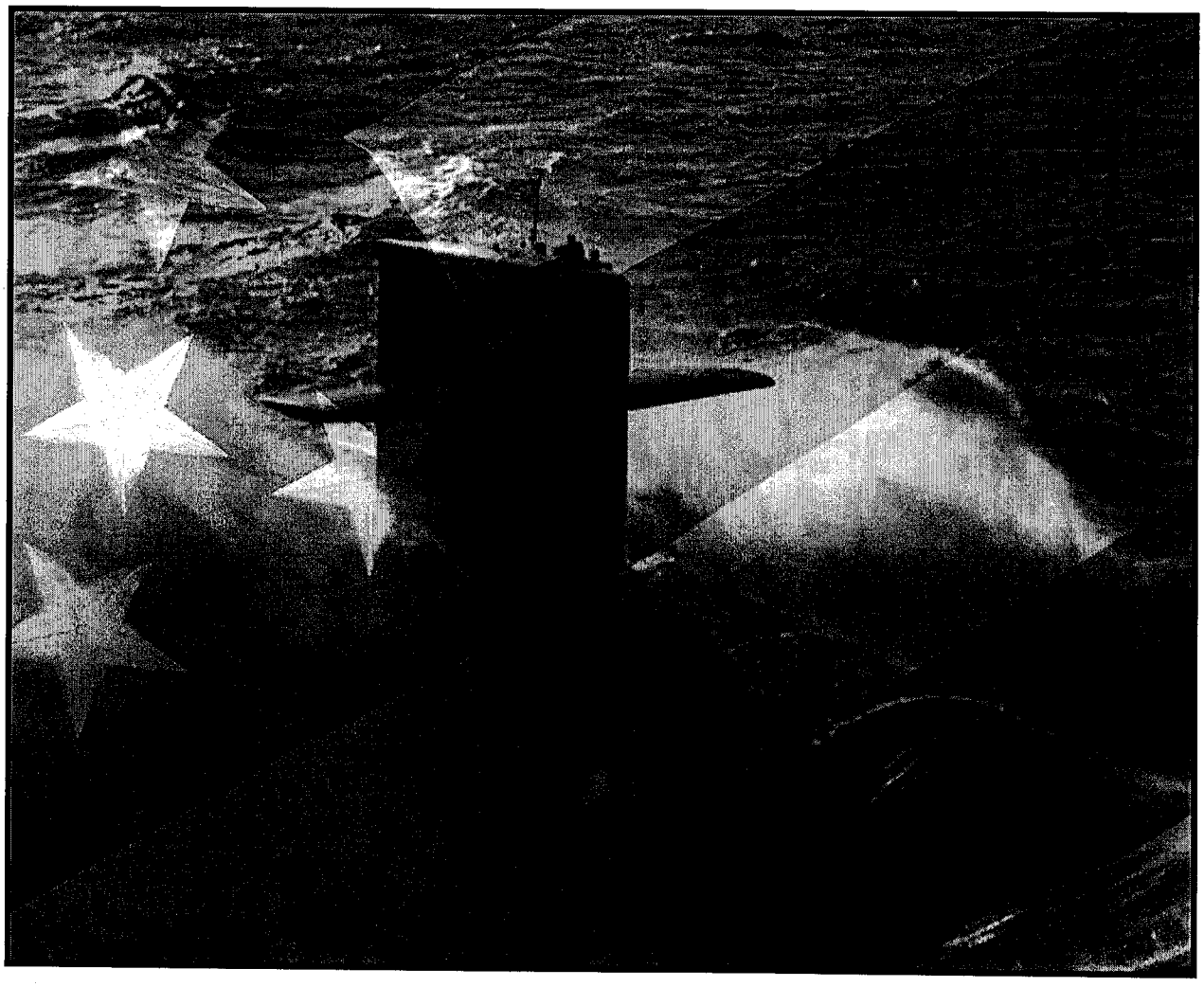
N65540-03-Q-0619

UNIVERSAL SUBMARINE FENDERS



UNIVERSAL SUBMARINE FENDER PROCUREMENT

Louis J. DiStefano

OOO1.	Submerged Triangular Fender Drawing 806-5773689 Rev. B	1	Ea
OOO2.	Type III Float for Item 0001 Drawing 806-5773691 Rev. B	1	Ea
OOO3.	Submerged Cylindrical Fender Drawing 806-5773690 Rev. B	1	Ea
OOO4.	Type II Float for Item 0003 Drawing 806-5773691 Rev. B	1	Ea
OOO5.	Technical Data for Items 0001 through 004	1	Lot

UNIVERSAL SUBMARINE FENDERS SPECIFICATION

Scope: This specification establishes requirements for Universal Submarine Fenders to be used as separators for submarine tender operations. To avoid damage to Submarines, the universal Submarine fender contacts the hull of the Submarine several feet above the vertical tangent of the hull, (above the centerline). It can be positioned at any location along the parallel mid-body without contacting the critical sections of the submarine. The basic structure of the universal submarine fender is a triangular steel pipe support frame assembly. The separator has three legs or sides angled at 13–degrees and house the energy absorbing material or rubber fender. In the operating position, the assembly is oriented so that two legs are always inboard and the single leg is outboard. The fenders are required to maintain the point of contact. Two universal submarine separators Type I and two Type II (one-half ship-set) is required to moor two submarines outboard a tender. They were configured specifically to avoid damage to the Submarine sonar, special hull treatment (SHT), and clearances relative to forward diving planes, stern screws/ rudders in all classes of submarines. Clearances will remain sufficient in all reasonable loading conditions. They are intended for use in both the forward and aft. locations in which ship and submarine or submarine and submarine can be arranged either bow-to-bow, staggered, or bow-to-stern mooring arrangement. Use of the separator system permits any active class submarine to moor next to a submarine tender or nested to any other active submarine, in either a bow-to-bow, staggered, or a bow-to-stern mooring arrangement.

ITEMS 0001:
The Submerged Triangular Fender to be furnished under Item 0001, shall be in accordance with the requirements of Drawing 806-5773689 Rev. B.

ITEMS 0002:
The Submerged Triangular Fender Type III Float to be furnished under Item 0002, shall be in accordance with the requirements of Drawing 806-5773691 Rev. B.

ITEMS 0003:
The Submerged Cylindrical Fender to be furnished under Item 0003, shall be in accordance with the requirements of Drawing 806-5773690 Rev. B.

ITEMS 0004:
The Submerged Cylindrical Fender Type II Float to be furnished under Item 0004, shall be in accordance with the requirements of Drawing 806-5773691 Rev. B.

ITEMS 0001 THROUGH 0004

PRESERVATION, PACKAGING, PACKING & MARKING REQUIREMENTS

The Fenders and Floats to be furnished shall be preserved, packaged and packed in accordance with the contractor's standard practice in a manner to prevent corrosion, deterioration, and damage and to insure arrival at destination in a satisfactory condition.

DOCUMENTATION

The manufacturer shall provide the purchaser with certification that fenders and floats have been tested and inspected as specified in Drawing 806-5773689, 806-5773690, 806-5773691 Revision B, and that all the requirements have been met, together with a test and inspection reports.

ITEM 0005

The contractor is responsible for the performance of all inspection and test requirements as specified in this solicitation (DD FORM 1423). Item 0005 shall consist of the test and inspection report detailing the results of all tests and inspections performed and all technical information records, serial numbers, etc. covered under this solicitation. One copy of the Technical Data for each fender and float under Items 0001 through 0004 shall be delivered to:

Philadelphia Naval Business Center
Building 4, Code 9731
Philadelphia, PA 19112-5083
Attn: Louis J. DiStefano

DELIVERY SCHEDULE

Item 0001	Quantity two (1)	90 DAO
Item 0002	Quantity zero (1)	90 DAO
Item 0003	Quantity two (1)	90 DAO
Item 0004	Quantity zero (1)	90 DAO
Item 0005	Final draft report due within thirty (30) days after completion of all technical efforts under statement of work.	

SHIPPING INSTRUCTIONS

Items 0001 thru 0004 will be shipped to the following address:

USS FRANK CABLE (AS-40)
OMNAVMAR Support Activity,
Port Operations, Sumay Drive BLDG 3169.
ATT: PSC 455 Box 155 FPO AP 96540-1000
POC is Mr. Dick Riddle
Ph-(671) 777-4684, fax- (671) 339-8219

CONTRACT DATA REQUIREMENTS LIST

(1 Data Item)

Form Approved
OMB No. 0704-0188

The public reporting burden for this collection of information is estimated to average 110 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0701-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to the above address. Send completed form to the Government Issuing Contracting Officer for the Contract/PR No. listed in Block E.

A. CONTRACT LINE ITEM NO.	B. EXHIBIT	C. CATEGORY:
0001	A	TDP TM OTHER X

D. SYSTEM/ITEM	E. CONTRACT/PR NO.	F. CONTRACTOR
UNIVERSAL SUBMARINE FENDERS	TBD	TBD.

1. DATA ITEM NO.	2. TITLE OF DATA ITEM	3. SUBTITLE	17. PRICE GROUP
A002	MATERIAL VERIFICATION, INSPECTION & TEST RESULTS	Final Report	

4. Authority *(DATA Acquisition document No.)*	5. CONTRACT REFERENCE	6. REQUIRING OFFICE	18. ESTIMATED TOTAL PRICE
	Contractor's Inspection Req.	NAVSEA PHILADELPHIA	

7. DD 250 REQ	9. DIST STATEMENT REQUIRED	10. FREQUENCY	12. DATE OF FIRST SUBMISSION
DD	TBD	ONE/R	See Block 16
8. APP CODE		**11. AS OF DATE**	**13. DATE OF SUBSEQUENT SUBMISSION**
			See Block 16

16. REMARKS

The Contractor shall submit two (2) draft final reports within **thirty (30)** days after completion of all technical effort under the Statement of Work. The report can be in contractors format, but must outline all material verifications. For contractor supplied material, the contractor shall supply documented verification of the raw material being utilized under this solicitation.

The Contractor shall submit one (1) draft final reports within **thirty (30)** days after completion of all results of dimensions inspected in accordance with the Statement of Work. The "actual" dimension can be recorded on a copy of the provided drawings under this solicitation.

The Contractor shall submit two (2) draft final reports within **thirty (30)** days after completion of all technical effort under the Statement of Work with the results of the required leak test called out under Drawing 806-5773691, Revision B of this contract.

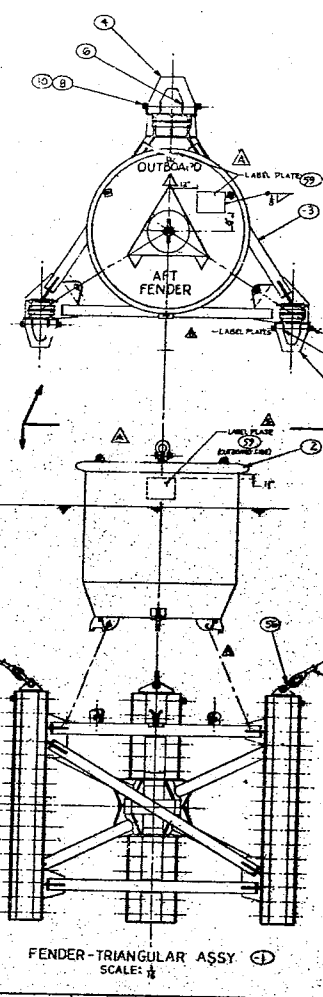
All records shall be documented on a reproduction of the component containing the following information:

(a) Inspector's Name and Signature
(b) Date of Inspection
(c) Contract Number
(d) Contractor Name
(e) Drawing Number, Revision & Piece Number
(f) Serial Number

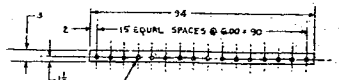
14. DISTRIBUTION

a. ADDRESSEE	b. COPIES Draft	Final Reg	Final Repro
Naval Surface Warfare	2	2	
Carderock Division			
US Naval Business Ctr			
Phila, PA 19112-5083			
Building 4, Code 9731			
Attn: Lou DiStefano			
15. TOTAL	2	2	

G. PREPARED BY	H. DATE	I. APPROVED BY	J. DATE
LOUIS J. DISTEFANO	22 July 2002	James Fries	22 July 2003

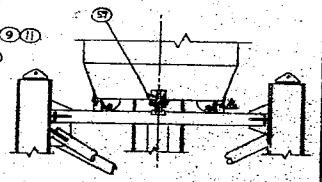


FENDER-TRIANGULAR ASSY
SCALE: 1/4



PL NO	DIM A (TRP SIZE)
6	1/2-13 UNC-2B
7	3/4-10 UNC-2B

THREADED PLATE
SCALE: 1/16



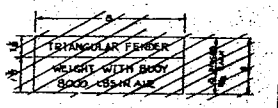
FLOAT ATTACHED TO FENDER FOR STOWAGE
DETAIL 5-C

NOTES:

1. WELDING TO BE IN ACCORDANCE WITH NAVSEA 0900-000-1000. ALL FILLET WELDS TO BE SIZED PER MIL-STD-1628. JOINT EFFICIENCY TO BE 100 %.
2. REMOVE ALL BURRS AND SHARP EDGES.
3. SURFACES TO BE PAINTED SHALL BE PREPARED BY ABRASIVE BLASTING OR EQUIVALENT HAND CLEANING. THE FOLLOWING EPOXY POLYAMID COATING SYSTEM SHALL BE APPLIED TO ALL EXTERIOR SURFACES:
   a. FIRST COAT - MIL SPEC MIL-P-24441, FORMULA 150, 2-4 MILS THICK, GREEN PRIMER.
   b. SECOND COAT - MIL SPEC MIL-P-24441, FORMULA 154, 3-4 MILS THICK, RED COLOR.
   c. THIRD COAT - MIL SPEC MIL-P-24441, FORMULA 154, 2-4 MILS THICK, GREY COLOR.
4. VOID SPACES SHALL BE FILLED AND DRAINED PER MIL-P-21735, GRADE 1.
5. THE TRIANGULAR FENDER SHALL BE STOWED IN THE VERTICAL POSITION WITH ITS FLOAT STOWED ON TOP, SEE DETAIL 5-C.
6. TOGGLE PINS TO BE PROVIDED WITH RETAINING CLIPS & CABLE PER REF. 3; LOCATE TO SUIT.
7. PL 8 (3/4 INCH BOLT) TO BE TORQUED TO 50 FOOT LBS AND PL 9 (1/2 INCH BOLT) TO BE TORQUED TO 25 FOOT LBS, DRY.

OUTBOARD SIDE
FLOAT SUSPENDED SUBMERGED FENDER ASSEMBLY
NAVSEA DRAWING NO. 804-5773689 & 804-5773690
WEIGHT IN AIR 8000 LBS.
SUBMERGED DEPTH OF CENTER OF FENDER: 11 FT
CAUTION
DESIGNED FOR USE IN PROTECTED OPERATING AREAS

(59) LABEL PLATE
SCALE: 1/2 = 1



(12) LABEL PLATE
SCALE: 1/2 = 1

REV LTR	NO	DESCRIPTION	DATE	APPROVED
A	14 TO 14 LM 14A 14B	FLOAT MODIFIED TO AGREE WITH REV. A OF REF. 2. VIEWS 11E, 13F, 14A MODIFIED AND 14B ADDED TO CLARIFY FABRICATION DETAILS OR TRANSIT WALKWAY; LABEL PLATE 4800 B	3-17-87	
B	7B 14A 14C 7E 13A 14A	IN ASSEMBLY VIEW, MODIFIED ARRGT. OF SUPPORT LEG BETWEEN FLOAT BODY AND SUBMERGED FENDER. CHANGED SIZE OF PL 36 FROM 2" RD BAR TO 2 3/4" DIA IN L/M & DET. 13-A. ADDED LABEL PLATE, PL 59 TO L/M AND DETAIL ADDED FOR LABEL PLATE MOUNTING. INDICATED LOCATION OF 1-48A PLATES ON TOP VIEW OF FLOAT, & DETAIL PL 12. MODIFIED VIEWS 13A & 14A TO SUIT NEW SUPPORT LEG ARRGT.	11-17-87	

ITEM QTY	ITEM QTY	NO	DESCRIPTION	MATERIAL	MATL SPEC	REMARKS	SIZE
	4		29	15.8 # PL	STL	ASTM A36	
	4		28	I 8x4# 25#	STL	ASTM A36	
	12		27	15.3 # PL	STL	ASTM A36	
	6		26	I 8x4x 25#	STL	ASTM A36	
	4		25	20.4 # PL	STL	ASTM A36	
	4		24	15.8 # PL	STL	ASTM A36	
	2		23	15.3 # PL	STL	ASTM A36	
	4		22	PIPE 4 IN XS	STL	ASTM A53	SCHD 80
	4		21	PIPE 4 IN XS	STL	ASTM A53	SCHD 80
	4		20	15.3 # PL	STL	ASTM A36	
	4		19	15.3 # PL	STL	ASTM A36	
	4		18	15.8 # PL	STL	ASTM A36	
	4		17	15.3 # PL	STL	ASTM A36	
	4		16	I 10x5 1/2 x 28.1 #	STL	ASTM A36	
	4		15	15.3 # PL	STL	ASTM A36	
	2		14	I 10x5 1/2 x 28.1 #	STL	ASTM A36	
	8		13	20.4 # PL	STL	ASTM A36	
	1		12	[illegible]	[illegible]	[illegible]	[illegible]
	64		11	WASHER-FLAT	CRES	COML	1/2-MED
	32		10	WASHER-FLAT	CRES	COML	1/2-MED
	64		9	BOLT UPSET THREADED	CRES	LOCK	LONG LOC HEXAGON
	32		8	BOLT UPSET THREADED	CRES	LOCK	LONG LOC HEXAGON
	4		7	21.6 # PL	CRES	304	THREAD FOR PL 6
	2		6	21.6 # PL	CRES	304	THREAD FOR PL 6
	2		5	FENDER	LOW FRICTION PLATE	UNIFORM	DELTA "A" 13 A
	1		4	FENDER	LOW FRICTION PLATE	UNIFORM	DELTA "A" 20A
	1		-3	FRAME WELDMENT			
	1		2	FLOAT TYPE III			2
	-		-1	FENDER ASSY			1
48	3	-1		LIST OF MATERIAL			

SH	DRAWING TITLE	DRAWING NO.
1	FENDER ARR. TOP MOORING, SUBMERGE AT TENDER	804-5773689
2	FLOAT FOR SUBMERGED FENDERS	804-5773691
3	TOGGLE PIN	804-5773814

REV	DATE	REVISIONS OF THIS DWG
B	8	
A	2	

NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

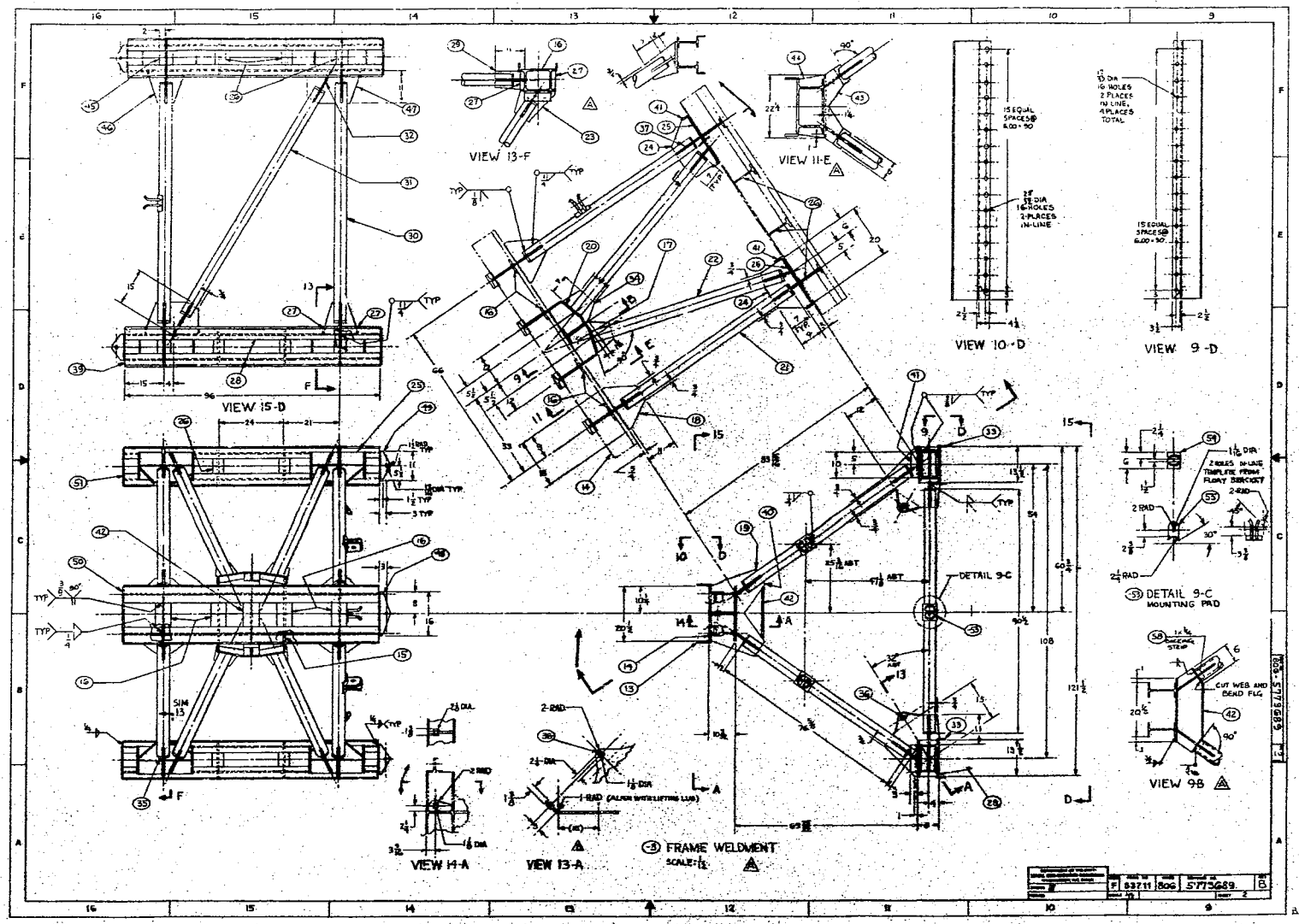
SUBMERGED TRIANGULAR FENDER

CODE IDENT NO.	SIZE	DRAWING NO.	REV
58711	A	804 5773689	B

SHEET 1 OF 2

B-10-10-23

5773689 SH 1


VIEW 15-D
VIEW 13-F
VIEW 11-E
VIEW 10-D
VIEW 9-D
DETAIL 9-C
MOUNTING PAD
VIEW 9B
VIEW 14-A
VIEW 13-A
FRAME WELDMENT
SCALE: 1/2
CUT WEB AND BEND FLG
15 EQUAL SPACES @ 6.00 = 90
15 EQUAL SPACES @ 6.00 = 90
2 HOLES IN-LINE TEMPLATE FROM FLOAT BRACKET
2-RAD (ALIGN WITH LIFTING LUG)
F 83711 806 5773689 D
5773689 SH 2

5773689 SH 2

GENERAL NOTES

1. WELDING TO BE IN ACCORDANCE WITH NAVSEA S9070-000-1000. ALL FILLET WELDS TO BE SIZED PER MIL-STD-1628. JOINT EFFICIENCY TO BE 100%.

2. REMOVE ALL BURRS AND SHARP EDGES.

3. SURFACES TO BE PAINTED SHALL BE PREPARED BY ABRASIVE BLASTING OR EQUIVALENT HAND CLEANING. THE FOLLOWING EPOXY POLYAMIDE COATING SYSTEM SHALL BE APPLIED TO ALL SURFACES:

   a. FIRST COAT – MIL SPEC MIL-P-24441, FORMULA 150, 2-4 MILS THICK, GREEN PRIMER.

   b. SECOND COAT – MIL SPEC MIL-P-24441, FORMULA 150, 3-4 MILS THICK, RED COLOR.

   c. THIRD COAT – MIL SPEC MIL-P-24441, FORMULA 154, 3-4 MILS THICK, GREY COLOR.

4. THE FOLLOWING PROCEDURE SHALL BE FOLLOWED TO ASSEMBLE THE CYLINDRICAL FENDER DET 11A:

   a. MANUFACTURE FENDER ASSEMBLIES, PC NO 2 THRU 5.

   b. ARRANGE CYLINDRICAL FENDERS, PC 7, TO FACILITATE INSTALLATION OF BAR ASSEMBLIES (-3 ASSY). LINK, PC 11 & 29, AND SHACKLE, PC 12, ALLOW APPROXIMATELY THREE INCHES OF SEPARATION BETWEEN FENDERS TO PROVIDE ACCESS TO SHACKLE, PC 12, USED TO CONNECT BAR ASSEMBLY (-5 ASSY), SEE DET 11 A.

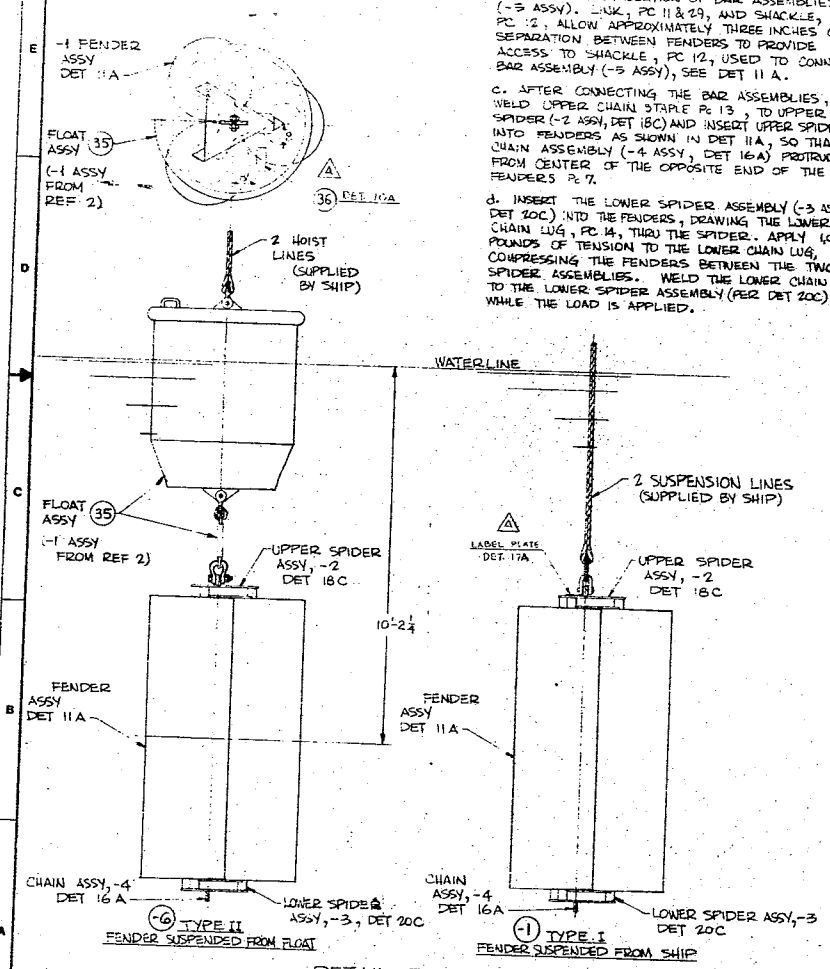
   c. AFTER CONNECTING THE BAR ASSEMBLIES, WELD UPPER CHAIN STAPLE PC 13, TO UPPER SPIDER (-2 ASSY, DET 18C) AND INSERT UPPER SPIDER INTO FENDERS AS SHOWN IN DET 11A, SO THAT CHAIN ASSEMBLY (-4 ASSY, DET 16A) PROTRUDES FROM CENTER OF THE OPPOSITE END OF THE FENDERS PC 7.

   d. INSERT THE LOWER SPIDER ASSEMBLY (-3 ASSY, DET 20C) INTO THE FENDERS, DRAWING THE LOWER CHAIN LUG, PC 14, THRU THE SPIDER. APPLY 1,000 POUNDS OF TENSION TO THE LOWER CHAIN LUG, COMPRESSING THE FENDERS BETWEEN THE TWO SPIDER ASSEMBLIES. WELD THE LOWER CHAIN LUG TO THE LOWER SPIDER ASSEMBLY (PER DET 20C) WHILE THE LOAD IS APPLIED.

5. a. ATTACH SUSPENSION LINES AND HOISTING LINES TO PC 27 FOR FENDERS WITHOUT FLOATS (TYPE I), DET 7A. FOR FENDERS WITH FLOATS SEE DET 7A (TYPE II).

   b. FENDER DEPTH IS CONTROLLED BY ADJUSTING THE SUSPENSION LINES ON FENDERS WITHOUT FLOATS, OR THE FLOAT CHAIN OF REF 2. PCS 26 AND 27 ARE REMOVED FROM FENDERS WITH FLOATS.

6. FENDERS, PC 7, LENGTH SHALL BE ± 1/4 INCH AND ENDS SHALL BE SQUARE TO THE BORE WITHIN 1/4 INCH TOTAL VARIATION.



DETAIL 7A
FENDER ASSY RIGGED FOR USE
SCALE : 1/16

FENDER ASSY TYPE II	BAR ASSY	CHAIN ASSY	LOWER SPIDER ASSY	UPPER SPIDER ASSY	FENDER ASSY TYPE I	SEE DET	PC NO.	DESCRIPTION	MATERIAL	MATL SPEC	REMARKS
					1	19B	37	LABEL PLATE	CRES CLASS FS-302	QQ-S-766	FINISH 2B
1						10A	36	LABEL PLATE	CRES CLASS FS-302	QQ-S-766	FINISH 2B
1						7A	35	FLOAT ASSY	—	—	-1 ASSY OF REF 2
				1		15A	34	CHAIN STAPLE BASE	STEEL	ASTM A36	1 x 2 1/2 FB
		6	6			20C 18C	33	(VERTICAL) BACKING BAR	STEEL	ASTM A36	1/4 x 3/4 FB
		2				24B	32	LOWER CHAIN LUG SLEEVE PC	STEEL	ASTM A36	10.2 # ft
		1				24B	31	BACKING RING	STEEL	ASTM A36	10.2 # ft
			1			22	30	BACKING RING	STEEL	ASTM A36	10.2 # ft
1						13B	29	LINK STAPLE	STEEL	ASTM A36	1 DIA ROD
		3	3			20C 18C	28	(HORIZONTAL) BACKING BAR	STEEL	ASTM A36	1/4 x 3/4 FB
					1	11A	27	RING	GALV STEEL	COML	1 1/8 DIA STOCK x 6 ID CROSBY-LAUGHLIN S-643 OR EQ
1					1	11A	26	SHACKLE	GALV STEEL	RR-C-271	1 1/8 RND PIN CHAIN
		2				24B	25	LOWER CHAIN LUG SLEEVE PC	STEEL	ASTM A36	10.2 # ft
				1		22D	24	UPPER CHAIN LUG	STEEL	ASTM A36	1 1/2 x 2 1/2 FB
		1				15A	23	CHAIN STAPLE BASE	STEEL	ASTM A36	1 x 2 1/2 FB
			6	6		25D	22	SPIDER FINGER CAP PL	STEEL	ASTM A36	10.2 # ft
			6	6		25D	21	SPIDER FINGER TUBE	STEEL	ASTM A53-B	3 OD x 1/4 WALL
			1			17A	20	LOWER SPIDER CAP PL	STEEL	ASTM A36	20.4 # ft
				1		17A	19	UPPER SPIDER CAP PL	STEEL	ASTM A36	20.4 # ft
			3	3		19A	18	SPIDER WEB	STEEL	ASTM A36	1/2 x 3 FB
			1			22A	17	LOWER SPIDER PL	STEEL	ASTM A36	20.4 # ft
-6	-5	-4	-3	-2	-1	SEE DET	PC NO.	DESCRIPTION	MATERIAL	MATL SPEC	REMARKS

NO. REQD FOR ONE FENDER ASSY

LIST OF MATERIAL (CONT)

FENDER ASSY TYPE II	BAR ASSY	CHAIN ASSY	LOWER SPIDER ASSY	UPPER SPIDER ASSY	FENDER ASSY TYPE I	SEE DET	PC NO.	DESCRIPTION	MATERIAL	MATL SPEC	REMARKS
					1	22A	16	UPPER SPIDER PL	STEEL	ASTM A36	20.4 # ft
			1			16A	15	CHAIN	GALV STEEL	RR-C-271	3/4 TYPE I GR C, CL 1
			1			13A	14	LOWER CHAIN LUG	STEEL	ASTM A36	1 x 2 1/2 FB
			1	1		15A	13	CHAIN STAPLE	STEEL	ASTM A36	7/8 DIA ROD
		1				11A	12	SHACKLE	GALV STEEL	RR-C-271	1/4 RND PIN CHAIN
		1				13B	11	LINK LUG	STEEL	ASTM A36	71.4 # ft
		1				14D	10	SMALL STAPLE	STEEL	ASTM A36	1 DIA ROD
		1				14E	9	LARGE STAPLE	STEEL	ASTM A36	1 DIA ROD
		1				16A	8	BAR	STEEL	ASTM A36	2 x 3 FB
3					3	11A	7	CYLINDRICAL FENDER	LOW FRICTION EPDM	COML	UNIROYAL OR EQ 28 OD x 14 ID NOTE 6
—					—	7A	-6	FENDER ASSY TYPE II		—	—
12	—				12	16C	-5	BAR ASSY	—	—	—
1		—			1	16A	-4	CHAIN ASSY	—	—	—
1			—		1	20C	-3	LOWER SPIDER ASSY	—	—	—
1				—	1	18C	-2	UPPER SPIDER ASSY	—	—	—
				—	—	7A	-1	FENDER ASSY TYPE I	—	—	—
-6	-5	-4	-3	-2	-1	SEE DET	PC NO.	DESCRIPTION	MATERIAL	MATL SPEC	REMARKS

NO. REQD FOR ONE FENDER ASSY

LIST OF MATERIAL

REF NO	DRAWING TITLE	DRAWING NO
1	FENDER ARR FOR MOORING SUBMARINES AT TENDERS	806-5773688
2	FLOAT FOR SUBMERGED FENDERS	806-5773691
3	SUBMERGED TRIANGULAR FENDER	806-5773689

REFERENCE DRAWINGS

REV	SHEET	REVISION STATUS OF SHEETS
B	3	
A	2	
B	1	

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN INCHES. TOLERANCES SHALL BE IN ACCORD WITH COMMERCIAL PRACTICE UNLESS OTHERWISE INDICATED ON DRAWING

CONTRACT NO N00024-79-C-4236
GEORGE G. SHARP, INC. 73503

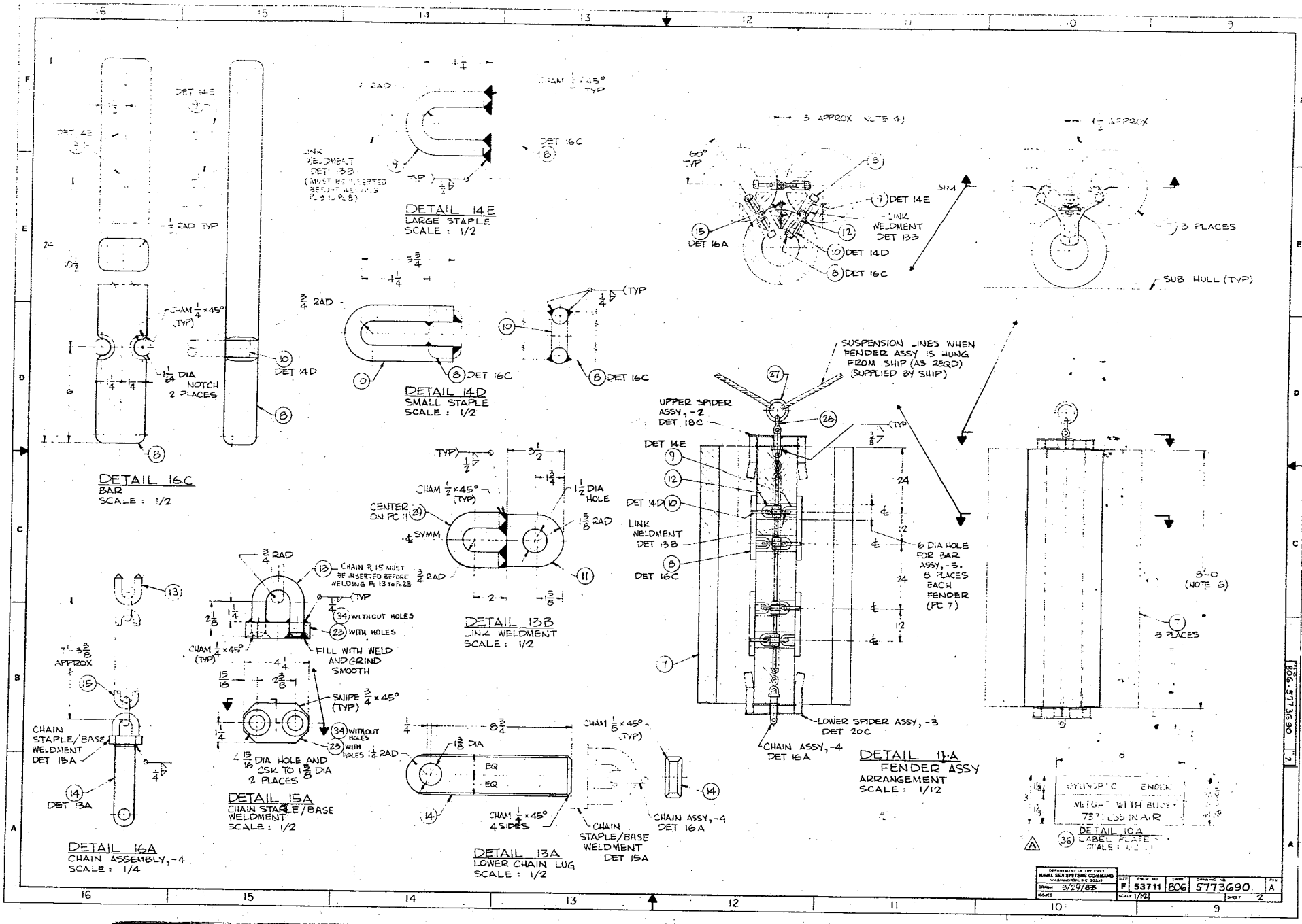
PREPARED BY: BURKE
CHECKED: A PIERRE
NO ENGR: [illegible]
NAVY APPROVAL: PROJ ENGR LUNDEEN; BRANCH NO [illegible]; DIVISION DIR [illegible]; OP DEP SYS; SAFE FOR COMMERCIAL USAGE

DEPARTMENT OF THE NAVY
NAVAL SEA SYSTEMS COMMAND
WASHINGTON, D.C. 20362

SUBMERGED CYLINDRICAL FENDER

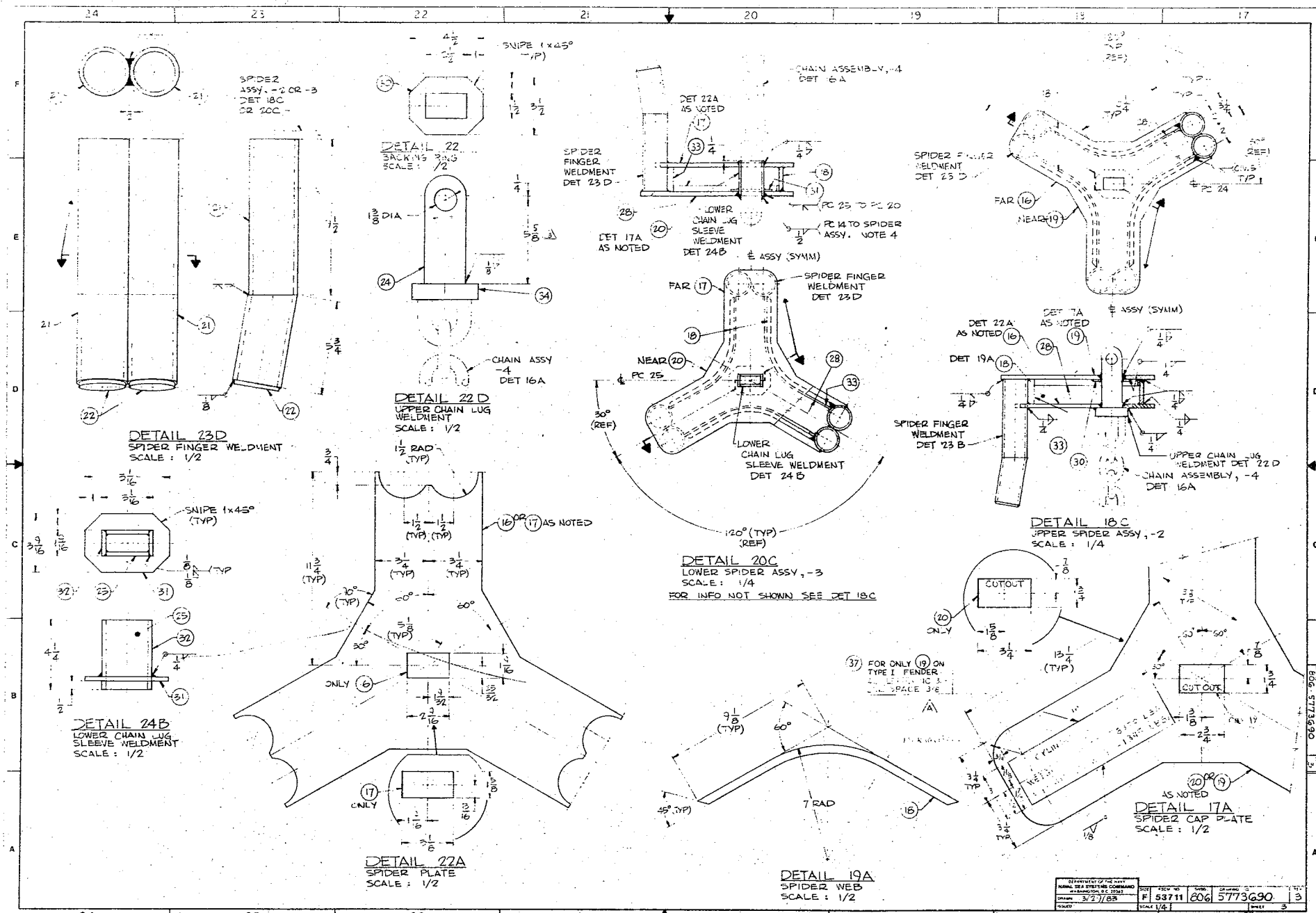
SYSTEM F | FSCM NO 53711 | DRAWING NO 806 5773690 | REV B | SCALE 1/16 | SHEET 3 OF 3

5773690 H



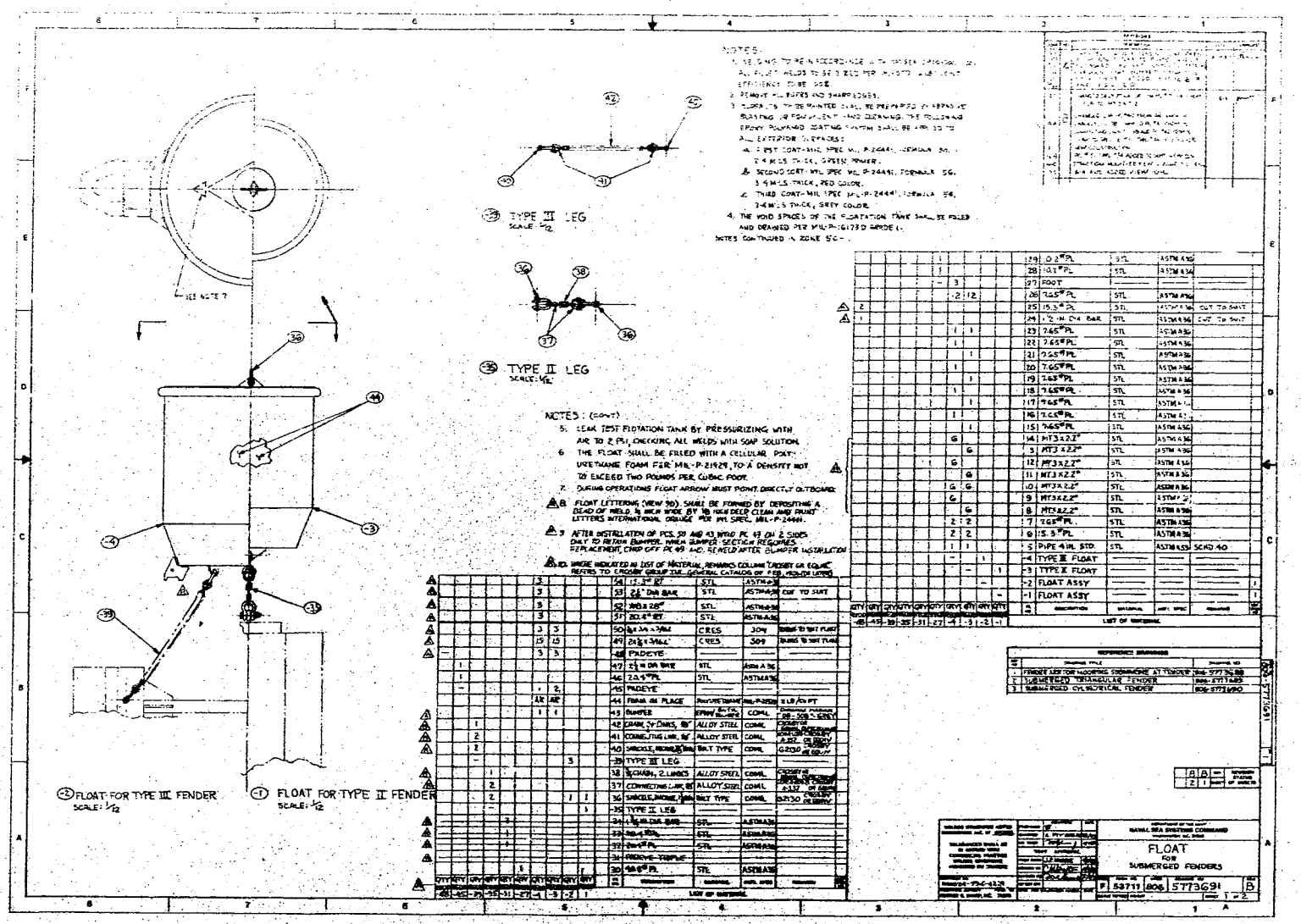
[redacted]

5773690 SH2

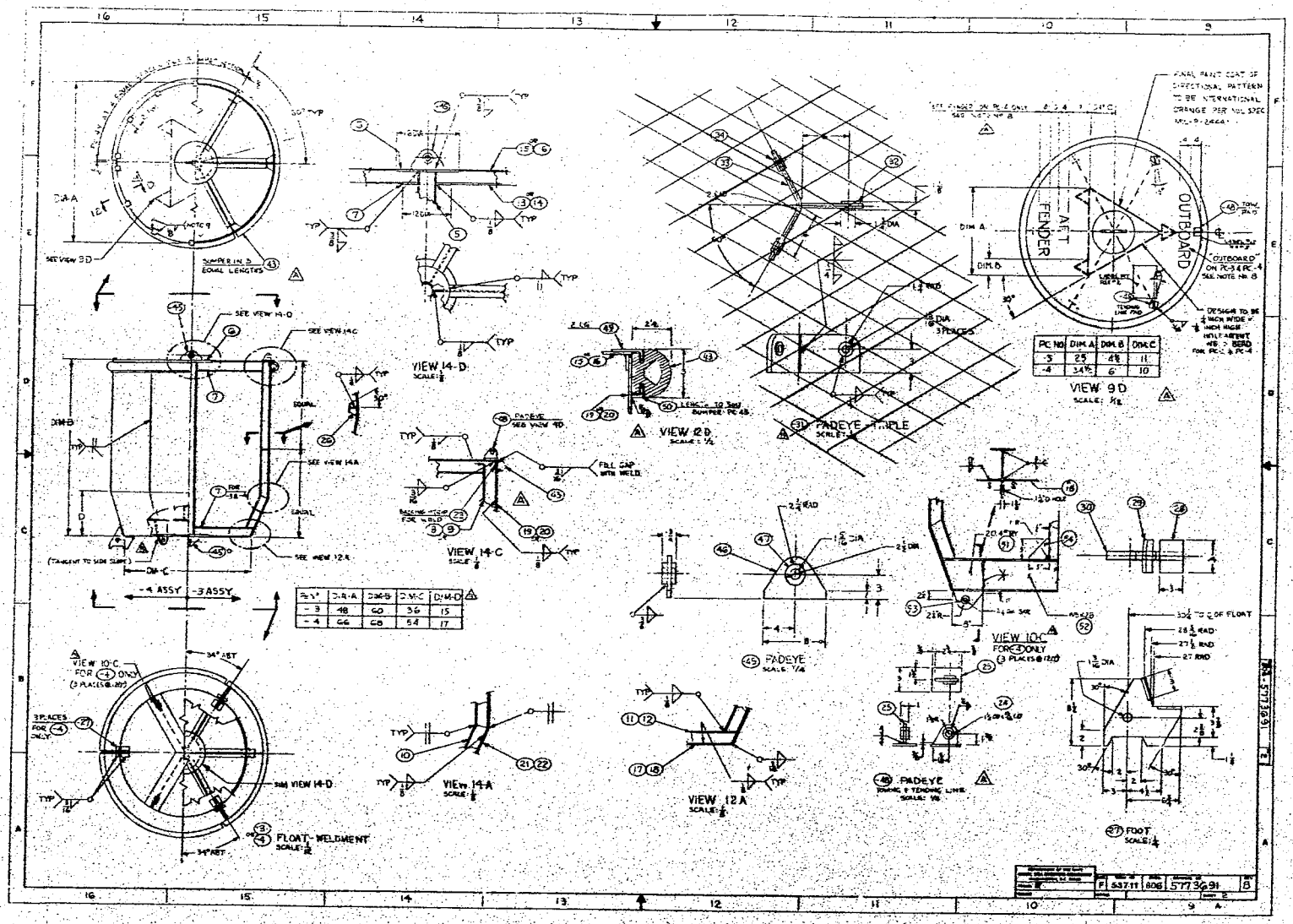


[redacted]

5773690 SH3


NOTES:
2. REMOVE ALL BURRS AND SHARP EDGES.
4. THE VOID SPACES OF THE FLOATATION TANK SHALL BE FILLED AND DRAINED PER MIL-P-16179D GRADE 1.
NOTES CONTINUED IN ZONE 5C-1
TYPE II LEG
SCALE: 1/12
TYPE II LEG
SCALE: 1/12
NOTES: (CONT)
5. LEAK TEST FLOTATION TANK BY PRESSURIZING WITH AIR TO 2 PSI, CHECKING ALL WELDS WITH SOAP SOLUTION.
6. THE FLOAT SHALL BE FILLED WITH A CELLULAR POLYURETHANE FOAM PER MIL-P-21929, TO A DENSITY NOT TO EXCEED TWO POUNDS PER CUBIC FOOT.
7. DURING OPERATIONS FLOAT ARROW MUST POINT DIRECTLY OUTBOARD.
8. FLOAT LETTERING (VIEW 90) SHALL BE FORMED BY DEPOSITING A BEAD OF WELD 1/8 INCH WIDE BY 1/8 INCH DEEP CLEAN AND PRINT LETTERS INTERNATIONAL ORANGE PER MIL SPEC. MIL-P-24441.
9. AFTER INSTALLATION OF PCS. 20 AND 43 WELD PL 49 ON 2 SIDES ONLY TO RETAIN BUMPER. WHEN BUMPER SECTION REQUIRES REPLACEMENT, CHIP OFF PL 49 AND RE-WELD AFTER BUMPER INSTALLATION.
10. UNLESS INDICATED IN LIST OF MATERIAL, REMARKS COLUMN "ASTM" OR EQUAL REFERS TO CROSBY GROUP INC. GENERAL CATALOG OF FEB. 1980 (OR LATER)
SEE NOTE 7
FLOAT FOR TYPE III FENDER
SCALE: 1/12
FLOAT FOR TYPE II FENDER
SCALE: 1/12
LIST OF MATERIAL
REFERENCE DRAWINGS
NAVAL SEA SYSTEMS COMMAND
FLOAT
FOR
SUBMERGED FENDERS
53711
806
5773691
B
1 OF 2

5773691 SH 1


VIEW 14-D
VIEW 12 D
VIEW 9 D
VIEW 14-C
VIEW 10-C
VIEW 14-A
VIEW 12 A
FLOAT-WELDMENT
FOOT
PADEYE
PADEYE TRIPLE
AFT FENDER
OUTBOARD
-4 ASSY
-3 ASSY
5773691
SH 2