

Captain

MILITARY SEA TRANSPORTATION SERVICE, PACIFIC
NAVAL SUPPLY CENTER
OAKLAND, CALIFORNIA 94625

SPECIFICATION NUMBER: MSTSP 69-18

4 September 1968

S P E C I F I C A T I O N S

For

INACTIVATION - DRYDOCKING

USNS EDWIN D. PATRICK (T-AP 124)
(Principal Dimensions)

Length	- - - - -	608' 11"
Breadth	- - - - -	75' 6"
Depth	- - - - -	52' 6"
Gross Tonnage	- - - - -	16039
U.S. Maritime Commission Design	- - - - -	P2-SE2-RI

The General Conditions dated 15 July 1955 and Amendment No. 1 dated 23 November 1962 to the General Conditions for work under Department of Defense, Department of the Navy, Master Contract for Repair and Alteration of Vessels are a part of these specifications and any conflict between these specifications and the Master Contract for Repair and Alteration of Vessels shall be governed by the provisions of the Master Contract.

These specifications consist of 11 pages and General Conditions, referenced above.

SUPT PORT ENGINEER:

Approved: Director, Transport/Tanker Engineering Div. *[Signature]*

Approved: Supt. Port Engineer *Geo. H. Naulen*

I N D E X

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INFORMATION REGARDING THE INVITATION FOR BIDS INCLUDING THESE SPECIFICATIONS

Prior to the time of bid opening and after award of job order, inquiries should be directed to one of the following:

Procurement and Contractual Matters (Maintenance and Repair Office)

<u>Title</u>	<u>Telephone</u>
Director, Procurement & Control Division	466-5185
Head, Contract Branch	466-5185

Legal Matters (Office of Counsel)

<u>Title</u>	<u>Telephone</u>
Assistant Counsel	466-6481
Counsel	466-6481

Engineering and Technical Matters (Maintenance and Repair Officer)

<u>Title</u>	<u>Telephone</u>
Deputy M & R Officer	466-6955

Statement of Manufacturer's Representative

On any specification item which calls for supervision by the manufacturer's representative the following shall be strictly complied with:

Submit a statement of supervision exercised by the representative, prepared and signed by the representative. The statement shall include certification of work actually performed and certification either that work was performed to the satisfaction of the representative, or that work deficiencies, explicitly identified by the manufacturer's representative, exist. The original plus four copies of each statement shall be delivered to the MSTSP Inspector.

Overtime Policy

The Contracting Officer may require of the Contractor's statement in writing regarding the need for overtime in the performance of the contract in the event of the issuance of a Change Order or a Supplemental Agreement for extra work. No overtime premium pay shall be considered in the price or equitable adjustment to be paid by the Government on account of the Change Order or a Supplemental Agreement unless authorized by the Contracting Officer.

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ITEM 101- SERVICES: (TC)

Upon arrival of the ship in the Contractor's plant, the Contractor shall provide the following services for a period of four (4) continuous calendar days:

- (a) ELECTRIC POWER: 500 amps. of 440 volt, 3 phase, 60 cycle AC power.
- (b) VENTILATION: Provide portable blower ventilation as required for safety of Contractor's assigned working personnel during the inactivation of equipment.
- (c) FIRE PROTECTION: Provide temporary fire protection independent of ship's facilities.
- (d) Provide temporary but adequate means for pumping of bilges, shaft alley, etc.
- (e) Provide two (2) telephones, through contractor's yard switchboard; one (1) located in the MSTSP Inspector's office on board ship, and one (1) located at Quarter Deck.

ITEM 102- DELIVERY AND DRYDOCKING: (GRB)

A suitable drydock shall be furnished by the contractor and the ship placed in same upon arrival at the contractor's plant for the accomplishment of all work specified in individual items of this specification or any additional work found necessary which can be accomplished during the drydock availability.

The ship will proceed to and from the contractor's plant under its own power or with the assistance of tug boats, without expense to the contractor.

Ballast conditions, trim weights, draft, etc., shall be carefully checked by the contractor prior to drydocking of the ship.

The contractor shall remove material as necessary to bring the ship's displacement and trim to within the capacity of the drydock and shall replace same upon the completion of the drydocking.

Obtain the ship's keel block record for its last drydocking from ship. DO NOT duplicate the previous drydocking position.

Furnish a record sketch in quadruplicate, showing the new locations and widths of the keel blocks to the MSTS Inspector.

Remove the keel and bilge blocks as found necessary to permit examination of all peak and double bottom tank drain plugs and fathometer diaphragms by the MARAD and MSTS Representatives.

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ITEM 103- PAINTING UNDERWATER BODY (GRB)

Prepare surfaces and paint underwater body, rudder and all appendages from keel to five (5) feet above line of delivery floatation or to line of normal floatation whichever is greater.

Line of delivery floatation shall be established as draft of ship minus one (1) foot, on arrival at contractors plant.

Remove all marine growth, rust, scale, loosely adhering paint, grease, oil, salt and other foreign matter to bare metal or tight film by sweep blast.

Wash down all areas with fresh water prior to application of paint.

After area has been approved by the MSTS and MARAD Representatives, paint the entire aforementioned area including all areas in way of disturbed keel blocks with one (1) coat of wash primer formula 117 MSTS Code 32, followed with two (2) coats of anticorrosive paint (Maritime Specification 52-MC-401).

Paint in eight (8) floatation marks, two (2) each located forward, port and starboard, and two (2) each aft, port and starboard as designated by the MARAD Representative.

Paint in new draft markings for a distance of four (4) feet above line of delivery floatation.

ITEM 104- RANGING ANCHOR CHAINS: (GRB)

Range port and starboard anchor chains, thoroughly clean anchors, chains and associated chain lockers, sumps, and pump systems free of mud, scale and other foreign materials.

Paint aforementioned items and areas with grade 2 metal conditioning compound Navy Spec. no. MIL-M-15205a and restow chains and anchors in respective locations.

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ITEM 105 - SEA CHESTS, STRAINERS, AND OVERBOARD DISCHARGES: (GRB)

Remove all sea chest strainer plates, clean and paint as specified for underwater body. Thoroughly clean the interiors of the chest to clean metal. Examine the strainer securing lugs on the chest and furnish and install new lugs and studs as directed by the MSTS Inspector to replace defective units as found. An estimated amount of ten (10) lugs and ten (10) studs.

Paint the interior of the sea chests with two (2) coats of Apexior No. 3, or equal as approved, and reinstall the strainer plates, replacing the holding nuts. Individually thread a wire through cotter keyholes and around each lug to prevent loosening of nuts and loss.

On completion of the foregoing and when notified by the MSTS Inspector, install 20.4# mild steel blanking plates over each of the sea chest hull openings for sea injection and discharge, also all sea valve and overboard discharge valves below the line of floatation.

Blanking plates shall extend beyond periphery of openings in hull and be attached to hull plating not doubler plate with continuous full strength welds.

Fit each blanking plate with air test fitting consisting of a welded boss and standard pipe plug. Test plug to be at lower limits of blanking plate for drainage.

Air test each of the sea chests, after blanking, to 5-pound PSI pressure and prove all areas watertight in the presence of the MSTSP Inspector. Seal weld drain plug after tests.

Prepare surfaces and paint internal surfaces of blanks with one (1) coat of red lead and paint exterior surfaces as specified in a separate item of these specifications titled, "PAINTING, UNDERWATER BODY."

All strainer plates requiring removal for installation of blanks shall be properly labeled and stowed aboard ship as directed by the MSTS Representative.

Prove all work satisfactory to the MSTS and MARAD Representative.

Hull openings to be dealt with are, but not limited to the following:

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ITEM 105 - SEA CHESTS, STRAINERS, AND OVER DISCHARGES: (cont'd)

<u>CHEST</u>	<u>SIZE</u>	<u>LOCATION</u>
Circ. Wtr. Disch.	1 1/2" Dia.	FR. 29, Port
Diesel Pump Suct.	17 1/2" x 17 1/2"	FR. 32, Port
Refrig. Mach. Disch.	3" Dia.	FR. 93, Port
Refrig. Mach. Suct.	23" x 17 1/2"	FR. 99, Port
Dist. Brine Disch.	8" Dia.	FR. 99, Port
Aux. Cond. Disch.	10" Dia.	FR. 99, Stbd.
Main Injection, High Suct.	2'-6" x 3'-8 1/4"	FR. 99, Stbd.
Main Injection, Low Suct.	5'-2 1/4" x 2'-3 1/4"	FR. 101, Stbd.
Boiler Blow	1 1/2" Dia.	FR. 104, Stbd.
Mn. Circ. Disch.	20" Dia.	FR. 104, Stbd.
L. O. Cooler Disch.	5" Dia.	FR. 107, Port
Fire Pump Suct.	18" x 18"	FR. 105, Stbd.
Mn. Cond. Vent	4" Dia.	FR. 105, Stbd.
Salt Water Serv. Disch.	2" Dia.	FR. 108, Stbd.
Separator Disch.	4" Dia.	FR. 109, Stbd.
Bilge Pump Disch.	6" Dia.	FR. 112, Stbd.
Mn. Circ. Disch.	20" Dia.	FR. 134, Port
L. O. Cooler Disch.	5" Dia.	FR. 133, Stbd.
L. O. Cooler Disch.	2" Dia.	FR. 130, Port
Mn. Inject. Low Suct.	5'-2" x 2'-6"	FR. 134, Port
Mn. Cond. Vent	4" Dia.	FR. 134, Port
Mn. Inject. High Suct.	2'-6" x 3'-9"	FR. 133, Port
Boiler Blow	1 1/2" Dia.	FR. 138, Stbd.
Aux. Cond. Circ. Pump Suct.	23" x 18"	FR. 140, Port
Dist. Circ. Pump Suct.	18" x 18"	FR. 141, Stbd.
Dist. Brine Disch.	8" Dia.	FR. 144, Stbd.
Aux. Cond. Disch.	10" Dia.	FR. 141, Port
Air Cooler Disch.	4" Dia.	FR. 158, Port
Air Cooler Disch.	4" Dia.	FR. 158, Stbd.
Diesel Firepump Suct.	18" x 18"	FR. 201, Port

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ITEM 106- FRESH WATER AND BALLAST TANKS: (GRB)

Open up the following water tanks. Flush ballast tanks with fresh water. Remove all water, rust, scale and debris; tanks shall be left clean and dry.

Leave tanks open and stow manhole covers near respective manholes. Cover deck manholes with expanded metal screen and secure in place utilizing four (4) of existing securements. Bulkhead manholes are to remain unscreened.

FRESH WATER TANKS

<u>TANK</u>	<u>NO.</u>	<u>FR. NO.</u>	<u>TONS</u>
Boiler Feed Water	10-C	60-69	203
Boiler Feed Water	11-C	69-78	203
Potable water	12-P	60-78	128
Potable Water	12-S	60-78	128
Boiler Feed Water	13-P	112-120	97
Potable Water	13-S	112-120	82
Potable Water	16-P	120-128	98
Boiler Feed Water	16-S	120-128	80
Potable Water	19-P	158-166	124
Potable Water	19-S	158-166	124
Potable Water	20-P	166-180	133
Potable Water	20-S	166-180	133

SALT WATER BALLAST TANKS

Fore Peak	Stem-18	188
Aft Peak	213-Stern	112

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ITEM 107- VOIDS AND COFFERDAMS: (GRB)

Open the below-listed voids and cofferdams, remove all water, dirt and debris and leave each area dry.

Leave spaces open and stow manhole covers near respective manholes. Cover deck manholes with expanded metal screen and secure in place with four (4) of the existing securements, bulkhead manholes are to be left unscreened.

<u>SPACE</u>	<u>LOCATION</u>
Cofferdam under Reefer Deck	Frames 60-91 Port
Cofferdam under F.W. tank	Frames 112-128 Centerline
Cofferdam over F.W. tank	Frames 112-128 Centerline
Cofferdam between F.O. Settler and F.W. tank	Frames 112-128 Port
Cofferdam between F.O. Settler and F.W. tank	Frames 112-128 Stbd.
Pipe Tunnel	Frames 142-158 Port

ITEM 108- SCATTERED WELDING REPAIRS ON EXTERIOR OF SHELL PLATING, ETC: (GRB)

Chip out deteriorated welds to good metal and reweld scattered seams and butts of shell plating and bilge keels. Build up designated pitted areas by welding.

NOTE: (Quote on 100 feet of seams and butts, not feet of bead, pitted areas not in seam or butt to be evaluated at one foot of seam or butt for 6 square inches of welding cost shall be in direct proportion to computed length actually welded.)

ITEM 109- SHELL RIVETS: (GRB)

Renew two-hundred (200) shell rivets in lapped seams and frames in scattered locations, exclusive of those in way of double bottom or deep tanks, as designated by the MSTSP Representative.

ITEM 110- CATHODIC PROTECTION STUDS: (GRB)

Install four steel 5/8-inch dia. by 2 1/2-inch long studs on hull of ship, one (1) each at midships, five (5) inches above floatation line and five (5) feet five (5) inches above floatation line, port and starboard.

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ITEM 201 - OVERHAULING SEA VALVES: (BK)

All sea valves, overboard discharge valves, sea chest blowing-out valves, boiler blow-down shell valves and main circulator bilge injection valves, shall be opened up, cleaned, inspected and overhauled and shall be placed in first-class seaworthy and serviceable condition. All broken, missing or otherwise defective minor parts shall be repaired and/or renewed.

All valves seats, discs and/or gates shall be resealed and ground into a tight seat. All valve stems shall be freed up, cleaned and repacked.

All shell fastenings securing the various valves and their appurtenances, such as pads, nipples, spuds, spool pieces, studs, flanges, etc., shall be hammer-tested and examined. Paint interior surfaces of valves with two (2) coat of Apexior No. 3, or equal as approved.

Upon completion of all stipulated repairs, inspection and acceptance of all the above work, flush with fresh water all sea chest, sea valves, adjacent connecting piping and leave dry, close up all valves ready for service, using all new bolting and jointing material as required.

Completely close all sea valves and sea chest steaming out valves.

Wire all valves in the closed position.

All work shall be performed to the complete satisfaction of the MSTS & MARAD Representative.

ITEM 202 - STERN GLANDS, PORT AND STARBOARD: (BK)

Remove all packing from port and starboard stern gland stuffing box. Thoroughly clean stuffing box and gland.

Prove water service piping to stern tube bearings clean and free.

Run DIE-NUT on stern tube stuffing box glands retaining studs.

Install new square flax packing, Federal Spec. HH-P-00106C in single turns with butted and staggered joints. Each turn shall be pulled individually into the stern gland stuffing boxes with the glands. The ends of each turn of packing shall be properly served to prevent unraveling. Tie off two (2) additional turns of flax packing adjacent to stern packing glands.

Wire water service valves in closed position and prove tight.

On completion of the above work the stern glands shall be tightened to prevent any leakage.

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ITEM 203 - ROPE GUARDS AND FAIRWATERS AND SHAFT WEARDOWN: (BK)

Remove the port and starboard rope guards and strut and stern tube fairwaters and tallow retainers.

Take and record wear-down on the starboard and port strut and stern tube bearings, using trammels or dial gauge in the presence of the MARAD and MSTs Representatives.

Clean guards, fairwaters and retainers to bare metal and paint in accordance with underwater body painting item of this specification and reinstall utilizing new securing studs, nuts and bolts.

Recement fairwater bolt heads.

ITEM 204 - RUDDER: (BK)

Pintles, bushings, post and carrier shall be checked for wear and tightness and pintle pin nut harden up. Remove drain plug and reinstall same to prove free of water. Air test rudder to 5 pounds pressure. Repair leaks and prove tight. Repack rudder post gland using square flax packing, Federal Specification HH-P-001060C.

Fill and drain rudder upon completion of repairs using U.S. Government furnished rust preventive compound.

The rudder pintle bearing clearance shall be taken at the athwartship and fore and aft positions.

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ITEM 501 - FATHOMETER SEA CHEST:

Fabricate and install transducer cover plates (2) as per MSTS guidance Plan TAP 113-800-1176286 Detail "B". Drill and tap existing mounting rings to suit. Install with 1/4" rubber gasket and CRS bolts.

Install stowage racks for cover plates in area of cofferdams.