSPAC PEARL HARBOR HI
COMNAVMARIANAS GUAM
COMPACMISTESTCEN PT MUGU CA
WESTNAVFACENGCOM SAN BRUNO CA
DICC MIDPAC PEARL HARBOR HI
DICC GUAM
DICC DIEGO GARCIA HOUSTON TX
PWC GUAM
PWC YOKOSUKA JA
PWC SAN FRANCISCO CA
COM THREE ZERO NCR GUAM
NAVPAL CENTERVILLE BEACH CA
NAVSTA SEAL BEACH CA
NAVSHIPREPFAC SUBIC BAY RP
NAF ATSUGI JA
NAVSHIPYD PUGET SOUND WA
NSC SAN DIEGO CA
TRIREFAC BANGOR WA
NSC GUAM
NAVSUPPFAC DIEGO GARCIA
NAVSTA LONG BEACH CA
NSC PEARL HARBOR HI
NAVSHIPYD MARE ISLAND CA
PACMISRANFAC HALAWEA BARKING SANDS HI
COMNAVSEASYSCOM WASHINGTON DC
COMNAVELEXSYSCOM WASHINGTON DC
CNR ARLINGTON VA
COMNAVLOGPAC PEARL HARBOR HI
COMSUBPAC PEARL HARBOR HI
COMTHIRDFLT
COMMARCORBASESPAC CAMP H M SMITH HI
COMNAVFORJAPAN YOKOSUKA JA
COMUSNAVPHIL SUBIC BAY RP
PACNAVFACENGCOM PEARL HARBOR HI
CHESNAVFACENGCOM WASHINGTON DC
DICC SUWESTPAC MANILA RP
DICC FAR EAST YOKOSUKA JA
PWC PEARL HARBOR HI
PWC SUBIC BAY RP
PWC SAN DIEGO CA
COM THREE ONE NCR PORT HUENEME CA
UCT TWO
NAVOCEANSYSCEN SAN DIEGO CA
NSU SUBIC BAY RP
MCAS IWAKUNI JA
NAVUSEAWARENGSTA KEYPORT WA
NAVMAG LUALUALEI HI
SUBASE BANGOR WA
NAVPHIBASE CORONADO SAN DIEGO CA
NAVSHIPREPFAC GUAM
NAVSTA SAN DIEGO CA
NAVSHIPYD PEARL HARBOR HI
SUBASE PEARL HARBOR HI

BT
UNCLAS //N11000//

SUBJ: UCT TWO FY83 EMPLOYMENT TASKING

DLVR:CHESNAVFACENGCOM WASHINGTON DC(9)...INFO

RTD:000-000/COPIES:0009

114776/235 1 OF 3 M1 0308 235/23:21Z 2103312 AUG 82
CSN:RAOY00304 CINCPACFLT PEARL HARBOR HI

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U U N C L A S S I F I E D U
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A. CINCPACFLT PEARL HARBOR HI 260654Z JUN 82

1. REF A REQUESTED NOMINATIONS OF PROJECTS FOR UCT TWO ACCOMPLISHMENT FY83-85. FROM THE RESPONSES TO REF A THE FOLLOWING PROJECTS ARE TASKED FOR ACCOMPLISHMENT IN FY83:
   A. CENTERVILLE BEACH (CLASSIFIED)
   B. ARCTIC WEST (CLASSIFIED)
   C. BARKING SANDS, HI, CABLE LANDING AND REPAIRS
   D. WPNSTA SEAL BEACH, DEMOLISH ANAHEIM BAY BRIDGE
   E. NSD SUBIC, PILE REPAIR POL PIER
   F. NSD SUBIC, PILE REPAIR MARINE TERMINAL PIER PHASE I (REPAIR ALL SEVERE AND MAJOR DAMAGE)
   G. NAVSHIPREPFAC SUBIC, INSPECT ALAVA WHARF
   H. FLEET MOORING INSPECTION - PACIFIC DATA BASE (PEARL HARBOR HI, GUAM, YOKOSUKA, IWAKUNI, SASEBO, INDIAN ISLAND WA, BREMERTON WA)
   I. NAVMAG LUALUALEI, INSPECT AMMO PIERS W1-5
   J. UNDERWATER INSPECTION PROGRAM (NSC SAN DIEGO)
   K. SUBASE, BANGOR WA, UNDERWATER INSPECTION
   L. TRIREFFAC BANGOR WA, UNDERWATER MSF RANGE REPAIR
   M. DEGAUSSING RANGE SURVEY, SAN FRANCISCO CA
   N. NAVPHIBASE CORONADO SAN DIEGO CA, PIER INSPECTIONS

2. THE FOLLOWING PROJECTS ARE TASKED AS FILL IN WORK FOR FY83:
   A. UNDERWATER INSPECTION PROGRAM (NAVSTA PEARL HARBOR)
   B. NAVUSEAWARENGSTA KEYPORT WA, INDIAN IS PHASE TWO MOORING
   C. NSD GUAM, REPAIRS TO SIERRA WHARF GUAM. REQUIRES COORDINATION WITH ON SITE NMCB FOR ACCOMPLISHMENT.

   THE FOLLOWING PROJECTS ARE TENTATIVELY TASKED FOR ACCOMPLISHMENT AS INDICATED:
   A. FY-84
      (1) ARCTIC WEST (CLASSIFIED)
      (2) NAVSHIPREPFAC GUAM, REPAIRS TO LIMA WHARF
      (3) FLEET MOORING INSPECTION - PACIFIC DATA BASE 9SUBIC BAY, NSF DIEGO GARCIA, PWC SAN DIEGO, NAVSTA SAN DIEGO, WPNGTA SEAL BEACH, NAVSTA LONG BEACH)
      (4) NSD SUBIC, WATERFRUNT FACILITIES INSPECTION
      (5) NSD SUBIC, MONOBUOY FUEL LINE REPAIRS
      (6) DEGAUSSING RANGE SAN FRANCISCO, RANGE INSTALLATION
      (7) UNDERWATER INSPECTION PROGRAM CNAVSHIPY PEARL HARBOR, NSC PEARL HARBOR, SUBASE PEARL HARBOR)
      (8) SCARF REPAIR/INSPECTION
      (9) BARKING SANDS, UNDERWATER RANGE REPAIRS
      (10) NSD SUBIC, PILE REPAIR MARINE TERMINAL PIER PHASE 2

(REPAIRS TO MODERATE AND MINOR DAMAGE)

B. FY-85
- (1) ARCTIC WEST (CLASSIFIED)
- (2) BARKING SANDS UNDERWATER RANGE WORK
- (3) FLEET MOORING INSPECTION - PACIFIC DATA BASE PEARL HARBOR HI, GUAM, JAPAN, PUGET SOUND WA)
- (4) UNDERWATER INSPECTION PROGRAM (MARE ISLAND CA)
- (5) SUBASE PEARL, MCON P-088, REPAIR AND EXTEND SEAWALL THIS PROJECT WILL REQUIRE SEPARATE TASKING OF AN RNMCB, CBU, OR OTHER ORGANIZATION AS "PRIME CONTRACTOR" FOR PILE DRIVING AND TOPSIDE ZONE, WITH UCT ACCOMPLISHING IN WATER SUPPORT.

END

FILMED

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