

**ORDER FOR SUPPLIES OR SERVICES**

**IMPORTANT: Mark all packages and papers with contract and/or order numbers.**

1. DATE OF ORDER 07/14/2010		2. CONTRACT NO. (If any) DTMA1H05006		6. SHIP TO:		
3. ORDER NO. C06IAS10011		4. REQUISITION/REFERENCE NO. PRCR1000218		a. NAME OF CONSIGNEE No Shipping Information		
5. ISSUING OFFICE (Address correspondence to)  DOT/Maritime Administration, DGO Acquisition 500 Poydras Street, Room 1223  New Orleans LA 70130-3394				b. STREET ADDRESS		
				c. CITY	d. STATE	e. ZIP CODE
7. TO:				f. SHIP VIA		
a. NAME OF CONTRACTOR				8. TYPE OF ORDER		
b. COMPANY NAME Interocean American Shipping Corporation				<input type="checkbox"/> a. PURCHASE		b. DELIVERY - Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.
c. STREET ADDRESS 302 HARPER DR STE 200				REFERENCE YOUR:		
d. CITY MOORESTOWN				e. STATE NJ	f. ZIP CODE 08057-4701	
9. ACCOUNTING AND APPROPRIATION DATA 2010 - 70 - X4303 - SXX - 8 - 1018 - GZ - MIS - 701018 - GZ - MIS000 - - - 25431 - 6100 - 6600 -				10. REQUISITIONING OFFICE DOT/Maritime Administration, DGO Ship Operations		
11. BUSINESS CLASSIFICATION (Check appropriate box(es))						12. F.O.B. POINT
<input type="checkbox"/> a. SMALL <input checked="" type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> g. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. EMERGING SMALL BUSINESS						Destination
13. PLACE OF			14. GOVERNMENT B/L NO.	15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date)		16. DISCOUNT TERMS
a. INSPECTION Destination		b. ACCEPTANCE Destination				

17. SCHEDULE (See reverse for Rejections)

ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<b>SEE LINE ITEM DETAIL</b>					

SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT	19. GROSS SHIPPING WEIGHT	20. INVOICE NO.		17(h) TOT. (Cont. pages)
	21. MAIL INVOICE TO: Christy Remington				
	a. NAME DOT/ Enterprise Services Center (ESC) OFO/FAA, Oklahoma City				
	b. STREET ADDRESS (or P.O. Box) MARAD A/P Branch, AMZ-150 PO Box 25710				
	c. CITY Oklahoma City	d. STATE OK	e. ZIP CODE 73125		17(i) GRAND TOTAL \$0.00

22. UNITED STATES OF AMERICA BY (Signature) <i>Marie Casse</i>	23. NAME (Typed) Marie Casse TITLE: CONTRACTING/ORDERING OFFICER
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**ORDER FOR SUPPLIES OR SERVICES  
SCHEDULE - CONTINUATION**

PAGE NO.  
3 of 3

**IMPORTANT: Mark all packages and papers with contract and/or order numbers.**

DATE OF ORDER 07/14/2010	CONTRACT NO. DTMA1H05006	ORDER NO. C06IAS10011
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ITEM NO. (a)	SUPPLIES OR SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
0001	<p>STATE OF MAINE - 2010 REMEDIATION DRYDOCK PACKAGE</p> <p>This initial task order is issued to facilitate issuance of a solicitation of bids to carry out the necessary work to remediate (in drydock) and prepare the ex-State of Maine (USNS UPSHER) for delivery to MARAD's Beaumont Reserve Fleet in accordance with the attached specification and drydock package.</p> <p>SPECIFICATIONS ARE ATTACHED.</p> <p align="center"> <i>Start Date</i>                      <i>End Date</i>                      07/14/2010                      09/30/2010                 </p> <p>Reference Requisition: PRCR1000218</p>	1.00	LOT	0.000	0.00	

**TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17i)** ⇒ \$0.00

# T/S STATE OF MAINE

ex: USNS UPSHUR (T-API-98)

## 2010 DRYDOCK PACKAGE

FOR  
Environmental Remediation;  
Layup / Disposal Preparations;  
Hull Coatings Preservation;  
Layup Preparation; and,  
Tow Preparations.

INTEROCEAN AMERICAN SHIPPING CORPORATION (IAS)	
IAS RFP / CONTRACT #:	10-GA-297-097
PROPOSED START OF REPAIR PERIOD:	
VESSEL ETA @ CONTRACTORS FACILITY:	
IAS ATTENDING REPRESENTATIVE:	
AWARDED TO:	
DATE AWARDED:	
BAFO DATE:	
RFP DATE:	
SPECIFICATION DRAFT / REVISION:	2010-06-29 (rev 2.4.2)



302 Harper Drive, Suite 200  
Moorestown, NJ, 08057, USA  
(tel) US+856-770-1600 (fax) US+856-770-1634

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# VESSEL CHARACTERISTICS:

<b>NAME:</b>	<b>T/S STATE OF MAINE</b>
ex:	usns upshur (t-api-98), president hayes
<b>Builder:</b>	New York Shipbuilding Corp (Camden, NJ yard)
<b>Yard Hull Number:</b>	487
<b>Keel Laid:</b>	9/30/1949
<b>Launched:</b>	01/19/1951
<b>Delivered:</b>	December 1953
<b>Maritime Commission Hull Type:</b>	P2-S1-DN3
<b>LOA:</b>	533-ft, 09-inch
<b>LBP:</b>	511-ft, 11-inch
<b>Beam, Molded:</b>	73-ft
<b>Depth, Molded, to Upper Deck:</b>	49-ft
<b>Draft, Keel to Full Load:</b>	27-ft, 1-1/8 inch
<b>Displacement, Full Load:</b>	17,630 tons
<b>Displacement, Light Ship:</b>	11,233 tons

USNS UPSHUR (T-API98)

VESSEL DATA

FORMER NAME (IF ANY)	<u>"President Hayes"</u>
BUILT	<u>Camden, N.J.</u>
BUILDER	<u>New York Shipbuilding Corp.</u>
KEEL LAID	<u>9/30/49</u>
LAUNCHED	<u>1/19/51</u>
DELIVERED	<u>Dec. 1952</u>
OPERATED BY (YEARS)	<u>MSTS - 10 years</u>
MARITIME COMM. TYPE	<u>P2-S1-DN3</u>
CALL LETTERS	<u>N T F H</u>
LENGTH OVERALL	<u>533.7</u> LENGTH B. P. <u>503.2</u>
BREADTH, MOLDED	<u>73.0</u> BREADTH, EXTREME <u>73.2-5/8</u>
*DEPTH, MOLDED	<u>49</u> HEIGHT <u>129' 09"</u>
FREEBOARD (AT WNA)	<u>22'</u> SPEED, DESIGNED <u>21.5 knots</u>
TONNAGE: GROSS	<u>13,319.32</u> NET <u>7,158</u> DEADWEIGHT _____
DISPLACEMENT: LOADED	<u>17,600 tons</u> LIGHT <u>10,702 tons</u>
MEAN DRAFT (FULL LOAD)	<u>27' - 06"</u>
BOILERS: NUMBER	<u>2</u> TYPE <u>Straighted Header</u>
	MFG. <u>Babcock &amp; Wilcox Co.</u>
PROPELLERS	NUMBER <u>1</u> MATERIAL <u>Navy Bronze</u>
	DIAMETER <u>22'</u> PITCH <u>21' 8"</u>
MAIN GENERATORS (NO. & KW)	<u>3</u> <u>600 KW each</u>
EMERGENCY GENERATORS	<u>1</u> <u>100 KW</u> <u>120-240 Volts D.C.</u>
MAIN ENGINES	_____

Height above Base Line, 15" Fwd of FR 59

USNS UPSHUR (T-AP198)

EVAPORATORS (TYPE & CAPACITY) (2 Evaps. 20,000 gals. per day)  
GRISCOM-RUSSELL CO. Low Pressure 13,000

FRESH WATER CAPACITY 1,180 tons

FUEL CAPACITY 15,902

FUEL CONSUMPTION (24 HRS.) 450 bbls. CRUISING RADIUS 15,000

ANCHORS: PORT BOWER 13,409 LBS. STARBOARD BOWER 13,561 LBS.  
11,373  
SPARE BOWER 165 LBS. STREAM 4880 LBS.

\* ANCHOR CHAIN: LENGTH (PORT) 165 fathoms (STBD) 165 fathoms  
TYPE Stud Link SIZE 2-7/16" diameter

PERMANENT BALLAST (TONS-  
LOCATION) 1,717 tons, #1 L/H, #2L/H, #7 T/D, Sun/D

\*105 fathoms of 1-3/8 dia. chain for stream anchor

## ATTACHMENTS AND ENCLOSURES:

### Required References from Within the Specification Package:

Verify Before Issuing:	Referenced in Spec Item #:	ENCL #:	TITLE:	NOTES:
✓	201, 209	ENCL 01	Capacity Plan	1
Pending	201, 208	ENCL 02	Docking Plan	2
Pending	201	ENCL 03	Drydock Report (IAS)	1
Pending	201	ENCL 04	Expansion / Line Drawing	1
✓	201, 208, 214, 301, 302, 303 & 401	ENCL 05	General Arrangement & Compartment Plan (partial sets, 6 shts))	1
✓	207, 208	ENCL 10	List of Overboard Discharge Valves (2 pages (frm DC Book)).pdf	1
✓	207, 208	ENCL 11	List of Sea Valves (1 page (frm DC Book)).pdf	1
✓	201	ENCL 14	Mid-Ship Section	1
✓	213	ENCL 23	After Body Plan	1
✓	213	ENCL 24	"TYPICAL SECTIONS DWG 485-201-BC"	1
✓	210, 209, 211	ENCL 29	Bottom Shell Plating To "E" Strake Incl. Aft Fr. 107	1
✓	210, 211	ENCL 30	Side Shell Plating Above Strake "E" Fwd. fr. 107	1
✓	210, 211, 401	ENCL 31	Side Shell Plating Above Strake _E_ Aft fr.107	1
✓	210	ENCL 32	Inner Bottom Plating Fwd. Fr. 107	1
✓	210	ENCL 33	Bow Framing Fwd. Fr. 14 Bel. "B" Deck	1
✓	209, 210	ENCL 34	Bottom Shell Plating To "E" Strake Inc. Fwd. of Fr. 107	1
✓	209, 301, 303	ENCL 36	Sounding Report (VSL-WIDE)	1
✓	302	ENCL 37	FO & LO Tk Sounding Report	1

### Additional Reference Material Available:

Verify Before Issuing:	ENCL #:	TITLE:	NOTES:
✓	ENCL 06	List of Bilge Sounding Tubes (1 page (frm DC Book)).pdf	1, 3
✓	ENCL-07	List of Bulkhead Types (1 page (frm DC Book)).pdf	1, 3
✓	ENCL-08	List of CO2 Systems (1 page (frm DC Book)).pdf	1, 3
✓	ENCL 09	List of Fuel Oil Sounding Tubes (1 page (frm DC Book)).pdf	1, 3
✓	ENCL 12	List of Shore Connections (1 page (frm DC Book)).pdf	1, 3
✓	ENCL 13	List of Watertight Doors & Types (2 pages (frm DC Book)).pdf	1, 3
✓	ENCL 15	Reach Rod List (2 pages (frm DC Book)).pdf	1, 3
✓	ENCL 16	Various Pages from the Trim & Stability Booklet.pdf	1, 3
✓	ENCL 17	Vessel Data (2 pages (frm DC Book)).pdf	1, 3
✓	ENCL 18	Standardized Curves of Displacement, Areas, Centers & Coefficients	1, 3
✓	ENCL 19	Standardized Curves of Transverse Levers of Buoyancy	1, 3
✓	ENCL 20	Trim & Stability Booklet	1, 3
✓	ENCL 21	Stability Booklet	1, 3
✓	ENCL 22	Fwd Body Plan	1, 3
✓	ENCL 24	Typical Sections	1, 3
✓	ENCL 25	Structural Deck Plans Tank Top "D" & "C" Decks & Flats	1, 3
✓	ENCL 26	Structural Deck Plans "B" & "A" And Upper Decks	1, 3
✓	ENCL 27	Stem Arrangement	1, 3
✓	ENCL 28	Stern Frame Arrangement	1, 3
✓	ENCL 35	Tonnage Plan	1, 3
✓	ENCL 38	Inboard Profile	1, 3

NOTE "1" => Item provided as a stand-alone file, in PDF format, with original solicitation package (CD or download).

NOTE "2" => Item will be provided to successful shipyard prior to arrival of vessel.

NOTE "3" => Additional information not specifically referenced in any work item but useful.

## SCOPE AND INTENT OF SPECIFICATION PACKAGE:

The subject ship, T/S STATE OF MAINE (ex: USNS UPSHUR), is owned by the United States Department of Transportation, Maritime Administration (US-DOT-MARAD).

On/about 1994 the ship was retired from service as the training ship (T/S) for Maine Maritime Academy. Since retirement from service as a training ship, the ship has been in use by the United States Coast Guard at the USCG Fire and Safety testing facility located at Little Sand Island, Mobile, Alabama.

The intent of this specification package is to carry out necessary preparations to place the ship in the MARAD Ready Reserve Fleet in Beaumont, TX.

The ship will be delivered by the owner, via commercial tug, as an unmanned, "dead ship" tow to the successful shipyard's designated facility (the contractor).

The ship, delivered via tug as a dead-ship, will be totally without power (propulsion, steerage, lighting, etc...) and will be unmanned, with the following exceptions:

- (i) only tow contractor personnel will be onboard at arrival; and,
- (ii) Only required navigational lights in support of a dead-ship tow will be illuminated.

Upon arrival at the contractor's facility, the contractor will take custody of the vessel by executing the IAS Transfer Letter.

At the contractor's convenience, as identified in his response pricing/proposal, the vessel shall be either be immediately drydocked or placed at a temporary repair berth.

The shipyard must assume that Deck Machinery, Mooring Winches, Anchor Windless, etc, etc, do not (repeat: NOT) function and cannot be planned on for use or aid during any portion of the contract performance period.

## SECTION 1: OWNER-FURNISHED TECHNICAL SERVICE ORDER

“Section 1” is provided herein only for informational purposes to interested shipyards / contractors.

This section represents a list / index of intended Owner-Furnished 3<sup>rd</sup> Party Services and / or Technicians which IAS will engage under our own Purchase Order to attend the repair / drydocking availability in support of this entire specification package and work scope.

As Owner-Furnished Technical Service items, contractor / shipyard pricing is not (repeat: not) asked for, nor is it wanted for “Section 1” items. Section 1 is only for informational purposes and therefore informs the shipyard of owner-furnished services IAS intends to bring in to the successful shipyard / contractor facility:

### LISTING OF INTENDED OWNER-FURNISHED SERVICES:

S/O 001	Sponge Blast Contractor	=>	see item 206, paragraph 4.3
S/O 002	IAS Representative	=>	Owner’s Representative.
S/O 003	Steel Surveyor	=>	Assistance and supervision of items 210, 211, 213, etc...
S/O 004	Marine Surveyor	=>	Assistance and supervision of items 203, 214, 802, 303 etc...
S/O 005	Coatings Application Engineer	=>	Assistance and supervision of items 206
S/O 006	IAS Logistics Management	=>	Owner’s Representative.

## SECTION 2: SHIPYARD CONTACT

## PREAMBLE AND GENERAL REQUIREMENTS

### Preamble – 01 WORK SCOPE & ABSTRACT

- 1) RESERVED.
- 2) The terms “owner-furnished material”, “OFM” and “ship-furnished material” have the same meaning / definition, are interchangeable and may be used interchangeably within this specification package. This refers materials that will be furnished by the owner/ship. The shipyard does not need to include costs in their price quotation for these materials.  
  
Similarly, the terms “owner-furnished services (or) technician” and “ship-furnished services (or) technician” have the same meaning.
- 3) The shipyard is, however, responsible to include the cost for all “shipyard-furnished” materials in their price quotation.
- 4) The term “shipyard” and “contractor” have the same meaning / definition, are interchangeable and may be used interchangeably within this specification package. IAS considers the “shipyard” as the main entity under contract by IAS to carry out the scope of work detailed within this specification package.
- 5) The shipyard price quotation, for each specification item, must be fully laden / burdened. It is the responsibility of the shipyard to insure that the full costs for all necessary labor, material, services (staging, rigging, crane service, fire-watch, gas-free certificates, lighting, equipment, ventilation, tools and subcontractors) to carry out the complete work scope of each job item is included in their price quotation.
- 6) The term “Regulatory”, “Regulatory Body” and “Regulatory Bodies” refers to any combination of the ship’s Classification Society and Flag State Administration; and, are commonly referred to within this specification package as “Class & Flag” / “Regulatory & Statutory” and are interchangeable.
- 7) When applicable / necessary, attendance by Regulatory and Statutory Surveyors / Inspectors shall be arranged for and provided by the owner.

### Preamble – 02 GENERAL COATING REQUIREMENTS

**All new and disturbed steel resulting from the performance of work items in this package shall be prepared and recoated as follows:**

- 1) Surfaces are to be prepared by grinding, sandblasting or mechanical scaling with mechanical needle gun or equivalent as may be specified. At a minimum, surface preparation shall be to SA 1.
- 2) All shipyard-furnished coatings used must be compatible to the existing or new coatings.
- 3) RESERVED.
- 4) Any existing system or equipment markings shall be protected or re-applied in accordance with the above guidelines.

**All hull coatings, freeboard and underwater areas, shall be addressed as follows:**

- 5) SURFACE AREAS - The hull surface areas stated within this specification are official measurements and considered firm measurements and not open to negotiation for shipyard convenience.
- 6) Fresh water wash down of the entire hull area is provided for under work item 201, titled “DRYDOCKING”, paragraph 4.2, titled “INITIAL FRESH WATER WASH DOWN”.
- 7) RESERVED.
- 8) Prior to any surface preparation, the transducers, hull anodes and reference cells shall be covered and protected. Upon completion of hull painting, the contractor shall remove the protective covers and leave anodes, reference cells, transducer windows, etc... in good order.

- 9) Before applying paint to the hull, the contractor shall install wood plugs and/or extension pipe/hoses of sufficient length on all deck drain scuppers to prevent any drainage from running on the hull. Plugs are to remain in place until painting is completed and dry.
- 10) RESERVED.
- 11) Paint / coatings materials shall be Owner furnished. The Owner will furnish thinner for thinning the coating if needed. No Owner furnished thinner is to be used for equipment clean-up.
- 12) The contractor shall receive and verify amounts (inventory) all owner furnished coating deliveries. Contractor shall also verify all amounts of any coating material returned.
- 13) Owner furnished coating materials are to be received by the contractor and are to be stored in a secure and covered area and shall not be comingled with coating materials from other vessels, ships or projects.
- 14) RESERVED.
- 15) RESERVED
- 16) Prior to any coating applications, all prepared surfaces or primed areas are to be blown down with dry, oil-free air of approximately 5 bar pressure (~ 72.5 psi), or shall be fresh water washed in order to remove accumulated dust, grit or debris. All such surfaces are to be inspected and approved by Owner's paint representative prior to the application of each successive coat of paint.
- 17) It is requested that painting be conducted only during daylight hours; however, painting may be carried out during the night / evening hours if sufficient lighting is provided by the shipyard and approved by the IAS Representative.
- 18) Paint application method shall be by airless spray. Film thickness shall be in accordance with coating manufacturer's written instructions. Coating application and drying time allowed between each coat of paint shall be in full accordance with manufacturer's recommendations. All painting is to be accomplished during clear and dry weather and within coating manufacturer's humidity requirements.
- 19) All mixing, spraying, brush and roller application shall be done in accordance with the manufacturer's specifications. Thinning will be allowed only with permission of Owner's paint representative. No hand mixing of paint shall be allowed. Empty containers shall be checked to assure all solids have been mixed into the liquid. All paint shall be strained after mixing.
- 20) Runs, overspray, and sags in coating application will be rejected by the IAS Representative and shall be removed/repared prior to the next coat or final acceptance.
- 21) All hull painting, excluding touch up, is to be accomplished while the vessel is in dry-dock undergoing required repairs, and NOT at pier side, unless specifically authorized by IAS Representative.
- 22) Upon completion of related repairs, each strainer and sea chest shall be coated as specified for the area in which it is located. Off stickers and overboard lines to the first valve are to be considered as part of the sea chests.
- 23) During each stage of the coating application, wet film thickness measurements shall be taken approximately every ten minutes by the shipyard applicators and/or their immediate supervisor (lead man) to ensure correct material coverage thickness.
- 24) Contractor shall be responsible for disposal of all rubbish and debris generated by this item (i.e. dirty solvent, paint cans, used grit, rags, etc.). Contractor shall comply with all federal, state and local regulations for disposal.

**Preamble – 03                      HULL PLATING AND STEEL RENEWALS**

1) GENERAL

- 1.1) The contractor shall furnish all materials, equipment, labor, tools, equipment and services necessary to access and perform all plating and structural renewals, as indicated elsewhere in this specification package.

- 1.2) All work to be carried out to the satisfaction of the IAS Representative, as well as the attending Classification Surveyor if applicable.
  - 1.3) The Owner's shall be permitted to have their inspector(s) present, in the works and on the premises of the contractor, throughout the complete repair period of the vessel. The IAS Representative shall receive timely notification prior to all tests and required inspections.
- 2) MATERIAL
- 2.1) All steel plates and structural shapes are to be in accordance with Classification Rules.
  - 2.2) The contractor shall provide Mill Certificates as per Classification Rules.
  - 2.3) All steel plates, bars and shapes are to be of a thickness equal to or greater than the renewal thicknesses indicated below.
- 3) WORKMANSHIP
- 3.1) All workmanship is to be of the highest quality and well executed, subject to inspections by the IAS Representative, Classification Surveyor.
  - 3.2) All new steel to be grit blasted, edges taped and prime coated (2 coats) prior to installation. In areas not subject to complete coating, new steel and disturbed areas are to be final coated as per the requirements of "preamble" item 002, titled "GENERAL COATING REQUIREMENTS", stated above. All paints to be Owner furnished.
- 4) FIT-UP & WELDING
- 4.1) All connections in way of structural renewals, which were originally welded, are to be joined by electric arc welding, employing approved coated electrodes and/or wire, performed by skilled operators, under careful supervision and to the approval of the attending Classification Surveyor.
  - 4.2) Before welding, the surfaces to be joined are to be closely and accurately fitted together, without use of undue force and with the surfaces thoroughly cleaned and made free of rust. Sequence welding is to be performed in a manner, which will avoid buckling of plates, and avoid undue stress in the material.
  - 4.3) All welded seams and butts are to be welded so that the welds from opposite sides of the plate penetrate the full depth of the plates. Butts and seams are to be chipped, ground and/or gouged clean on the opposite side before the back welding is applied. The IAS Representative shall witness the back gouge side of all watertight joints before welding proceeds.
- 5) TESTING
- 5.1) Each inner bottom and ballast tank, where work is to be carried out, is to be tested with water and/or vacuum box at a pressure corresponding to a test head equal to the highest point of the tank to the satisfaction of the IAS Representative and the Classification Surveyor.
  - 5.2) The contractor is to appoint suitable personnel to examine repairs, renewals and/or alterations, on completion, prior to final survey.
- 6) ADDITIONAL REQUIREMENTS & NOTES
- 6.1) All measurements, weights, sizes, etc., written or implied, are approximate estimate. It is, therefore, the responsibility of the contractor to make independent physical measurements in order to achieve accuracy.
  - 6.2) Sketches are provided for estimated purposes only and are not to scale.
  - 6.3) The IAS Representative will provide all drawings or plans required.
  - 6.4) To insure the continued safety, and vessel stability, the contractor shall provide supporting calculations, work planning and production schedules in support of all hull plating and structural steel renewals, inserts, removals and

additions. This information shall be provided to the IAS Representative prior to the commencement of any / all work. Drydock and vessel refloat safety shall be paramount.

**Preamble – 04                      QUALITY ASSURANCE**

- 1) It shall be the responsibility of the Contractor to confirm/comply with the IAS Representative or his/her appointed representative regarding any and all sizes, shapes, types, dimensions, colors, materials, parts, technical requirements, data and/or processes required to effectively make associated repairs and/or modifications per these specifications prior to the commencement of work.
- 2) All contractor-furnished parts, materials, services, labor and workmanship shall be the satisfaction of the attending IAS Representative.

**Preamble – 05                      MATERIAL QUALITY**

All material, equipment, etc., used in the performance of the specifications shall be at least equal to that of the original, be certified by an established industry-wide recognized firm for marine application and in full compliance with the rules, regulations and requirements of the ships Classification Society and the USCG where applicable.

**Preamble – 06                      PERIPHERAL ACCESS, TANKS, MANHOLES AND COVERS**

- 1) All equipment, machinery, systems, tankage, etc... that are to be opened in the performance of the specifications, including all interferences, removals, etc., shall be closed-up, reinstalled, and replaced as original with new shipyard-furnished gaskets, packing, fasteners, etc. including washers for studs of manholes, access covers, etc. Said equipment, machinery, systems, tanks, etc. shall be tested in accordance with accepted practices to prove tightness and proper operations upon completion of work.
- 2) The contractor shall maintain a list of loosened / eased, opened, altered tanks, voids and/or confined spaces and demonstrate tightness of same upon completion of work to the IAS Representative.
- 3) The contractor shall maintain a list of all blanks, plugging, etc., installed for testing purposes and demonstrate removal of same to the IAS Representative.
- 4) The contractor shall not close any tank, void, space or vessel, opened for any reason, without obtaining the specific authorization to do so from the attending IAS Representative.
- 5) Each tank, void, confined space, etc... which has been opened, ventilated and certified "safe for entry" or "safe for hot work" shall be continuously ventilated and its certification checked and verified daily until such tank, void, space, etc... has been authorized for closure by the IAS Representative.
- 6) Each tank, void, confined space, etc... open for work or inspection the contractor shall supply install and maintain adequate and appropriate temporarily lighting to facilitate work and / or inspection.
- 7) The attending IAS Representative, or his appointed representative(s), (e.g. vessel Captain and / or Chief Engineer) shall inspect all tanks, voids, spaces or confined spaces of the vessel immediately prior to the contractor closing same.
- 8) The attending IAS Representative, or his appointed representative(s), (e.g. vessel Captain and / or Chief Engineer) shall personally witness the securing of the manhole cover, hatch or door.

**Preamble – 07                      REQUIRED TIDINESS**

- 1) All new, disturbed and/or soiled materials, surfaces, equipment, etc., affected by the accomplishment of these specifications shall be properly cleaned, prepared, coated/recoated, re-lagged/re-insulated, etc., as applicable and original.
- 2) All spaces, equipment, machinery, tanks, accommodations, affected by repairs shall be left in a clean and orderly condition and ready to serve their intended purposes.
- 3) The vessel shall be delivered in a condition at least equal to when received by the Contractor. A mutual inspection of the entire vessel by the IAS Representative, and the Contractor, is to be conducted before commencement and upon completion of contract. IAS Representative shall decide all disputed matters.

**Preamble – 08 ACCESS TO THE VESSEL**

The contractor shall insure safe and free access to and from shore for ship’s compliment, all regulatory authorities, and company / owner representatives. This requirement includes, but is not limited to, adequate lighting on the pier, gangway area, and installation of safety netting and barriers.

**Preamble – 09 FINAL INVOICE & INVOICE STRUCTURE**

The shipyard must prepare and present a final invoice package, for all work performed and all materials provided, in accordance with this “specification package” and any IAS approved change orders.

The final invoice package is to be presented to the IAS Representative for validation and approval.

The final invoice package shall be as follows:

**SECTION 1: COVER LETTER**

Invoice cover letter, stating in words and numbers the grand total due the shipyard. This cover letter is to be signed by both the shipyard and the attending IAS Representatives.

**SECTION 2: ORIGINAL FIXED PRICE ITEMS (Line items are to be sorted by the IAS “specification” item number):**

<b>ITEM #:</b>	<b>TITLE OF ORIGINAL ITEM</b>	
(a)	Comprehensive statement of work carried out by the shipyard.	
(b)	Cost of any associated “Labor”	1
(c)	Cost of any associated “Materials”	2
(d)	Cost of any associated “Subcontractors”	3
(e)	Cost “Other (if applicable)”	4
	<b>Total for Item:</b>	<b>10</b>

**SECTION 3: CHANGE ORDERS (Credit or Debit) AND EXTRAS:**

<b>ITEM #:</b>	<b>TITLE OF CHANGE ORDER</b>	
(a)	Statement of work carried out as extra or above and beyond original scope.	
(b)	Signed IAS Change Order Form - Identifying the following Costs	
	Cost of any associated “Labor”	1
	Cost of any associated “Materials”	2
	Cost of any associated “Subcontractors”	3
	Cost “Other”	4
	<b>Agreed Total for Change (Credit or Debit):</b>	<b>10</b>

**SECTION 4: ITEMIZED INVOICE LISTING (all original items and all change orders, sorted by IAS-Specification item number):**

<b>ITEM #:</b>	<b>LINE ITEM TITLE (Original or Change Order)</b>	<b>1</b>
<b>ITEM #:</b>	<b>LINE ITEM TITLE (Original or Change Order)</b>	<b>2</b>
<b>ITEM #:</b>	<b>LINE ITEM TITLE (Original or Change Order)</b>	<b>3</b>
<b>ITEM #:</b>	<b>LINE ITEM TITLE (Original or Change Order)</b>	<b>4</b>
“	“ “ “ “	<b>5</b>
	<b>FINAL AGREED GRAND TOTAL:</b>	<b>15</b>

## 100 GENERAL SERVICES SECTION

### 101 WHARFAGE

Provide safe and adequate pier space and berthing for the subject vessel. Said pier shall be equipped with all the service facilities as required by the repair requirements and service needs contained in this specification package.

The Contractor-furnished wharfage shall provide a safe and adequate berthing to the subject vessel. A safe berthing area constitutes as a minimum, structural integrity of the wharf as well as sufficient depth of water at the pier at all times during the contract period.

The contractor shall furnish IAS a "Mooring Plan" and "Heavy Weather Plan" specific to the subject vessel.

A minimum of four (4) feet of water shall be maintained at all times under the vessel's keel over its entire length throughout the duration of the shipyard period.

Provide personnel to maintain the proper tension on the mooring lines and wires during all tide changes and weather changes. The actual mooring arrangement shall be in accordance with the mooring plan submitted by the contractor. The ships mooring lines may be used (EXCEPT IN DRYDOCK, WHERE CONTRACTOR-FURNISHED LINES SHALL BE USED).

Provide and install rat guards on all mooring lines, service lines and hoses greater than 1 inch in diameter for the duration of the yard period. Maintain the rat guards in good order and correct all deficiencies when required. The pier area must be maintained in a safe and clean condition throughout the duration of the shipyard period.

### 102 LINE HANDLERS

The contractor shall provide all line handlers to receive, handle, shift and moor the vessel.

### 103 GANGWAY

The Contractor shall supply and secure in position at all times, two (2) lighted gangways with proper handrails and safety nets to allow easy access to and from the vessel. The gangways shall be set up at a location approved by the IAS Representative.

**Note:**

1. Any modifications to, removals of, or attachments to the vessel for the purpose of positioning the gangway are to be completely removed and or restored when the gangway is removed, and the area is to be left as original.
2. The ship's gangway will not be used at any time during the shipyard period.

### 104 GAS FREE CERTIFICATE

The Contractor must provide the services of a Marine Chemist to certify "Safe for Men" for all spaces (cargo holds, machinery and equipment spaces (out side of the Main Engine Room). Shaft Alley, storage lockers, cofferdams, ballast tanks, void spaces, double bottom tanks, deep tanks, pressure vessels, etc.) which must be entered during the period of performance of the contract.

Three (3) copies of all Gas Free Certificates must be made available. Each copy must be delivered to the proper person, or location, before entry and/or start of hot work.

Distribution of the certificate copies is as follows:

- One copy to IAS Representative;
- One copy for display at Gangway;
- One copy to be posted locally at the space entry point.

### 105 FIRE PROTECTION

The contractor shall furnish, install and maintain fire hose manifolds (minimum of 2) and sufficient 1-1/2 inch fire hose lengths to reach throughout the entire vessel. Each manifold must be charged by a 2-1/2 inch fire hose and branch off into two separate 1-1/2 inch fire hoses.

One manifold must be placed forward; one manifold must be placed mid-ship on the ships upper deck. The manifolds shall be pressurized by a dedicated shore service fire pump. The pressure at each manifold shall be maintained at a minimum of 100 PSIG while providing sufficient flow.

Each manifold shall be equipped with a gauge to monitor the pressure of the system. In addition, each manifold must also be equipped with two (2) quick closing ball valves installed prior to the downstream hoses (each hose must have one dedicated shut off valve). The downstream hoses shall not be pressurized unless required by an emergency. An all-purpose nozzle is to be attached to the end of each hose.

#### **106 IAS REPRESENTATIVE OFFICE**

The Contractor shall provide a clean and secure office facility for the exclusive use of the attending IAS Representative.

At a minimum, the office facility must have, or meet, the following criteria

- (a) Must be capable of locking; provide the IAS Representative with four (4) sets of keys;
- (b) Equipped with, or have near-by access to toilet facilities, toiletries, and wash basin with hot and cold fresh water;
- (c) Heating and air conditioning; and,
- (d) Lighting, desk space, furniture and electrical outlets for full time use of three (3) personnel.
- (e) Two (2) unrestricted, CAT5 high-speed broadband internet connections (not wireless). **These CAT5 connections must allow use of a VPN connection.**

At a minimum, the office shall have the following shipyard-furnished and maintained, equipment

- (f) Access to one (1) plain paper fax machine.
- (g) Access to coffee maker, with all accessories / supplies.
- (h) Office desks and chairs for three (3) people.
- (i) One color printer w/ software drivers and cables.
- (j) One dedicated & unrestricted telephone line with unrestricted, direct dial international service.

The Contractor shall clean the office daily (empty trash, clean floors, clean restrooms, etc...).

Provide all sundry items necessary for the operation of office equipment, including paper, toner, ribbons, computer accessories, coffee supplies, etc. Provide any needed servicing to all equipment.

Provide all necessary safety equipment and materials to support three (3) Superintendents (flashlights, batteries, coveralls, hardhats, inspection hammers, etc.

**Note:**

For estimating purposes, the contractor shall include in his price quotation that this office space will be available to the IAS Representative five (5) days before and five (5) days after vessel arrival / departure.

#### **107 ELECTRIC POWER**

The Contractor shall provide, install and connect metered electric power for general lighting purposes. Meter readings shall be recorded at each power-up and disconnect for a final totalized settlement. It is the responsibility of the contractor to make all connections and disconnections for arrival, departure and all vessel movements/shifts.

**Note:**

For estimating purposes, the contractor quotation shall provide 220VAC, 60hz, 250 amp, 3-phase for the contract duration.

#### **108 TUG BOATS AND PILOTS**

The ship shall arrive and depart from the contractor's facility by an owner-furnished commercial tow contractor, as a dead-ship, unmanned tow.

The contractor shall provide all other tugboats, pilots and line handles for all shifts within their facility; to include all drydock movements.

#### **109 UNIT PRICING – SHIFTS WITHIN CONTRACTOR FACILITY**

Should the ship require a shift from drydock to a contractor pier, prior to redelivery, the contractor shall provide all necessary tugs, pilot and line handlers to accomplish same.

**200 DRY-DOCKING SECTION**

## **201 DRY-DOCKING**

### **1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to dry-dock the subject vessel in accordance with the “undamaged” docking condition shown in the docking plan.

### **2.0 OWNER-FURNISHED MATERIAL, SERVICES, EQUIPMENT & INFORMATION**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 ENCL 01 Capacity Plan
  - 2.4.2 ENCL 02 Docking Plan
  - 2.4.3 ENCL 03 Drydock Report (IAS)
  - 2.4.4 ENCL 04 Expansion / Line Drawing
  - 2.4.5 ENCL 05 General Arrangement & Compartment Plan (partial sets, 4 shts))
  - 2.4.6 ENCL 14 Mid-Ship Section

- 3.0 SHIPYARD FURNISHED MATERIALS: All other as required.

### **4.0 STATEMENT OF WORK:**

Using attachments and enclosures listed above in paragraph 2.4, titled “DRAWINGS, TECHNICAL MANUALS, INFORMATION” for guidance, the shipyard will provide all labor, services, equipment and services, inclusive of a qualified and experienced Docking Master, to drydock the ship.

Unless otherwise agreed, the ship is to be drydocked as/in the “undamaged” condition.

### **4.1 PRICING AND ESTIMATION GUIDANCE**

The contractor price quotation for drydocking shall be for the full period time (given his facilities, labor and capabilities) necessary to complete all work stated within this specification package that requires the ship to be out of water.

### **4.2 GENERAL DOCKING INSTRUCTION**

Using the items listed above in paragraph 2.4, titled “DRAWINGS, TECHNICAL MANUALS, INFORMATION” for technical guidance, provide all the necessary labor, Dock Master supervision, materials and other equipment to safely dock and undock the vessel for a period of time sufficient to carry out all necessary bottom inspections, painting and other work required by this specification.

The contractor’s Docking Master shall arrange all blocking to safely support the vessel IAW all drawings and customary industry practice and structural considerations for a vessel of this class/type. Particular attention shall be paid to the keel blocking and the structural consideration of the ships “pipe tunnel”. All blocking shall be fabricated of hard wood and in good condition without excessive checking. Blocks shall be capped with softwood in new or good condition. Any damage to the hull from block caps will be the responsibility of the contractor. Blocks shall be of sufficient height to allow for a minimum of five-foot clearance from the dry-dock floor to the bottom shell plating at the keel.

Contractor shall take soundings of all vessel’s tanks at vessel's arrival at contractor's facility and prior to docking and undocking. Contractor shall supply clean ballast water as required for docking and undocking, of vessel.

#### **4.3 INITIAL FRESH WATER WASH DOWN:**

As the dry-dock is being pumped dry, or immediately thereafter, the contractor shall commence and continue to high-pressure fresh water wash the entire hull area (to include sea chests, in-takes, discharge openings, recesses, etc...) from the rail to the keel to remove all marine growth before same is allowed to dry.

The contractor shall use a minimum of 5,000 psi, at the nozzle, of fresh water pressure. The contractor shall also provide adequate staging or man-lifts to ensure that the operators of wash down equipment can and do maintain a maximum distance of six inches from the hull with the water blasting nozzle or lance.

The intent of this item is to remove all marine growth, loose corrosion, and salt from the hull BEFORE it dries.

#### **5.0 DELIVERABLES:**

- 1) **PRE-DOCKING DRYDOCK INSPECTION:** Prior to docking the vessel, the contractor shall present the drydock, ready to receive the ship (all blocking set, floor cleaned, reference marks in place, etc., to the IAS Representative for inspection.
- 2) Provide copies of the shipyard docking arrangement / docking plan showing the subject ship in position on the blocks relative to the walls, caisson, cranes, major structures, gangway access positions and other vessels in the dock; as follows:
  - a. One hard copy in support of the PRE-DOCKING DRYDOCK INSPECTION; and,
  - b. One electronic copy (pdf format).
- 3) The Contractor is to complete Owner's Dry-dock Report (see paragraph 2.4.3 stated above) and submit it to the IAS Representative prior to undocking of vessel. A complete description of underwater hull coating and underwater hull markings are to be attached. A copy of the form is attached herewith.

**202 (unit price) DRY-DOCKING DAILY RATE**

Contractor to provide a price quotation for each additional day in drydock. Price is to assume maintenance of all general and drydock services.

**203 ANCHOR CHAIN GAUGING**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to range the Port and Stbd Anchor and Chains and provide gauging inspections IAW the standards of ABS.

**2.0 OWNER-FURNISHED MATERIAL, SERVICES, EQUIPMENT & INFORMATION: None.**

**3.0 SHIPYARD FURNISHED MATERIALS: All other as required.**

**4.0 STATEMENT OF WORK:**

Provide all labor, materials and services to disconnect, lower and range the Port and Stbd anchor chains (11 shots each side) to the dry-dock floor for Classification Society, Flag State and IAS Representative inspections.

Power wash anchors and chains to remove mud and loose scale.

Gauge anchor chains in accordance with Classification Surveyor's requirements. Submit four (4) typewritten copies of gauging results to the IAS Representative.

**NOTE:**

The ship's anchor windlass's are not functional and the chains will need to be removed and reinstalled via shipyard labor and crane.

**5.0 DELIVERABLES:**

Chain Gauging Report, as follows:

1 each, hard copy report; and, electronic copy.

**204 ANCHOR CHAIN SAFETY MARKINGS**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to apply required safety and identification markings to the Port and Stbd Anchor and Chains, as follows:

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

All coatings materials will be ship-furnished.

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

In conjunction with work item 202, titled "PORT & STBD ANCHOR CHAIN GAUGING" and item 205, titled "ANCHOR CHAIN COATING", and while ranged on the drydock floor for same, the contractor shall carry out the following preparation and coatings work:

Chain Markings, each shot of chain shall have the following safety markings applied:

<b>ANCHOR CHAIN SAFETY MARKINGS:</b>	
<b>(i)</b>	Each detachable link shall be painted red;
<b>(ii)</b>	One link on each side of the detachable link shall be painted white to indicate the number of shots. <i>(example: with three shots in the water, three links at each side of the detachable shall be painted white, and so on.);</i>
<b>(iii)</b>	Apply metal banding on each side of the detachable link to indicate the number of shots. <i>(example: with three shots in the water, three bands shall be applied at each side of the detachable link, and so on.);</i>
<b>(iv)</b>	The next to last "complete shot" shall be painted yellow; and,
<b>(v)</b>	The last "complete" shot shall be painted red.

**5.0 DELIVERABLES:** None.

**205 CHAIN LOCKER INSPECTIONS**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to open clean and inspect the chain lockers (Port and Stbd).

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:** None.

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

With the port and starboard anchor chains removed from the ship as discussed above, the contractor shall provide all ventilation, lighting, staging, services and labor to clean the interior of the chain lockers.

The contractor shall thoroughly clean by use of power washers all interior surfaces of port and starboard chain lockers and remove all mud, sludge, loose scale and other debris.

Contractor pricing shall include / allow for removal and disposal of 50 m3 of existing of sludge, sediment, debris.

**5.0 DELIVERABLES:** None.

## **206 HULL COATINGS RENEWAL APPLICATION**

### **1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to fully blast and apply two (2) coats of owner-furnished coatings system.

### **2.0 OWNER-FURNISHED MATERIAL, SERVICES, EQUIPMENT & INFORMATION**

2.1 MATERIALS: All required coatings / paint and thinner.

#### **2.2 SERVICES:**

2.2.1 A qualified coatings representative to oversee all preparation and application work.

2.2.2 A qualified SpongeJet contractor as per paragraph 211.4.3, stated below.

2.3 EQUIPMENT: None

#### **2.4 DRAWINGS, MANUALS, INFORMATION:**

2.4.1 Hull Coatings Application Scheme

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

### **4.0 STATEMENT OF WORK:**

#### **4.1 GENERAL INSTRUCTIONS, CLEANING AND PREPARATION STANDARDS:**

A freshwater wash down of the ENTIRE ships hull (underwater and freeboard) is provided for above under item 201, titled "DRY-DOCKING", paragraph 4.4, titled "INITIAL FRESH WATER WASH DOWN".

4.2 The general instructions, requirements and expectations for all hull coatings, freeboard and underwater areas, are stated in the "Preamble – 02 GENERAL COATING REQUIREMENTS".

#### **4.3 Sponge Blast Test Area:**

As stated above in paragraph 2.2.2, IAS shall provide a qualified "SpongeJet" contractor, as Owner-Furnished Services, to include all equipment, materials and consumables and trained labor necessary to sponge-blast a test area of approximately 10,000 square feet (between frame 195 to 180 (rail to keel, port and Stbd sides).

The purpose of this test area is to provide the vessel owner with a direct comparison between conventional surface preparation by abrasive grit blasting verse Sponge-Blasting.

The shipyard shall allow and provide for unrestricted access, labor and necessary services (including but not limited to compressed air, crane, forklift, electric power, water, blasting-spoils disposal, etc) to generally assist the owner-furnished subcontractor to set-up and carry out his test blasting operation.

#### **4.4 Abrasive Grit Blasting, Hull:**

Using enclosure 206.2.4.1, titled "Hull Coatings Application Scheme" for guidance, the contractor shall carry out a full surface preparation, blow off with dry oil free compressed air; then hold surface preparations for coating application detailed below in paragraph 4.5 (following).

#### **4.5 Hull Coatings:**

Using enclosure 206.2.4.1, titled "Hull Coatings Application Scheme" for guidance, the contractor shall hold the surface preparations carried out in paragraph 4.4, and apply the hull coatings as specified enclosure 206.2.4.1.

**4.6 Hull Markings:**

4.6.1 All traditional hull markings (tank, boundary, draft, ship name, home port, etc...) shall be reapplied as specified in enclosure 206.2.4.1, titled "Hull Coatings Application Scheme" (coat = FB4).

4.6.2 Waterline Markings:

Apply two (2) coats, as follows:

- (1) Four (4) inch wide stripes along the "waterline" extending horizontally forty-eight (48) inches toward midships around (wrapping) from the bow and stern on both sides of the vessel.
- (2) A second marking stripe (again 4 inches high) shall be applied four (4) feet above each "waterline" mark.
- (3) The trailing edge of the rudder (1/2 the rudder) shall also have the same set of markings applied.

**5.0 DELIVERABLES:**

- 1) Temperature and humidity readings @ 0800-hrs, 1200-hrs and 2000-hrs.
- 2) Coatings application report.

Encl 206.2.4.1 "Hull Coatings Application Scheme"

HULL COATING RENEWAL									
AREA:		FT <sup>2</sup>	M <sup>2</sup>	PRODUCT:	PREP:	COAT:	TYPE:	DFT: (micron)	COMMENTS / NOTES:
UNDERWATER HULL	Keel To Deep Load Line (@ 27-ft = 50,000 ft <sup>2</sup> )	50,000	4,645	(para 4.4) Abrasive Grit Blast	SA 2	X	X	n/a	
		50,000	4,645	(para 4.4) Blow-off (w/ dry, oil free, compressed air)	Blow	X	X	n/a	
		200	19	(para 4.5) Jotamastic 87 Red 49 Hard Edges and Seams (as designated)	X	UW-1	SC	150	
		50,000	4,645	(para 4.5) Jotamastic 87 Red 49	X	UW-2	FC	200	
		50,000	4,645	(para 4.5) Safeguard ES Grey	X	UW-3	FC	100	
	Hull Markings	20	2	(para 4.6) Safeguard ES Black	X	UW-4	Hand	100	
FREEBOARD	DLL (@ 27 ft) To Inside Rail (49 ft) (33,000 ft <sup>2</sup> )	28,000	2,601	(para 4.4) Abrasive Grit Blast	SA 2	X	X	n/a	
		10,000	930	(para 4.3) Sponge Blast - Test Area (Rail to Keel, btwn fr 195 to 180, Pt & Stbd)	SA 2	X	X	n/a	Owner-furnished contractor.
		33,000	3,066	(para 4.4) Blow-off (w/ dry, oil free, compressed air)	Blow	X	X	n/a	
		200	19	(para 4.5) Jotamastic 87 Red 49 Hard Edges and Seams (as designated)	X	FB-1	SC	150	
		33,000	3,066	(para 4.5) Jotamastic 87 Red 49	X	FB-2	FC	200	
		33,000	3,066	(para 4.5) Penguard FC (Haze Gray)	X	FB-3	FC	100	
	Hull Markings	20	2	(para 4.6) Penguard FC (Black) (2 coats)	X	FB-4	Hand	100	
	Hull Markings	20	2	(para 4.6) Penguard FC (International Orange) (2 coats)	X	FB-5	Hand	100	
Legend: para = paragraph; FC = Full Coat; TU = Touchup Coat; SC = Stripe Coat (by brush); Hand = Hand Lettering.									

**207 SEA VALVES**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to secure / disable all primary sea valves (suction and discharge).

**2.0 OWNER FURNISHED MATERIALS, SERVICES AND INFORMATION:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 ENCL 10, titled "List of Overboard Discharge Valves (2 pages (frm DC Book)).pdf"
  - 2.4.2 ENCL 11, titled "List of Sea Valves (1 page (frm DC Book)).pdf"

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

Using enclosures 10 and 11, as stated above in paragraph 2.4.1 and 2.4.2, for guidance, provide all labor, material and services to close and disable each listed valve.

Insure that each listed valve is physically in the closed position. With each valve closed, secure each hand (or other similar hand actuator) to the valve body in the closed position using contractor-furnished galvanized chain and brass / marine grade key lock.

All locks shall be numbered IAW enclosures 10 and 11, stated above; key numbers shall be applied by way of embossed metal tag attached to each key. All locks shall be "keyed" to a common Master Key (in turn id'd as the "MASTER" by a similar metal tag.

Provide two (2) sets of keys.

**NOTE:**

- (1) Enclosure 10, includes deck drains / valves. Deck drain valves are exempted from this work scope and shall not (repeat: NOT) closed or locked in the closed position.
- (2) Powered operated valves (motorized, hydraulic, pneumatic, etc...) shall be additionally disabled at the controller. Allow for working six (6) such valves.

**5.0 DELIVERABLES:**

Table listing / indexing key numbers and respective valves (one hard copy and one electronic copy).

**208 SEA CHESTS STRAINER PLATES (OWNER OPTION)**

**1.0 ABSTRACT:**

Provide all labor, material, and services to remove the strainer plates from all sea chests / sea nozzles for preservation, coatings and storage onboard.

**NOTE:** Work on this item shall not be started unless specifically authorized by the attending IAS Representative in writing by way of IAS Changer Order.

**2.0 OWNER FURNISHED MATERIALS, SERVICES AND INFORMATION:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 ENCL 10, titled "List of Overboard Discharge Valves (2 pages (frm DC Book)).pdf"
  - 2.4.2 ENCL 11, titled "List of Sea Valves (1 page (frm DC Book)).pdf"
  - 2.4.3 ENCL 02, titled "Docking Plan"
  - 2.4.4 ENCL 05, titled "General Arrangement (Sister Ship)"

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

Provide all labor, material, and services to remove the strainer plates from all sea chests / sea nozzles and to carry out the requirements of the below specification.

**NOTES:**

- (1) The areas encompassed by all sea chests, are included in those areas stated in work item 206, titled "HULL COATINGS RENEWAL APPLICATION" and are to be prepared and coated as required there in.
- (2) The areas encompassed by all sea chests, and similar openings, is included in paragraph 201.4.4, titled "INITIAL FRESH WATER WASH DOWN" and shall receive the initial fresh water wash as required there-in.
- (3) Prior to any abrasive grit blasting, the contractor shall install wooden blanks / plugs in way of all sea valves and / or nozzles. Wooden plugs to be removed prior to closing / blanking of these chests.

Remove all sea chest strainer plates ashore for blasting and coatings under work item 206, titled "HULL COATINGS RENEWAL APPLICATION". All plates shall be tagged with an embossed metal name-tag stating service & location. Once coated and tagged, place all plates on the main deck for permanent storage.

Each sea chest shall be blanked IAW work item 211, titled "HULL BLANKS, FABRICATION AND INSTALLATION".

**5.0 DELIVERABLES:** None Additional.

**209 DOCKING PLUGS (OWNER OPTION)**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary remove and reinstall docking plugs as required.

**NOTE:** Work on this item shall not be started unless specifically authorized by the attending IAS Representative in writing by way of IAS Changer Order.

**2.0 OWNER FURNISHED MATERIALS, SERVICES AND INFORMATION:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 ENCL 01, titled "Capacity Plan".
  - 2.4.2 ENCL 29, titled "Bottom Shell Plating To "E" Strake Incl. Aft Fr. 107"
  - 2.4.3 ENCL 34, titled "Bottom Shell Plating To "E" Strake Inc. Fwd. of Fr. 107"
  - 2.4.4 ENCL 36, titled "Sounding Report"

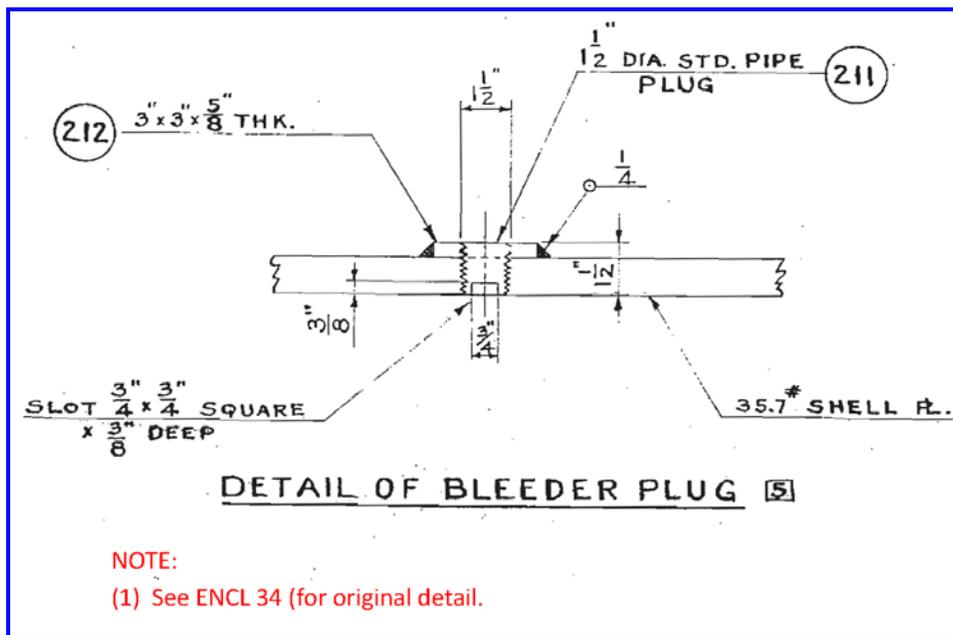
**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

Using Enclosure 01, 29, 34, and 35 (stated above in paragraphs 2.4.1 thru 2.4.4) for guidance, provide all labor, materials, and services to remove, reinstall and vacuum box test docking plugs as designated by the IAS Representative.

Open and remove all docking plugs to facilitate draining, collection and disposal of all fluids from all tanks. Allow for working 10 Docking Plugs.

Clean and reinstall all plugs when authorized by the attending IAS Representative. Vacuum box test all reinstalled plugs to the satisfaction of the attending IAS Representative. Following satisfactory vacuum box testing, apply cement fairing over all plugs prior to coatings applications discussed above under Hull Coatings renewals.



**ABOVE: Typical Docking Plug / Bleeder Plug Arrangement.**

**5.0 DELIVERABLES:** Vacuum Box Inspection and Test Report.

**210 HULL GAUGING MEASUREMENTS**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The ship’s hull plating and internal structures requires thickness measurement and inspection. The intent of this item is to take and record hull thickness measurements in accordance with standard Classification Society requirements.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 ENCL 29, titled “Bottom Shell Plating To “E” Strake Incl. Aft Fr. 107”
  - 2.4.2 ENCL 30, titled “Side Shell Plating Above Strake “E” Fwd. fr. 107”
  - 2.4.3 ENCL 31, titled “Side Shell Plating Above Strake “E” Aft. fr. 107”
  - 2.4.4 ENCL 32, titled “Inner Bottom Plating Fwd. Fr. 107”
  - 2.4.5 ENCL 33, titled “Bow Framing Fwd. Fr. 14 Bel. “B” Deck”
  - 2.4.6 ENCL 34, titled “Bottom Shell Plating To “E” Strake Inc. Fwd. of Fr. 107”

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

Provide all labor, materials, and services including staging to ultrasonically gauge the hull plating and internal structure as required by the Classification Society and IAS Representative.

All personnel taking the gauging measurements shall be from a qualified company experienced in taking ultrasonic thickness measurements and shall be **specifically certified and approved by the Classification Society for this purpose.**

The contractor shall take and record gauging measurements to include, but not limited to, the below listed areas.

<b>GAUGE THE FOLLOWING AREAS:</b>		<b>Number of Shots:</b>
(a)	Suspect areas throughout vessel as identified by IAS.	200
(b)	A minimum of one (3) transverse sections within the amidships 0.5 x vessel length.	250
(c)	Internals in forepeak tank and after peak tanks.	200
(d)	All cargo holds hatch covers and coamings (plating and stiffeners)	100
(e)	All exposed main deck plating in full length.	300
(f)	Representative exposed superstructure deck plating (poop, bridge and forecastle deck).	100
(g)	Lowest strake and strakes in way of ‘tween decks of all transverse bulkheads in cargo spaces together with internals in way.	150
(h)	All wind- and water strakes, port and starboard, full length.	200
(i)	All keel plates full length. In addition, additional bottom plates in way of cofferdams, machinery space and aft end of tanks.	200
(j)	Plating of sea chests.	100
(k)	Shell plating in way of overboard discharges as considered necessary by the attending surveyor.	100
(l)	All air pipes and ventilators on the fore deck (forward quarter length), all air pipes to day tanks and selected air pipes and ventilator coamings aft of the forward quarter length.	100

**4.0 DELIVERABLES**

A detailed typewritten report, in accordance with standard Classification Society requirements and format detailing the location of each shot, the actual reading, the original plate thickness, and the percentage of loss from original scantlings are to be submitted. One hard copy required, one electronic copy in PDF format required.

## **211 HULL BLANKS, FABRICATION AND INSTALLATION**

### **1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is for the contractor to template, fabricate, fit-up and install blanking plates over all Sea Chests and hull penetrations below the Deep Load Line.

### **2.0 OWNER FURNISHED MATERIALS, SERVICES AND INFORMATION:**

2.1 MATERIALS: None.

2.2 SERVICES: None.

2.3 EQUIPMENT: None.

#### **2.4 DRAWINGS, MANUALS, INFORMATION:**

2.4.1 ENCL 29, titled "Bottom Shell Plating To "E" Strake Incl. Aft Fr. 107"

2.4.2 ENCL 30, titled "Side Shell Plating Above Strake "E" Fwd. fr. 107"

2.4.3 ENCL 31, titled "Side Shell Plating Above Strake \_E\_ Aft fr.107"

2.4.4 ENCL 34, titled "Bottom Shell Plating To "E" Strake Inc. Fwd. of Fr. 107"

2.4.5 Example #1 thru 7, of Typical Hull Penetration Arrangement to be blanked

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

### **4.0 STATEMENT OF WORK:**

Using Enclosure 01, 29, 34, and 35 (stated above in paragraphs 2.4.1 thru 2.4.4) for guidance; as well as the "Typical Hull Penetration Arrangements" detailed above in paragraph 2.4.5, the contractor shall provide all labor, materials, and services template, fabricate, fit-up and install blanking plates over all Sea Chests and hull penetrations below the Deep Load Line.

All blanking plates shall be ½ inch, ABS approved grade, complete with certificates.

All fit-up and welding shall be in accordance with ABS Rules. All hull welding shall be carried out by ABS Certified welders. Proof of certification shall be presented to the attending IAS Representative.

Openings larger than 8 inches shall be reinforced by internal framing. Openings of 8 inches or less, will not require framing.

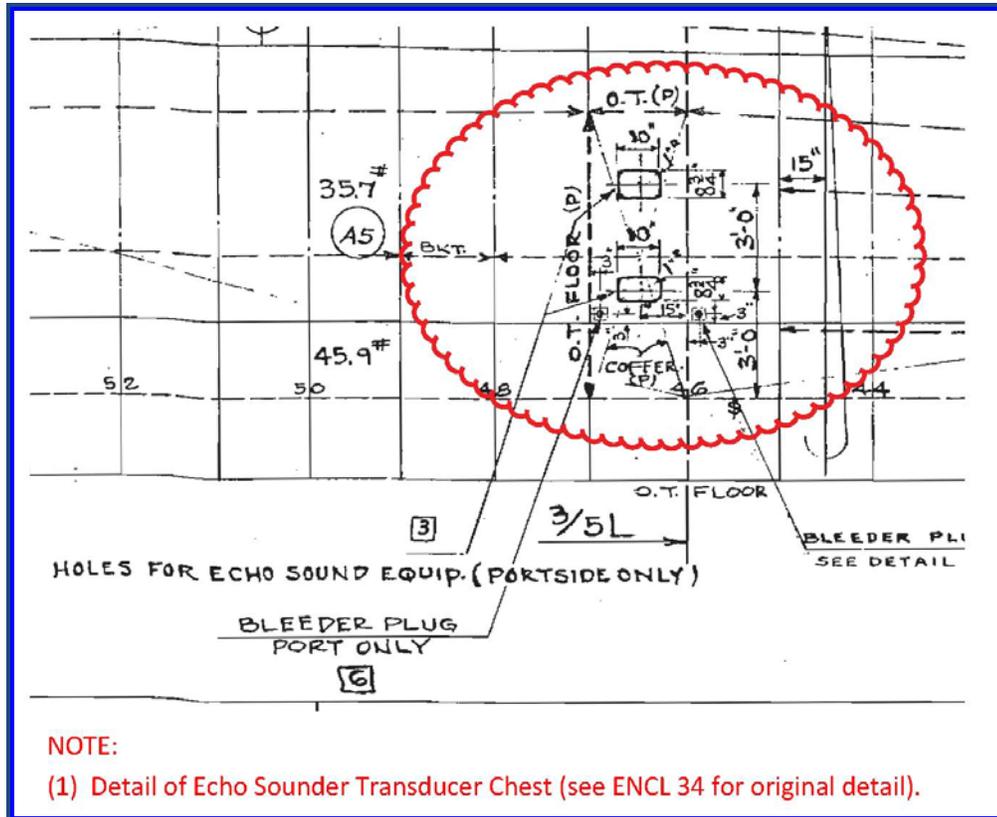
All Steel plate shall be accompanied by Certificate tracking to A-36.

#### **FOR ESTIMATION PURPOSES, ALLOW FOR THE WORKING THE FOLLOWING:**

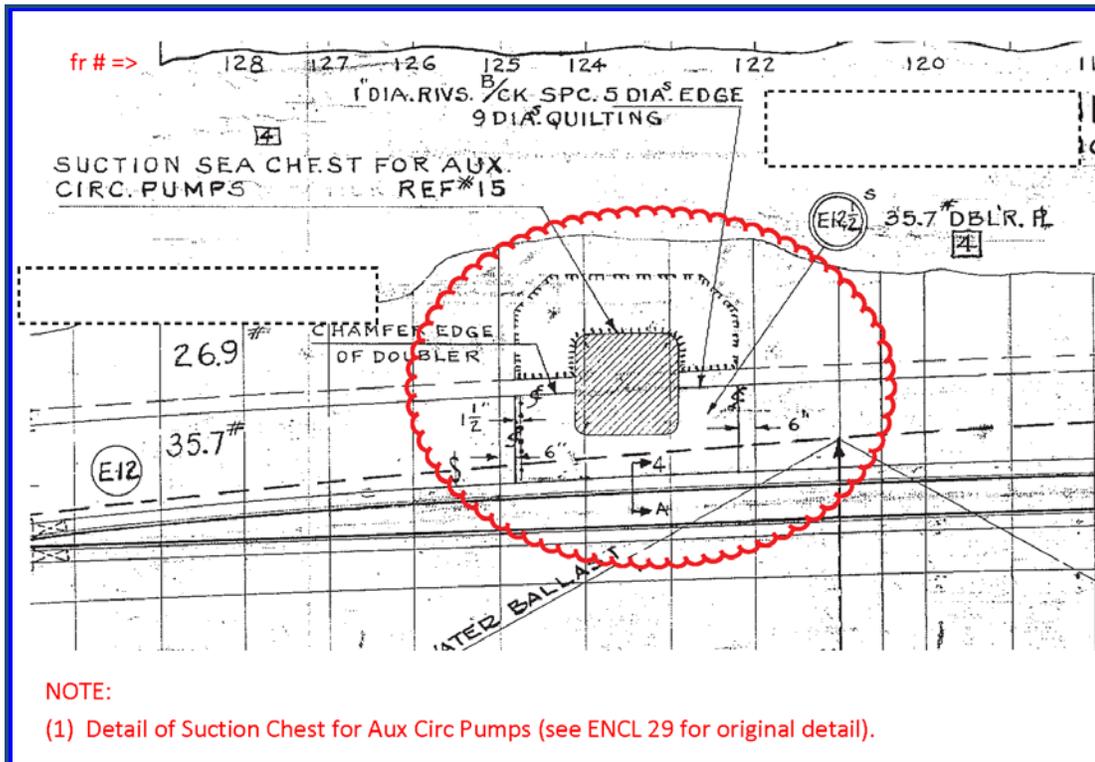
- 4 Sea Chests @ 24 inch diameter;
- 4 Sea Chests @ 17 inch diameter;
- 4 Sea Chests @ 19 Inch diameter;
- 20 Sea Chests @ 8 inch diameter or less; and,
- 8 Sea Chests @ 8 inch diameter;
- All welding to be 3-pass;
- Vacuum box testing on 100% of all welds.

**5.0 DELIVERABLES:** Vacuum Box Inspection and Test Report.

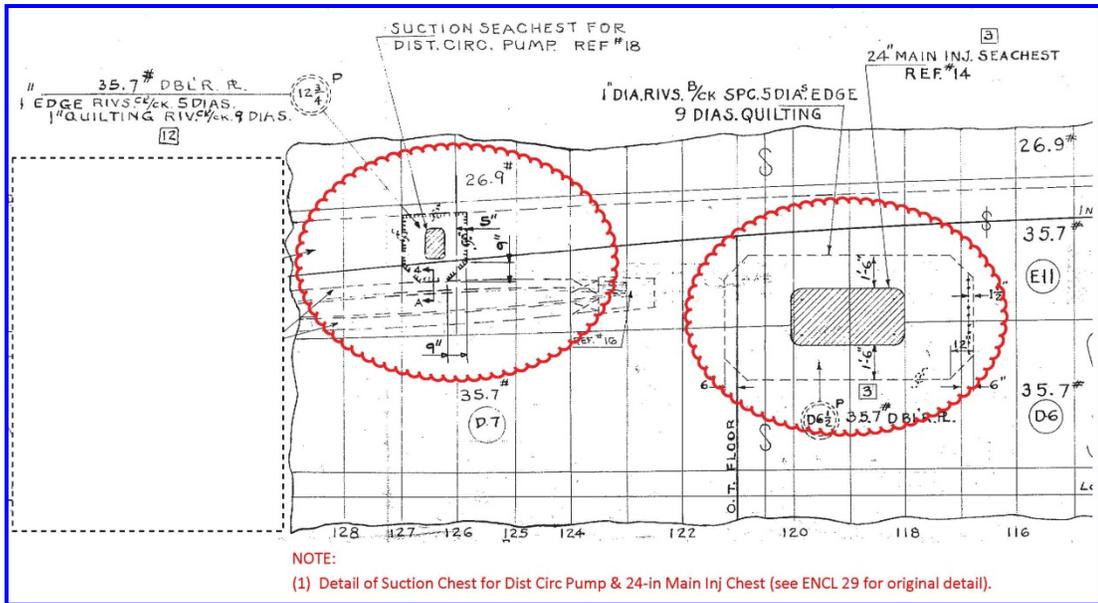
Example #1, of Typical Hull Penetration Arrangement to be blanked:



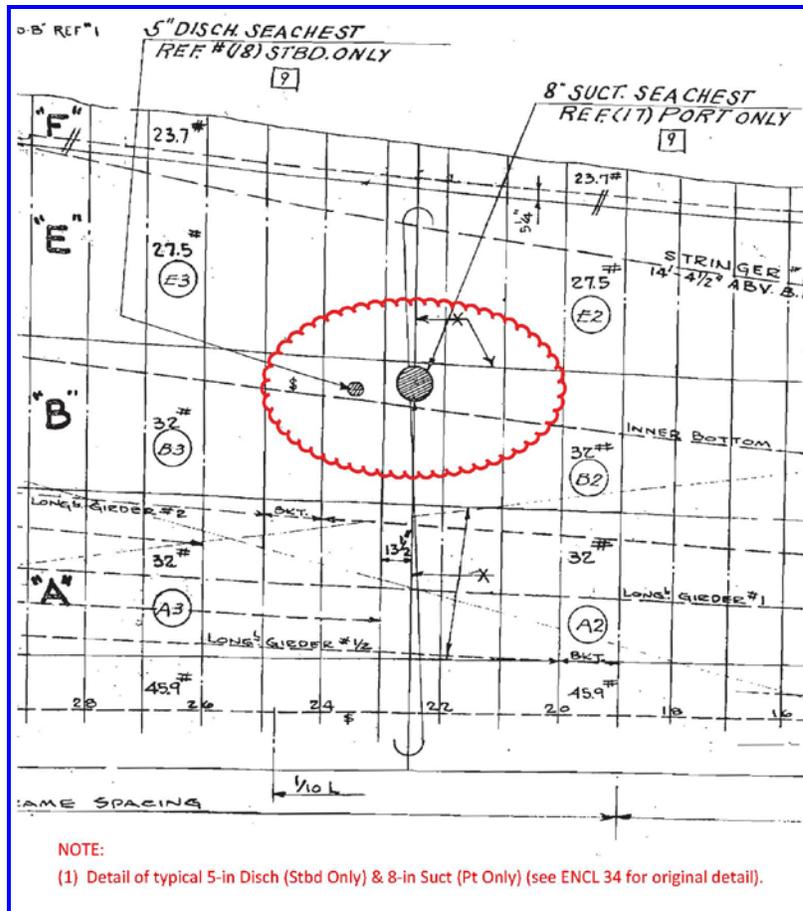
Example #2, of Typical Hull Penetration Arrangement to be blanked:



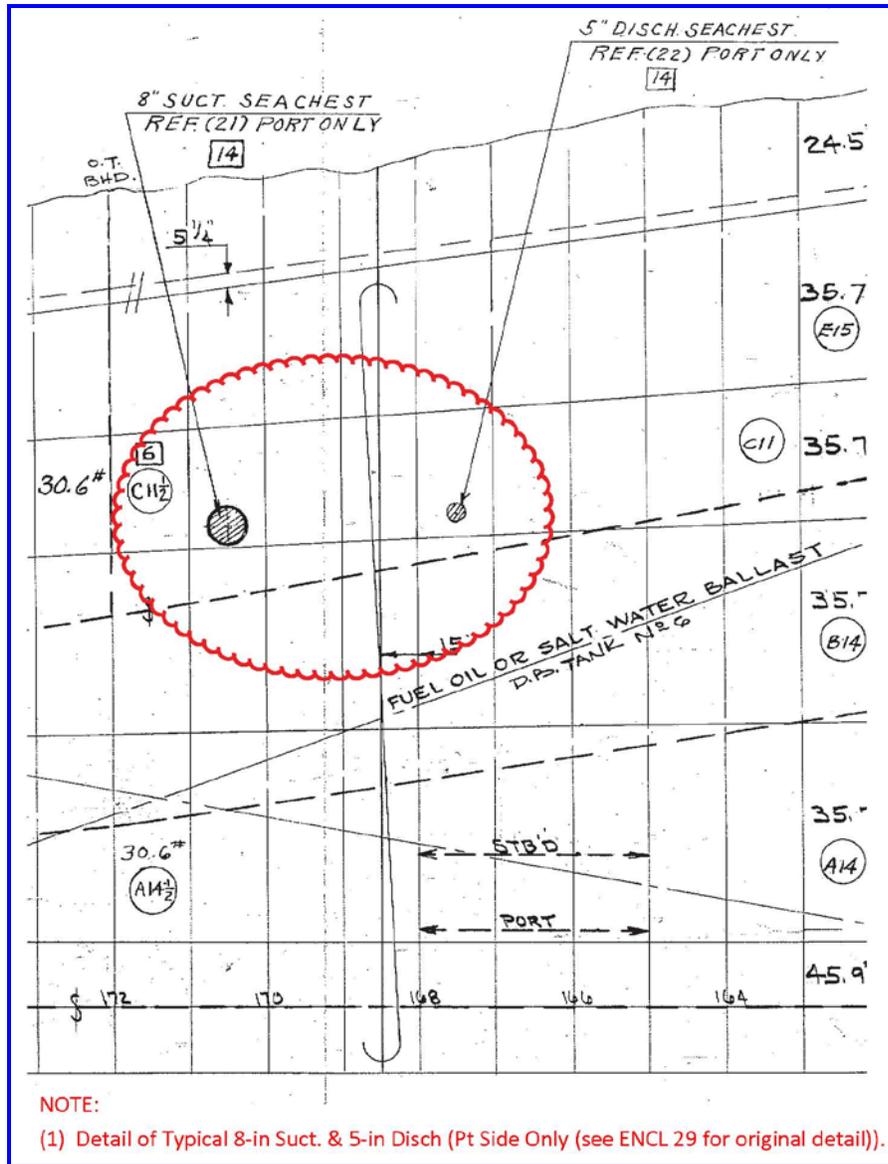
**Example #3, of Typical Hull Penetration Arrangement to be blanked:**



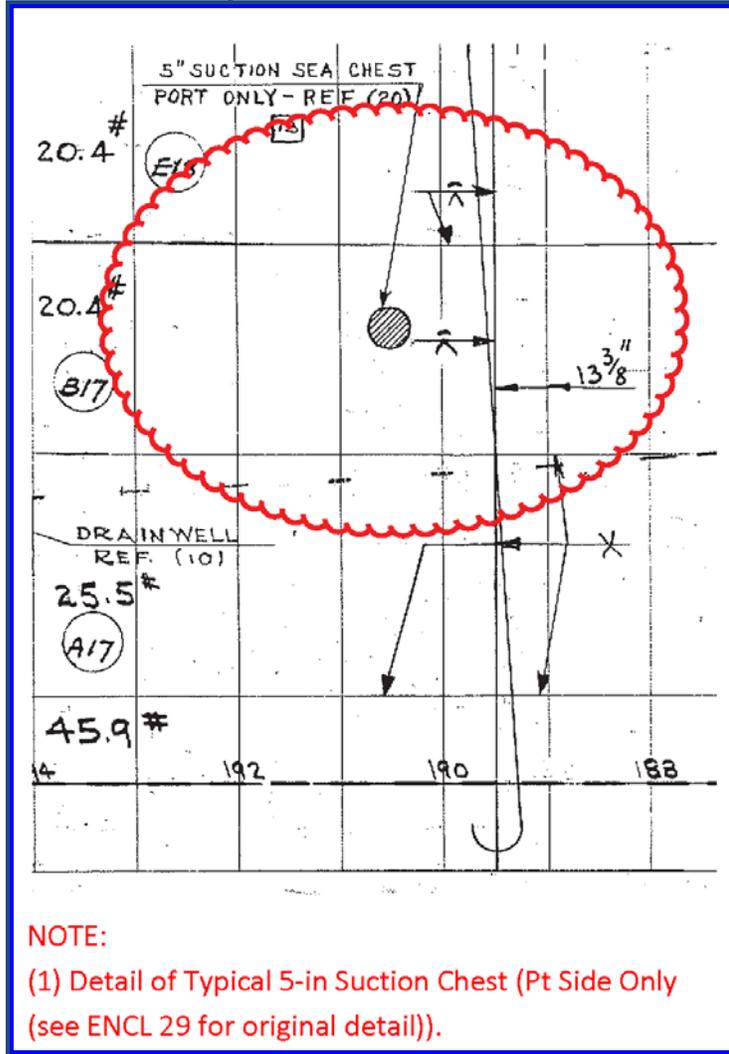
**Example #4, of Typical Hull Penetration Arrangement to be blanked:**



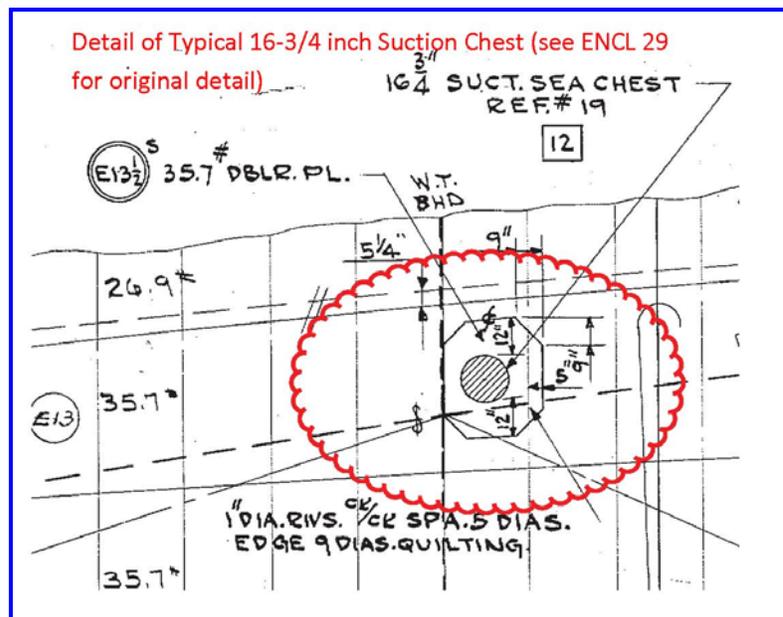
Example #5, of Typical Hull Penetration Arrangement to be blanked:



Example #6, of Typical Hull Penetration Arrangement to be blanked:



Example #7, of Typical Hull Penetration Arrangement to be blanked:



**212 TAIL SHAFT REMOVAL AND BLANKING**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging, and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to remove the draw the tail shaft inboard , permanently secure same and permanently blank/seal the stern tube boss.

**2.0 OWNER FURNISHED MATERIALS, SERVICES AND INFORMATION:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 VESSEL CHARACTERISTICS, listing known propeller data (stated above on page 4 of this specification package.
  - 2.4.2 ENCL 23, titled "After Body Plan"
  - 2.4.3 ENCL 24 , titled "TYPICAL SECTIONS DWG 485-201-BC"

3.0 SHIPYARD FURNISHED MATERIALS: All other as required.

**4.0 STATEMENT OF WORK:**

**4.1 PROPELLER REMOVAL:**

Disconnect and remove the ships propeller to safe contractor-furnished yard storage pending owner instructions for disposal. For estimation purposes, allow for working one propeller, as follows:

- TYPE:** Fixed Pitch, Tapered-Keyed
- NUMBER OF BLADES:** 4-blade,
- DIAMETER:** 22-foot
- MATERIAL:** Navy Bronze

**4.1.1 Proposed Credit Against Propeller Scrap Value:**

The shipyard is to provide and proposed a scrap credit value for the subject propeller. If elected by the owner, the credit shall be applied against the final settled and agreed contract value upon completion.

**4.2 WITHDRAWAL OF TAIL SHAFT:**

Disconnect and withdraw intermediate / dummy shaft into the ships Shaft Alley. Permanently secure the intermediate shaft in the shaft ally bilges using contractor-furnished saddles and clamps. The intermediate shaft must be secured in a position that will not interfere with withdrawal of the tail shaft.

Disconnect and withdraw the tail shaft into shaft alley and permanently secure same in the shaft ally bilges using contractor-furnished saddles and clamps.

Allow for opening, and later rough closing of four (4) line shaft bearing shells to accomplish removal for the two shafting sections.

**4.2 BLANKING STERN TUBE BOSS:**

Using enclosures 23 and 24, stated above in paragraphs 2.4.2 and 2.4.3 (respectively) for general guidance, fabricate, fit-up and install by welding one blank to permanently close the outboard stern tube opening. All work and requirements for this task shall be done in accordance with those set forth in item 211, titled "HULL BLANKS, FABRICATION AND INSTALLATION" as stated above in this specification package.

**5.0 DELIVERABLES:** None Additional.

**213 RUDDER REMOVAL AND BLANKING**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging, and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to remove the ships Rudder and permanently blank/seal the Rudder Pintle boss.

**NOTE:** Work on this item shall not be started unless specifically authorized by the attending IAS Representative in writing by way of IAS Changer Order.

**2.0 OWNER FURNISHED MATERIALS, SERVICES AND INFORMATION:**

2.1 MATERIALS: None.

2.2 SERVICES: None.

2.3 EQUIPMENT: None.

2.4 DRAWINGS, MANUALS, INFORMATION:

2.4.1 ENCL 28, titled "STERN FRAME DWG 485-211-C AL"

2.4.2 ENCL 23, titled "After Body Plan"

3.0 SHIPYARD FURNISHED MATERIALS: All other as required.

**4.0 STATEMENT OF WORK:**

4.1 Using enclosures 28 and 23, stated above in paragraphs 2.4.1 and 2.4.2 (respectively) for guidance, disconnect and remove the ships Rudder to Scrap.

4.2 Disconnect and remove the Rudder Pintle / post and nuts. Clean each item and preserve using cosmoline or similar preservative tape. Place in storage in the Steering Gear Room.

4.3 Fabricate, fit-up and install by welding one blank to permanently close the Lower / outboard Rudder Boss opening. All work and requirements for this task shall be done in accordance with those set forth in item 211, titled "HULL BLANKS, FABRICATION AND INSTALLATION" as stated above in this specification package.

**5.0 DELIVERABLES:** None Additional.

**214 BRUSH-OFF BLAST CLEANING (entire superstructure, all appendages and decks)**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to “Brush-off Blast Clean” the entire superstructure from and including the main deck up to the upper most areas of the ship and all appendages.

The intent is item is to remove any and all loose paint, scale, rust, grease, dirt, etc consistent with the standards of “BRUSH-OFF BLAST CLEANING” as defined by SA 1 (SSPC-SP-7, NACE-4 or WJ 4).

**2.0 OWNER-FURNISHED MATERIAL, SERVICES, EQUIPMENT & INFORMATION**

2.1 MATERIALS: None.

2.2 SERVICES: None.

2.3 EQUIPMENT: None

2.4 DRAWINGS, MANUALS, INFORMATION:

2.4.1 Enclosure 05, titled “General Arrangement & Compartment Plan

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

**4.1 Blast Cleaning:**

Using enclosure 5, stated above in paragraph 2.4.1 for general guidance, the contractor shall provide all labor, material, services, staging and equipment necessary to “Brush-off Blast Clean” the entire superstructure from and including the main deck to the upper most areas of the ship and all appendages.

The intent of this work scope is to remove all loose paint, scale, rust, grease, dirt from the exterior if the ship, from the Main Deck up. In order to accomplish the work scope intent, areas to be worked shall include, but are not limited to, to the following exterior areas: decks, houses and superstructures, fashion plates, bulwarks, deck mounted machinery foundations, hatch covers & comings, doors & door sills. In short, the entire area of the ship (bow to stern, port to starboard, Main Deck upward to the mast heads shall be receive a full “Brush-off Blast Cleaning” (SA 1).

The intent is item is to remove any and all loose paint, scale, rust, grease, dirt, etc consistent with the standards of “BRUSH-OFF BLAST CLEANING” as defined by SA 1; however, at the contractor’s convenience this work may be carried out by UHP-WaterJet. For cross reference purposes, SA 1 = WJ 4 (and SSPC-SP-7, NACE-4).

4.1.1 Remove and dispose of all waste, scale, rust and/or debris from all exterior areas and decks.

**NOTES:**

- (1) For estimation purposes, allow for working 60,000 square feet to SA 1. An IAS change order, credit or debit, shall be used to adjust for actual usage / area.
- (2) If the contractor intends to carryout this scope via UHP-WaterJet method, it will be his responsibility to collect and remove any water which may collect from the interior of the ship.
- (3) The contractor shall coordinate all work on this item with work required elsewhere within this specification package, primarily but not limited to items 801 and 206.

**4.2 Cementing of Deck Drains and Scuppers:**

Following the satisfactory completion of paragraphs 4.1 and 4.1.1, stated above, the contractor shall permanently cement closed / over all exterior deck drains, scuppers and fishplate limber-holes.

**NOTES:**

- (3) For estimation purposes, allow for working the equivalent of 40 deck drains (or equivalent openings).

**5.0 DELIVERABLES:** None Additional.



**301 BILGE AND BILGE WELL CLEANING**

**1.0 ABSTRACT**

The contractor shall provide all labor, material, services, staging and equipment necessary to clean various bilges and areas of oil, dirt and debris to the satisfaction of the attending IAS Representative.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION:
  - 2.4.1 ENCL 36, titled "Sounding Report"
  - 2.4.2 ENCL 05, titled "General Arrangement (Sister Ship)"
  - 2.4.3 BILGE AND BILGE WELL CLEANING LIST

SPACE:	LOCATION:	SIZE/AREA:	WORK SCOPE:
Eng. Rm. Bilge Well, Port	Mn Eng Rm, Aft Lower Lvl	9 ft <sup>3</sup>	as per para 4.1
Eng. Rm. Bilge Well, Stbd	Mn Eng Rm, Aft Lower Lvl	9 ft <sup>3</sup>	as per para 4.1
# 3 Cargo Bilge Well, Port	#3 Cargo Hold, Aft Lower Lvl	15 ft <sup>3</sup>	as per para 4.1
# 3 Cargo Bilge Well, Stbd.	#3 Cargo Hold, Aft Lower Lvl	15 ft <sup>3</sup>	as per para 4.1
# 4 Cargo Bilge Well, Port	#4 Cargo Hold, Aft Lower Lvl	15 ft <sup>3</sup>	as per para 4.1
# 4 Cargo Bilge Well, Stbd.	#4 Cargo Hold, Aft Lower Lvl	15 ft <sup>3</sup>	as per para 4.1
Shaft Alley	Fr 130 thru 187, Centerline.	Approx 3,500 ft <sup>2</sup> area in total: <ul style="list-style-type: none"> <li>• ~ 8 feet each side of Centerline.</li> <li>• Vestibules &amp; connected spaces.</li> </ul>	as per para 4.2
Engine Rm. Bilges	Main Engine Room	6,400 ft <sup>3</sup>	

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK**

The intent of this item is for the contractor to provide all labor, materials, services and equipment to access and clean, to a standard equal to "safe for entry", each space listed in paragraph 2.4.3, titled "BILGE AND BILGE WELL CLEANING LIST".

The contractor pricing for this complete work scope shall be fully burdened and will include disposal of all residuals, cleaning spoils, debris and waste IAW all local, state and federal regulations.

**4.1 Bilge Wells:**

Each listed Bilge Well shall be emptied of all water, sludge, debris and sediment. Degrease using contractor-furnished cleaners. Wipe out leave dry and maintain dry and clean until vessel departure.

**4.2 Shaft Alley:**

The shaft alley is contaminated with approximately 15,000 gallons of IFO grade fuel oil (~ 357 bbls). Pump out and dispose of all fuel oil. Hot water Pressure wash and degrease the entire shaft alley using contractor-furnished materials. Remove all water, sludge and sediment. Wipe out leave dry and maintain dry and clean until vessel departure.

**4.2.1 FO Value Credit:**

The credit generated from disposal of this fuel oil shall be applied against the final invoice; the contractor's price quotation shall include his credit estimate to be applied.

**4.3 Engine Room Bilges:**

Hot water Pressure wash and degrease the entire shaft alley using contractor-furnished materials. Remove all water, sludge and sediment. Wipe out leave dry and maintain dry and clean until vessel departure.

**5.0 DELIVERABLES:** None Additional. .

**302 FUEL TANK CLEANING**

**1.0 ABSTRACT**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to open, access, drain and clean (safe for entry) all FO tanks and to dispose of Fuel Oils.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

2.1 MATERIALS: None.

2.2 SERVICES: None.

2.3 EQUIPMENT: None.

2.4 DRAWINGS, MANUALS, INFORMATION:

2.4.1 ENCL 37, titled "FO & LO Tk Sounding Report"

2.4.2 ENCL 05, titled "General Arrangement (Sister Ship)"

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK**

Using enclosure 35A, listed above in paragraph 302.2.4.1 for guidance, the contractor shall provide all labor, materials, services and equipment to access, ventilate and empty each listed tank.

Tank ventilation, lighting, tracking and management to be carried out IAW "Preamble – 07", titled "PERIPHERAL ACCESS, TANKS, MANHOLES AND COVERS".

Contractor pricing for this complete work scope shall be fully burdened and will include disposal of all fuel oils, lube oils, residuals, cleaning spoils, debris and waste IAW all local, state and federal regulations.

**4.1 Sounding Survey:**

Allow for joint sounding survey of all listed tanks to taking and record initial tank level readings, and using the ships "sounding tables" to verify amounts of fuel and lube oils to be removed from the ship and disposed of by the contractor.

**4.1.1 Proposed Credit against FO Value:**

Using enclosure 35a for general guidance propose a credit generated from disposal of this fuel oil shall be applied against the final invoice; the contractor's price quotation shall include this credit estimate to be applied. The actual credit amount applied shall be based on the Sounding Survey required above in paragraph 302.4.1

**5.0 DELIVERABLES** None Additional.

**303 BALLAST TANK INSPECTIONS**

**1.0 ABSTRACT**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to open, access, drain and clean (safe for entry) both the Fore Peak Tank and the After Peak Tank.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

2.1 MATERIALS: None.

2.2 SERVICES: None.

2.3 EQUIPMENT: None.

**2.4 DRAWINGS, MANUALS, INFORMATION:**

2.4.1 ENCL 36, titled "Sounding Report"

2.4.2 ENCL 05, titled "General Arrangement (Sister Ship)"

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK:**

Using enclosure 35, listed above in paragraph 303.2.4.1 for guidance, the contractor shall provide all labor, materials, services and equipment to access, ventilate and empty the Fore Peak Tank and the After Peak Tank.

Tank ventilation, lighting, tracking and management to be carried out IAW "Preamble – 07", titled "PERIPHERAL ACCESS, TANKS, MANHOLES AND COVERS".

Contractor pricing for this complete work scope shall be fully burdened and will include disposal of all residuals, cleaning spoils, debris and waste IAW all local, state and federal regulations.

**5.0 DELIVERABLES:** None Additional.



## 401 DIESEL GENERATOR SET REMOVAL

### 1.0 ABSTRACT

The contractor shall provide all access, labor, material, services, staging and equipment necessary to remove, and land, the ship service diesel generator set and temporarily store it ashore pending final disposition instructions.

### 2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:

2.1 MATERIALS: None.

2.2 SERVICES: None.

2.3 EQUIPMENT: None.

#### 2.4 DRAWINGS, MANUALS, INFORMATION:

2.4.1 ENCL 05, titled, "General Arrangement & Compartment Plans (partials)"

2.4.2 ENCL 31, titled, "SIDE SHELL PLATING ABOVE STRAKE \_E\_ AFT FR.107"

2.4.3 Close-up of Diesel Generator Room (compartment 3-116-2 (PORT side)) taken from ENCL 05.

2.4.4 Close-up of Side Shell, taken from ENCL 31, showing approximate removal access (PORT side).

3.0 SHIPYARD FURNISHED MATERIALS: All other as required.

### 4.0 STATEMENT OF WORK

Using enclosure 05 and 31, listed above in paragraph 2.4.1 and 2.4.2, for general guidance, the contractor shall provide all labor, materials, services and equipment to access, disconnect and remove the ships diesel generator set (engine, attached generator, skid and immediate attachments) from the ship. The diesel generator set to be removed is as follows:

MAKE / Model: Hamilton / T-89

TYPE: Four-cycle, eight cylinder, inline diesel

HP: 1,200 HP (approx)

KW: 800 kW (approx)

#### 4.1 Structural Access:

Using enclosure 05 and 31, listed above in paragraph 2.4.1 and 2.4.2, for general guidance, the contractor shall crop out and remove a section of the Port Side Shell, as approximately represented below in enclosure 2.4.4, titled "Close-up of Side Shell, taken from ENCL 31, showing approximate removal access (PORT side)".

The final area of the side shell to be removed shall be sized to facilitate ease of machinery removal, as determined by contractor-furnished measurements and layout. All framing and shell plate cuts shall be made neatly and professionally to facilitate reinstallation. Any access interferences, if any, requiring removal will not (repeat: NOT) require reinstallation and be simply terminated as discussed below in paragraph 4.2 of this work item.

Following removal of the target machinery from the ship, reinstall / insert the previously removed side shell section as original, providing full penetration welding of all cut frames and shell plate. Shell plate welding, shall be verified by continuous vacuum box testing. Disturbed interior coatings shall be mechanically cleaned and one coat of contractor furnished primer applied. All exterior surfaces shall be prepared and recoated as required by work item 206, titled "HULL COATINGS RENEWAL APPLICATION" as stated above in this specification package. All other requirements shall be in compliance and expectations of Preamble – 03, titled "HULL PLATING AND STEEL RENEWALS" as stated above in this specification package.

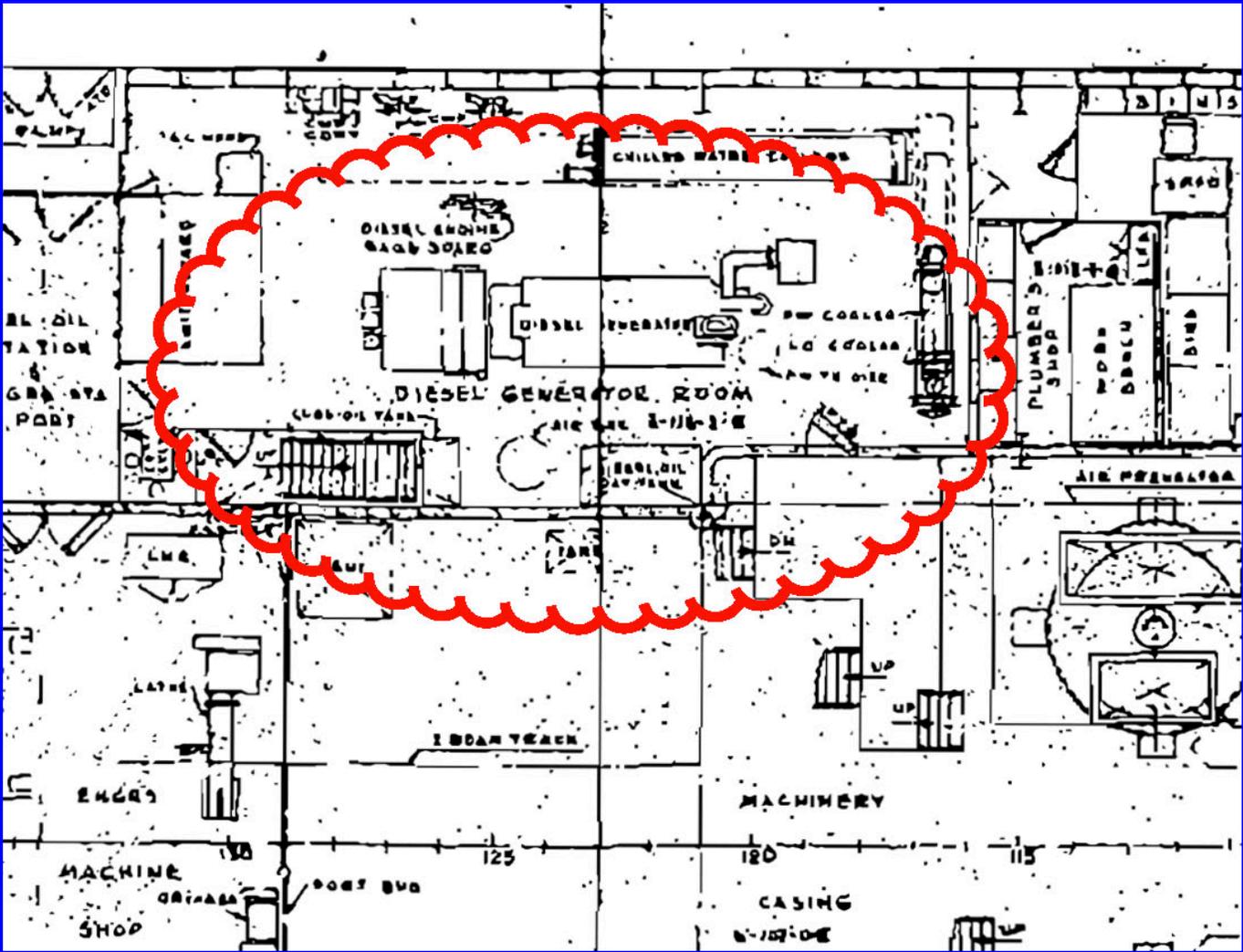
#### 4.2 Mechanical and Electrical Disconnects:

When making mechanical and electrical disconnects, the contractor may:

- Cut electric cables, wires and leads immediately to and from the set. The remaining ship side of all such cuts must be properly insulated, tied-back and terminated;
- Plumbing, piping and tubing (be it for water, fuel, air, etc) may be disconnected at the first flange / connection nearest the engine/generator. The remaining ship side of all such disconnections must be closed off by blanking, capping or crimping.
- Air intakes and Engine exhaust ducting may be disconnected at the first flange / connection nearest the engine/generator. The remaining ship side of all such disconnections must be closed off by blanking or capping.

5.0 DELIVERABLES None Additional.

2.4.3 Close-up of Diesel Generator Room (compartment 3-116-2 (PORT side)) taken from ENCL 05:





**402 GENERAL LABOR, ASSISTANCE AND MATERIALS**

**1.0 ABSTRACT:**

The contractor shall provide various materials, labor, services and equipment required to support and assist the IAS Representative in support of various Owner-furnished Service Engineers, Classification Surveys, Flag State Inspections and Ship Force jobs not already discussed elsewhere in this specification package.

All work, labor, services and equipment under this work item will be at the direction and request of the IAS Representative.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION: None.

**3.0 SHIPYARD FURNISHED MATERIALS: All other as required.**

**4.0 STATEMENT OF WORK REQUIRED:**

The contractor shall provide various materials, labor, services and equipment required to support and assist the IAS Representative in support of various Owner-furnished Service Engineers and jobs as directed by the attending IAS Representative.

The contractor shall furnish a price quotation that allows for providing the following labor and material services throughout this performance period. Laborers shall be equipped with the necessary tools, materials and equipment customary to the specific trade, craft or service, as follows:

- a) 300 MAN-HOURS (STRAIGHT TIME) OF ANY TRADE, SERVICE OR CRAFT:  
(example: electrician, electrical, mechanics, machinist, rigging, crane, hull or pipe fitter, etc, etc, etc.)
- b) \$10,000 Materials, Services, Other, etc...

**NOTES:**

- 1) The above trade and trade-hours are estimates for bidding purposes. Actual trades, and usage requirements, will be determined and requested by the IAS Representative.
- 2) A Change Order will be used, debit or credit, to compensate for actual usage.
- 3) Only the IAS Representative is authorized to draw man-hours, material or services against this work item. Under no circumstances shall the contractor utilize hours from this work item without written consent from the IAS Representative.
- 4) For contractor planning and labor coordination, whenever possible, the IAS Representative shall give the contractor 24-hour notice prior to drawing against this item.

**5.0 DELIVERABLES: None.**

**500 MAIN PROPULSION SYSTEM - Not Used**



**700 CARGO HANDLING and DECK MACHINERY - Not Used**



**801 HOUSE CLEANING AND REMOVAL OF DEBRIS**

**1.0 ABSTRACT:**

The contractor shall provide all labor, material, services, staging and equipment necessary to carry out the complete scope and intent of this work item.

The intent of this item is to provide labor and services to clean various areas of the house and ships decks.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION: None.

**3.0 SHIPYARD FURNISHED MATERIALS: All other as required.**

**4.0 STATEMENT OF WORK:**

Areas to be worked are, but not limited to, the following: all passage ways, ladder wells, state rooms, passage ways, bridge and mess deck, etc. Additional areas may be identified by the attending IAS Representative.

- 4.1 Provide six (6) general labors to sweep down all above stated areas, collect and remove all loose trash from the vessel and dispose of same.
- 4.2 Remove all standing water from all of the above listed spaces.
- 4.3 Secure all house deck doors, port holes, windows, etc. When authorized by the attending IAS representative fresh water fire hose of at least 1.5 inch size to wash down all weather decks from the flying bridge to the Main Deck.
- 4.4 Rip out, and remove to scrap all wood deck coverings on the weather decks. The wood is in poor condition and may be removed forcibly without concern for further damage. Allow for removal of screws, bolts and clips holding the wood, which causes a tripping / safety hazard.

The total area of wooden deck coverings is estimated at 30,000 sq-feet.

**NOTES:**

- 1) The contractor shall insure work on this item is coordinated with all hull coatings jobs.
- 2) FOR ESTIMATION PURPOSES, ALLOW FOR THE WORKING THE FOLLOWING:
  - (A) 10 men, 8 hours per day, 12 days;
  - (B) All consumables, supplies and services required to carry out the above general scope of work.
  - (C) Suitable sized dumpster to support this work scope to be placed onboard and emptied daily.
  - (D) Dumpster service shall be maintained until the ship departs the contractors facility.

**5.0 DELIVERABLES: None Additional.**

**802 REMOVAL AND DISPOSAL OF HAZMAT ITEMS:**

**1.0 ABSTRACT:**

The contractor shall provide various materials, labor, services and equipment required to collect and dispose of various HAZMAT materials in accordance with all local, state and federal requirements.

**2.0 OWNER FURNISHED MATERIALS, SERVICES and/or EQUIPMENT:**

- 2.1 MATERIALS: None.
- 2.2 SERVICES: None.
- 2.3 EQUIPMENT: None.
- 2.4 DRAWINGS, MANUALS, INFORMATION: None.

**3.0 SHIPYARD FURNISHED MATERIALS:** All other as required.

**4.0 STATEMENT OF WORK REQUIRED:**

The contractor shall provide various materials, labor, services and equipment required to collect and dispose of various HAZMAT materials in accordance with all local, state and federal requirements.

The materials to be disposed of are, as follows:

LOCATION:	QUANTITY:	ITEM:
3 <sup>RD</sup> Deck, STBD Side Troop Mess, (3-145-3), FR. 150	60	Emergency Breathing Devices 8 Minute Air Canisters
	1	14 oz – National Chemsearch Aerosol Grease
3 <sup>rd</sup> Deck, STDB., Galley, 3-117-1	1	3lb. – Devcon Pump Repair Comp.
	1	8 oz. Devcon Hardener
3rd Deck, Thwart ship passage, AFT of Emergency Diesel Room	1	16 oz. – Steeling Raw Linseed Oil
	2	½ lbs. – Cortobond Steel Putty
	1	16 oz. – Uni-Kem Lubricating Oil
	1	1 gal. – CRC 5-56
	1	1 gal. – Chemizer Glass Cleaner
	1	1 qt. – Shell Activation Oil
	1	2 lb. – Can Unknown
	1	1lb. Can Lapping Compound
	1	15 oz. – Ace Rust Stop Primer
	1	Tube – Permatex Gasket Compound Pt. 2
	12	1 lb. – Cans of Corease
	1	Can – Smith’s Cast Iron Flux
	6	1 lb. - Cordobond
	2	½ pt. – Dap
	1	1 pt. – Epi-Seal Epoxy Compound
	1	Can – John Crane Super Seal
	1	5lb. – G-382 Aircraft Grease
1	5 lb. – GH359 High Temp Grease	
5 Deck, Blanket Stowage Room (5-151-1)	6	Boxes of unused Insulation marked “Asbestos”.
5 Deck Stbd, Chaplains Room (5-145-1)	Various	Loose Insulation and Cement (fibers and dust on floor) treat as “Asbestos”
Main Deck Aft	8	55 gal BBLS marked Heptane.
	6	55 gal BBLS Fire Fighting Foam.
Main Deck Aft	1	5 gallon can Marked Minnesota Mining Foam.
Ship Wide	50	CO2 Hand fire extinguishers.
Ship Wide	50	100 lb, CO2 cylinders (see ENCL-08, titled “List of CO2 Systems (1 page (frm DC Book))”
Main Deck Aft, Stern Locker	1	5 gallon can of gasoline.

**5.0 DELIVERABLES:** Proof of proper and legal disposal.

**900 NAVIGATION and SAFETY SECTION - Not Used**

# Specification for the STATE OF MAINE (ex Upshur) Remediation (drydock) and Preparation for Delivery to BRF

## 1.0 Intent

- 1.1 The intent of this task is to carry out the necessary work to remediate (in drydock) and prepare the ex-State of Maine (USNS UPSHER) for delivery to MARAD's Beaumont Reserve Fleet.
- 1.2 All operation must be completed in a safe manner and in compliance will all local, state and federal environmental laws, regulations and standards.

## 2.0 Location

- 2.1 The vessel is located in Mobile Bay at Little Sand Island.

## 3.0 References:

- 3.1 Drydock specification
- 3.2 MARAD form 496

## 4.0 Work Statement

- 4.1 Remediation and preparation for delivery to Beaumont Reserve Fleet.
  - 4.1.1 Carry out environmental remediation and prepare the vessel for delivery to the Beaumont Reserve Fleet in accordance drydock and remediation specifications (ref 3.2).
  - 4.1.2 Prepare the vessel for delivery to the Beaumont Reserve Fleet in accordance with the requirements of MAR-496. Once the vessel is deemed ready for delivery to the Beaumont Reserve fleet, conduct a joint inspection vessel with representative(s) from the Beaumont Reserve Fleet. Upon completion of the inspection complete a punch list of items to be completed prior to vessel being turned over to the Fleet.
  - 4.1.3 Take necessary corrective action to complete the punch list generated in section 4.3.2.
  - 4.1.4 Upon completion of the punch list submit the MAR-456 to the Beaumont Reserve Fleet representative.
  - 4.1.5 Submit a report detailing the type and quantity of hazardous and oil materials removed during the topside remediation. All materials removed shall be disposed of in accordance with federal, state and local laws and regulations. Provide documentation for all disposed materials.
  - 4.1.6 Maintain a daily photographic record of the topside remediation effort.

## 5.0 Optional items

- 5.1 Securing for Hurricane.

- 5.1.1 Prepare a Hurricane plan for the vessel during drydock . The Hurricane plan is to be submitted with 5 days before start of drydock.
- 5.1.2 In the advent of the Coast Guard Captain of the Port set condition Whiskey in the Port of Mobile, secure the vessel in accordance with the Hurricane plan submitted under section 5.1.1
- 5.1.3 After the danger from the storm has passed and upon authorization of the contracting officer, conduct a damage survey.
- 5.2 Condition Reports and Growth
  - 5.2.1 In the event an unforeseen condition is found that will require additional effort, provide a condition report and recommended actions with 24 hours after discovery.

## 6.0 Delivery

- 6.1 MAR 496 punch list
  - 6.1.1 Due next business after completion of join inspection
- 6.2 Material disposal documentation – topside remediation
  - 6.2.1 Due 7 days after completion of work
- 6.3 Drydock progress photos
  - 6.3.1 Due 7 days after completion of topside remediation work
- 6.4 Hurricane Plan
  - 6.4.1 Ten (10) after award of the Task Order.
- 6.5 Hurricane Damage Report (if Securing for Hurricane Option is exercise)
  - 6.5.1 Next business day after inspection.
- 6.6 Condition Reports
  - 6.6.1 Twenty four (24) hours after discovery of condition.