EXXON COMPANY, U.S.A.
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MARINE DEPARTMENT
P___ T (6 mo.)___

MARINE DEPARTMENT

J. H. SWARTZ
OPERATIONS MANAGER

A. D. MOOKHOEK
FLEET & BRANCH MANAGER

L. H. EARLE
MARINE ADVISOR

H. J. BORGEN
MAINTENANCE & SERVICES MANAGER

April 24, 1978

EXXON GETTYSBURG
Shipyard Repairs

Newport News Shipbuilding
4101 Washington Avenue
Newport News, Virginia 23607

Attention: Mr. G. Guy Via, Jr.
Vice President

Dear Guy:

The EXXON GETTYSBURG is nominated for ship repairs under the terms of our October 1, 1973 contract. The vessel should arrive in the yard on or about May 30, 1978. We will keep you advised of any changes to this schedule.

The work to be accomplished includes USCG Biennial Inspection, ABS Special Survey, Drydocking, cargo tank coatings, steel renewals, miscellaneous other repairs, and betterments which are described in detail in the attached specifications. We request your early preparation of the estimated material costs and man-hours for completing the work described in each item on these specifications. Please indicate the item(s) considered to be the controlling jobs, the amount of overtime necessary to expedite delivery by working overtime on the controlling jobs, and the amount of time which would be saved by authorizing overtime on this basis.

For purposes of Article IV of our contract, the forecast worth of the vessel is ATRS + 160 % which equates to $18,000 per day. Please indicate your agreement with the vessel's value by signing and returning one copy of the letter.

Very truly yours,

H. P. Leyendecker
Repair Superintendent

HPL: bt
Attachment

_____
G. Guy Via Jr.

c: Mr. H. J. Borgen (w/o attachment)
Mr. R. E. Gordon (w/o attachment)
Mr. L. A. Hanft (w/o attachment)
Mr. W. A. Ingham (w/ attachment)
Mr. E. J. Worrel, Jr. (w/ attachment)

# GENERAL SPECIFICATIONS

The following are some general specifications pertaining to all work done during this repair period.

a. Cargo piping 6" or more in diameter to be schedule 40, blasted in and out and coated with RB-191; less than 6" to be schedule 80 and blasted in and out and coated with RB-191.

b. Steam and exhaust piping to be schedule 80 steel.

c. All steel installed aboard vessel including brackets, internals, ladders, etc., to be blasted and coated with RB-191.

d. All pipe hanger bolts and ladder bolts installed on deck or in tanks to be galvanized or cadnium plated.

e. All steel work to be cleaned and coated with primer at completion. All disturbed areas to be cleaned and coated with primer. All steel work on which the zinc coating has been disturbed due to welding shall be wirebrushed and recoated with RB-191.

f. All disturbed insulation in way of all repairs shall be patched and placed in good order as necessary.

g. All Rust-Ban 191 specified in these specifications will be supplied by the vessel, until those current supplies presently onboard are exhausted.

## 1. EQUIPMENT REMOVED FROM PLACE ABOARD VESSEL

Valves, motors, machinery parts, etc., not otherwise designated by Owner's Representative for removal from vessel for repair or shipment, or scrap is to be tagged as to origin and stored in midship house square.

All survey and inspections to be accomplished as soon after arrival as possible.

## 2. VALVE SPECIFICATIONS (GENERAL)

Pressure test all valves removed from place prior to opening up. All valves found tight required pressure to be repacked and replaced. Renew packing on all valves worked on. All valves to be repaired with new gaskets, bolts and nuts and proven tight. Replace and/or repair disturbed insulation.

## 3. PROTECTIVE PAPER AND TOPSIDE CLEANING - 503

Furnish necessary labor, equipment and material required to complete the following:

a. Furnish necessary labor and material to install fire retardant protective paper on decks in passageways of quarters. Secure paper with suitable tape.



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b. End of repair period clean house top, bridge wings, and decks down to main deck and remove all fire retardant paper from bulkheads, passageways and stairwells.

c. All shipyard workers are to stay out of ship's quarters, galley, messhalls, toilets and other similar areas unless conducting authorized work in such areas. The Contractor will be held responsible for all damage to Shand and Jurs tapes and floats in ballast and cargo tanks and all electric probes in ballast and cargo tanks. Suggest all floats, tapes and probes be secured or labeled to prevent damage to same.

4. FOAM SAMPLE - 109

As soon as vessel arrives, draw two (2) samples of foam, one (1) from each foam tank. One (1) pint each. Box and ship same immediately addressed prepaid "Air Mail" to:

National Foam Company
Union and Adams Streets
West Chester, Pennsylvania 19380

Send report to:

Exxon Company, U.S.A.
Marine Department
P. O. Box 1512
Houston, Texas 77001

Attention: Mr. H. P. Leyendecker

5. DRYDOCK - 901

Vessel is to be drydockekd, keel blocks to be spaced at not less than three-foot centers, except in way of forward and after ends of dock pontoons, in order to properly apply paint to keep between keel blocks. Contractor is to furnish fresh water under pressure to painters for washing off vessel's bottom.

Vessel is to remain on dock sufficient time to permit all testing to be carried out and paint to dry to approval of Owner's Representative.

6. GAS FREE - 902

The Owner will steam, clean and gas-free, or cause to be steamed, cleaned and gas-freed, all cargo tanks, cofferdams, pumproom, compartments and pipelines other than those containing bunker or boiler fuel and such other tanks, cofferdams, compartments, etc., as are specifically exempted by the Contractor's Certified Chemist. The Contractor shall not assume, however, that the vessel and/or its compartment and/or its pump and/or its piping is or are free from explosive or dangerous gas or gases or oil, but shall at his own expense have such tanks, compartments, pumps, piping, etc., tested by a Certified Chemist engaged by the Contractor who shall furnish the Owner and/or his Representative with a Certificate showing that such compartments and/or pumps and/or piping, etc., have been so tested and found to be free from explosive and/or dangerous gases or oil. Said Contractor shall keep all such cargo tanks, cofferdams, pumprooms, compartments and pipelines free from explosive and/or dangerous gas or gases or oil during the period of repairs and/or alterations. Delivery of such aforementioned Certificate and receipt thereof by the Owner or his Representative shall in no way relieve and/or discharge the Contractor from his obligation to keep these places free from explosive and/or dangerous gas or gases or oil during the performance of this contract or any related additional work. Should, during the course of repairs or alterations, the Contractor's Chemist report the presence of dangerous and/or explosive gases or oil, the Contractor shall immediately stop all work and shall not resume work until such places, etc., are again certified free from explosive and/or dangerous gas or gases or oil.

Burning or other hot work shall not be done by the Contractor on any part of the cargo piping system, gas vent lines or other piping lines which may have contained oil, gas, or other inflammable products, unless permission to do so is specifically granted by the Contractor's Certified Chemist.

7. SLOP OIL DISPOSAL - 902

Successful Contractor will be required to accept approximately 10,000 barrels of dirty slop from one (1) tank and to dispose of same. Tank is to be gas-freed by Contractor as required to obtain gas-free certificate, together with connecting pipelines and related pumps. There is to be no delay in accomplishing this item, in order that repairs may proceed promptly upon vessel's arrival.

8. SAFETY PRECAUTIONS - COATED MATERIALS - 905

The Contractor shall provide adequate exhaust ventilation; shall supply airline respirators, hose masks, or similar accessories; and shall take all other measures necessary to avoid creation of hazards resulting from burning or welding of coated plates, structural members, pipes, or other parts of the vessel or its equipment. The Contractor shall at no time run steam lines, air lines, water lines, acetylene lines, welding cables, light cables or any other lines of any nature through the passageway doors or port holes to the quarters or engine room.

----------THESE PASSAGEWAYS ARE TO BE KEPT CLEAR AT ALL TIMES----------

9. TUG SERVICE - 905

Furnish necessary tug service to assist vessel from stream to pier, and from pier to stream and within yard.

10. LINE AND GANGWAYS - 905

Furnish necessary labor and crane service to handle lines and gangways upon vessel's arrival and departure of vessel.

11. FIRE MAIN - 905

Furnish necessary material and labor to connect and disconnect fire main to vessel at pier.

12. SHORE POWER - 905

Furnish necessary material and labor to run necessary shore leads and connect up shore power to vessel. Supply shore power to vessel during repair period.

13. SHORE STEAM - 905

Furnish necessary labor and material to run piping and connect up and disconnect shore steam piping to the vessel. Supply shore steam to vessel during repair period.

14. WATCHMAN - 905

Furnish services of watchman to maintain fire watch on vessel during period of repairs.

14. GARBAGE - 905

Furnish necessary labor to dispose of garbage.

15. TELEPHONES - 905

Furnish telephones in engine room and midship's office.

16. SCUPPER PLUGS AND STOCKINGS - 905

a. Before any paint is applied to hull, install wood plugs with extension pipes of sufficient lengths or other approved means in all scuppers and overboard drains throughout vessel to prevent any water running on hull of vessel. Plugs to remain in until painting is completed and dry and then removed.

b. Install stockings on soil lines, scupper drains from washrooms and air conditioner, also ice machine overboard discharges, while vessel is on drydock to enable ship's personnel to use toilets and washrooms, preventing any water running on shell during painting.

17. PUMPING AND DISPOSING OF CONTAMINATED LIQUIDS - 905

When directed, furnish necessary labor and material to rig pumps and hoses aboard vessel, connect hoses to pump and barge or tank and dispose of contaminated liquids in accordance with approved procedure. When all pumping is completed, disconnect hoses, rig pumps and hoses from vessel. Furnish Ship Superintendent a list of all pumping accomplished including date, spaces pumped, number of items pumped and reason for pumping.

18. FRESH WATER, COOLING WATER FOR ICE MACHINE AND AIR CONDITIONING CONDENSERS - 905

Furnish necessary labor and material to supply fresh water as required (wash and drinking). Also run hoses and connect up and disconnect hoses to the vessel for ice machine and air condition cooling water; supply water to vessel during repair period.

19. CARGO TANK, MACHINERY SPACE AND ENGINE ROOM CLEANING - 902

Contractor to provide necessary labor to clean and remove debris, resulting from repairs, modifications and/or alterations during this year period, from all machinery spaces, pump rooms, cargo and ballast tanks including bilge areas of aforementioned spaces. These spaces to be in the same condition when vessel departs, as when vessel entered shipyard.

20. CATHODIC HULL PROTECTION - 115

While vessel is on drydock, thoroughly examine all hull anodes and reference cells. Remove, replace, renew if required. Stage as necessary. Owner supplies new parts required. Sandblast approximately 200 sq. ft. of defective calcuis deposits from capastic shields and recoat two (2) coats of new capastic on blasted areas. Remove staging. Check out internal electronic panel aboard vessel. Renew defective parts, reset and place in good order. New parts will be owner supplied. Require services of Englehard engineer to supervise repairs. Services of Engineer to be for Contractor's account.

21. MAIN AND EMERGENCY SWITCHBOARD - 804

Thoroughly clean and blow out with dry air all busses, circuit breakers, terminal strips and insulators on main and emergency switchboards. Examine and tighten all connections, nuts and screws for terminals in front and behind switchboards. Check insulation of mountings for exciter rheostats, and renew as required. Work to be carried out when galley not in use. Tighten all connections in all power control boxes, including steering gear controls. This includes both sides of panels. Check and reset reverse power relays for main generators. Prove in good order.

22. HEAT LAMPS - 805

Furnish and install heat lamps on all motors, generators, converters, automation console and switchboard. Keep in service during repair periods. Upon completion of repairs, remove all wiring and heaters.

23. MEGGER TEST READINGS - 809

Test and delivery to Owner's Representative as soon as possible after vessel's arrival in yard five (5) typewritten megger readings on all generators, motors, controllers, and electrical circuits throughout the vessel. Locate and demonstrate breakdown of all low readings. Allow for removal of twenty (20) grounds from circuits as designated by Exxon Repair Inspector and/or Chief Engineer.

24. SHIP'S TELEPHONE AND GENERAL ALARM CIRCUITS - 851

Overhaul, check all circuits, remove all low readings, free up frozen cranks, check all bells, renew defective sound powered units in headsets. Prove system in good order. Parts requiring renewal will be supplied by Owners. Test out general alarm circuits and call bells and prove all to be in good order. Test steering gear power failure alarm and prove same in good order.



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25. CRANE SERVICE - STORES - 905

Furnish crane service from time to time as requested by the Owner's Representative to place stores aboard vessel.

Rig vessel stores from ashore to vessel as delivered by Vendors. Ship supply engine, deck and stewards stores.

26. RECEIVING, SHIPPING, HANDLING AND STORAGE OF OWNER'S MATERIAL - 905

Furnish labor and equipment to receive Owner's materials, as delivered to shipyard. Pay any collect freight charges, Custom House brokerage fees, etc., due on shipments. Properly store material and, when directed, convey to location on vessel as designated. Receive any material removed from vessel. Properly store and/or ship as directed by Owner's Representative, paying any freight charges, Custom House brokerage fees, etc., on prepaid shipments.

27. ENGINE ROOM BILGES - SHAFT ALLEY - 905

Furnish labor and equipment for pumping out and disposing of engine room and shaft alley bilge water preferably designated port and stbd wing tanks of vessel.

28. SKYLIGHT REMOVAL - 102

Furnish labor and material to remove the skylights from the engine room and after pumproom.

Reinstall using new gasket and bolting material as necessary, upon completion of all work in way of same.

29. CARGO PIPING SURVEY - 407

Upon arrival of vessel in shipyard, provide manpower and material to conduct a hydrostatic test of all cargo piping including ballast and stripping piping test pressure approx. 125 psi, mark all leaks with white or yellow paint and report findings in writing to Repair Inspector. Five (5) copies.

Upon completion of repairs and just prior to ship departing shipyard, set up and test all cargo piping to Chief Mates and Repair Inspector's satisfaction.

30. CARGO TANKS INSPECTION - USCG & ABS - 107

a. Provide necessary labor to assist USCG and ABS representatives to conduct survey and search out cargo tanks for fractures. Report in writing all fractures found to Owner's Representative for examination. Five (5) copies.

b. Check condition of Shand and Jurs "U" bolts - total (60) in (30) cargo tanks. Defective or wasted bolts found to be dealt with in addendum to this item.



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31. MAIN TURBINE AHEAD AND ASTERN THROTTLES - 206

Open main turbine ahead and astern throttle valve. Renew Owner furnished balance piston rings. Fit to recommended vertical height and gap clearance. Machine discs (as found necessary), grind in and lap in and make tight. Hone and polish shoulders from cylinders. Check and set to correct clearance between disc and valve stem. Renew stainless steel fillister head locking screw, tack weld the screw to nut. Renew defective ball bearings in gear train bonnet assembly. Ream all holes true and make and install new pins and bushings in control valve linkages to remove all excessive slack. Reassemble with new gaskets, renew valve stem packing with approved packing. Prove in good order. Harden all nuts after throttle is hot. Replace or renew all disturbed insulation. The vessel is to be tied up sufficiently so that throttle valve can be tested out by running the main engine. While ahead throttle is disconnected, remove bonnet of oil governor assembly and renew bonnet gasket. Reassemble governor after renewal of gasket. All of the above to be supervised by Newport News service engineer for Owner's account.

32. RUDDER - 105

Carry out necessary work to obtain a certified chemist's gas-free certificate on rudder before starting any hot work. Remove inspection plates for examination of pintle nuts and bushings and taking of bushing clearances. Test nut in presence of USCG, ABS and Owner's Representative. Reinstall inspection plates and pintle nut retainer stops. Weld solid inspection in place. Examine rudder and rudder horn for erosion and leaks, make all necessary repairs to leaks. Pitted areas are to be sandblasted and covered with red hand cement prior to painting.

33. RUDDER STOCK PACKING - 105

Provide necessary labor and material to remove all old packing and renew packing in top and bottom of glands on rudder stock. Prove grease connections clear.

Repack rudder post using John's Manville NAVALON Packing Style 1 - 5, Form C-175. Renew defective gland studs and nuts, size 7/8" x 6" stainless steel material.

34. PROPELLER POLISHING - 116

Clean, sand and polish all four (4) propeller blades, all areas including hub. Dress and fair minor dents in all four (4) blades.

35. AFTER PEAK AND FORE PEAK TANKS - 102 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open the after peak and fore peak tanks for ABS survey and examination. Hydrostatic test tanks to ABS requirements. Upon completion drain tanks as directed, close up in good order using new gaskets as necessary.



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36. CARGO TANK STRUCTURAL REPAIRS - 102

Allow for erection and subsequent removal of required staging.

Furnish services of audio gauge technician to audio gauge as directed and furnish copies of results.

Allow for cropping and insert renewal of approx. total of 40 ft. x 60 ft. of 1/2" blasted and RB-191 coated Longitudinal bulkhead plating.

Allow for "Veeing out" and welding from both sides an approximate total of 150 cracks.

Allow for cropping and renewing of side shell and/or under deck longitudinals, each approx. 10 ft. long x 15" x 1/2" flanged plate welded to shell or under deck - total of twelve (12).

Allow for cropping and insert renewal of horizontal and vertical brackets on longitudinal and transverse frames for an approx. total of 100 ft. x 50 ft. x 1/2" plate.

37. SHELL AND BULKHEADS - 103

a. Flood bottoms of all cargo center tanks and fill wing tanks to cover outboard riveted plate, while vessel is on drydock. Mark and report all leaks to Owner's Representative. Repair as directed. Remove and replace plugs and drain water as necessary on completion. All as per ABS survey.

NOTE: All riveted laps in wing tanks FR 69 to FR 121. Caulk and make tight seventy-five (75) scattered rivets and 100 ft. of seam in way of riveted laps. Vee out and reweld approx. 100 ft. of seams and butts.

b. Fill and test all cargo tanks as required by ABS for survey. Will require filling odd wing tanks and even center tanks. Locate and mark all leaks. Repair as directed. Pump out all water but the ballast tanks as requested by Master of vessel.

38. COFFERDAMS - ABS SURVEY - 102

Open the following cofferdams for ABS survey and examination. Upon completion survey, chip wire brush and clean all rusty areas of the five cofferdams. Upon completion of satisfactory cleaning, apply one (1) touch up coat of red lead primer to entire areas of cofferdams.

One (1) forward cofferdam port and stbd.
One (1) aft cofferdam port and stbd.
One (1) engine room cofferdam port.
One (1) engine room cofferdam stbd.
One (1) engine room lube oil sump cofferdam.

Close up in good order, renewing defective gaskets, bolts and nuts.



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39. DOUBLE BOTTOM TANKS - 102 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open the following engineroom double bottom tanks: #1, #2, #3, port and starboard for ABS survey and examination. If found necessary, while vessel is on drydock, hose wash with fresh water, remove all sediment. Upon completion of examination, close up tanks, renew defective cover gaskets. Fill and test tanks as directed. Drain tanks as required.

40. FUEL AND BALLAST TANK - 102 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open the following fuel and ballast tanks for ABS survey and examination. Fill and test to ABS requirements.

No. 1 deep tank, port and starboard. Upon completion of test, the tanks are to be drained and wiped dry and closed up in good order.

41. CLAPPER VALVES - SHIPSIDE - 126 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open for examination by ABS surveyors, all shipside clapper valves. Overhaul all valves, prove free, renew defective pins and clapper valve discs as found necessary.

Thoroughly clean and coat inside surfaces with two (2) coats of Coal Tar Epoxy. Renew gaskets, close up in good order renewing studs, bolts and nuts where necessary. Total of (12).

42. ANCHOR CHAINS - 107 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Range on dock forward port, starboard and stern anchor and chains, unshackling same at bitter end connections, for examination by USCG and ABS. Chain lockers to be thoroughly cleaned and dirt removed from vessel and suction pipes to be proven clear. Sandblast and remove all scale, rust and dirt from all chains, shackles, links, anchors, etc. The first through the fourth outboard shots of chains to be removed, and reinstalled on the inboard end of the chain and all to be coated with fish oil. Remark with paint all shots of chain. Harden up on anchor shackle pins, crown pins, and patent link pins. Free-up three (3) anchor chain swivels (one swivel each chain). Reinstall and stow chains in lockers in good order.



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43. MAIN TURBINE - HP AND LP UNITS - 26500 HP - 201 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Make necessary removals and remove upper half of both HP and LP turbine casings, secure and raise both turbine rotors for examination and ABS survey. Check all blading. Examine all labyrinth seals and packing, straighten any bent packing, prove free. Examine all nozzle ring allen head bolts, prove same tight and sound. Prove diaphragms free. Upon completion, reinstall rotors, take and record all blade and bearing clearances, check and adjust to proper thrust bearing clearance. Close up turbines in good order, renewing any defective bearings and etc. (furnished by vessel). Supply Owner's Representative with five (5) typewritten copies of all readings taken prior to and after all adjustments are made. Prove all in good order after running dock trial of four (4) hours. After exposed to heat, reharden all casing flange and pipe joint bolts, proving same tight. Replace all insulation and lagging in good condition, as original. Work to be done under constant supervision of Newport News Service Engineer for Contractor's account. Replace all removals in good order.

44. MAIN TURBINE HP AND LP HIGH SPEED COUPLINGS - 201 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open up and remove for inspection, two (2) high speed flexible couplings for HP and LP turbines. Thoroughly clean and check same for wear. Remove shoulders and wire edges by stoning as directed. Remove and clean oil supply pipes and nozzles. Reassemble couplings, oil lines and nozzles in good order. Renew neoprene rubber seal at forward end of coupling covers top and bottom.

45. MAIN THRUST - 106 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Take clearance of main thrust bearing. Give reading to Repair Inspector.

46. MAIN REDUCTION GEARS - 205 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open inspection plates of main reduction gears for examination by ABS. Upon completion of examination, close inspection plates in good order, renew defective cover gaskets. Remove manhole cover of lube oil sump, clean and reinstall manhole cover with new gasket.

47. LINE SHAFT BEARING - 106 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open for examination and ABS survey one (1) designated line shaft bearing, after examinaton close up leaving in good order. Renew oil, clean oil sump. Oil furnished by vessel.

48. MIN CONDENSER - 230 - ABS SURVEY -HOLD UNTIL AUTHORIZED

Open main condenser, removing access cover plates for examination. Wire brush and thoroughly clean tube sheets and tubes. Test condenser to 15 lbs. hydrostatic pressure and prove tight with spectrotest. Plug all leaking tubes and tighten all leaking packing and renew any defective tube packing found.

Renew swedish iron plates and any defective studs, nuts and washers. Harden up on leaking exhaust flange joints.

Shore up condenser for hydrostatic test. Upon completion of work, condenser to be drained and shores removed. Close up in good order, renewing cover gaskets, defective studs and nuts.

Chip, power wire brush, thoroughly clean all pitted spots in covers and water box of condenser, fill areas with red hand cement. Remove all defective neoprene coating, thoroughly clean areas. Apply two (2) coats of Exxon Chemical Coal Tar Epoxy 6692 to all areas not coated with Neoprene.

49. AUXILIARY CONDENSER - 230 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open auxiliary condenser for examination. Wirebrush and thoroughly clean tube sheets and tubes. Clean heads, test condenser to 15 lbs. hydrostatic pressure and prove tight. Repair any damaged areas of neoprene coating. Renew swedish iron plates and any defective studs and nuts. Harden up on all leaky joints, prove tight. Upon completion of work, condenser to be drained and closed up in good order.

50. LUBRICATING OIL COOLERS (MAIN UNIT) DAVIS ENGINEERING CORPORATION - 233 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open for examination two (2) main lubricating oil coolers. Wirebrush and air lance, clean tubes also clean tube sheets, wirebrush, clean and apply one (1) coat of apexior #3 paint to water boxes and heads. Renew zinc plates, test tubes to working pressure, prove tight and close coolers in good order, renew gaskets, defective studs, bolts and nuts.

51. FEEDWATER HEATERS - 228 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Remove covers of the following feed water heaters for examination by ABS. Apply working pressure to shell, prove all tubes tight. Clean channel and cover, renew gasket and defective studs, bolts and nuts. Prove cover tight. Replace insulation as original:

One (1) first stage feedwater heater Ross #2112 "EUA" Exchanger
One (1) third stage feedwater heater Ross #1911 "EUH" Exchanger.
Clean tubes.
One (1) fourth stage feedwater heater Ross #1912 "EUH" Exchanger.
Clean Tubes.



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52. DEAERATING TANK - 237 - ABS AND USCG SURVEY - HOLD UNTIL AUTHORIZED

Open up deaerating tank for examination and cleaning. Thoroughly wirebrush and clean all internal surfaces, including dome. Remove all sediment and wash down inside of tank with fresh water. Test floats for leaks and make tight, also free-up and adjust all linkage for make-up and dump valves. Blow out, prove clear and tight all air lines. Remove spray nozzle valve assemblies, overhauling as required or if necessary, renew valve assemblies, supplied by vessel. Reinstall assemblies in good order.

Machine seats and disc, grind in, test and prove tight relief valve on deaerating tank and set valve to lift at 60 lbs. pressure. Remove, clean, test and make tight and reinstall vent condenser. Upon completion of work and examination, close up in good order using new gaskets. Renew all defective studs, nuts and bolts. Replace disturbed insulation and blankets in way of repairs.

53. COMPRESSED AIR TANKS - 235 - ABS AND USCG SURVEY - HOLD UNTIL AUTHORIZED

Open two (2) compressor air tanks for examination by USCG and ABS.

Thoroughly clean, wirebrush internal surface and remove sediment. Upon completion close up tanks in good order, renewing gaskets, defective studs and nuts.

Test relief valves and prove same in good order, overhaul or renew as found necessary. Size 3/4".

54. EVAPORATOR - 219 - ABS AND USCG SURVEY - HOLD UNTIL AUTHORIZED

Open for examination one (1) make-up feed evaporator. Remove all coils and baffles, thoroughly scale, wirebrush and clean all surfaces of shell and headers. Remove all coils to shop, clean, test to working pressure, repair all leaking coils by brazing, anneal all coils, free-up spud nuts, replace all coils in good order, test coils and headers to working pressure and prove tight.

Renew defective zinc plate. Close evaporator in good order, renewing all gaskets, defective studs, bolts and nuts. Test, prove all connections tight.

Machine seats and discs, grind in, test, adjust, prove tight relief valve to requirements of USCG. Repair or renew as original all disturbed insulation and blankets.

55. FEED PUMP TURBINES (GE 575 H.P.) - 208 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open top casings of No. 1, 2, and 3 feed pump turbines and bearings for examinations and ABS survey. Check and record clearances. Remove rotors check nozzle plates, intermediate, spacer and etc., renew defective parts, also worn or defective bearings. Open lube oil pumps and speed changers, check all parts for wear and defects, renew defective parts. Clean bearing housings and strainers, test lube oil coolers and prove tight. Polish shaft in way of carbon packing, renew carbon packing, adjust to proper clearances. Reassemble, install correctly, renew gaskets, defective studs, bolts and nuts. Install four (4) rings of carbon packing per box.



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Clean carbon packing boxes and casing joints. Carbon packing and parts furnished by vessel.

Open governor and trip throttle valve assemblies also air-operated valves. Renew all worn and damaged parts, close up in good order.

Adjust to proper clearances and connect up turbine shaft in correct alignment with pump. After plant in service, test and adjust overspeed trip, prove in good operating condition. Renew or replace disturbed insultation as original. Work to be under supervision of GE Service Engineer for yard's account.

56. FEED PUMP WARREN - SIZE 4-TMH-6, GPM 660 - 207 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open casing and hearings of No. 1, 2 and 3 feed pumps for examination and ABS survey. Disconnect and remove impeller assembly. Check and record all casing and impeller wearing rings, also inner stage clearances, check sleeves in way of packing, renew worn or defective parts. Renew worn or defective bearings. Reassemble and reinstall impeller assemblies, clean casing faces, and renew casing gasket (giving special attention to thickness of gasket). Open up oil pump, check and renew defective and worn parts, clean, test, close up in good order. Repack glands with approved packing. Test out pumps and prove in good working condition. Parts for pumps, bearing and packing also oil pumps furnished by vessel. Work to be under supervision of Warren Service Engineer for yard's account.

57. CENTRIFUGAL PUMPS - WARREN - 209 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open up thefollowing centrifugal pumps for examination and ABS survey. Remove impeller assemblies to shop as found necessary. Machine and true up impeller in way of sealing rings and renew sealing rings. Renew casing rings, interstage seal and liner on shaft. Work to be under supervision of Warren Service Engineer for yard's account.

Renew sleeves in way of packing, renew bearings (pack with approved grease) adjust to proper clearances. Reassemble, rejoint, repack and prove pumps in good working order:

One (1) fire pump - size 2 1/2 DB6 - 400 GPM
Two (2) first stage heater drain pumps - size 2-2CV-11-130 GPM
One (1) auxiliary condensate pump - size 4-2CVP-13-380 GPM
One (1) auxiliary circulating pump - size 14-DVB-16-GPM-6500, renew casing studs, bolts and nuts
Two (2) Main condensate pumps - size 4-2CYP-13-380 GPM parts shipped by vessel.

58. MAIN CIRCULATING PUMP - WARREN - SIZE 30SLMV - 210 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open up main circulating pump and remove impeller assembly for ABS survey and examination. Adjust impeller on shaft for correct vertical height. Fit the new casing rings to casing. Close up circulator in good order, using manufacturer's prescribed thickness gaskets. Prove grease fitting clear, repack, prove free and in good order. Renew defective studs, bolts and nuts. Test and prove in good working order. Spare rotating element on board.



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59. ROTARY PUMPS - DE LAVAL - 217 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Remove the following designated rotary pumps to shop. Open for examination and ABS survey. Remove rotors, housings, bearings, washers and so forth. Build up original size. Renew worn sleeves, bushings, bearings, washers and end plates. Check and adjust end clearances. Reassemble in good order, using new gaskets, renewing defective studs, bolts and nuts. Reinstall and connect up pumps and motors in true alignment. Pack couplings with approved grease. Test out and prove units in good operating condition. Repack glands with approved packing. All work to be under supervision of De Laval Service Engineer for yard's account.

Two (2) lubricating oil service pumps - Type A422AV #350, GPM 550
Two (2) fuel oil service pumps - Type A 314X #250, GPM 45

60. BILGE PUMP - WORTHINGTON HORIZONTAL - DUPLEX - SIZE 8 1/2" X 10" - 215 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open bilge pump in machinery space for examination and ABS survey. Open liquid end, renew liners, renew plungers and rods, machine plungers to fix new rods, renew plunger packing, parts furnished by vessel. Repack rods, close up using new gaskets, renew defective or worn studs, bolts and nuts. Renew bushings if found necessary. Overhaul, machine and grind in seats and discs on suction and discharge valves, renew broken or worn springs and guide studs. Open up gear case for examination, clear out gear case, renew gaskets and renew oil furnished by vessel. Test and prove pump in good working order.

61. PUMPS - WARREN DUPLEX - 215 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open for examination and ABS survey the following designated duplex valve chests. Thoroughly clean all parts, machine suction and discharge valves and seats, renew damaged or broken valves, springs and stems furnished by vessel. Close up pumps in good order, renew gaskets, repack rods and valve stems with approved packing, renew defective studs, bolts and nuts. Test out and prove in good operating condition. Replace all insulation, renewing all missing or damaged insulation as original.

One (1) bilge and general service pump, 16" x 14" x 18" machinery space. Renew seats and discs liquid end, furnished by vessel. Renew liquid end plunger packing
One (1) fuel oil transfer pump, 10" x 7" x 12" machinery space
One (1) bilge and fire pump, 14" x 14" x 12" forward pumproom

62. LUBE OIL COOLER CIRCULATING PUMP - WARREN - 1500 GPM - 233 - ABS SURVEY HOLD UNTIL AUTHORIZED

Open up lube oil cooler circulating pump and remove impeller assembly for examination and ABS survey. If found necessary remove coupling and install same on spare assembly. Adjust impeller on shaft for correct vertical height. Fit casing rings to casing as necessary. Close up pump in good order using gaskets of correct thickness. Prove grease fittings clear, repack, prove free and in true alignament. Renew defective studs, bolts and nuts.

53. ONE (1) GENERATOR TURBINE AND GEARS - 750 KW DE LAVAL - 240 - ABS SURVEY

Make necessary removals and raise upper casing of one (1) generator turbine for examination and ABS survey. Check all blading, rotor and bearing clearances, hone shaft in way of bearings. Free up diaphragms; clean and straighten all damaged labyrinth seals and packing.

Renew defective packing, also defective or worn bearings furnished by vessel. Check, adjust if found necessary turbine rotor and pinion shaft alignment, also adjust nozzle and thrust bearing clearances, when ready reassemble, replace all removals. Clean flexible coupling.

Open for examination nozzle valve chest, clean and free up all nozzle valves, adjust to proper clearances. Close up nozzle chest in good order. Harden up on all casing bolts after steam is on turbine and replace all insulation to its original good condition.

Open reduction gear casing for examination and survey. Check and adjust alignment of gear and generator shaft coupling. Check and record all clearances. Renew worn bearings and adjust to proper clearances.

Open up lube oil pump, check all parts for wear and defects, renew defective parts, examine all orifice plates in lube oil system for wear, open for examination nozzle strainer for gears, clean, renew gaskets and replace in good order, renew all enlarged orifice plates, also overhaul and adjust all relief valves. Open up governors and controls, check relays, valves, etc., for wear and renew worn or defective parts. Open up bearing on generator shaft, check clearances, renew defective bearings, clean out bearing housings and shaft seals.

Upon completion of work close up all in good order. Clean oil sump on completion of all work and close immediately after being inspected by Owner's Representative. Vessel to furnish necessary parts and bearings. Lube oil to refill sump furnished by owners. Furnish five (5) typewritten copies of all readings before and after adjustments are made to Owner's Representative. Test and adjust overspeed trip and prove turbines and gear in good operating condition under load. Replace all removals in good order.

Thoroughly clean, test and prove lube oil coolers tight, renew zinc plates.

All repairs under supervision of De Laval Service Engineer for yard's account.

64. ONE (1) 750 KW GENERATOR AND 7.5 KW EXCITER - 801 - ABS SURVEY

Remove cover and shield from one (1) 750 KW generator and 7.5 KW exciter. Thoroughly clean windings, rotor, field and armature if necessary with approved solvent. Check air gap and binding wires. Bake until satisfactory megger readings are obtained. Apply one (1) coat of approved insulation varnish. Machine slip rings of generator and commutator of one (1) 7.5 KW exciter after above work. Reinstall cover and shield in good order, test and prove in good working condition under load.



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64. ONE (1) 750 KW GENERATOR AND 7.5 KW EXCITER (Continued)

Open for examination air cooler, wirebrush and air lance. Clean tubes, also clean tube sheets, scrape, wirebrush, clean and apply one (1) coat of Apexior #3 paint to water boxes and heads. Renew zinc plates or rods test tubes to working pressure, prove tight, and close coolers in good order, renew gaskets, defective studs, bolts and nuts.

65. INBOARD 1000 KW G.E. GENERATOR ELECTRICAL MODIFICATION - 240

1. Disconnect the old voltage regulator from the generator and remove it from in place.

2. Install the new static exciter in a suitable location.

3. Install the new static voltage regulator in a suitable location; this regulator should be installed in or near the generator switchboard control panel.

4. Install the new voltage adjusting rheostat (automatic), the voltage adjusting rheostat (manual) and the new Off - Manual - Automatic S1 control switch. These three items should be installed on the front panel of the generator control cubical.

5. Make all electrical wire and cable connections between the generator, the static exciter, the static voltage regulator, the voltage adjusting rheostats (manual and automatic) and the S1 control switch. Make all these connections according to the attached wiring diagram No. 44F242252.

6. During the installation of the new equipment, the job should be inspected periodically, by one of our field engineers, to assure that the proper generator and exciter phasing is maintained.

7. After installation, the wiring should be inspected and all connections checked for proper phasing and control function.

8. All pre-startup adjustments to the exciter and voltage regulator should be performed.

9. The unit should now be started up and the unit check out and start up should be performed.

10. The unit should first be started in manual and after satisfactory operation, the Auto-Control mode should be tried.

11. After satisfactory operation of the above, the generator should be loaded and all necessary regulator adjustments be made.

The attached control and wiring diagrams are the prints for the job and should be followed when making any wiring connections. Supervision by - General Electric Svc. Engineer - Owner's Acct.

66. AIR COMPRESSOR - SHIP SERVICE - SIZE 6" x 4 3/4" x 5" - 234 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Gardner Denver

Open up ship service air compressor for examination and ABS survey. Clean, grind in suction and discharge valve seats, renew valve strips. Examine crank pin and main shaft bearings, wrist pins and bushings, and oil seals, renew any worn or defective parts. Renew piston rings. Examine oil pump, renew defective parts. Clear out sump and renew oil supplied by vessel. Clean air filters. Reassemble using new gaskets. Parts supplied by vessel. Renew defective coupling links. Test and prove in good order.

67. FIRE AND BUTTERWORTH TURBINE - 213 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Raise top half of casing of fire and butterworth turbine for examination and ABS survey. Clean packing boxes and renew packing. Clean top and bottom casing joint faces. Replace turbine casing in good order. Test and prove tight.

68. SHELL GAUGING - 103 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Supply necessary labor, staging and equipment to take two (2) complete belts of audio gauge readings as required by ABS to complete hull survey. Supply Owner's Representative with five (5) copies of all readings taken.

69. STEERING GEAR PUMP - 238 - ABS SURVEY - HOLD UNTIL AUTHORIZED

Open up port and starboard steering gear pump for examination by ABS. Renew all defective parts. Check all clearances, renew all bearings and oil seals if necessary. Close up pump with new gaskets. Renew any defective studs, bolts and nuts. Test and prove in good order.

Marine Hydraulics - Norfolk - 804 - 487 - 8871 - Owner's Acct.

70. ITEM - CARGO DEEP WELL PUMP - ABS SURVEY - 401

This pump to be opened up in its entirety poor discharge performance. Pump bearings to be renewed. Owner furnished parts.

Rearrange lube oil sump cooling coil so that all fittings are outside unit to avoid possible contaminization in event of leak.

Complete unit to be reassembled. Realigned and tested and proven satisfactory.

71. ITEM - CARGO BALLAST PUMP ROTATING ELEMENT - ABS SURVEY - 401 AFT PUMP ROOM

Open pump, remove impeller, survey casing for needed repair, install owner furnished spar impeller. Re-check coupling alignment, test with air controls, remove all debris from vessel.

Spare impeller on order.

72. ITEM - VERTICAL DUPLEX STEAM CARGO PUMPS - ABS SURVEY - 401

A. Port stripper pumps AFT pump room - Disassemble liquid ends sufficiently to install owner furnished "darcova" piston cups - reassemble test prove satisfactory. 16 x 14 x 18

B. Vertical duplex steam solvent pump - portside foward pump room - disassemble sufficiently to install owner furnished "darcova" piston cups - reassemble test and prove satisfactory. 16 x 14 x 18

C. Vertical duplex steam lube pump - stbd side forward pumps room. Disassemble liquid end - renew damaged liners spare liners aboard - install "darcova" owner furnished pistoneups. Reassemble, test and prove satisfactory. 16 x 14 x 18

D. Vertical duplex steam aux pump - apt stbd side of fwd pump room - disassemble liquid end sufficiently and install owner furnished "darcoua" piston cups, remove (1) one cylinder head and wasted studs - build up by welding and install new studs. Reassemble and test and prove satisfactory. 16 x 14 x 12

E. On all above pumps - over haul operating values and adjust and set valve linkage and prove satisfactory.

73. ITEM - (4) MAIN CARGO PUMP TURBINES AND (1) BALLAST PUMP TURBINE ABS SURVEY - 402 HOLD UNTIL AUTHORIZED

Make disconnects sufficient to renew all shaft seal chambers and new carbon packing. Repair distorbed insulation. Test and prove satisfactory.



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74. ITEM - BILGE PUMP STRAINER BOX - STBD SIDE - 407 SHAFT ALLEY

Disconnect strainer box - send to shop blast and coat and repair wasted section. Reassemble as original and prove tight.

75. ITEM - CARGO SYSTEM GAUGES AND GAUGE LINERS - USCG - 401

A. Disconnect and send to shop and calibrate following 97 gauges - affix test date to gauges and reassemble to place
after pump room lower - 29
after pump room upper - 29
deep well pump - 4
risers - mid ships -10
FWD pump room lower - 12
FWD pump room upper -13

B. Test gauge lines to above gauges and prove tight or renew only sections found leaking.

76. ITEM - ENGINE DEPARTMENT MOTORS - ABS SURVEY - 805

Disconnect following motors - identify leads and send to shop - open, clean, machine slip rings, renew bearings coat windings, bake, reassemble - give repair inspector 5 copies of before and after megger readings and reassemble and prove satisfactory.

A - Air conditioning compressor motor - AFT
B - Large air compressor motor
C - #1 and #2 fuel oil service pump motors
D - Exhaust fan motor - fireroom - boat deck level stbdside - staging required
E - exhaust motor and fan - AFT pump room portside

77. TAILSHAFT - 106 ABS - USCG SURVEY DO NOT START UNTIL AUTHORIZED BY OWNER'S REPRESENTATIVE

Furnish necessary labor, equipment and material required to complete the following:

A. Waukesha bearing and seals installed. Vessel's engineers todispose of oil from system. Check centimeter gauge readings in presence of Owner's Representative. Make necessary removals disconnect and remove section of line shafting. Remove aft seal sleeve bolts from propeller face, install distance straps between sleeve and seal housing. Forward stern tube seal-remove bolts from sleeve to clamp ring, remove clamp ring, install distance straps. Remove propeller and draw tailshaft clean tailshaft. Magnaflux shaft taper and in way of keeway and search for fractures in presence ofUSCG, ABS and Owner's Representative, stone and polish any scratches and bur found on shaft, check bearings, cover shaft to protect same from damage. Disconnect and remove forward and aft stern tube seal assemblies to shop, dismantle for examination of meals, springs sleeves, etc. Renew all defective parts furnished by Owner. Reassemble in good order, thoroughly clean and flange faces, renew defective gaskets and seal rings, replace renewing defective bolts and wire lacing, use monel wire for lacing bolts together.

Upon completion of examination, clean stern tube and drain tank Reinstall tailshaft propeller, aft and forward seals, line shafting and connect up in good order. Fill propeller hub and fairwater with Rust Ban #324 by filling through ABC holes as directed by Owner's Representative. As soon as aft and forward seals are installed, fill stern tube system with new oil furnished by vessel. After four (4) hours, remove drain plugs from seals and check for leaks, replace plugs. Take and record gauge reading. Fill aft and forward seals with oil furnished by vessel. Replace all removals in way of work in good order. Three (3) copies of all guage readings taken to be given to Owner's Representative.

TAILSHAFT - 106 - (CONT.)

B. While tailshaft is withdrawn, renew, with Owner furnished spares, tailshaft bearings. This will required machining the O.D. and the I.D. of the new bearings to the proper dimensions. Three (3) copies of all stern tube dimensions and final machine size of new bearings to be given to Owner's Representative.

C. All of the above to be done under the supervision of a Waukesha serviceman. Cost of serviceman for Contractor's account.

78. TAILSHAFT BEARING CLEARANCE - 106
DO NOT START UNTIL AUTHORIZED BY OWNER'S REPRESENTATIVE

Furnish necessary labor, equipment and material required to complete the following:

A. Take aft tailshaft bearing clearance with centimeter gauge in presence of Owner's Representative. Drain oil from aft seal, catch in clean container. Flush and refill seal; oil furnished by vessel. Replace removals in good order.

79. SEAVALVES AND STRAINERS - USCG AND ABS - 126

Open up all sea valves in engine room, fire room, pumproom, and cofferdams, including bilge injection, all steam blow out valves and all overboard discharge valves for examination USCG and ABS. Machine seats and disc as necessary, grind in, repack, rejoint and close up valves in good order. Remove all sea strainers for examination of sea chest; thoroughly scrape and wirebrush sea chests to bare metal and apply two (2) coats of Exxon Chemical Coal Tar Epoxy 6692. Replace sea strainers and renew defective and missing lugs, bolts, studs, nuts and cotter pins. Clean out and prove steam blow lines clear between valves and sea chest. While above valves are open, clean and coat with two (2) coats of Exxon Chemical Coal Tar Epoxy 6692. Note some sea valves are coated with Neoprene. All damaged surfaces are to be scaled and wirebrushed and thoroughly cleaned and apply Exxon Chemical Coal Tar Epoxy 6692 to all bare areas. Secure aft pumproom sea valve discs to stem lock nuts by track brazing (3).



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Valves are as follows:

1. One (1) 3-1/2" gate air conditioner cooling water overboard, aft Starboard side shaft alley.

2. One (1) 5" angle low sanitary sea suction - Starboard side shaft alley.

3. One (1) 3/4" angle steam out valve at low sanitary sea suction - Starboard side shaft alley.

4. One (1) 5" angle high sanitary sea suction - Portside shaft alley.

5. One (1) 3/4" angle steam out valve at high sanitary sea suction - Portside shaft alley.

6. One (1) 4" gate bilge overboard - Starboard side shaft alley.

7. One (1) 3" gate cooling water overboard (Reefers, fire and butterworth pumps and #3 feed pump) - Starboard shaft alley.

8. One (1) 10" angle fire and bu-terworth suction - Portside shaft alley.

9. One (1) 6" angle bilge and ballast suction - port side shaft alley.

10. One (1) 6" gate fire and butterworth overboard - portside shaft alley.

11. One (1) 3" gate cargo pump cooling water overboard - Starboard side forward engine room - lower level.

12. One (1) 4" air cooler and generator cooler overboard - Starboard side - forward engine room - lower level.

13. One (1) 16" angle aux. circulator sea suction - Starboard side lower engine room.

14. One (1) 16" angle aux. circulator sea suction - Starboard side lower engine room.

15. One (1) 6" angle fire pump sea suction - Starboard lower engine room.

16. One (1) 1" globe steam out valve at fire pump sea suction - lower engine room.

17. One (1) 16" gate aux. circulator overboard - Starboard side lower engine room.

18. One (1) 2-1/2" gate electric fire pump overboard - Starboard - lower engine room.

19. One (1) 4" low pressure evaporator feed suction - portside lower engine room (renew).



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20. One (1) 28" gate main cond. high sea suction - portside lower engine room.

21. One (1) 3/4" globe steamout at high sea suction - Portside lower engine room.

22. One (1) 30" gate main cond. low sea suction - portside lower engine room.

23. One (1) 3/4" globe steamout valve at low sea suction - portside -lower engine room.

24. One (1) 30" gate main cond. overboard - portside - lower engine room.

25. One (1) 6" gate lube oil cooler overboard - portside lower engine room.

26. One (1) 8" angle lube oil cooling water pump suction - portside lower engine room.

27. One (1) 6" angle general service pump suction - portside - lower engine room.

28. One (1) 3/4" globe steamout valve at service pump suction - portside lower engine room.

29. One (1) 5" gate general service pump overboard - portside lower engine room.

30. One (1) 3" gate cargo oil heating coil drain cooler overboard - portside lower engine room.

31. One (1) 2" globe make up evaporator overboard - portside lower engine room.

32. One (1) 3-1/2" globe low pressure evaporator overhead - portside lower engine room.

33. One (1) 3-1/2" globe distiller overboard - portside - lower engine room.

34. One (1) 3-1/2" boiler blow - portside - fire room.

34-B One (1) 28" emergency bilge suction - globe - engine room portside lower - FWD.

FORWARD PUMPROOM

35. One (1) 5" gate - bilge pump overboard - starboard side.

36. One (1) 6" bilge pump suction - Starboard side.

37. One (1) 3/4 globe steam valve at pump suction - Starboard side.

38. One (1) 10" ballast pump suction - portside.



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39. One (1) 3/4" globe steam out valve at pump suction - portside.

40. One (1) 10" gate ballast pump overboard - portside.

AFTER PUMPROOM

41. One (1) 16" angle cargo pump suction - portside.

42. One (1) 3/4" globe steam out valve at pump suction - portside.

43. One (1) 3/4" globe steam out valve at pump suction - Starboard side.

44. One (1) 4" gate stripper overboard - Portside.

80. LIFEBOATS - 108 USCG SURVEY

Furnish necessary labor, equipment and material required to complete the following:

A. Remove all gear from four (4) lifeboats, including air tanks, provision boxes, etc., for inspection in accordance with USCG and ABS requirements. Profide storage boxes with locks and keys for stowing above gear. Keys for boxes to be given to Chief Mate and will be returned to yard upon completion of restowing lifeboats. Restow lifeboats as directed by Chief Mate.

B. Test, make necessary repairs, and prove tight all air tanks.

C. After all gear is removed from lifeboats, remove four (4) lifeboats from vessel to sandblasting area. Sandsweep entire hull to each boat to remove all paint and scale. Survey hull plates upon completion of this operation, and repair as directed by Owner's Representative. Upon completion of repairs, coat entire hull with RB-191. (Two lifeboats are diesel powered and will require protection to diesels during sandblasting and painting.) Apply one (1) coat of approved primer to entire hull allowing recommended drying time before finish coat is applied. Apply one (1) coat of approved color coat to inside of hull and one (1) coat of approved color coat to outside of hull. Restencil lifeboats as original and return them to vessel.

D. Allow for the renewal of four (4) hull plates (shaped) in each lifeboat (total of sixteen (16) plates 1/8" thick galvanized sheet metal, approximately 4' x 8').

81. LIFEBOAT WEIGHT TEST - 108 USCG

Furnish necessary labor, equipment and material required to complete the following:

A. Make necessary preparations as required and weight test four (4) lifeboats and related equipment as per USCG requirements.

B. Free up, grease and prove in good working order releasing gear on all four (4) lifeboats.



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C. Open as required by USCG for inspection, limit switches, disconnect switches and motor controllers. Renew defective cover gaskets. While above switches and controllers are open, clean and free up and prove in good working order.

D. Adjust limit switches on all four (4) boats.

82. LIFERAFTS - USCG - 108

Provide necessary labor and crane service to remove two (2) liferafts from vessel to service truck (liferafts to be sent out for servicing cost of which is to be for Owner's account). Upon redelivery of liferafts, restow as original in life-raft racks.

83. ITEM - LIFEBOAT DAVITS - 121

Wash off and renew total of (4) four 2" x 2" x 3/8" x 4" long angle brackets on which lifeboat keel are landed - make sure of proper fit and location.

84. ITEM - LIFEBOATS - 108

Allow for renewal of 20% of internal wood structure in each of (4) four lifeboats.

85. ITEM - LIFEBOAT RUDDERS - #1, #2, #3, #4 - 108

Rebuild and or renew life boat rudder gudgeons and tiller assembly per USCG specifications.

86. ITEM - #3 STBD AFT LIFEBOAT AFT END DAVIT - 121 LINK CHAIN AND BLOCK

Renew deteriorateo chain and block.
AFT chain wasted so that it is lengthened and boat cannot be raised by cable high enough to seat properly.

87. ITEM - LIFEBOAT DAVIT ASSEMBLY - 121

Sandblast to white metal entire davit "A" frame assembly including davit channel and releasing gear, and coat with R.B 191 on number 3 and 4 lifeboats. Said work does not include davit arms.



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88. PRESSURE VACUUM RELIEF VALVES - 408 - USCG SURVEY

Open up for inspection of USCG and Owner's Representative all pressure vacuum valves to cargo tanks. Thoroughly clean, machine seats and discs, grind in and renew defective flame screens. Close up valves in good order after being passed by USCG and Owner's Representative. Renew all defective studs, nuts, screws, and screens. A total of thirty (30) valves.

89. FLAME ARRESTORS - 408 - USCG SURVEY

Open up six (6) flame arrestors for cargo vent system for examination by USCG. Thoroughly clean and free-up. Renew defective flame screens. Close up in good order. Renew defective studs on flame arrestors.

90. SPILL VALVES - 408 USCG SURVEY

Open up seven (7) spill valves located on vent piping for inspection in accordance with USCT requirements. Thoroughly clean, machine seats and discs as found necessary and grind in. Renew defective flame screens, gaskets, also defective of missing brass capscrews and close up in good order.

91. FIRE DAMPERS - USCG - 110

Furnish necessary labor, equipment and material to complete the following:

A. Free up, put in good working order, and grease all fire dampers to spaces covered by fixed fire extinguishing system, including fore and after pumprooms and after machinery space.

Allow for eight (8), no staging required.

92. FIRE EXTINGUISHERS AND CO2 SYSTEM - USCG - 110 HOLD UNTIL AUTHORIZED

Furnish necessary labor, equipment and material required to complete the following: Goldsmith Chesapeak - 804.543

A. Weight all main cylinders, also portable cylinders for CO2 Kidde firefighting system. Recharge all underwight cylinders. Check with compressed air and assure free operation of all pullers, controls, pipelines, nozzles, alarm sirens, etc., and prove everything in good working condition.

Supply Owner's Representative with six (6) certified copies of weights of cylinders and also attesting to full efficiency of system.

93. BOILER SAFETY VALVES - USCG - ABS - 315

Furnish necessary labor, equipment and material required to complete the following:

A. Disconnect and remove two (2) superheater relief valves and four (4) safety valves from two (2) boilers. Valves are to be repaired by an approved safety valve service shop. Valves are to be thoroughly cleaned, including all working parts. Seats and discs machined as found necessary, ground in defective parts including nozzles, etc., renewed. Test and prove valves steam tight at working pressure with proper relief and blow back pressures. Reinstall valves on boilers. Renewing gaskets, defective studs and nuts. Test out valves and make all necessary adjustments after steam has been raised on boiler. Prove all in good order according to USCG and ABS requirements. Connect up lifting gear and replace all removals in good order. Cost of repairs for Contractor's account.

B. On vessel's arrival at yard, and before plant is shut down, arrange for USCG and ABS inspectors' attendance to test all safety valves in place. Arrange for necessary labor to gag and make any required adjustments during the tests.

94. FOXBORO CONTROLS FOR MAIN FEED PUMPS - 311

Overhaul and service the Foxboro controls for the main feed pumps renewing all worn parts furnished by vessel. Test and prove in satisfactory working order.

95. INTERNAL CLEANING - MAIN BOILERS - 302

Open up two (2) babcock and Wilcox boilers for internal examination and cleaning, including steam and water drums, water wall headers and superheater tube headers. Remove all handhole plates on each boiler for examination and cleaning boiler tubes and headers. Thoroughly wash out boilers with fresh water. Clean and remove all sludge and sediment from drums and tube headers. Build up by welding in way of defective handhole seat landings, a total of thirty (30) handholes. Set up and machine landings true. Renew all removed gaskets. Close up boilers with new gaskets on doors after boilers are steamed to 400 psi and plates have been hardened up. Replace all removals. Apply working pressure hydrostatic test prior to steaming. Report all tube leaks to Owner's Representative.

96. EXTERNAL CLEANING - MAIN BOILERS - 303

Scrape, wirebrush, and thoroughly clean all external heating surfaces of two (2) Babcock and Wilcox boilers, including stack, uptakes, fan damper vanes, casing, air ducts, air heater tubes, economizer, generating and superheater tubes. Wash air heater, economizer, generating and superheater tubes with fresh water under pressure and at approximately 150°F. temperature. Special attention to be given to the cleaning of superheater, economizer and generator tubes, hand lancing when found necessary. Upon completion of cleaning, remove all sludge and sediment from



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boilers and vessel and replace all boilers casing access doors renewing asbestos tape gaskets as necessary plus air tight. Renew all missing or defective studs and bolts. Special attention to completely cover electric and mechanical equipment in shaft alley under boilers before washing is started. The shipyard is to provide all thenecessary drain hoses and pumps to keep the shaft alley bilges and engine room bilges pumped out during entire shipyard period. During the washing process on boilers the furnace fronts in way of the burners are to be covered with water proof material. The bailey board fireroom and engine room peabody console are to be boxed in with plywood to prevent damage to same.

97. BOILER REFRACTORY - PORT AND STARBOARD - 304

Repair brickwork and refractory in furnaces of two boilers. Repair of renew front wall of each furnace including burner arches in way of eight burner openings. Renew defective short bladed grids and flame diffusers. Grids and diffusers to be supplied by vessel. Remove blades in grids and cut proper openings in diffusers for ignition and flame detectors before installation. Renew missing or defective studs, bolts, and nuts. Repair refractory in way of side back and roof tubes and superheater supports. Renew bottom baffles and repair top with Crome Ore. Renew two (2) baffles. Repair floors. Floor level to be 3'9" from center of bottom burner. Renew corbel in way of front wall, side wall, rear wall, lower drum and top rear wall header.

Note: Make sure of opening above lower drum. See Babcock and Wilcox Boiler Drawing.

If existing floors have pebbles, they are to be renewed with Oceanite pebbles and binder to a depth of 2 1/2".

98. INTERNAL DESUPERHEATER TEST - TWO (2) BOILERS - 307

While boilers are opened up for internal cleaning, remove necessary baffles, grating, etc. from top drums for examination of internal desuperheater, pipes and connections. Apply hydrostatic working pressure of maximum 150# to desuperheater, pipes and connections and locate all leaks. Repair as directed. Prove tight. Replace all removals in good order.

99. PEABODY AUTOMATIC FIREMAIN - 311

Individually clean, dehydrate and keep dry three console cabinets. Furnish and install protective covering during repair period.

100. PEABODY BOILER CONTROLS - 311 HOLD UNTIL AUTHORIZED

Check out entire system and repair as required for proper operation. This work to be performed and supervised by Smith Marine Service Technician. Charge -- Owner's account.



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101. BAILEY AIR OPERATED FEED WATER REGULATORS - 307

Disconnect and remove to shop two (2) automatic feed water regulators, size 4" open up, machine seats and discs, grind in, repack, rejoint, test, prove tight at working pressure. Renew defective cages, cages, disc, valve stems, and diaphragms using only Bailey parts, replace on vessel in good order, renewing gaskets, defective studs and nuts.

Make necessary adjustments and prove in good working order when boilers are operating under light and full load capacity. Repairs to be carried out under supervision of Bailey service engineer. Follow up on nuts when valves are hot. Replace insulation as original.

102. HULL PAINTING (SPECIAL COATING SYSTEM) - 61-501

GENERAL

A. The entire exterior shell surface from turn of bilge to rail, oil and grease to be removed using Owner supplied cleaner, and entire area; then wash down with fresh water under pressure. No. 8555 Exxon Chemical Company Cleaner, or equal.

B. Before any paint is applied to hull, install wood plugs with extension pipes of sufficient lengths or other aproved means on all scuppers and overboard drains throughout vessel to prevent any water running on hull of vessel. Plugs to remain in until painting is completed and dry and then removed.

C. Install stocking on soil lines, scupper drains from washrooms and air conditioner, also ice machine overboard discharges while vessel is on drydock to enable ship's personnel to use toilets and washrooms, preventing any water running on shell during painting.

D. Piant will be supplied by Owners.

E. Paint may be sprayed on. Drying time allowed between each coat of paint to be in full accordance with manufacturer's recommendations. All surfaces are to be inspected and approved by Owner's Representative before applying painting coat and before applying each additional coat. All painting to be done only during clear and dry weather.

NOTE: Before starting abrasive sweeping or painting, cover transducer, hull anodes and reference cells. Upon completion, remove in good order.

KEEL TO LIGHT LOAD LINE

A. Abrasive sweep entire bottom to light load line to remove all fouling, grass, rust and dirt.

B. Apply one (1) spot coat of Devalum Aluminum Barrier MD-2548. (Light) or equal to a thickness of 5 wet mils (2 mils dry).



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HULL PAINTING (SPECIAL COATING SYSTEM) 61-501 (CONT.)

C. Apply onefull coat of Devalum Aluminum Barrier MD-2548 Bottom Composition. (Dark) or equal to a thickness of 5 wet mils (2 mils dry).

D. Apply one full coat of Devoe Raynold Super Tropical Anti-Foul MD-2771 to a thickness of 3 wet mils (1.5 mils dry).

NOTE: External Hull Areas in square feet

| | |
|---|---|
| Bottom - light load line - | 68,100 |
| Boottop | 26,100 |
| Deep Load Line - Rail | 25,240 |

LIGHT LOAD LINE TO DEEP LOAD LINE

A. Abrasive blast to near white metal all rusty and bare areas including rusted weld seams, port and starboard (see below). Apply the following Devoe paints.

B. Apply one (1) coat Cathacoat 302 Inorganic Zinc to a thickness of 4 mils dry to all blasted areas. Minimum recoat interval is 8 hours at 77° F., and 50% relative humidity.

C. All areas not covered by spot blasting in Section (a) of Part 3 will be given an extra heavy abrasive sweep to remove all rust stains, loose and brittle coatings.

D. Apply one (1) full coat Devoe Special Primer MD-4368, one component epoxy, to a thickness of 5 wet mils (1.0 mil dry). Product may be thinned with TH 5859 up to one (1) pint per gallon as required. Minimum drying time before recoating is 4 hours at 77° F., and 50% relative humidity.

E. Apply one (1) full coat of Devoe Polyurethane Red Oxide (MD-4622/4619) to a thickness of 6 wet mils (2.5 mils dry).

HULL PAINTING (SPECIAL COATING SYSTEM) 61-501 (CONT.)
DEEP LOAD LINE TO RAIL

A. Abrasive tonear whitemetal all rusty and bare areas including rusted weld seams, port and starboard. Apply the following Rust-Ban paints.

B. Apply one (1) coat of Cathacoat 302 Inorganic Zinc to a thickness of 4 mils dry to all blasted areas.

C. All areas not covered by spot blasting in Section a of Part 4 will be given an extra heavy abrasive sweep to remove all rust stains, loose and brittle coatings.



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D. Apply one (1) full coat Devoe Special Primer MD-4368, one component epoxy, to a thickness of 5 wet mils (1.0 mil dry). Product may be thinned with TH5859 up to one (1) pint per gallon as required. Minimum drying time before recoating is 4 hours at 77° F., and 50% humidity.

E. Apply one (1) full coat of Devthane Polyurethane Dark Gray MD 4620/4619 to a thickness of 6 wet mils (2.5 mils dry).

HAILING PORT, VESSEL NAME, AND DRAFT MARKS

A. Paint in above markings using Devthane 4618/4619 white.

103. RIVETS - 103
DO NOT START UNTIL AUTHORIZED BY OWNER'S REPRESENTATIVE

Furnish necessary labor, equipment and material to complete the following:

A. Caulk and make tight fifty (50) rivets in bilge strake.

B. Caulk, then ring weld and prove tight a total of fifty (50) rivets.

C. Caulk 300 ft. of riveted seams as designated.

D. Test and prove tight by air pressure or other suitable means.

E. While vessel is on drydock, blast to near white metal bilge strake rivets and rivet seams (a total of 2,000 ft approx. 15" wide) between fwd bulkhead of #1 port and stbd and thru after bulkhead of #12 port and stbd. Coat blasted area with coating supplied by Owner's (matcoate). Coating to be applied under supervision of Owner furnished serviceman.

104. BOTTOM WELDING - 103
DO NOT START UNTIL AUTHORIZED BY OWNER'S REPRESENTATIVE

Furnish necessary labor, equipment and material required to complete the following:

A. Chip out and reweld 300' of eroded welds on bottom shell seams and butts.

B. Supply, erect and remove staging on drydock. Stipulate standard width of sections.



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105. PROPELLER - 116
DO NOT START UNTIL AUTHORIZED BY OWNER'S REPRESENTATIVE

Furnish necessary labor, equipment and material required to complete the following:

A. Heat, fair and dress edges of all four (4) propeller blades.

B. Drill stopper holes at ends of all cracks, heat, braze and dress also in way of old repairs. Allow for repair of three (3) cracks.

C. Upon completion of any repairs, polish entire propeller and hub to satisfaction of Owner's Representative.

D. Prior to any paint application, coat wheel lightly with grease in order that paint does not adhere to wheel.

106. DOMESTIC WATER TANKS - 103

Port - 48 Ton Capacity and Stbd

Chip and scale all loose material from entire internal surface of port fresh water tank. Wooden plugs to be inserted in all suction and discharge connections prior to cleaning to prevent line from being clogged. Remove plugs prior to securing tank. Clean tank and remove all debris from vessel. Apply one (1) spot coat cement wash to all bare areas and one (1) full coat for the entire internal area of both tank. Flush out both tanks with fresh water. Chlorinate tank, fill and dump tank twice. Refill tank and leave tanks ready in all respects for human consumption as per USPHS requirements. Renew all disturbed manhole plate gaskets and replace all defective nuts and studs as required.

107. ITEM - MAIN CONDENSER TO AUX CONDENSER CROSSOVER VALVES - 227

A. Remove (1) one 20" gate valve to shop and repair and or renew - repack and prove satisfactory and reinstall.

B. Remove (1) one 10" gate valve to shop and repair and or renew repack prove satisfactory and reinstall.

108. ITEM - THROTTLE LEAK OFF TO 35# DUMP VALVE - 227

Renew existing defective planges 1 1/2" check valve.

109. ITEM - BOILER ATOMIZING STEAM VALVES - TOTAL (8) - 227

Remove these valves to shop. Open, clean, machine, grind in, repack and prove satisfactory.



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110. ITEM - RECIRCULATING LINES FROM FEED PUMPS TO DEAERATOR -227 2 1/2" VALVE

Location overhead in shaft alley above #3 feed pump. Install (1) one 2 1/2" valve in recirculating line from feed pumps to deaerator so that when the valve is open to distilled tanks and this valve is shut. The recirculating valves and nozzles can be changed on various feed pumps without shutting down plant.

111. ITEM - #3 MAIN FEED PUMP SUCTION VALVE PACKING GLAND - 227

Renew wasted packing gland.

112. ITEM - FEED PUMP SUCTION FROM DEAERATOR 10" valve - 227

Located under deaerator remove valve bonnet clean, lap in, repack, renew gasket and reassemble.

113. ITEM - STEAM TO WHISTLE BY PASS VALVE - 1 1/2" 900# - 227

Remove defective (fermanited) existing valve and replace with owner furnished spare.

114. ITEM - FIRE AND BUTTER WORTH 4" SPRING LOADED TURBINE - 227 EXHAUST VALVE

Remove bonnet and determine why valve cannot be opened normally. Presently exhaust pressure has to be built up before valve opens. This condition trips out feed pump. Correct problem and reassemble.

115. ITEM - #1 - #2 - #3 MAIN FEED PUM 6" EXHAUST VALVES TURBINE - 227

Open, clean, lap in, repack, make sure these valves operate in half and full open positions, reassemble as original.

116. ITEM - GENERATOR LUBE AND AIR COOLER SALT WATER VALVES - 227

Repair or renew two (2) 3" globe valves from 30# water service.

117. ITEM - MAIN CONDENSER TO CROSS OVER LINES - 4" GATE VALVES - 227

Located lower stbd side engine room below floor plates advacent to main reduction gear foundation.

Repair or renew (2) two 4" gate valves.

118. ITEM - BOILER SUPERBEATER 1" - 1500# ANGLE WELDED VALVES - TO FUNNEL BELOW FLOOR PLATES - TOTAL (2) two - 315

Renew these defective valves.

119. ITEM - #2 MAINFEED PUMP RECIRCULATING VALVE TO DEAERATOR - 227

Renew flange gasket - previously fermanited.

120. ITEM - 2 AUTOMATIC DUMP VALVES 10 lb. and 30 lb. EXHAUST SYSTEM SO STACK VENT LINES - 227

Remove to shop for over haul and make tight, leaking @ present. Location @ after port side of main operating plat form.

121. ITEM #102 - HIGH PRESS DRAIN LINE VALVE TO DEAEREATOR - 227

Overhaul high pressure drain line valve to deaerator and renew mounting gasket, both flanges size and type valve 3" angle steel 125 lb. class.

122. ITEM - (2) STEAM VALVES TO #3 FEED PUMP - 3" - 1500# - 227

Disconnect, remove to shop, open, clean, machine and grind in seat to disk, repack, shop test. Reassemble as original.

123. ITEM - EXTERNAL DESUPER HEATER AND INLET STOP VALVE TO SAME - 317

Disconnect and remove to shop in let stop valve and external desuper heater and mixing chamber for examination and repair. Repair or renewal will be determined after examination by concerned parties.

124. ITEM # 1 - GENERATOR TURBINE RELIEF VALVE - 227

Generator turbine relief valve between leslie valve and throttle valve disconnect send to shop. Repair or renew and reassemble as original and rpove tight.

125. ITEM - VENTILATION DUCT WORK ENGINE ROOM - 236

A. Crop out wasted area with branch off with 90° bend approximately 10 linear feet, fabricate and install new duct work and reinsulate location. Main lower engine room after starboard side at fuel heaters level.

B. Fireroom ventilation duct crop out wasted duct at branch off fabricate and install new duct restore insulation. Location upper fire room fidely port side aft over boiler drum. Approx. (10) ten ft.

C. Allow for additional 60 ft. of ductwork renewal and reinsulation - approx. 24" X 12".



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D. Crop away entirely wasted away section of engine room ventilator duct 20"x20"x40" length replace duct insulation padding of fibre glass 2" thick over all. Location operating platform deck main engine room port side at front of lube oil storage tanks.

126. ITEM - OLD FOAM SYSTEM - SUPUR FLUOUS PIPING - 110

Remove remaining piping for original foam system in lower main engine room, @ motor driven pumps sea suction line, also steam driver fire butterworth pump in shaft alley, also crop to buldhead, and blank off 1 1/2" former foam liquid supply lines bulk head penetration.

127. ITEM - CONTAMINATED DRAIN COOLER - 227

Heater coil returns, cooler (salt water coolant). Remove forward unit to shop renew tubes, at present thru plugged and remaining tubes in poor condition. Blast and coat head with rust ban or equal reinstall and mind insulation in every of repairs. Approx 50 tubes

128. FLOOR PLATE SUPPORTS - BRACING IN CARGO PUMP TURBINE CONTROL AREA - 102

Remove all floor plates from in and around all cargo bullast pump turbines.

Crop back to stank and cofferdam top all deteriorated supports brucing for floor plates, renew from pump room bulk head to main engine room bilge gunwhale and from the bulk head of the port wing bunker tank to the starboard bunker tank, with one correction, reestablish the entire floor plate level at least six inches lower than @ present.

Ninety percent of existing floor plates can be reused.
Approx 200 ft 2" x 2" x 1/4" angle iron
Approx 80 sq ft - diamond tread floor plate.

129. ITEM - JURGUSON GAUGES IN ENGINE ROOM @ THROTTLE - 227

Renew approx total of defective 80 ft section of 1/2" high pressure tubing.

130. ITEM - FOAM SYSTEM SALT WATER GAUGE FITTING - 227

Relocate fitting for salt water gauge on recently installed foam system. Present location clogs line with foam.

131. ITEM - VERTICAL - 2nd STAGE FIRE AND BOTTERWORTH HEATER AND TUBE BUNDLE - 232

Disconnect and remove existing defective patched (pressure vessel) heater shell and tube bundle. Take delivery of owner furnished complete new shell and tube bundle and install to place as original. Test and prove satisfactory.



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132. ITEM - PORT AND STBD BOILER EXPANSION VOINTS - 313

Port and stbd boilers original expansion joint @ base of each boilers uptake, rumove 10 ft of wasted metal fabricate clean smooth shut metal fit in place of cropped out areas to make a smooth line to exterior of uptake at this point.

133. ITEM - PORT STBD BOILER AIR HEATER TUBES - 308

A. Pressure test air heater tubes, replace or correct any leaking (by deterioration) tubes found upon testing.

B. On starboard boiler expose air heater by pass dampen and fare up operating shaft internally for eliminating difficulty in operating.

Furnish and install updated stock pyrometers and metors, for both boilers, original equipment seriously damaged and deteriorated during the life of the ship.

134. ITEM - BAILEY FUEL OIL REGULATORS PORT STBD - 315

Disconnect and remove to shop. Overhaul reinstall test and prove satisfactory under supervision of dorsic owners account.

135. ITEM - PORT AND STBD BOILER INNER DOOR LUG BOLTS AND NUTS AND (1) ONE DOOR HINGE - 319

A. Renew total of (40) forty studs and nuts on inner doors of both boilers.

B. Renew hinge on inner door of stbd boiler (middle).

136. ITEM - AUTOMATION PORT AND STBD BOILER STEAM TO BURNER 3/8" STRAINERS - 311

Port Boiler - #1 #2 and #4 Burners
Stb Boiler - #1 #2 #3 #4 Burners
Renew total of (7) seven 3/8" check valves on steam to burner lines, parts on board.

137. ITEM - PORT AND STBD BOILER AIR REGISTERS - TOTAL OF (8) eight - 318

Disconnect send to shop blast and coat, renew parts as found necessary, parts on board, return and reinstall as original.

138. ITEM - STBD BOILER MAIN STEAM STOP VALVE - 315

Renew hand wheel timkin bearing.

139. ITEM - STACK PYROMETERS - 312

Furnish and install stack pyrometers for both boilers original equipment damaged and and wasted.



EXX-MOR-010611

40. ITEM - CARGO SYSTEM PUMP RELIEF VALVES - USCG - 405

Remove the following valves to shop - open clean, overhaul and test and prove tight and set pressure, reassemble to place.

A. (4) Main cargo pump relief valves - AFT pump room
B. (1) Ballast pump relief valve - AFT pump room
C. (2) Stripper pump relief valves - AFT pump room
D. (3) Cargo pump relief valves - FWD pump room
E. (1) Cargo deep well pump - main deck portside

41. ITEM - AFT PUMP ROOM 16" GATE VALVE BULKHEAD - 405

On "B" Line. Renew existing defective valve newspare valve on order.

42. ITEM - #8 CARGO TANK HEATING COIL 3" - 300# GLOBE - 405

Valve to manifold. Repair or renew valve, test and prove satisfactory.

143. ITEM - 12" GATE BLOCK VALVE SUCTION SIDE BALLAST PUMP AFT PUMP ROOM - 405

Disconnect send to shop open, clean machine grinding, repack and shop test and prove tight and reassemble as original.

144. ITEM - FWD PUMPROOM VALVES - 405

Renew six (6) four (4") inch valves and/or remove existing four (4") inch valves to shop repair - sand blast and coat with R.B. #191 and reinstall.

One (1) valve to Port Cofferdam
One (1) valve to Starboard Cofferdam
One (1) valve to Dry Cargo Space
Two (2) valve to Forepeak
One (1) valve from bulge suction line to Manifold.

145. ITEM - AFT PUMP ROOM STBD STRIPPER PUMP SUCTION AND DISCH VALVES - 405

Disconnect, send to shop, open, clean, machines, grinding, repack and shop test and prove tight and reassemble as original.

(1) one 10" gate
(1) one 8" gate



EXX-MOR-010612

146. ITEM - CARGO TANK VALVES - 405

Disconnect and send following valves to shop. Open, clean, machine, grinding, repack. Shop test and prove tight and reassemble to palce as original or renew.

A. #3 center #2 center hisuction in #3 center 16" gate
B. #6 stbd 8" gate stripper valve
C. #6 stbd 12" gate main suction valve

147. ITEM - DECK WINCH VALVES - 117

Remove and replace with owner furnished spare valves six (6) designated 5" flanged exhaust valves and three (3) designated 3" 300# flanged globe steam valves.

148. ITEM - CARGO HEATING SYSTEM VALVES - 405

A. Cargo heating steam supply line to #7 main cargo tanks and return line. Furnish and install 3 inch globe valve on steam supply from deck steam line, crop back existing line install flunger locate or position valve as close to deck steam line as possible. Valve is to be of 300 lb. class. Furnish and install 2 inch globe valve on return line from #7 MCT heating coils, again locate as close to main return line as possible. Valve is to be of 125 or 150 lb. class.

B. Furnish and install 2 inch globe valve on heating coil returns line from #8MCT to be located as close as possible to return line. Valve is to be of 125 or 150 lb. class.

149. ITEM - (4) FOUR 16" ANGLE GLOBE SUCTION VALUES TO A.B.C AND D MAIN CARGO PUMPS IN LOWER AFT PUMP ROOM. - 405

Remove bonnets of valves, install grease fittings @ packing glands and at yoke bushings. Grind and lap in seats to disks repack and reassemble and prove tight. This item to be done in place.

150. ITEM - AFTER STBD FORCED DRAFT FAN - 316

Located AFT boat back forced darft fan room disconnect and remove fan inpeller to shop, heat and pair blading. Dynamically balance, renew bearings, test in place under load and prove satisfactory.

151. ITEM - LOW PRESSURE EVAPORATOR OPERATING PLATFORM LEVEL - 219

Renew mesh separators in 1st and 2nd effects,parts on order.



EXX-MOR-010613

152. ITEM - PORT AND STBD AFT AND PORT FWD AIR CONDITION EVAPORATOR COILS IN AIR CONDITION FAN ROOMS - 702

Disconnect and remove existing wasted coils. Fabricate and install new drip pans (3). Take delivery of new owner furnished coils and install to palce. Recharge system, test for leaks and prove tight test systems in operation and prove satisfactory.

153. ITEM - FORCED DRAFT FAN CONTROLLER BOXES - 806

Fire room ports side FWD buldhead open, clean, spot in magnetic core faces, dress contacts, check all connections and prove satisfactory.

154. ITEM - ENGINE ROOM AND SHAFT ALLEY TANK TOPS AND PUMP SUPPORTS - 102

Clean areas where bitumastic was formerly applied and replace these areas with new application of bitumastic coating. Approx 50% of tank top areas involved.

155. ITEM - 1" PIPE FROM 30# STEAM LINE TO GENERATOR SEAL STEAM LINE - 227

Renew 1" pipe union and nipple from 30 lb steam to generator seal steam line. Lower engine room stbd side.

156. ITEM - 6" DIAM LUBE OIL OVERFLOW LINE FROM LUBE OIL GRAVITY TANKS TO MAIN LUBE OIL SUMP - 227

Located lower engine room portside near lube oil purifiers - 12 ft suction with multiple off sets remove section, crop and renew wasted section where pipe has been chafed from contact with a 16" salt water line. Alter pipe contour to prevent further contact with other pipe. Reassemble and prove satisfactory.

157. ITEM - DRAIN LINE 2" DIAM APPROX 10 FT STBD - 227

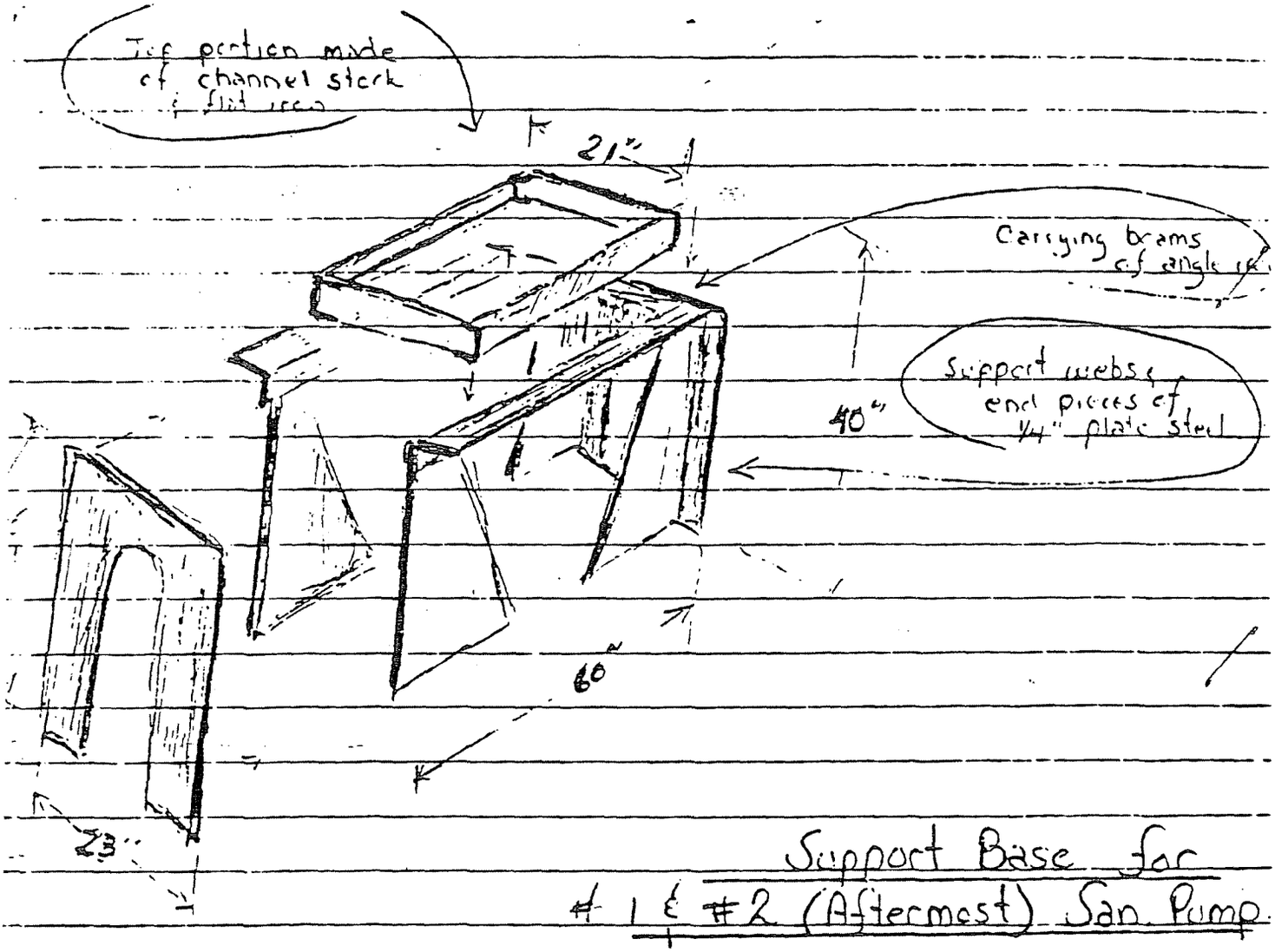
Side of machine shop. Renew flanged section with (1) one bend and prove tight.

158. ITEM - TANK TOP IN MAIN CARGO PUMP TURBINS AREA HOLE IN TANK TOP UNDER BALLAST PUMP TURBINE - 102

Furnish and install a 12" x 12" x 3/8" doubler.

159. SANITARY PUMP #1 and #2 FOUNDATION - 102

#1 and #2 sanitary pumps after lower engine room. Fabricate, and install new support base for pump and motor. Base in use is badly wasted away. Sketch and dimensions are attached. Blasting coat with RB 191.




Support Base for #1 & #2 (Aftermost) San. Pump



EXX-MOR-010615

160. FIRE AND BUTTERWORTH PUMP PEDESTAL - 212

Disconnect and remove pump from place and set to one side. Crop off wasted support plate for pump foundation. Using the cropped section as a sample, fabricate a new pump foundation.

Material required - (approx. sizes)

(1) one 32" x 28" x 1/2" plate foundation support

(1) one 24" x 28" x 1/2" plate fitted with a 3" rolled lip on each edge of 28" width and welded to the afore mentioned foundation plate.

(2) two 3" x 8" x 1/4" channel iron pump supports 16" long, welded to top flat of rolled edge plate drilled to receive hold down bolts and alignment chocks for pump pedestal feet.

(2) two 13" x 8" x 3/8" radiused closing plates to be welded to ends of 3" x 8" channels. Plates to have proper swipe holes to prevent water retention inside pump foundation.

Prior to reassembly, all new material to be sandblasted and coated with Rust ban #191. All new work to be fully welded and fitted in true alignment with existing turbine drive support plate on foundation. Reassemble fit necessary chocks. Renew all disturbed nuts, bolts and gaskets. Align pump to turbine drive. Pack coupling with owner furnished grease. On completion, test and prove satisfactory.

161. ITEM - PLUGGED HOLE IN DECK #5 center cargo tank formally steam smothering supply - 102

Weld plug to place - 1 1/2"

162. ITEM - STEAMLINE TO FIXED BUTTERWORTH MACHINE - 121

Pipe 2" diam x approx 20 ft - shaped to #6 port tank crop and renew existing defective pipe.

163. ITEM - HEATING COILS TO CARGO TANKS ON DECK - 409

(Heating coils - cargo) Renew from manifold to deck penetration steam and return line size 1 1/4" and 1", approximately one hundred running feet, with multiple offsets and bends. As directed also approx 20 twenty five pipe brackets.

164. ITEM - DOMESTIC WATER LINE TO MIDSHIP HOUSE - 131

Blank off existing wasted 1" diam line - in multi gang insulated pipe run @both ends. Run separate new 1" pipeline from AFT pump room to midship house and connect up original - insulate line and prove tight. Approx 250" of 1" galuarized pipe, flanged and screwed couplings with (1) capped nipple branch off for shore connection approx so pipe hangers.



EXX-MOR-010616

165. ITEM - DECK STEAM LINE THRU UPPER FWD PUMP ROOM AFT AND FWD BULKHEADS - 131

Crop and renew deck steam line bulkhead penetrations.

166. ITEM - BULDHEAD CABLE RUN PENETRATION - 102

After bulkhead of FWD pump room crop and renew bulkhead penetration doubler

167. ITEM - AIR TO DECK PIPE LINE - 131

Item - A - 1 1/2" x approx 10 ft section air to deck pipe line - shaped and welded pipe. Renew same in upper FWD pump room

B - Renew approx 100 ft of 1 1/2" air to deck pipe line on FWD deck between midship house and focsle head

168. ITEM - DECK STEAM LINE PENETRATION - FWD PUMP ROOM AFT BULKHEAD ABOVE MAIN DECK TO PORT PUMP ROOM VENT BLOWER - 102

Renew bulk head penetration.

169. ITEM - STBD STRIPPER PUMP DISCHARGE LINE AFT PUMP ROOM PIPING - 407

Remove existing 8" diam" flanged tee dresser one leg fabricate new section, eliminating dresser and substituting glanges approx 8 ft. Also renew existing wasted 8" flanged elbow connected to "tee" and stripped pump discharge outlet. Also renew additional 8" flanged "tee" in same line - approx 8 ft long.

170. ITEM - HEATING COIL RETURN LINE - 407

AFT of mid ship pump man locker. Renew gasket on 3" diam heating coil lines flange.

171. ITEM - 8" FIRE LINE EXPANSION JOINT - 131

Just AFT of mid ship house. Renew 8" expansion joint on order.

172. ITEM - STEAM TO MIDSHIP HOUSE EXPANSION JOINT - 131

Adjacent to deep well pump. Remove expansion joint. Renew packing gland bolts and studs. Repack and reassemble and prove tight.

173. ITEM - HEATING COIL MANIFOLD TO #8 CARGO TANKS - 409

Renew wasted 3" diam manifold with (4) four flanged spuds and (1) one 3/4" drainspud.

174. ITEM - HEATING COIL PIPE DECK PENETRATIONS - 409

#8 Port, #8 center and #8 stbd. Crop existing defective penetrations total of (8) eight steam and return. Furnish and weld to deck penetration new extra heavy nipples with threader 90° elbows and reconnect heating coil lines to same.

175. ITEM - PORT VERTICAL DUPLEX CARGO PUMP FWD PORT SIDE FWD PUMP ROOM STRAINER BOX - 401

Build up (4) four wasted stud holes by welding retap and renew studs and bolts.

176. ITEM - AFT PUMP ROOM PORT STRIPPER PUMP SECTION OF 8" pipe - RETURN TO SUCTION FROM RELIEF VALVE - 407

Renew approx 8 ft section - flangen - prove tight.



EXX-MOR-010618

177. ITEM - 8" STRIPPER LINE BULKHEAD PENETRATION BETWEEN #4 CENTER AND #4 STBD CARGO TANKS WASTED SECTION APPROX 1 FT LONG - 407

Renew wasted section of pipe.

178. ITEM - 8" STRIPPER LINE APPROX 5 FT LONG #3 PORTCARGO TANK - 407

Renew wasted section where it goes thru striffiner. Has boiler plug in same.

179. ITEM - SOIL LINE PIPING - 131

A. Allow for renewal of approx 100 ft of 4" soil line piping various designated sections.

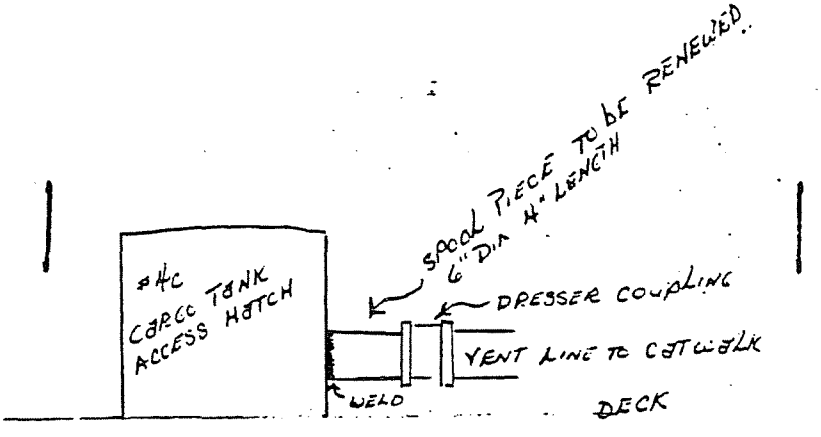
B. Allow for renewal of approx 10 ft of 2" soil line piping various designated sections.

180. ITEM - #11 WINCH 5" STEAM EXHAUST LINE PIPE - 117

Renew plange and dresser on #11 winch steam exhaust line (5"); present flange worn to where bolts show through flange.

181. ITEM - CARGO TANK VENT LINE PIPE - 408

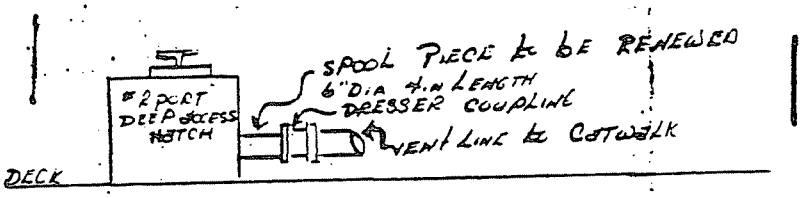
A. #4 center tank access trunk and #4 stbd tank access trunk
Renew 6" diameter pipe spool piece 4" length welded to access hatch at one end desser coupling at other.






EXX-MOR-010619

B. Cargo tank vent line @ #2 port deep tank access trunk.
Crop out and renew 6" diameter 3 1/2" lenght spool piece of vent line one end welded to tank access hatch other end fitted to dresser coupling.




182. ITEM - #2 CENTER CARGO TANK STRIPPER LINE

Bell mouth - furnish and weld to place on longitodinal (1) one pipe hanger.

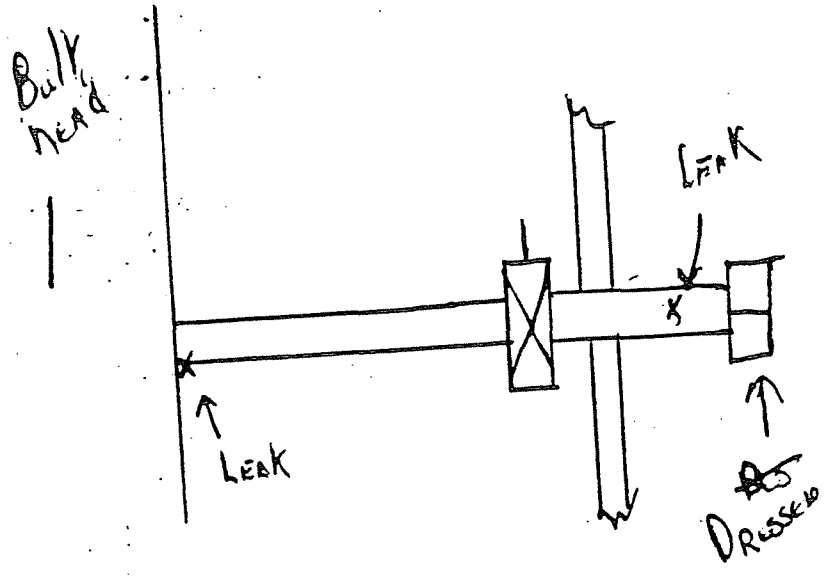
183. ITEM - #4 STARBOARD TANK - STRIPPER LINE PIPE - 407

Crop off existing three (3) inchlast gallon stripper line and renew with coated pipe. Approximately twelve (12) feet of piping - fabricated. Present piping red handed. Furnish and install two pipe hangers.

184. ITEM - #7 CENTER CARGO TANK 8" STRIPPERLINE PIPE - 407

Renewal approx 25' of prefabricated 8" stripper line in 7ct cargo tank.

Presently hoses in this line at after bulkhead and forward of port stripper master volue (buld head penetration weld leak).





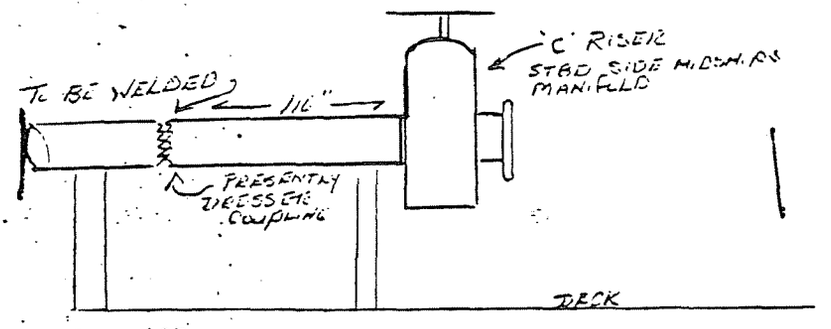

EXX-MOR-010620

185. ITEM - SOLVENT PUMP SUCTION LINE SPUD PIPE - FWD PUMP ROOM - 407

Solvent pump suction line in bilge of foreward pump room has a spud which leads to a drain valve. This spud is leaking at its weld to the suction line. Spud is 2" pipe. Reweld or replace this spud and prove tight with a pressure test.

186. ITEM - "C" LINE MIDSHIP RISER MANIFOLD - 116" FROM "E" RISER - 407

Crop out dresser coupling in line. Furnish and weld to place 16" pipe section to replace existing dresser.




187. CARGO PIPE RENEWAL - 407

Renew, test and prove tight the following main deck cargo piping. All new pipe and fittings to be sand blasted and coated with Rust Ban #191 internally and externally. Schedule 40 steel pipe is to be used. Renew all gaskets and use cadmium plated nuts and bolts. Wirebrush and recoat with Rust Ban #191 all welds made after pipes are coated. All wasted hangers and collars are to be renewed and coated with Rust Ban #191.

(1) "A" line drop; One (1) 16" - 90° elbow approximately 5'-6" long, flanged on one end and deck penatration on other; with one 2 1/2" wash-out spud and valve, and one 2 1/2" drain line spud.

(2) "B" line drop; One (1) 16" - 90° elbow approximately 5'-6" long, flauged on one end and deck penatration on other; with one 2 1/2" wash-out spud and valve, and one 2 1/2" drain line spud.

(3) "C" line drop; One (1) 16" - 90° elbow approximately 6'-6" long, flauged on one end and deck penatration on other; with one 2 1/2" wash-out spud and valve, and one 2 1/2" drain line spud.

(4) "D" line drop; One (1) 16" - 90° elbow approximately 5'-6" long, flauged on one end and deck penatration on other; with one 2 1/2" wash-out spud and valve.

(5) "C" line drop; One (1) 8" - 90° elbow approximately 2'-0" long, flanged on one end and deck penatration on other.



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(6) "7C" stbd stripper line drop; One (1) 8" - 90° elbow approximately 3'-6" long, flanged on one end and deck penatration on the other; with 2 1/2" drain spud.

(7) "7C" port stripper line drop; One (1) 8" - 90° elbow approximately 3'-6" long, flanged on one end and deck penatration on the other.

(8) Stbd side discharge manifold - "A" line; One (1) - 16" straight section approximately 11'-8" long, flanged on one end and weld on the other, with one spud.

(9) stbd side discharge manifold - "B" line; One (1) - 16" straight section approximately 10'-0" long, flanged on one end and weld on the other.

(10) Stbd side discharge manifold - "C" line; One (1) - 16" straight section approximately 9'-8" long, flanged on one end and weld on the other.

(11) Stbd side discharge manifold - "D" line; One (1) - 16" straight section approximately 11' - 8" long, flanged on one end and weld on the other.

(12) Stbd side discharge manifold - stbd stripper line; One (1) - 8" straight section approximately 13'-8" long, flanged each end, with one (1) - 5" shaped offset spud approximately 3'-4" long, flanged on one end and weld on other.

188. ITEM - #5 PORT CARGO TANK 8" STRIPPER LINE PIPE - 407

Renew 10 ft section of 8" pipe - straight bulkhead penetration - (2) two dresser couplings.

189. ITEM - AFT PUMP ROOM "C" MAIN CARGO PUMP 16" DISCHARGE LINE PIPE - 407

Renew wasted section 14 ft long flangen both ends.

190. ITEM - AFT PUMP ROOM 16" CROSS OVER LINE PIPE BETWEEN "B" AND "C" MAIN CARGO PUMPS - 407

20 ft long - 4 flanges - 1 dresser

191. ITEM - AFT PUMP ROOM "D" MAIN CARGO PUMP DISCHARGE LINE PIPE - 407

Renew section 14 ft long - 16" - 3 flanges

192. ITEM - AFT PUMP ROOM - BALLAST PUMP SUCTION LINE PIPE - 407

Renew 12" diam section approx 12 ft long - 3 flanges.



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193. ITEM - EDUCTOR - FWD PUMP ROOM - PIPE - 131

A. Renew 4" diam x approx 10ft section of suction line to eductor - flanged with (3) three bends.

B. Water supply line to eductor - renew 3" diam x approx 8ft section - flanged (2) two bends.

194. ITEM - FWD PUMP ROOM BILGE SUCTION PIPE - 131

Renew 3" diam x approx 20ft section - flanged - (4) four bends - located on AFT bulkhead.

195. ITEM - FEW PUMP ROOM - FUSH OUT LINE TO SOLVENT SYSTEM - PIPE - 131

Renew 2 1/2" diam x approx 8ft section. Flanged one end, welded other end - stbd side aft in pump room.

196. ITEM - DECK EXHAUST 8" LINE BULKHEAD PENETRATION - 117

AFT pump room pipe tunnel, 6ft long section crop and renew.

197. ITEM - DECK EXHAUST LINE EXPANSION JOINT ALONG SIDE CAT WALK - FWD OF MIDSHIP HOUSE - 117

Furnish and renew expansion joint pedistal and two (2) pipe brackets 5" line.

198. ITEM - UNIVERSAL MOORING CHOCKS - 129

Wash off deck total of (4) four designated irrepairable universal mooring chocks. Furnish and install to place (4) four new Pallister mooring chocks to place as original and prove satisfactory.



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199. ITEM - OUTER STACK VENT LOUVERS - 102

Cropout and renew existing frame and louvers port and stbd sides approx - overall 4ft x 5ft each.

200. ITEM - SKYLIGHT DECK (4) ENGINE VENT AND COMPARTMENT FIRE DAMPERS- 102

Crop out wasted guide racks and operating levers fabricate new ones and install as original.

201. ITEM - CAPTAINS BEDROOM DECKHEAD SALT WATER LEAK
LEAK APPEARS TO BE COMMING FROM WHEEL HOUSE WINDOWS - 102

Remove necessary paneling - locate leak and correct fault. Replace paneling.

202. ITEM - AFT PUMP ROOM VENT FAN REMOVAL - USCG - 835 LOCATED STBD SIDE OVER "B" MAIN CARGO PUMP - 236

Main pumproom booster fan, foundation, all pertinent piping to be removed. Install vent opening in way of casing removal, for continued air supply from king post gooseneck ventilator.

Also remove unused pipe as indicated by ch/engr to shore (already disconnected) Brace up remainder of duct work as needed after removals are made, prime and paint all surfaces, remove all debris from vessel.

203. ITEM - FOCSLEHEAD FWD P AND S ANCHOR CLAWS - 113

Weld 3/4" round steel handle to each claw to facilitiate placing same in position for safety in handling.

204. ITEM - CARGO TANK ACCESS TRUNK VILLAGE OPENINGS - 102

Crop and renew a total of (10) large 10" openings and (10) - 6" openings - reuse hinges and covers furnish and install new gasket material and prove tight.



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205. ITEM - WINCH FAIR LEADS - 102

A. #1, #2, #3 and #4 - Wash off deck - send to shop. Renew "A" frame angle iron foundations, blast and coat and free up drums and reweld to place as original. Prove satisfactory.

B. Total of (4) winch fair leads opposit #7 and #8 winches free up drums and prove satisfactory.

206. ITEM - PLATFORM STBD FWD END ANCHOR WIND LASSON FOCSLE HEAD - 102

Reweld broken hand rail.

207. ITEM - ACCESS COVER TO STWDS DRY CARGO STORAGE AREA BOAT DECK AFT - 102

Disconnect cover remove to shop - approx 5ft x 5ft x 1/4" - Reuse hard ware and balance weight and renew cover and furnish and install gasket material and prove tight.

208. ITEM - STACK DECK DRAIN COLLECTION TANK 2-1/2" 25" GOOSE NECK VENT - 227

Crop at deck - fabricate new vent and weld to place as original.

209. ITEM - AFT PUMP ROOM OVER HEAD PIPE TUNNEL - 102

"Vee" out and reweld (2) two cracks in tunnel as directed.

210. ITEM - AFT PUMP ROOM SKYLIGHT COVERS (2) TWO - 102

Remove covers to shop - blast and coat and renew 1 1/2" cover lips around covers. Covers approx 4' x 5'.

211. ITEM - STACK DECK - 102

Furnish total of (6) six - 12" x 12" x 3/8" steel doubleas and weld to place @ designated areas of stack deck.

212. ITEM - BOAT DECK AFT - 102

Furnish and weld to place total of (5) five 12" x 12" x 3/8" doublers as directed.

213. ITEM - BOAT DECK GALLEY SKY LIGHT - 102

Unbolt and remove to shop.

A. Blast and coat and renew wasted sections as required and replace as original with new gaskets.

B. Remove from place and replace with flat plate gasketed cover approx 20ft x 5ft x 1/4"

214. ITEM - CARGO CAIRE S.W. AIR COOLER - 414

A. Located dry cargo space - stbd side under focsle head renew leaking and patched brazed fittings - use extra heavy brass.

B. Renew drum rollers, motor belt and reduction gears - parts on order.

215. ITEM - WINCH STEAM AND EXHAUST PIPING - 117

A. Crop and renew total of (3) three 3" flanged deck penetrations 300# pressure. (5) five designated 5" flanged deck penetrations.

B. Repair (2) two pinhole leaks in 5" flanged exhausts pool copper nickle. @ #11 poop deck winch.

216. ITEM - CARGO CAIRE 3" EXPANSION JOINT - 414

Foward deck AFT of focsle bead. Disconnect existing defective joint and replace with owner furnished spare expansion joint and prove tight.

217. ITEM - FORE AND AFT CAT WALK - 102

A. Needle gun cat walk a frames between AFT end of midship house and AFT pump room and coat with RB - 191.

B. Prove all catwalk sliding feet free.

C. Allow for renewal of total of (30) thirty thwartship 2" x 2" x 1/4" x 36" long angle iron supports.

D. Allow for renewal of approx 200 ft of 6" x 6" x 3/8" cat walk side member angle iron.



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E. Allow for renewal of total of 40 various size additional pipe hangers under cat walk.

F. Allow for croping and renewal of (20) twenty "A frame" triangular pipe run support brackets each approx 30" x 14" x 3/8".

218. ITEM - ANCHOR WINDLASS ENGAGING BLOCKS - 113

Disconnect total of (4) four from port stbd sides of anchor windlass - (too much lost motion) build up blocks and remachine to nominal clearance and reinstall as original and prove satisfactory.

219. ITEM - STACK DECK RUDDER ANGLE INDICATOR - 601

Renew cracked glass approx 10" x 1/4".

220. ITEM - POOP DECK FLUSH MOUNTED SCUTTLE TO LAZARET - 102

Crop existing wasted, defective scuttle furnish new scuttle. Weld to place as original and prove tight.

221. ITEM - MAIN ANTENNA HOUSING OVER PADIO ROOM -605

Crop off main antenna housing. Remove two (2) antenna insulators - crop out old pedestal and renew with coated material. Prove new pedestal is water tight prior to reinstalling antenna housing. Insulators to be replaced with new gaskets and canmium plated bolts and nuts. All work to be proved in good order.

222. ITEM - SHIP RADIO ANTENNA - STACK DECK - 604

Install two (2) two and one half (2 1/2) inch extra heavy galvanized piping each piece approximately seven (7) foot long with two (2) inch padeye at upper end. Top section to be capped.

Install in line of king posts at after corner of stack deck. One (1) port side and one (1) starboard side - to support ship radio antenna.

223. KING POSTS AFTER BOAT DECK LEVEL - 102

Crop off and remove from vessel two (2) king posts - at deck level. Remove all stays padeyes and grind smoth all work and prime coat.



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224. ITEM - DIESEL TANK DECK - AFT - 102

Furnish and weld to place total of (3) three 12" x 12" x 3/8" doublers over presently patched holes in deck.

225. ITEM - DECK STORES LOCKER DECK - BOAT DECK AFT - 102

Deck in Deck stores locker on the boat deck AFT has several holes. Weld in doubler plate approximately 4' x 5' x 1/4" steel. Coat with RB 191.

226. ITEM - FOCSLE HEAD RUNNING LITES - ARMOURED CABLE - 809

Disconnect existing defective cable. Furnish and install approx 75ft of new cable and junction box to port and stbd running lite outlets, and furnish and install approx (6) six dozen cable chips.

227. ITEM - FWD PUMP ROOM OVERHEAD LIGHT CABLE - 809

Renew total of (20) twenty wasted cable chips.

228. ITEM - EMERGENCY SHUT DOWN SWITCH FOR MAIN CARGO PUMPS - 806

Rebuild 1/4" steel box for emergency switch @ after bulkhead of midship's house main deck port side, box @ 18" x 12" and 6" deep, rebuild interior controls replacing worn parts as needed.

Furnish and install new emergency shut down switch for main cargo pumps @ FWD bulkhead of focsle head ART bulkhead @ end of catwalk. Install controls to pumps, uncase in 18" x 12" x 6" deep 1/4" steel box test both emergency cargo shut down switches to satisfaction of chief mate and chief engineer that switches are in good working order.

229. ITEM - SPEARY GYRO AND AC GENERATOR MARK 14 - MODEL 2 - 602

General overhaul and cleaning to be done by sperry service man owners account.

230. ITEM - WATER TIGHT DOORS FWD AND AFTER HOUSES - 120

Renew pad eyes and hooks on 20 (twenty). Water tight doors on FWD after houses. These hooks and pad eyes are to keep door in open position and prevent it from swinging; these should be sandblasted and coated.

231. ITEM - MIDSHIP RISER MANIFOLD 3" x 3" x 3/8" - EACH APPROX 4ft LONG - ANGLE IRON BRACKETS

Crop and renew defective wasted and bent brackets total of (8) eight. (4) four on each side.

232. ITEM - MIDSHIP CATWALK SUPPORT BEAM @ FWD END OF PUMP ROOM

Crop out wasted beam and two (2) support pillars. Replace beam with 3/8" x 4" x 6' 3" angle iron to be butt welded to pump room @ each end. 3" diameter pipe pillar support 20" long (2 supports) to be welded to top of pump room and new beam.

Midship catwalk @ pump room, under side. Renew all bridge control and electrical conduit support hangers to new support beam.

233. ITEM - CO2 CONTROL SYSTEM @ MIDSHIP CATWALK - 102

Straighten or replace protective guard conduit for co2 control cables, 40ft and 2 90° turns. Renew and fasten 14, 1" x ;/4" x 18" steel support securing brackets for above conduit. Test to satisfaction of chief mate and chief engineer that all controls are in good working order.

234. ITEM - #1 FIRE STATION UNDER FOCSLE - 102

Remove existing box and replace with 1/8" sheet metal box of dimentions 32" x 48" and fitted with a hose retention bar box to be welded to bulkhead.

235. ITEM - #1 MOORING WINCH FOCSLEHEAD STBP -114

A. Weld bracket for clutch lever fulcrum pins.

B. Cut hole in gear guard - 3" diam so gears can be greased.

C. #4 winch renew (1) one fulcrum pin bracket.

236. ITEM - CARGO BOOM WINCH - 114

Braze hole in boom winch copper nickle exhaust pipeline and prove tight.

237. ITEM - WINCH BED FOUNDATION COAMINGS #4, #7, #8, #9 and #12 - 102

Crop and renew wasted sections 3" x 1/4" flat bar total of approx 80ft.

238. ITEM - #3 MOORING WINCH FWD GUARD - 114

Furnish and weld to place (1) one 18" x 6" x 1/4" support.

239. ITEM - NAVAGATION LIGHTS PORTS AND STBD BRIDGE WINGS - 810

Renew present side lights due to complete deteriation of casing making it unable to renew bulbs and lenses.

Replace with Perkins Marine Lamp sidelight red 1164-RB, sidelight green -1164-GB

240. ITEM - NAVAGATION LIGHTS - MASTHEAD - RANGE AND STERN - 810

Renew so that lights contorm to regulations; presently deteriated as to need constant attention to meet regulations; also to enable easy changing of power bulb.

Renew with Perkins Marine Lamp 1165-B (Range and Mast)
Renew with Perkins Marine Lamp 1166-B (Stern)

241. ITEM - REACH RODS - 413

Reach rods in following tanks require freeing up partial renewal of wasted sections of reach rods, renewal of various sleeves, bushings and hangers. Some staging required. Also some renewal of for assembly @ valves.

Fore Peak Tank
#1 center cargo tank
#3 center cargo tank
#4 center cargo tank
#4 stbd cargo tank
#5 port cargo tank
#5 center cargo tank
#6 port cargo tank
#6 stbd cargo tank
#7 center cargo tank
#8 port cargo tank
#9 center cargo tank
#10 center cargo tank

Allow for renewal of 20 reach rod forks
100 - lignum vita bushings
100 - sleeves
200 - ft of 1-1/4" reach rod.



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242. ITEM - CARGO TANK EXPANSION TRUNK GASKET - 102
SEATING RIM SURFACES

Build up wasted areas and grind smooth to original configuration and prove water tight.

243. AFT WINDLASS/MOORING WINCH - AMERICAN ENGINEERING - HOLD UNTIL AUTHORIZED - 107

Open cylinders and valve chests of aft windlass/mooring winch for examination and ABS survey. Remove pistons and rods, reassemble, rejoint, repack and close up cylinders in good order. Open up control valve, remove valve and rod, renew worn valve rod, reassemble, rejoint, repack and close up control valve in good order. Free up, renew worn bushings and pins in operating gear. Renew all defective and broken studs, bolts and nuts.

Open crosshead bearings, guides, crank pin bearings, and shaft bearings, also eccentric straps. Recut oil grooves, scrape, fit and adjust to proper running clearances bearings and eccentric straps. Open main shaft, intermediate and pinion shaft bearings for examinations, refit and adjust to proper running clearances. Close bearings in good order.

Disconnect, make necessary removals, remove and renew brake lining. Chip, wirebrush, apply two (2) coats of primer to bank landing. Scale and clean brake drum. Free up all linkage and pins, renew all defective, worn or bent pins using stainless steel material. Renew grease fittings. Reassemble. Test out windlass under load and prove all bearings and brakes in good working order.

244. ITEM - SKYLIGHT OVER AFT PUMP ROOM - 102

Disconect (4) four approx 3' x 4' steel skylight covers and send to shop - wash off and renew all 1 1/2" cover lips, wash off and renew wasted channel landings, furnish and install new gasket material blast and RB - 191 coat and replace as original.

245. ITEM - HAND RAILS AND LADDERS - 128

A. Hand rail cable allow for renewal of 150 ft of 1/2" diam cable 20 clamps 30 pad eyes.

B. Allow for renewal of 150 ft of 1 1/4" top rail and 150 ft of 1" mid rail.

C. Allow for heating and fairing total of 60 ft of hand rail and (10) ten rail stanchions.

D. FWD pump room allow for renewal of 120 ft of 1" hand rail.

E. Reweld broken hand rail #2 stbd cargo tank near top.

F. Reweld broken hand rail #8 port cargo tank at lower platform.



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6. ITEM - ENGINE ROOM LADDER BETWEEN TOP & SECOND LANDING - 102

Crop and renew four (4) wasted ladder steps. Vessel to furnish new steps.

7. ITEM - BOAT DECK TO DIESEL TANK DECK TO STACK DECK LADDERS - 102

Crop existing wasted ladder steps total of four (4). Fabricate new steps approximately 24" x 6" x 1/4". Rolled lip, weld top half as original.

8. ITEM - HAND RAILS & LADDERS - 128

A. Ladder Platform - Main Deck - Just aft of midship house. Crop and renew wasted frame and supports of platform 62" x 45"
3" x 3" x 3/8" angle iron
Four (4) 3" x 3" x 3/8" angle iron legs - each 20" high.

B. #2 Port Cargo Tank - Crop and renew entire ladder handrails (wasted) 3/4" approx. 40 ft. each side and crop and renew total of ten (10) (wated) Diamond tread ladder steps, each approx 6" x 14" x 1/4" with rolled lip.

C. #1 Stbd. cargo tank - 1st platform landing from top. Renew (wasted) platform Diamond tread approx. 5 ft x 3 ft x 1/4" staging required.

D. #2 Center Cargo Tank - Crop and renew entire lower ladder, handrails and brackets. 3/4" rails. Diamond tread steps - approx. length 25 ft. staging required.

E. #6 Stbd. Cargo Tank - Crop and renew entire ladder, handrails, securing brackets, approx. length 50 ft. Rails 3/4" and renew both ladder platforms each Diamond tread. Approximately 4 ft x 4 ft x 1/4". Staging required.

F. Ladder Top Platform by #6C Tank - Maindeck - Crop out wasted top ladder platform from catwalk aft of midship house to stbd. main dec. Approximately 26" x 21" x 1/4" diamond tread plate. Fabricate new, blast and RB191 coat, and weld to place as original.

G. #3 Center Cargo Tank - Renew various ladder brackets and bolts and weld middle platform to bulkhead where present weld is cracked.

H. #4 Center Cargo Tank - Crop and renew upper ladder. Handrails 3/4" brackets Ladder steps Diamond tread. Staging required. Length approx. 20 ft.

I. #5 Center Cargo Tank - Crop and renew entire ladder, handrails 3/4". Length approx. 50 ft. and brackets. Staging required.

J. #5 Stbd. Cargo Tank - Crop and renew lower ladder handrails, brackets. Diamond Tread steps. Approx. length 25 ft. Staging required.

K. #10 Center Cargo Tank - Reweld broken hand rail @ lower platform.

249. ITEM - PORT & STARBOARD BOILER SOOT BLOWERS - 305

Remove (3) three soot blowers in way of generating tubes from each boiler. Total of six (6) for examination. Any required repairs to be covered in addendum to this item. Replace as original and prove satisfactory.

250. ITEM - MAIN STEAM STOP VALVE 8" - TO H.P. TURBINE - 227

Engine room upper level. Remove to shop. Open, machine, grind in, repack. Shop test and prove tight and reassemble as original. Repair or replace disturbed insulation.

251. ITEM - STEAM PIPE INSULATION - 5" & 6" PIPE - 241

Located after pump room.

A. Renew approximately 100 feet of wasted insulation on 5" steam line.

B. Renew approximately 100 feet of wasted insulation on 6" steam line.

252. ITEM - STARBOARD STRIPPER LINE #10 CENTER CARGO TANK - 407

Renew wasted section of 8" pipe, approximately 20 feet long with two (2) bends. Dresser coupling both ends.

253. ITEM - MUSHROOM VENTILATORS - STACK DECK - 236

Furnish and install approximately total of 20 square feet of sheet metal doublers over areas of designated mushrooms.

254. ITEM-POOP DECK BULKHEAD - PORTSIDE - BETWEEN GALLEY DOOR AND DOOR TO COMPANION WAY - 102

Crop existing wasted bulkhead 1-1/2" pipe braces furnish new pipe approx. total of 10 feet and weld to place as original.

255. RECOATING OF #3 CENTER TANKS AND #4 WING TANKS AS DESIGNATED - 502

EXXON is subcontracting to recoat #3 center tanks and #4 wing tanks. Specifications call for near white surface preparation (SS SA 2-1/2). Contractor is to apply 3.5-5 MDFT of Cathacoat 305 inorganic zinc (owner furnished).

Contractor is to supply all supervision, labor, equipment, and grit material to perform the work outlined above.

The following shipyard services will be required to support the above named contractor:

1. Crane service.
2. Electrical service and hook up.
3. Necessary internal and shell penetrations.
4. Dry gas-free tanks.
5. Contractor is to remove spent grit from tanks for shipyard disposal.
6. Necessary water/steam supply.

256. 7. Area for office/equipment trailers.
8. Yard phone service.
9. Labor to provide necessary services above.

Note: Tanks to be recoated are #5 and #7 center, #4 across, #2 wing tanks.

257. RECOAT AFT BOAT DECK AND STACK DECK (APPROX. 7,500 SQ. FT.) - 504

Aft boat and stack decks are to be sandblasted to near white metal (SS SA 2-1/2) Apply one (1) coat of owner furnished Joton Balto Flake or equal to 25 - 30 MDFT. Prior to cure, broadcast spent grit into coating to act as antiskid. Application to be in accordance with manufacturer's recommendations and to satisfaction of manufacturer's representative.

Application to be done in such a time that it will not interfere with other repairs.



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258. CONVERSION OF EXISTING DINING AND GALLEY FEEDING SYSTEM TO NEW CAFETERIA MODE SYSTEM

A. The following are general notes concerning the refurbishment (betterment) of the ship's galley and Officers' and Crew's Mess:

1. General Criteria: Removed equipment and furnishings are to be held for re-use or disposition by the Owner. All interior surfaces are to be prepared and prime coated. Exposed interior surfaces shall be color coated. Exterior surfaces shall be coated with inorganic zinc and appropriate colors. Refrigerated spaces are located below the galley and mess area. These spaces shall be inerted prior to and during all adjacent hot work, if necessary. New galley and mess room equipment shall be stored and protected untiltime of installation. All contractor furnished materials shall be in accordance with the applicable plans.

2. Removals: Remove all galley, pantry, officer mess, CPO mess, crew mess equipment and furnishings ashore and hold for re-use or disposition. Remove all piping and electricals not required for new installations. Rip out transverse bulkhead in its entirety, at Frame _____. Remove all bulkhead and overhead sheathing within the area created port and starboard between frames _____ and _____. Crop openings in the following locations to receive new doors and frames: Bulkhead_____ -- port and starboard passageways. Transverse bulkhead -- _____ starboard.

Crop opening in bulkhead_____ for passing windows in accordance with plans. Remove existing port light located in aft galley bulkhead, starboard.

a) Messrooms port and starboard and galley: Furnish and install closure bulkheads in port and starboard passageways at Frame_____. Furnish and install new joiner doors with view ports and hydraulic closures in way of these bulkheads. Doors to be non-locking type. Relocate vent piping as necessary, starboard, and blank off penetrations. Relocate radiators and modify air conditioning system ducts as necessary. Existing insulation to be retained. Install new insulation on bulkheads, and overhead as necessary.

Relocate general alarm and telephone systems to suit new compartments. Install foundations for new Owner's equipment port and starboard. Install new Owner's equipment and secure. Supply and install stainless steel tables, shelves, storage, and counters in accordance with plans. Furnish and install new drop ceiling in port and starboard messrooms in accordance with plans. Furnish and install new formica bulkhead system in port and starboard messrooms in accordance with applicable plans. Port lights, doors and passing windows to be framed out with stainless steel.

b) Galley: Install foundations for new equipment. Modify electrical systems and piping and install new insulation and sheathing as required. Furnish and install new stainless steel shelves, sinks, shelves and counter surfaces in accordance with plans.



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Install Owner-furnished ranges, refrigerators, dishwasher and associated equipment and secure properly.

Existing galley exhaust duct is to be modified for use as a supply system. Install supply fan and ducting complete with all electrical switches and vent risers as necessary. Existing exhaust riser shall be held for re-use. Install galley exhaust system in way of fryer and ranges complete with fan, hoods, filters, gaylord shutdown and dampers. Re-use exhaust riser relocated above.

Upon completion of renewals and installations, existing deck is to be repaired and resurfaced. All equipment is to be covered and galley painted out with gloss white enamel.

3. Electrical: To the extent that is possible, existing cable shall be utilized and relocated to suit the above installations. Supply and install cable, outlets, panels, circuit breakers and switches new and existing to be as shown on isometric plans.

4. Piping (General): In way of removals, existing piping shall be removed to header and blanked. Galley piping is to be rerouted and connected to suit the new installations. Supply all necessary piping, fittings, valves and fixtures necessary to complete this work. All installation, new and existing, to be as shown on as built schematic.

5. Fire plan: Vessel's fire plan shall be modified to show new compartments created by this modification. Furnish two (2) framed copies of revised plans and install as directed by the Chief Officer.

B. Provide manpower and material to accomplish refurbishment (betterment) of the ship's galley and Officers' and Crew's Mess in accordance with shipyard's drawings and Owner's instructions.

Time and material charges are to be made to proper items as noted below:

1. Material procurement: Procure all contractor-furnished material required to accomplish refurbishment modifications.

2. Engineering requirements: Provide engineering services to develop drawings and procedures for approval by ABS, USCG representatives, and U.S. Public Health Service.

3. Sheetmetal shop fabrication: Provide labor and material as required to shop fabricate sheetmetal components. (To include vent ducting, stainless steel bulkhead sheathing, counter tops and equipment racks.)

4. Sheetmetal shipboard installation: Provide labor and material as required to install and relocate shipyard and Owner-furnished equipment. (To include all shipboard removals and installations.)



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5. Piping modifications to ship's galley, Officers' and Crew's mess: Provide labor and material as required to accomplish shipboard piping modifications. (To include removals, relocation and shipboard tests.)

6. Electrical modifications to ship's galley, Officers' and Crew's Mess: Provide labor and material as required to accomplish electrical modifications (To include removals, relocation, electrical maintenance and shipboard test.)

7. Shipfitter modifications to ship's galley, Officers' and Crew's Mess (S/F/Welders): Provide labor and materials to accomplish removals, shop fabrications and shipboard hull modifications. (To include equipment foundations, bulkhead removals, strengthening, after removals, if required.)

8. Rigging services: Provide all rigging and crane service for refurbishment modifications. (To include shop and shipboard requirements, and from receiving department to vessel.)

9. Transportation: Provide labor and equipment to transport all material and equipment during refurbishment modifications.

10. Overhead ceiling installations: Provide labor and material to accomplish overhead ceiling installation. (Provide shipyard assistance as directed by Ship Superintendent.)

11. Decking requirements: Provide labor and material to accomplish decking modifications as reuqired. (Provide shipyard assistance as directed by Ship Superintendent.)

12. Paneling installation: Provide labor and material to accomplish paneling modifications as required. (Provide shipyard assistance as directed by Ship Superintendent.)

13. Reefer box relocation: Provide subcontractor to assist shipyard in the relocation of the non-self contained reefer box.

14. Clean-up (P/L): Provide labor, make removals, clean up and remove debris from work areas during modifications.

15. Painting touch-up (P/L): Provide labor and material to prime coat and touch up all disturbed areas.

C. Exxon Jamestown Class - Removals and Preparation of New Layout

1. Remove bulkhead between P. O. Mess (Old) and crew mess pantry (old). Level deck of new larger room. Remove table, PO mess, all buffets, ice maker (retain for new location, ice maker), coffee stand dresser, sink dresser, dishwasher, dish racks, etc. and dispose of according to instructions of Exxon Representative.

2. Remove framing of serving window, door to galley. Enlarge door opening for installation of serving window, to new Officer's mess horizontally, and fill in under serving window installation with bulkhead material as required.

3. Bulkheads are to be covered with formica wood grain (African teak, Honeytone oak, Cherry) panels or equal as selected by Exxon representative.

4. Overhead is to be covered with acoustic type material. Fluorescent lighting, as instructed by Exxon rep., to be installed in overhead.

5. Crew mess (old) -- remove framing for serving window. Enlarge vertically, to accept door framing in same location. Remove tables. Remove bulkhead for serving window opening.

6. Galley - remove equipment for relocation or disposal as per instructions of Exxon representative. Only cook's sink dresser remains in place. Other item relocated. Present 24" wide dresser in middle of galley may be incorporated in 24" wide dresser new installation forward side of galley if acceptable to Exxon representative, or other alternative as described under cook's serving dresser.

7. Old officer's mess - remove tables as required, or other items, to provide an area, as per instructions of Exxon representative, for installation of GYM equipment, or other recreation items.

8. Remove coffee maker from present location, old crew mess pantry, and install in old Officer's mess pantry (new night lunch pantry) as per instructions of Exxon representative.

9. Remove Scotsman ice flaker from present PO mess, and relocate to old Officer's mess pantry, or mess room, as per instructions of Exxon Representative. Relocate scoop holder if on bulkhead to site adjacent to flaker.

10. Relocate drinking fountains, crew mess and New officer's mess to location as instructed by Exxon Representative.

11. Relocate dish racks, old crew mess pantry, to new location galley, on aft bulkhead near dishwasher, as per instructions of Exxon Representative.

12. Relocate can opener, Galley, to new location.

13. Relocate slicer, Hobart 1612, to new location.

14. Relocate hand sink, paper towel dispenser, soap dispenser to new location as shown in layout. Relocate soiled paper towel holder, or provide new one adjacent to new location.

15. Relocate exhaust hoods, or replace with new as per Exxon representative's instructions, so as to provide suitable exhaust air from galley. Disconnect exhaust going to old dishwasher. Hoods to be extended or relocated over new location of new ranges and fryer.

16. Remove Hobart A-200 mixer from galley, relocate in Butcher shop on deck below, as per Exxon Representative's instructions.

17. Relocate Toaster, 4 slice Toastmaster Institutional type from present location to between Officer's and Crew's serving shelves, setting on Cook's Serving Dresser.

D-1 Exxon Jamestown Owner-furnished Equipment

Amount

2 GENERAL ELECTRIC Marine Model MR07 ranges, 230/60/3 phase, SS front and sides (no overhead panel, controls on range) 3 12" x 24" hotplates.

1 Hobart AM 12 dishwasher

1 Traulsen Model RHT 2-32 N UT Refrigerate, remote condensor and compressor.

1 Traulsen Model RLT 2 32 N UT Freezer, remove condensor and compressor (Remote installation of compressor in lower passageway)

2 CORY IFW-248-U-2 500 watt infra red overhead heating device for installation over serving windows for keeping served food hot.

2 ALLMETAL refrigerated salad and dessert display #1215-30 S, with SS sides and base.

2 KELVINATOR or approved equal 2 SF ice cream cabinets

2 SHELLEYMATIC or approved equal SD 575 dish dispenser

2 ROUND DIPWELL or approved equal ice cream dipping sink

1 BUNNOMATIC D-2 B coffee stove or warmer, with sea rails and sea legs

1 BUNNOMATIC F-20 coffeemater, with sea rails and sea legs 120/AC/20 amp.

2 LITTON SYSTEM 70/15 Microwave ovens

2 BLOOMFIELD 1096 Stainless steel silva-tainers, with 6 1086-N cylinder inserts

32 L & B chairs, #6422-A (GE-15 rawhide upholstery, padded back and seat, Dark Oak #5 wood finish)

1 Gym set, Owner-furnished, to be installed in old Officer's mess as per instructions of Exxon Representative.



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Amount

2 Litton System 70/15 Radar ovens, to be mounted on top of display cases ALLMETAL 1215-30 S, one in crew mess, one in officer's mess.

1 Shelleymatic #SD 1013H drop in dish dispensers, 110 Volt for 9-3/4" dinner plates (#SD1013H)

1 Shelleymatic #SD 813 H drop in dish dispensers, 110 volt, for 7" side plates.

D-2 Shipyard Furnished Equipment

1 T & S spray for scraping dishes, to be installed in accessible location at back of dish scraping sink.

1 Dresser, RANGE, 3' x 30", 1 stainless steel perforated shelf under, to be installed between ranges, modularly fitted to ranges, at a height from deck of upper surface of approximately 36" (matching level of range top). To have marine rolled edge on aisle sides. All stainless steel construction.

1 Dish scraping dresser, 6' 9" long (approximate) x 24" wide, stainless steel construction, with marine rolled edge on aisle side, flashed to bulkhead on bulkhead side. To have 24" x 20" x 14" deep dish scraping sink as shown in layout. Hot and cold water supply to be provided, drains.

1 Stainless steel backsplash to be installed on bulkhead in dishwasher area as required to fill in areas not now protected by backsplash, in area above dresser. Most of area now protected. Dresser must be contoured and fitted for entry and removal of trays of soiled and clean dishes to and from dish washer (AM 13 Hobart). Dresser to have area under for placement of dish scraping garbage can under dresser, so no braces should obstruct removal or placement of garbage can under dresser. Opening to be starboard side of sink.

1 Alter as required, edge of old cook's dresser, and install stainless steel addition as required, with proper entry of trans of soiled and clean dishes into and out of dishwasher, AM 13 Hobart, Port side.

1 Stainless steel stand or shelf for mounting GENERAL ELECTRIC HK-3 fryer as shown, adjacent to FRYER/RANGE DRESSER.

1 Stainless steel construction, 24" x 36" dresser, modularly fitted to adjacent range, top level of dresser level with range, marine rolled edge on other sides. 1 stainless steel perforated shelf under.



EXX-MOR-010640

Amount

1 10' x 24" wide stainless steel dresser, with marine rolled edges on aisle sides, flashed as per USPHS on bulkhead sides, to be installed as the COOK'S SERVING DRESSER as shown in layout. AS PER INSTRUCTIONS OF Exxon Representative, utilize present dresser in place, and add as required; or utilize center serving dresser (OLD LAYOUT), adding or deleting material as required; or build all new construction. 1 Stainless steel perforated shelf under, 1 cook's drawer.

D-3 Exxon Jamestown Class Shipyard Furnished Material and Equipment

1 SERVING SHELF, STAINLESS STEEL 12" wide x 4' long approximate, depending on final serving opening, to be installed at a height of approximately 12-13" above level of cook's serving dresser, Crew mess side. ½" smoothed or rolled retaining edges for rough weather. Shelf extends over bulkhead, forward side of shelf approximately even with bulkhead (finished, if covered) of Crew MESS

1 SERVING SHELF, Stainless steel, 12" wide x 4' 6-9" Approximate length, installed as detailed for Crew's mess serving shelf, on Officer's mess side.

NOTE: Structural supports may alter suggested dimensions of serving openings. Intent is to provide convenient and ample area for Chef to serve food to crew members, and as along as this criteria is met, adjust serving openings to structural support requirements.

1 Provide door, with door frame, and enclosure of area to create janitorial area, also serving as opening to Port side of galley to deck. Provide wall mounted hooks, brackets, etc. for mops, brooms, mop bucket, etc. Remove inner screen or plastic fitted door in this area if required.

2 OPTION 1 Purchase and install 30" x 5' buffet/dresser, formica or stainless steel top.

OPTION 2 Provide and install 30" x 5' stainless steel construction dresser, 2 shelves under, stainless steel. Upper surface to have smoothed retaining edges (or marine rolled edge). Shelves to have ½" approximate smoothed or rolled retaining edges on aisle sides.

Silva-Tainers, Coffee warmers, Coffee makers, etc. are to be mounted on upper surface of dresser, and constuction should be suitable for that purpose. These items should be placed near bulkhead insofar as possible to permit possible use of aisle side for sliding trays if used.

2 Tray slides, stainless steel sheet, with smoothed or rolled retaining edges on aisle sides, to be installed at a height from deck of approximately 36". To be approximately 4'6" long x 15" wide. (No slotted or pipe construction, Marine use).



EXX-MOR-010641

Amount

1 OFFICER'S MESS TABLE, 14' Long x 42" Wide, storm rails, surface to be _____, installed on pedestals secured to deck as per approval of Exxon Representative, using old pedestals from tables removed with renovation as per instructions.

D-4. Exxon Jamestown Class Shipyard Furnished Material and Equipment

1 CREW MESS TABLE, 36" wide x 14' long.

Option 1. Use 8' table combined with 6' table from crew mess to make 14' table. (8' table from old PO mess). Combine according to instructions of Exxon Representative.

Option 2 At discretion of Exxon Representative, build 14' long x 36" wide crew mess table, storm rails, pedestal mounted as per instructions of Exxon Representative

UPPER SURFACE OF TABLE TO be covered with_____.

2 Stainless steel shelves, 11" wide x 5' long, with 2½" smoothed or rolled retaining edges on sides other than bulkhead side, to be installed as shown in layout. Care should be taken that supporting braces should not interfere with placement of equipment under.

NOTE: If USPHS requires excessive area for cleaning under equipment, such as the coffee maker, it would be preferable to shorten shelf, rather than raise it because of this clearance problem to a height such that it would be hard to reach. Approximate height of 15" to 18" from upper surface of dresser could be usually considered convenient for average person.

Lighting, Crew and Officer's mess - Fluorescent lighting, _____ to be installed as per instructions of Exxon Representative.

2 Stainless steel dresser/buffets 24" x 24" top surface, fitted against adjacent ice cream cabinet, bulkhead, and salad display. Marine rolled edge, or smoothed-rolled retaining edge on aisle side, to be mounted even with top surface of ice cream cabinet adjacent. To have 2 stainless steel shelves under and doors at front. (No shelf required in area, middle shelf where dipping sink and dish dispenser are present at back) 12" backsplash against bulkhead.

In addition to power supply for aforementioned items, provide double 110 volt receptacles as shown in layout, for use with small portable items such as toasters, etc.



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D-5 Exxon Jamestown Class Shipyard Furnished Material and Equipment

| Amount | |
|---|---|
| 4 | Two outlets each, on bulkhead behind item #28, Buffet |
| 2 | 1 outlet each, item #34, ice cream dipping dresser on bulkhead |
| 2 | 2 outlets on bulkhead behind item #24, cook's serving dresser |
| 1 | 1 outlet, at back of Item #22, range dresser |
| 1 | 1 outlet, on bulkhead behind item #24, dish scraping dresser, STBD area |
| 1 | 1 outlet, on bulkhead behind FWD side of old Cook's dresser (sink and Pot Washing, which remains in place.) |
| 2 | 1 outlet, on bulkhead behind ALLMETAL 1215-30S salad display, above display area, for possible use with stereo equipment which may set on display cabinet. One on each of ITEM #6, SALAD DISPLAY. |



EXX-MOR-010643