

INSR/DD Est. - Scruggs x 2549

cancel = items cancelled and not in price list

A.C. = Additional cancels included in price list.

Repair Specifications

Exxon Washington

by

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1975

1 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 pumps 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 Certificated Chemist. Burning or hot work shall not be done in any cargo tank or any cargo line or on deck in way of cargo tanks while cargo lines are being tested.

2 SLOP OIL DISPOSAL - 902

Successful contractor will be required to accept approximately 3,000 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.

3 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--

4 TUG SERVICE - 905

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

5 LINE AND GANGWAYS - 905

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

WAI:all

Sheet No. 1

EXXON WASHINGTON

October, 1975

EXX-MOR-002550

- 6 FIREMAIN - 905
Furnish necessary material and labor to connect and disconnect firemain to vessel at pier.
- 7 SHORE POWER - 905 - HOLD UNTIL AUTHORIZED
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.
- 8 SHORE STEAM - 905 - HOLD UNTIL AUTHORIZED
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.
- 9 WATCHMAN - 905
Furnish services of watchman to maintain fire watch on vessel during period of repairs.
- 10 GARBAGE - 905
Furnish necessary labor to dispose of garbage.
- 11 TELEPHONES - 905
Furnish telephones in engine room and midship's office.
- 12 HEAT LAMPS - 805
Furnish and install heat lamps on all motors, generators, converters, automation console and switchboard. Keep in service during repair period. Upon completion of repairs, remove all wiring and heaters.
- 13 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.
- 14 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.
- 15 TWO (2) GENERATOR TURBINES AND GEARS - 750 KW DE LAVAL - 240 - ABS SURVEY
Make necessary removals and raise upper casing of two (2) generator turbines 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 couplings.

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 turbines and replace all insulation to its original good condition.

Open reduction gear casings 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 pumps, 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 sumps 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 sumps 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.

16

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

Open casing and bearings of No. 2 feed pump 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 assembly, 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 pump and prove in good working condition. Part for pump, bearing and packing also oil pump furnished by vessel. Work to be under supervision of Warren Service Engineer for yard's account.

17

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

Open up the following 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.

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

- 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
- Port - main condensate pump - size 4-2CYP-13-380 GPM
parts shipped by vessel

18 METAL FRAMED DOORS - 102

Provide necessary labor and material to fabricate and renew complete the following metal doors and door frames. Renew door sills using stainless steel sheet metal approximately size of each door 30" wide x 72" high x 1" thick with a 30" x 15" plexiglass panel in upper section. Install stainless steel retaining strip around new rubber seal packing around door frame for sealing air conditioning.

Renew all door hardware including brass hinges, hold open hook and eyes. Door latches with a long curved handle, renew door closer. Tow (2) boat deck port & starboard side entrance to engineers quarters.

19 DECKHEAD OF PUMPMANS WORKSHOP AFT OF MIDSHIP HOUSE - 102

Crop and renew section of wasted plate approx. 9' x 6' x 3/8".

20 PUMPROOM BLOWER MOTOR - 102

Cancel
Furnish labor and material to remove pumproom blower motor from ship to shop. Open up, renew bearings. Clean and repair as necessary. Reassemble, test, return to ship and reinstall. Prove operation to satisfaction of interested parties.

21 TRICING GEAR - FWD DAVIT #4 LIFEBOAT - 108

Chip off and reweld (2) clips 2 1/2" x 2 1/2" x 1/4" with hole for bolt to take eye of tricing gear. Fwd. davit #4 boat. These clips or pad eyes take weight of boat when at embarkation deck.

22 FOAM LINE--MIDSHIP SQUARE - 109

Renew two section (straight sections) of 6 inch foam line in Midship Square. Require approx. 40 feet of 6 inch ex heavy steel pipe, 4-6 inch 300#-12 bolt steel flanges. After two sections of pipe are fabricated, blast to white metal, coat with Rust-Ban 191, inside and outside of pipe. Install using new gaskets, cadmium plated bolts and nuts, and prove tight. Replace and hangers and any removals.

(Note: Two sections of pipe have 5 pin hole leaks.)

23 STEAM SMOTHERING SYSTEM FWD. PUMPROOM - 111

- A. Crop out one wasted nipple in existing steam smothering manifold 1" 6" long with necessary unions and valve together with 24" of 1" pipe. (owner to furnish the 1" valve).
- B. Renew one 3" BHD penetration approximately 16" long together with (1) 3" flange nut, bolts and gasket. Located at Fwd. pumproom aft BHD.
- C. Install one owner furnished 3" 300# valve in way of presently existing defective valve. serving fwd. pumproom steam smothering supply.

24 STEAM SMOTHERING LINE TO STBD FUEL OIL SETTLER TANK - 111

Crop out defective steam smothering line from deck, back to union on STBD side of aft pumproom. Require approx. 12 feet of 1 1/2 inch ex heavy steel pipe, two-4 bolt flanges, two bends and one union. Install using new gasket, bolts and nuts. Replace pipe hangers, and any removals.

- 25 INSURANCE TOWING CABLE AND REEL - 113
Furnish labor and equipment and remove existing damaged insurance cable and reel assembly located under fwd. castle head and hold for owners disposition. Wash off cable chips on deck in way of damaged reel foundation.
- 26 #8 MOORING WINCH - 114
A. Install 20 ft. of 3" all weather insulation on steam line. Fabricate and install (2) new deck stand pipe brackets for 3" steam line. Weld to existing bracket clips on deck.
AC B. Install 6 ft. of 5" all weather insulation on 5" exhaust steam line. Fabricate one 5" deck stand pipe bracket for exhaust line support and install same in good order.
C. Apply necessary heat and free up drum clutch and prove same in good order.
D. Fabricate and install by welding one 3/8" x 5" x 10" lever pedestal plate fitted with four 1/2" x 2 1/2" bolts as original in way of presently existing wasted pedestal mount.
- 27 #9 MOORING WINCH - 114
AC A. Take delivery of one owner furnished reverse valve assembly. Make all necessary removals of presently existing defective reverse valve assembly and install new reverse valve assembly in way of removal with new nuts, bolts and gaskets. Test unit and leave in all respects ready for satisfactory operation.
B. Install 12 ft. of 3" all weather steam line insulation.
- 28 #10, 11, AND 12 WINCHES (POOP DECK) - 114
AC Apply necessary heat, free up and prove drum clutches are in good operating order.
- 29 #6 MOORING WINCH - 114
AC A. Heat and free up mooring winch drum clutch assembly and prove same in good order.
B. Fabricate one 1/2" x 4" 12" shaped plate, blast and coat with RB 191 prior to welding place for cylinder support for #6 mooring winch.
C. Take delivery of steam cylinders and reverse valve assemblies. Make all necessary removals of presently existing defective cylinders and reverse valve assembly. Replace removals with new assemblies using new nuts, bolts, and gaskets. Carry out all necessary work and test complete unit, leave unit in all respect ready for satisfactory operation.
- 30 BRAKE OPERATION LINKAGE - 114
AC Apply necessary heat and remove pins and keepers from brake linkage for #1, 3, 4, 5, 6, 7 mooring winches dress pins as necessary and assemble all link pins, prove linkage in good operating order in all cases.
- 31 #7 MOORING WINCH - 114
AC A. Apply heat and free up drum clutch assembly.
B. Install 25 ft. of 3" all weather insulation and 12 ft. of 5" insulation for steam and exhaust lines.
C. Fabricate and install (3) (2) leg type deck stand bracket support for 3" stea line.
D. Fabricate and install one 3/8" x 5" x 10" operating lever pedestal plate drill to receive (4) 1/2" x 2" bolts. Plate to be welded in place and use existing chock bolts for leveling prove operating lever in good order.
- 32 #3 MOORING WINCH - 114
AC Apply necessary heat and free up presently frozen drum clutch.

33 #4 MOORING WINCH - 114

AC Fabricate and install all weather lagging for 16 ft. for 5" pipe and 12 ft. of 3" pipe together with insulating covers for (2) 5" valves and (2) 3" valves.

Fabricate and weld in place one shaped 1/2" x 4" x 12" plate in way of wasted area of support for after cylinder-plate to be RB191 coated prior to installation.

34 #5 MOORING WINCH - 114

AC Apply heat and free up mooring winch drum clutch assembly. Install 16 ft. of insulation on 5" exhaust steam line. Take delivery of owner furnished steam cylinders and valve chest assemblies. Make all necessary removals of (2) cylinders assemblies and one reverse valve assembly and install owner furnished assemblies in way of removals. Replace all defective studs, nuts, bolts and gaskets on completion test and winch in good operating order in all respects.

35 #1 MOORING WINCH - 114

AC Take delivery of one owner furnish reverse valve assembly. Make all necessary removals of presently existing defective assembly and install new assembly in way of removals. Replace all defective nuts, bolts and gaskets. Replace all removals and prove repairs in good order in all respects.

Renew approximately 5 ft of 3" pipe insulation.

Renew approximately 4 ft. of 5" pipe insulation.

DO Together with proper lagging for one 3" and a 5" angle valve, to be of weather resistant material, take delivery of one 3" and an 5" corrugated expansion joint for deck penetration for the steam and exhouse lines and install same in lines using new nuts, studs and gaskets. Heat and make free the clutch for winch drum operation which is presently froze.

36 #2 MOORING WINCH - 114

AC A. Apply heat and make free presently frozen winch drum clutch.

B. Take delivery of one 5" and one 3" corrugated expansion type bellows for deck penetration for steam and exhaust lines and install same in good order.

C. Insulate 5 ft. of 3" steam line, one 3" angle valve and, 4 ft. of 5" exhaust lines, and one 5" angle valve using weather resisting lagging material.

D. Drop out wasted section of fatl plate for operating lever pedestal stand and renew same with a 6" x 10" x 3/8" plate. Drill to receive (4) 1/2" x 2 1/2" bolts using existing spacer chocks. Weld firmly to existing vertical plate and prove operating lever in good order.

37 PROPELLER ROPE GUARD AND RING - 116

Remove damaged propeller rope guard and rope guard landing ring and renew same also (12) twelve bolts to be drilled out and renewed. Vessel to be trimmed by crew for above work.

38 MOORING WINCH #2 - FORECASTER DECK - 117

Crop out defective exhaust pipe and remove water tight deck expansion--Piece

Renew approx 4 ft. of 5" ex heavy steel pipe, with one (1) 90° elbow, and two (2) 300# - 8 Bart flanges.

Renew deck watertight expansion, piece, install, prove tight and insulate with approved insulation. Owner supplied.

39 EXHAUST LINE HANGARS - 117

Provide necessary labor and material to renew twelve (12) 8" RB 191 coated lead lined exhaust line hangers aft of midship house. Hangers are to be loose enough to allow pipe to travel in harbor saddle. Renew all nuts and bolts where required.

40 LESLIE DECK EXHAUST VALVE - 117

Remove to shop deck exhaust valve in Engine Room Leslie Size 10" Class D-3; Silver Solder Seat, grind in, reinstall in good order.
(Note: The seat on this valve unscrews due to contraction and expansion)

41 DECK WINCH STEAM AND EXHAUST LINE EXPANSION JOINTS FOR STEAM LINES 3" PIPE - 117

Remove steam line pipe stools and install 4" diameter expansion joint stainless steel bellows, fabricate new pipe stools and weld to place as original on #2-9-10-11-12 Deck Winches.

42 EXHAUST LINES 5" PIPE MOORING WINCHES - 117

Remove exhaust line pipe stools and install 6" diameter Expansion Joint stainless steel bellows, fabricate new pipe stools and weld to place as original on #1-2-9-10-11-12 Deck Winches. Expansion joints are aboard vessel.

43 DECK STEAM EXHAUST LINE. (ENGINE ROOM, PORT SIDE) - 117

Make all necessary removals, remove one 52" section of flanged 10" pipe fitted with one 10" flange and reduced to 8" flange, opposite hand. Pipe is fitted with (2) shaped 8" flanged side outlets 48" long each. Transport pipe to shop set same up in target. Fabricate new section as original using extra heavy pipe. Return new fabricated section to vessel and reinstall same with new nuts, bolts and gasket. Test same and prove tight and replace all removals and re-insulate as original.

44 DECK EXHAUST LINE - 117

Fabricate one 8" pedestal mounted spool in way of presently wasted spool located at 35 ft. aft of riser from midships. Requires 24" of 8" pipe, (2) 8" 150# flanges and pedestal mount as per removed defective section. Install new spool with (4) 5/8" x 2 1/2" securing bolt to "A" frame flange.

45 MOORING WINCH #9 - AFT DECK - 114

crop out defective steam pipe from deck to steam valve. Renew approx 2 ft. of 3" steel pipe, one (1) ex heavy 90° elbow and one (1) -300# 8 bolt flange. Weld a 12 inch diameter deck doubler around pipe. Install. Prove tight, and insulate with approved insulation.

46 STEAM VALVES TO STRIPPER PUMPS - 405

Disconnect, remove to shop, two (2) 4" steam valves, open up, machine seats, discs, grind in, renew bonnet gaskets, repack valve stems, close up, test to 300 lbs., prove tight, replace, renew gaskets, bolts and nuts, prove tight. Renew damaged insulation and insulation blankets.

WAI:all

Sheet No.7

EXXON WASHINGTON

October, 1975

EXX-MOR-002556

- 47 DECK STEAM LINE, FORWARD PUMPROOM--FORWARD BULKHEAD SPOOL PIECE - 117
Crop out and renew defective bulkhead spool piece. Require approx. 2 ft. of 5" steel pipe, 2--5" (8 bolt) 300# Steel flanges. Also may require doubler collar around pipe on Bulkhead.
- 48 DECK EXHAUST LINE IN CO₂ ROOM - 117
Reweld around top of deck exhaust pipe bulkhead penetration. (pipe way--CO₂ room Bulkhead.) Hose test to prove tight.
- 49 FORCASTLE HEAD HATCH TO FWD BOSUN STORES - 120
Remove wasted gasket material. Wire brush and clean surface as required, furnish and install new gasket, free up, adjust fit of hatch and prove tight.
- 50 MIDSHIP HOUSE FORE AND AFT, PORT AND STBD WATER TIGHT DOORS - 120
Remove wasted gasket material - (4) four doors. Wire brush and clean surfaces. Furnish and install new gasket material, free up, adjust fit of each door and prove tight.
- 51 FIRE LINE 8" GATE VALVES - 123
Cancel Remove two 8" 300# gate valves to shop, blast externally clean, open up valves free up and clean same, lubricate as necessary. Remove all packing, polish gate stem and seats. Reinstall in line and prove same in good order. (One located aft of midships and one located in way of #10 tank.
- 52 SHORE HEATING STEAM CONNECTION VAVLES - 227
A. Remove wasted 1 1/2" nipple and install new extra heavy 1 1/2" nipple drain and owner furnished 1 1/2" drain valve.
B. Renew 1/" extra heavy fresh water drain approximately 10" long with owner furnished drain valve.
Above items located immediately fwd. of aft pumphroom.
- 53 BULKHEAD LEAKS - 127
Furnish labor, material, installation and removal of required staging and repair bulkhead leaks as follows and as indicated by attached and prove tight.
A. Port Fwd Bulkhead #6 tank - locking fwd.
1. At 8th thwart ship stringer
2. At 7th thwart ship stringer
B. Stbd longitudinal bulkhead between #5 and #6 tanks.
- 54 AFT BULKHEAD PUMPMANS WORKSHOP - 127
"Vee" out and weld crack in same.
- 55 BULKHEAD LEAK - 127
Repair leak in longitudinal bulkhead between #4 part and 4 center. Leak located at 12th longitudinal from flow midway of 2nd bay.
- 56 BULKHEAD PENETRATION - 127
Reweld with doubler, bulkhead penetration, fireline, broken out in after bulkhead pumphmans workshop after side midship house, live broken out and 24" crack in bulkhead end of crack drilled to prevent further damage.
- 57 BULKHEAD PENETRATION - 127
Reweld bulkhead penetrations after bulkhead fwd. Pumphroom, 3, 4" conduit pipes broken out in rough weather.

WAI:all

Sheet No. 8

EXXON WASHINGTON

October, 1975

EXX-MOR-002557

- 58 MIDSHIP SQUARE BULKHEAD - 127
Weld in insert in leaks in after bulkhead midship square, outside corners at deck level, near drain from port and stbd. sides of square, large hole in vertical channel iron running from boat deck to maindeck has cement boxes.
- 59 FWD. PUMPROOM BHD - 127
Chip and scale one wasted BHD area at intersection of aft BHD fwd. pumproom and catwalk. Fabricate one 3" x 3" angle bar approximately 28" long. Scalloped out lower vertical flange to suit to fit around 3 BHD conduit penetrations. Install fitted angle bar by welding along top edge only.
(Keep heat away from conduit)
- 60 BULKHEAD FWD PORT COFFERDAM - 127
"Vee" out and weld leak (crack) after drilling stopper holes, located 10 ft. down from deck where grating is welded to bulkhead - Presently red handed on completion - prove tight.
- 61 FIRE LINE BULKHEAD PENETRATION - MIDSHIP'S-PUMPMAN'S LOCKER - 127
Install doubler on fire line bulkhead penetration at pumpman's locker. Approx. size 3/8" thick, 18" wide, and 18" long. Also vee out and reweld crack from inside.
- 62 HANDRAIL-MAIN DECK-FWD. STBD-OPPOSITE "K" RISER - 128
Reweld broken handrail.
- 63 #1 CENTER CARGO TANK LADDER BRACKET - 128
Renew wasted bracket on lower ladder.
- 64 #9 CENTER CARGO TANK LADDER - 128
Renew wasted ladder brackets - lower platform.
- 65 HANDRAIL STANTION - PORTSIDE - #8 WING TANK - 128
Renew wasted stantion pad eyes - (2) two - 1/2" material.
- 66 #3 CENTER CARGO TANK - LADDER HANDRAILS - 128
Furnish and install _____ ft. of 3/4" handrail.
- 67 HANDRAILS - 128
Replace handrails on catwalk, just aft of midship house and approx 60' of handrails on aft. main deck port side.
- 68 LADDER TREAD RENEWALS - 128
Fabricate and install (2) new diamond plate ladder treads for port side after ladder from main deck level. Requires (2) sections of diamond plate 26" long 8" wide fitted with a one inch rolled lip to be welded into existing ladder side rails. Remove existing wasted treads.
- 69 LADDER PLATFORM - 128
Renew platform at bottom of ladder from catwalk to main deck stbd, side of pumpmans locker, aft side midship house. Frame with grating, approx 4' square, grating ok, frame and legs eroded away, portable, bolted to deck brackets.
- 70 DECK AIR LINE - 131
Renew one 10 ft. shaped section of 1 1/2 air supply line together with an BHD penetration from pumpmans midship locker, fitted with (2) unions one tee side outlet, shaped approximately 3 ft. long to be fitted with owner furnished valve. Renew two pipe hanger support brackets for above line.

WAI:all

Sheet No. 9

EXXON WASHINGTON

October, 1975

EXX-MOR-002558

- 71 PIPE SUPPORT HANGERS - 131
Reweld broken legs on 10 designated pipe hangers below catwalk. Hangers are all double leg type. Reweld broken single leg hanger for conduit support in way of "B" line over riser.
- 72 "A" FRAME (9th AFT OF MIDSHIPS) - 131
Crop out wasted 4" angle of stbd side "A" frame support and weld in new 3 ft. section of 4" angle bar. Resecure by four 5/8" x 2" bolts to one 5" pedestal mounted pipe and secure by welding one 10" vent line hanger bracket (2 leg type) to newly installed angle bar support.
- 73 COOLING WATER LINE AT 30# REDUCING STATION BY #1 FEED PUMP - 207
Fabricate the flowing line from 90-10 cupro-nickel.
- 74 FIRE PUMP - 212
Disconnect and remove entire pump to shop. Disassemble. Build up casing in way of case wear rings. Install owner furnished spare rotating element. Tag and place existing wasted rotating element in midship house square for owners disposal.
- Reassemble unit as original with new gaskets and prove satisfactory.

75 ✓ MANIFOLD FOR FIRE PUMP - 212

Cancel Fabricate with extra heavy steel the following manifold. This manifold has a cordo-bond patch on it now.

76 DRINKING WATERLINE BULKHEAD PENETRATION-MIDSHIP'S PUMPMAN'S LOCKER - 224

Crop out and renew approx. 6 ft of 1" galv. pipe, 2-4 bulkhead penetration into pumpman's locker. Make up with new gasket, bolts and nuts. Prove tight, and replace.

77 SOIL PIPING-MIDSHIP'S-MAIN DECK - 223

AC. A. Port side - Aft locker room. Crop out defective piping, renew approx. 8 ft. of 2" ex heavy galv. pipe, 2 90° ex heavy galv. elbows, bolts and nuts. Reinstall any removals and pipe hangers. Prove tight.

(NOTE: 3 patches on this line)

B. Forward Port Side. Crop out defective piping. Renew Approx. 2 ft of 2" ex heavy galv. pipe, 2 90° ex heavy galv. elbows, and one (4 bolt) galv. flange. Install using new gasket, bolts and nuts. Reinstall any removals, and pipe hangers. Prove tight.

(NOTE: 2 patches on this line)

C. Forward Starboard Side. Crop out defective piping. Renew approx. 2 ft. of 2" ex heavy galv. pipe, 2 90° ex heavy galv. elbows, and one (4 bolt) galv. flange. Install using new gasket, bolts, and nuts. Reinstall any removals, and pipe hangers. Prove tight.

(NOTE: 2 patches on this line)

D. Aft Starboard Side. Crop out defective piping. Renew approx. 12 ft of 4" inch galv. pipe, with 2 bends, one 45° elbow, 4 galv. flanges, and two fabricated Y's. Install using new gaskets, Bolts, and nuts. Reinstall any removals and pipe hangers. Prove tight.

(NOTE: Leaking at the Y's)

WAI:all

Sheet No. 11

EXXON WASHINGTON

October, 1975

- 78 35 PSI LINE TO GENERATOR, CARGO PUMPS, FEED PUMPS FOR COOLING REPLACEMENT - 223
SANITARY LINE
 6 ft. length, 6 inch diameter line with Y at one end and a total of three tees. 2 tees being of 6" diameter, the third being of 1 1/2" diameter with flange on end of 1 foot length. One leg of Y is 4 inch diameter about 18 inches in length with flange at end. There will be a total of 4, 6" diameter flanges; 1, 1 1/2" diameter flange and 1, 4" diameter flange.
- 79 BOILER BOTTOM BLOW LINES - 227
 Audio gauge port and stbd boiler bottom blow lines between lower drum and skin valve in various areas including pipe bends as directed to prove pipe is required schedule 80 pipe and sound as directed.
- 80 #1 GENERATOR 20" EXHAUST VALVE - 223
 Make all necessary removals, remove exhaust valve bonnet. Remove gate from body of valve transport same to shop. Make necessary repairs to attach valve stem to gate. (presently valve stem is broken loose from gate.). Reassemble valve gate to stem, transport to vessel and assemble unit to valve. Test and prove valve to be in good order.
- 81 PATCHES ON VENTILATION - 241
 AC A. Weld two patches of approx. size-4" x 4" on ventilation duct. Located on aft deck beside diesel oil tank. (Now plugged with Duck Seal).
 B. Forward starboard mushroom ventilator on stack deck. There are approx. Four holes to be patched on this ventilator.
- 82 VENTILATION SUPPLY SYSTEM #18-MACHINE SHOP, FIREROOM, AND SHAFT ALLEY - 241
 AC A section of supply system #18 behind port boiler at the 45 ft., 5 in. grating level collapsed. Renew ventilation duct section, approx. size* 10 1/2" x 28" x 7' when duct work is completed, insulate with approved insulation. Also renew three type "E" terminals, size 15 inch on this system. Two behind port boilers, and one in the center.
 REFERENCE: New Port News Shipbuilding and Dry Dock Co.
 Drawing #725-4276--Ventilation--Boiler Room
 Aux. Mach Rm sections and elevations below poop deck.
- 83 DOMESTIC WATER TANKS-PORT AND STARBOARD - 224
 Cancel
 Now we will do 10/28
 Open up manholes on each of two (2) domestic water tanks. Clean out and remove all loose scale, rust and debris. Thoroughly dry out tanks. Apply one spot coat of cement to all bare areas, and apply one full coat to entire internal surfaces of both tanks. Close up tanks, renew all disturbed gaskets, replace all defective nuts and studs. Fill and chlorinate tanks according to U.S. Public Health requirements. Leave tanks in all respects ready for domestic service upon completion of work.
- 84 FUEL OIL BUNKER FILL LINE - 226
 Cancel
 Renew a total of eighty five (85) ft. of 6" extra heavy pipe serving bunker bill line located immediately aft of focastle head. On this item, line to be shaped as original and requires eight (8) bends, four (4) dresser couplings, five (5) flanges, one (1) 90° angled flange on each end. All line to be prime coated and one finished coat. All new line to be supported with suitable pipe hanger brackets. Furnish and install all necessary nuts, bolts, and gaskets. Owner to furnish all necessary dresser couplings. Sandblast and coat with RB 191 external parts only.

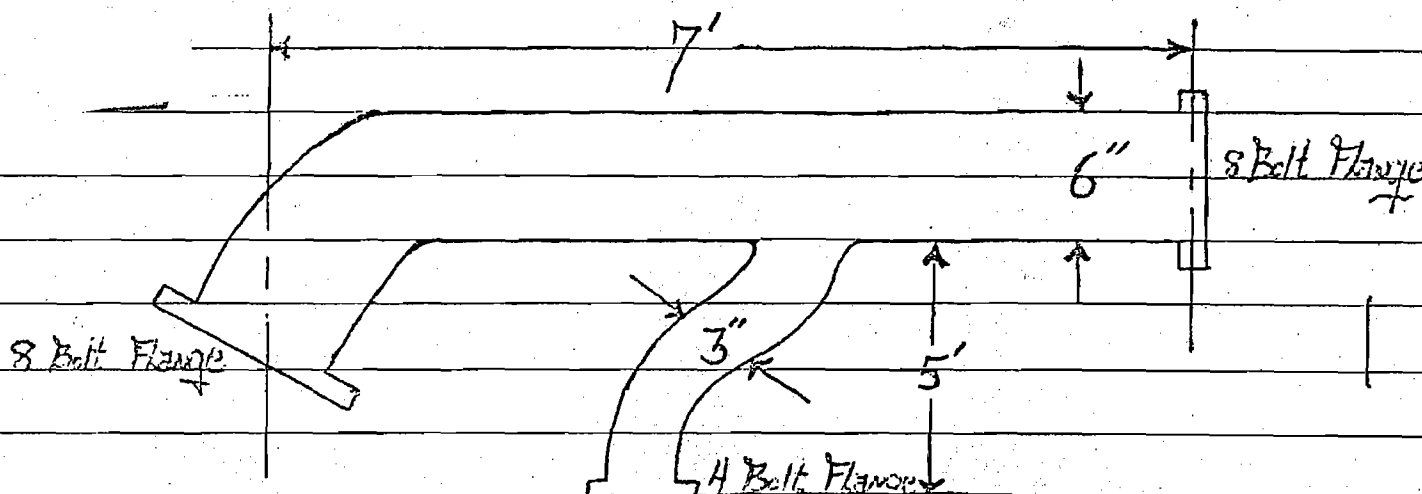
85 BUNKER FILL LINE-ADJACENT TO AFT PUMP ROW - 226
Renew (1) one section of wasted 6" diameter pipe approx. 18 ft. long, flanged one end-dresser coupling other end.

86 REPLACEMENT FUEL OIL TRANSFER PUMP DISCHARGE LINE - 226
Line is 25 ft long with a total of two sections. Diameter of pipe is 4" and there is a total of 4 flanges. There are two bends in line, one being vertical the other horizontal. Replace gaskets and bolts.

87 FUEL OIL METER - 226
Disconnect and remove to shipyard one (1) fuel oil meter for repair. After repairs reinstall using new gaskets, nuts and bolts.

88 ENGINE ROOM FUEL OIL SUCTION PIPE - BILGES STARBOARD SIDE - 226
Crop out defective fuel oil suction line. Renew approx. 20 feet of 4 inch extra heavy steel pipe and flanges at each end. This is located under fire pump. When new line is installed and proven tight, pipe is to be insulated with water proof insulation.

89 COLLECTION DRAIN LINE (IN ENGINE ROOM BY EMERGENCY FUEL OIL PUMP UNDER GEAR CASING - 228
Fabricate with extra heavy steel pipe as per diagram below.



90 FIREROOM VENTILATION DUCT WORK - 236
Renew ventilation duct in Supply System #18 as follows: one (1) section behind port boiler by domestic tanks. 3' wide, 13' high, 12' long. One (1) section, supply to machine shop 15"x13"x5' long. Insulate new and disturbed ventilation duct work.

91 ALNOR SUPERHEAT TEMPERATURE INDICATOR - 307
Check out, renew any defective parts, adjust alnor superheat temperature indicator for port and starboard boiler. Prove in good working order.

92 FIRE ROOM BOILER FORCE DRAFT FAN DUCTS - 310
Weld designated crack in port and starboard boiler force draft fan ducts, approximately 6 feet on each air duct.

93 VALVES* - ENGINE ROOM - 317

Cancel Disconnect and remove to shop, one (1) - 8" angle globe, steam stop valve for external desuperheater. Open up, machine seat and disc, grind in, renew bonnet gasket, repack properly. Install. Prove tight. Replace any removals, and any disturbed insulation.

94 VALVE REPLACEMENT-ENGINE ROOM - 317

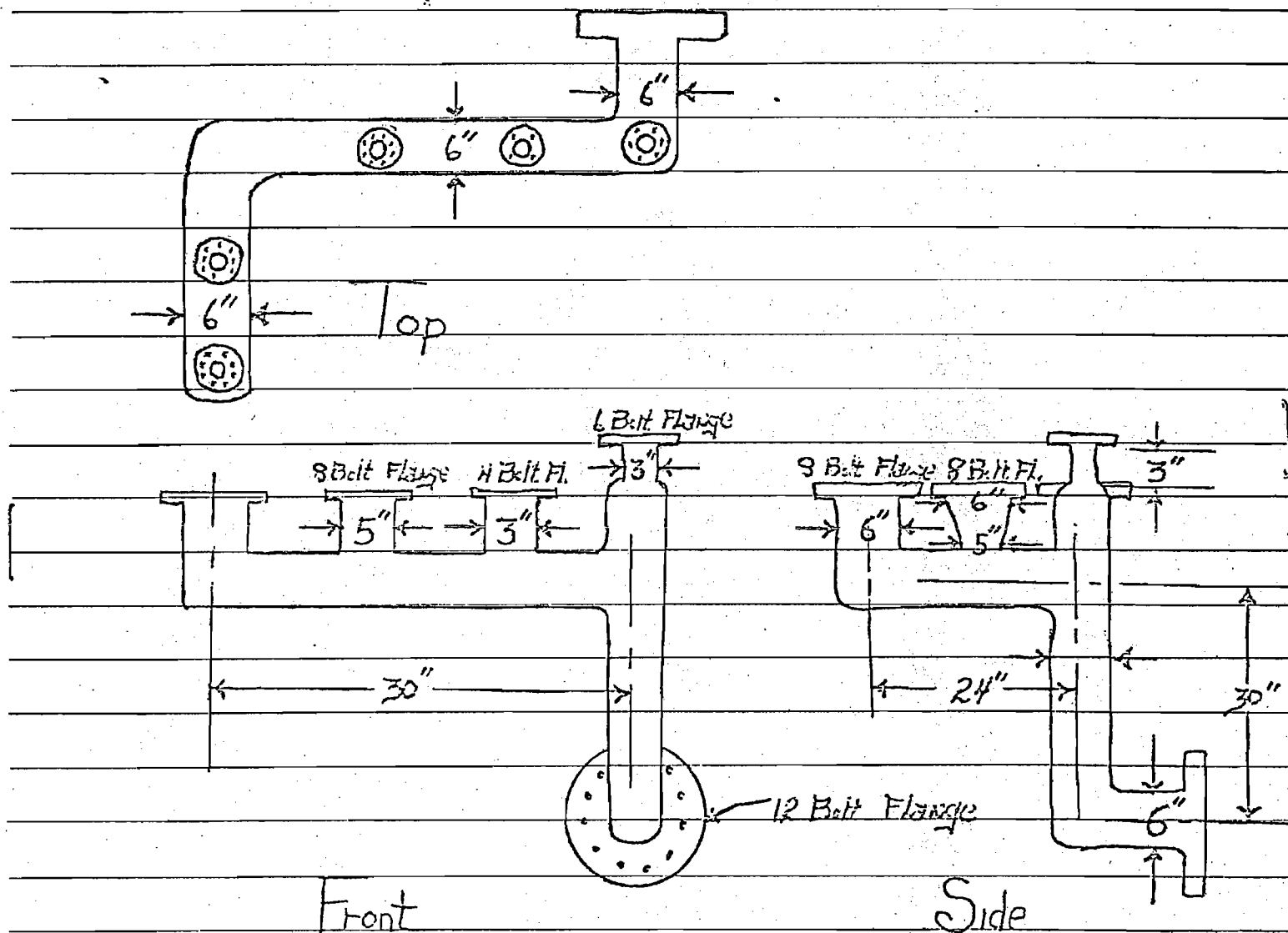
AC Grop out one defective 1 1/2" external desuperheater drain valve. Please tag valve and put in midship square. Install, owner furnished valve, new heat treated study (Size 1") and nuts. Prove tight.

95 LOWER ENGINE ROOM. NUMBER 2 AND 3 CARGO PUMP TURBINE ATMOSPHERE EXHAUST VALVES - 402

Cancel Remove to shop, clean out, grind in, test and prove tight. Reinstall using new gaskets, bolts and nuts, and reconnect fill and drain pipe. Renew any defective nipples.

96 MANIFOLD FOR BILGE AND BALLAST PUMP (FORWARD PUMP ROOM) - 404

Fabricate with extra heavy steel the following manifold. This manifold has a 5" clamp on it now.



- 97 AFT PUMPROOM-BILGE SUCTION LINE FROM MANIFOLD ON PORT STRIPPER PUMP - 407
Crop out defective bilge suction line in pumproom bilges. Require approx. 12 ft. of 4 inch ex heavy galv. steel pipe, with two bends, and two 4 in. 8 bolt standard galv. flanges. Install using new gaskets, bolts, and nuts, prove tight. Replace any removals.
(NOTE: Have a patch on this line. Also installing this pipe could be easier if a 4 inch dresser coupling was used on one section)

CARGO PIPING SPECIFICATIONS

Renew, test, and prove tight the following cargo pipe and/or fittings. All new pipe and fittings to be sandblasted and coated with RB-191 internally and externally. Schedule 80 steel pipe is to be used for all new pipe below 6" and schedule 40 for 6" and above pipe diameter. Renew all gaskets, bolts, and nuts. Blast and coat with RB-193 all new dresser couplings. Wire brush and recoat with RB-193 all welds made after pipes are coated.

- 98 CARGO PIPE RENEWAL - 407
A. Make all necessary removals. Remove (4) 20 ft. sections of 16" pipe located on deck in way of #8 cargo tank C and D lines (2) sections each. Install new pipe in way of removals with owner furnished dresser couplings. Replace all removed brackets.
B. Renew one 21 ft. section of 8" stripper discharge line with two owner furnished dresser couplings located in way of #8 tank, and replace all disturbed brackets.
C. Renew one 20 ft. section of 16" cargo discharge line located in way of #7 tank with (2) owner furnished dresser couplings.

- 99 CARGO LINE DISCHARGE RISER - 407
Crop out one wasted fabricated 16" shaped tee section approximately 8 ft. long athwart ships, a line riser fitted with a shaped 16" discharge side outlet 12 ft. long. Fabricate and install section butt welded into riser and fitted with owner furnished dresser in way of fore and aft run of pipe. Install one new 16" pipe hanger bracket cap in way of presently broken cap at above location.

- 100 COFFERDAMM OVERBOARD DISCHARGE VALVE STAND - 407
Fabricate and install new valve deck stand in way of presently damaged and wasted inoperable deck stand. Deck stand to include indicator 2 ft. section of reach rod, and to be of sufficient size to suitably operate a tank mounted 4" valve.

- 101 8" STRIPPER LINE #7STBD CARGO TANK - 407
Renew approx 3 ft. length of stripper line, bulkhead penetration. (1) One flanged end, between inboard bulkhead and stripper suction - Presently red handed.

- 102 "Y" HOSE CONNECTION ON "ALPHA" RISER PORTSIDE MAIN CARGO MANIFOLD - 407
Repair existing crack by welding.

VENT LINE PIPING SPECIFICATIONS

Furnish labor and material to crop and renew the following cargo vent piping with schedule 40 steel pipe. All pipe to be blasted and coated inside and out with RB 191. Renew all gaskets, bolts, and nuts and renew dresser couplings where necessary. Wire brush and recoat with RB 188 all welds made after pipes are coated.

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Sheet No. 15

EXXON WASHINGTON

October, 1975

EXX-MOR-002564

- 103 VENT LINE BRACKET - 408
Fabricate and install one vent line 10" pipe bracket as per presently existing defective bracket. Located 1st ladder aft of discharge riser port side of catwalk.
- 104 VENT LINE PORT FWD KING POST - 408
Renew wasted section of flanged, 10" diameter vent line, approx. 15 ft. long.
- 105 VENT LINE - 408
Renew 16' Section 10" Vent Line, Fwd, under catwalk, length from Focastle head to #1 center tank, has large hole in bottom, one flanged end, one dresser coupling.
- 106 VENT LINE - 408
Renew one fabricated length 10" vent line, runs from back of port king post fwd. to catwalk, one flanged end, one dresser coupling.
- 107 6" ULLAGE OPENINGS #9 AND #10 STBD WINGTANKS - 408
"Vee" out and weld existing holes in same.
- 108 VENT LINE - 408
Replace by welding, louvered vent box on vent line between Catwalk and stbd. king post midship, broken off, stower in midship square, hole has clamp.
- 109 VENT LINE PIPE TO #2 PORT WINGTANK - 408
Renew wasted section of shaped 5" pipe - flanged one end, dresser coupling - other end, approx. 20 ft. long.
- 110 FIX TANK WASHING PIPE FOR FWD. MACHINE FOR #4 STBD. WING TANK-MIDSHIP'S-STBD (TUNNEL) WAY - 415
Crop out and renew one 2" ex heavy galv. 90° elbow, and one 2" x 3" ex heavy galv. nipple into deck penetration. Weld up and prove tight.
- Cancel* 111 RUDDER ANGLE INDICATOR - AFTER STEERING STATION - 601
Repair or renew defective indicator.
- 112 RADIO ROOM VOICE TUBE - 601
Furnish and install new voice tube with flexible hose.
- 113 MAIN ANTENNA JUNCTION BOX AFT END BRIDGE DECK - 605
Crop and renew wasted pad eyes (2) two.
- 114 DOMESTIC REFRIG CHILL BOX DOOR - 701
Crop wasted section of bottom of chill box door, galvanized sheet iron - approx. size 16 gauge - 8" wide x approx. 36", also renew approx 60" of door insulation material.
- AC* 115 AIR CONDITIONING FAN ROOMS-AFT-BOAT DECK-PORT AND STARBOARD - 702
Crop out defective cooling coil drip pans (Port & Stbd) and foundations. Fabricate new drip pans complete with foundation supports, and drain pipes etc. Install, weld supports, connect up drains. Replace any removals. Prove water tight.
REFERENCE DRAWING: Newport New Shipbuilding and Dry Dock Co.
Drawing No. 725-4296 - Ventilation - Detail of cooling coil foundation and drip pan.

- 116 WIRE CONDUITS (THREE) INTO AFT BULKHEAD OF FORWARD PUMPROOM - 809
Remove old packing. Cover up cables in pumproom, Vee out and weld up cracks around conduit bulkhead packing sleeves. Repack with teflon packing and prove tight.
- 117 FLOOD LIGHT BRACKET SUPPORTS - 811
Fabricate (6) 3/8" x 12" x 14" shaped plates to be RB coated prior to installation and suitable drill and taper to receive flood light fixtures. Disconnect presently existing flood light bracket from six locations. Two on each midships kingposts and one on each of the two kingposts in way of pumproom. Wasted brackets to be then dropped off and new brackets to be welded in place of each removed bracket. Reattach flood light fixtures to the newly installed holding brackets in good order. Prove light in good working order on completion.

VALVE SPECIFICATIONS

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 replaced with new gaskets, bolts and nuts and proven tight. Replace and/or repair disturbed insulation.

- 118 FLOOR PLATING UNDER MAKE-UP EVAPORATOR - 102
Crop off existing wasted plating and weld in place new deck from 1/4" diamond plate 3' wide X 3' long. Install as original.
- 119 LADDER FROM BOAT DECK TO DIESEL TANK DECK - 128
Remove existing wasted ladder, and renew completely. This ladder is 10' long, has 11 steps 26" x 8" with a 1" rolled lip.
- 120 MAIN CIRCULATOR SUCTION LINE - 223
Located by Y where high and low suction meet. Braze a 6" x 6" x 1/8" copper doubler plate on main circulator suction line. Note: Patch on line.
- 121 TURBINE DRAIN LINE TO MAIN CONDENSER - 225
Renew flange on main condenser with new studs and bolts also renew approximately 6' of 1-1/2" extra heavy steel drain line.
- 122 WASH WATER FILLING LINE - 227
A.S. Located by #6 center tank. Renew one section of extra heavy steel pipe 2-1/2" in diameter x 20' long.
- 123 AUXILIARY EXHAUST LINE - 228
Location: First joint above auxiliary circulator by ladder leading from lower engine room to fuel oil suction valves. Renew one 6" joint. Replace nuts and bolts.

124 ATMOSPHERIC DRAIN TANK - 228

Make a new tank vs. patching
Located forward lower engine room. Weld a steel doubler 3' X 3' X 1/4" on the forward end near the bottom of the atmospheric drain tank. This area is wasted away. This doubler will cover existing tank drain line. Make provision to reinstall drain after doubler is welded. Note: Patch on tank now.

125 STBD AIR CONDITIONING SUCTION LOUVER - 702

Renew one air suction louver 43" high 35" wide with 13 fins 3-1/2" wide. This louver is made out of 1/4" flat iron.

126 VENTILATORS--MAIN PUMPROOM - 236

Remove port and stbd 24 inch cowl ventilators, for examination, to determine, if possible to repair. If not fabricate and install new ones, according to Newport News Ship Building and Drydock drawing.

127 STRIPPER LINE RENEWALS--MAIN PUMPROOM - 407

Renew approximately 8 feet of 8 inch steel pipe with one 3 foot bent spud, flanged all three ends, which discharges to "B" line. Cadmium plated bolts and nuts. Replace any removals.

128 STRIPPER LINE RENEWALS--MAIN PUMPROOM - 407

Renew approximately 5 feet of 8 inch steel pipe, with one 8 inch by 1 foot spud with two welded flanges, and one 8 inch dresser coupling. This line discharges to "A" line. Install using cadmium plated bolts and nuts. Replace any removals.

129 STRIPPER LINE RENEWALS--MAIN PUMPROOM - 407

Renew one section - 20 feet of 8 inch steel pipe, with one band and welded flanged ends which discharges to deck. Install using cadmium plated bolts and nuts. Replace any removals.

130 FORWARD PUMPROOM--GAUGE TUBING BRACKETS SUPPORTS - 215

Replace 50 gauge tubing brackets supports on aft bulkhead.

131 MAINDECK--"A" FRAMES--UNDER WALKWAY - 102

Repair 10 fractured "A" frames as designated.

132 STARBOARD STRIPPER STRAINER BOX--MAIN PUMPROOM - 412

Remove starboard stripper strainer box to shop. Weld hole in bottom, and build up or repair any other deteriorated areas in strainer box. Sandblast and coat with RB 191. Reinstall using new gaskets, cadmium plated bolts and nuts. Prove tight. Replace any removals.

133 STARBOARD STRIPPER SUCTION LINE--MAIN PUMPROOM - 407

Starboard stripper suction line to pump. Replace approximately 8 feet of 8 inch steel pipe with one bend flanged both ends, with one - 1-1/4 inch drain line. Install using cadmium plated bolts and nuts. Replace any removals.

134 REACH ROD RENEWAL FOR FUEL OIL TRANSFER PUMP IN FORWARD PUMPROOM - 413

Renew reach rod, approximately 40 feet 1 inch diameter from top of pumproom to steam valve on fuel oil transfer pump. Prove in good operating order. Replace any removals.

135 STEAM AND EXHAUST PIPE RENEWALS FOR PORT AND STBD. - 117

Require approximately 80 feet of 3/4 inch exheavy steel pipe. Welded at bulkheads, Replace any hangers. Replace any removals. Prove tight. }

136 HANDRAILS FORWARD PUMPROOM - 128

Renew approximately 32 feet of handrails in lower level of forward pumproom.

137 GRATING IN FORWARD PUMPROOM - 102

Replace grating at bottom of ladder in forward pumproom. Approximate size 3 foot by 2 foot.

138 STEAM SMOOTHING--FORWARD PUMPROOM - 111

Renew approximately 15 feet of 1-1/2 inch exheavy galv pipe, one union, two-90 deg elbows, and one weld into bulkhead. Replace one 1-1/2 inch valve. Replace any pipe hangers. Replace any removals. Prove tight.

139 STEAM SMOOTHING RENEWALS--FORWARD PUMPROOM-- 111

Steam smoothing for #1 port deep tank, #2 stbd. deep tank, and stbd. cofferdam. Renew approximately 60 feet of 1-1/2 inch exheavy galv. pipe, from manifold to bulkhead on the above list. In forward pump. Replace hangers, replace any removals prove tight.

140 STEAM LINE TO FORWARD PUMPROOM BLOWER - 117

Renew approximately 12 feet of 1/2 inch pipe from steam valve to bulkhead. Replace hangers. Replace any Removals. Prove tight.

141 STEAM SMOOTHING RENEWAL FORWARD PUMPROOM - 111

Steam smoothing from manifold in forward pumproom to bulkhead on boatswain locker. Renew approximately 10 feet 1 inch pipe. Replace any pipe hangers. Replace any removals. Prove tight.

142 FIRE LINE RENEWAL BY #8 WINCH - 123

AC Renew one section of 8 inch pipe, approximately 3 foot long. flanged on both ends, with one 2-1/2 inch spud outlet by 3 foot long for fire hose valve connection. All to be blasted and coated with RB 191. Install using new gaskets and cadmium plated bolts and nuts. Replace any removals. Prove tight. }X

143 FIRE LINE RENEWAL--TUNNELWAY OVER MAIN PUMPROOM - 123

AC Replace first section approximately 12 feet of 8 inch pipe, welded flanged both ends. Pipe to be blasted and coated with RB 191. Install using new gaskets, and cadmium plated bolts and nuts. Replace any removals. Prove tight.

144 FIRE LINE RENEWAL--FORWARD OF MAIN PUMPROOM - 123

AC Replace second section of fire line. Approximately 12 feet of 8 inch pipe, welded flanged both ends, one bend one 3/4 inch spud for gauge connection, and one 6 inch flanged spud connection. All to be blasted and coated with RB 191. Install using new gaskets, and cadmium plated bolts and nuts. Replace any removals, prove tight. } X

145 STRIPPER SUCTION VALVES, #4 CENTER TANK. - 405

Renew one (1) 8 inch teflon seated gate valve--stripper line master valve, and one (1) 8 inch angle valve--stripper line main suction.

146 STRIPPER PIPE LINE, #4 CENTER TANK - 407

Renew approximately 38 feet of 8 inch port stripper line, and three 8 inch dresser couplings. Replace any removals.

147 ANCHOR WINDLASS LOCKING IN BLOCKS - 113

Renew four anchor windlass locking in blocks.

148 FIRE LINE VALVE BY #8 WINCH - 123

AC Remove to shop, one 8 inch fire line valve. Free up, clean up, grind in, renew all worn or defective parts, repack. 24

149 FORWARD STARBOARD LIFEBOAT LIMIT SWITCHES - 121

Furnish and install approximately 75 feet of four conductor armored cable from fwd. and aft limit switches to control box. Replace all cable straps. Replace any removals. Prove in good working order.

150 FIXED BUTTERWORTH MACHINE - 415

Renew approximately 2 feet of 2 inch exheavy galv pipe. thread one end and welded on the other. For fixed butterworth machine in #4 port fwd machine, and #6 stbd aft machine

151 DECK STEAM LINE BY BOOM WINCH - 117

Renew a 20 foot section of 5 inch ex heavy steel pipe. Flanged on both ends, with a 2-1/2 inch spud, flanged outlet for steam to boom winch. Replace any hangers. Replace any removals, prove tight. } X

152 STRIPPER SUCTION VALVE, #7 STBD WING TANK - 405

Renew one 8 inch angle valve, stripper, main suction valve.

153 DECK STEAM EXPANSION JOINTS - 117

Remove three (3) deck steam expansion joints to shop. Disassemble, clean up, free up, drill out and replace broken studs in packing glands. Repack. Reinstall using new gaskets, bolts and nuts. Prove tight, replace any removals. (Locations - one expansion joint by #6 winch, one located by Pumpman's locker, and one located by boom winch.)

154 PUMPMAN'S LOCKER OVERHEAD - 102

Veel out and weld approximately (6) six foot of cracked overhead in pumpman's locker aft end.

155 ANCHOR WINDLASS - 113

Renew brake band lining on port and stbd anchor windlass brake bands.

156 DRINKING WATER HOSE BOX - 224

Located-boat deck, aft, stbd, side. Crop out defective top section of box approximately 4 inches. x 24 inches, 1/4 inch thickness, weld in new section to make box watertight For U. S. Public Health requirement.

157 FIRE LINE RENEWALS-AFT OF FORWARD PUMPROOM - 123

AC Renew two sections of fire line aft of forward pumproom. Approximately 20 feet of 8 inch pipe, four flanges, with one 2-1/2 inch by 2 foot flanged spud for fire hose valve, and one 2-1/2 inch by 4 foot riser flanged for fire hose valve. All to be blasted and coated with RB 191. Install using new gaskets and cadmium plated bolts and nuts, replace any removals, prove tight. ?x

158 MIDSHIP HEAT SYSTEM - 117

AC Renew one 20 foot section of 2 inch galv. pipe, flanged both ends. Located by CO2 control station on walk way. Install using new gaskets, bolts, and nuts. Replace any removals and hangers. Replace any disturbed insulation. ?x

159 BULKHEAD DRAIN SPUDS. - 127

Renew 6 bulkhead drain spuds size 1-1/4 inch. Crop out and weld in new drain spuds as designated.

160 LADDER FROM FOCASTLE DECK TO MAIN DECK - 128

Crop out and renew ladder bottom support so ladder can be bolted to deck clips

161 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

EXTERNAL CLEANING - MAIN BOILERS - 303 CONT'D

and at approximately 150 degrees 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 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 the necessary 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 consuls are to be boxed in with plywood to prevent damage to same.

162 BOILER TUBE LIME WASHING - B & W TYPE - 302

Upon completion of fire side tube washing and cleaning, lime wash fire sides of waterwall generating and superheater tubes of ~~one (1) combustion engineering type V2M boiler~~. Lime wash as soon as practical after tube washing and cleaning has been completed to neutralize sulphuric acid action on tubes. Mix a slake lime slurry (slake lime and fresh water) to the consistency of thick paint. Apply by spray and thoroughly coat the tube surfaces on the fire sides.