

**VESSEL PARTICULARS:**

<b>Name</b>	:	Floating Drydock "FAITHFUL SERVANT"
<b>Built</b>	:	1979; Mitsubishi Heavy Industries, Japan
<b>Rebuilt</b>	:	2002, China
<b>Official Number</b>	:	1216139
<b>Major Modifications</b>	:	2009; Fairhaven Shipyard, USA
<b>Hull No.</b>	:	160130484
<b>Flag</b>	:	U.S.A. Registry Only
<b>Dimensions</b>	:	471' x 129.8' x 27.8'
<b>GRT/NRT</b>	:	15,684 ITC / 4,705 ITC
<b>Free Deck Area</b>	:	54,000 sq. ft
<b>Draft Loaded</b>	:	18.7'
<b>Full Load Displacement</b>	:	30,416 tons
<b>Maximum Deck Load</b>	:	3,070 lbs/sq. ft.
<b>Maximum Submerged Draft</b>	:	60'
<b>Ballast Tanks</b>	:	21
<b>Ballast Water Capacity</b>	:	47,000 tons
<b>Lifting Capacity</b>	:	27,000 LT
<b>Distance Between Aft Wing Walls</b>	:	107'
<b>Aft Wing Walls Dimensions</b>	:	40' high x 20' wide x 40' long
<b>Classed As</b>	:	Class dropped by Nippon Kaiji Kyokai (NKK) and China Classification Society (CCS) class societies
<b>Floating Drydock</b>	:	Semi-submersible heavy lift drydock

The vessel is framed longitudinally and transversely in accordance with good marine practice for a vessel of this service.

The vessel's hull is protected by a 12" split pipe rubrail system, commencing just aft of the bow and extending aft to stern, on both port and starboard sides.

## **VESSEL PARTICULARS: (continued)**

The vessel is fitted with a 42½" high bulwark at the bow ranging from port to starboard forward of the superstructure. Bulwarks are capped with 7½" flat plate cap and stiffened with flange plate stiffeners. A 3-course safety rail fairs between the bulwark and the deckhouse by 6'. Centerline of the bulwark is fitted with an open area allowing an emergency tow chain to be secured starboard.

The vessel is fitted with a tow bridle on the bow comprised of 3½" stud link chain. The tow bridle chain is secured to port and starboard outboard tow padeyes which are rooted in the barge hull and shackled to fish plate. The tow legs are approximately 90' long with a 20' pigtail.

Deck fittings consist of the normal complement of roller chocks, mooring bitts, and kevels. Additionally, the vessel is fitted with gypsy heads on anchor windlasses, as well as mooring winches.

Ground tackle consists of one 100-ton single wildcat anchor windlass driven by an HPU unit and driven by a 150-HP electric motor. Anchor chain is 3½" stud link reeved through double roller system on the port side of the top of the superstructure forward, and through deck hawse connected to a 2,500-lb anchor.

**Note:** It should be noted that this vessel is fitted with three mooring winches forward and two aft, one each atop aft wing walls that also can be utilized as anchor retrieving winches. This vessel can be outfitted as a 4-point mooring system, but is presently set up as a 3-point mooring system. Both port and starboard after fitted wing walls are fitted with electric/hydraulic 150-HP windlasses shackled to 3" stud-link chain and 2" wire rope through fairleads, and 2,000-lb Danforth type anchors set on pipe anchor slides.

## **HULL COMPARTMENTATION:**

Hull compartmentation consists of twenty-one ballast tanks as follows:

- Forepeak ballast tank No. 1
- Port and starboard forward outboard ballast tanks, No. 9 (confined within the superstructure)
- Main hull ballast tanks Nos. 2-7 port and starboard
- Stern hull ballast tanks No. 8 port and starboard outboard and No. 8 port and starboard inboard
- Aft wing wall ballast tanks No. 10 port and starboard

Access to all ballast tanks is through oval type, multi-bolt, flush type manholes.

## **HULL COMPARTMENTATION: (continued)**

Located forward in the machinery space is a fuel oil tank with a total capacity of twenty-seven tons and fitted integral within the hull and a fuel oil day tank is located atop the deckhouse servicing the generator unit. In way of the No. 2 ballast tanks are two potable water tanks with a total capacity of 9,000 U.S. gallons. Lube oil is contained in 55-gallon drums and used as required.

All main hull and ballast water bulkheads are designed watertight.

## **DECKHOUSE ARRANGMENT:**

The deckhouse, located forward, houses the forward outboard Nos. 9 port and starboard ballast tanks, access to lower pump rooms, longitudinal tunnel with pipe manifolds, berthing, galley, workshops, and vessel's operational control room.

Access to superstructure is via external ladder type walkways leading from the main deck up to the control room. An additional internal staircase leads down from the control room to quarters and machinery spaces. Four ballast tanks are outboard of stairwell.

## **SUPERSTRUCTURE INTERNAL:**

Located to starboard, outboard of the control room, is a generator room fitted with a Mitsubishi, Model S12A, PTA, 12-cylinder, radiator cooled, electric start diesel engine driving a 450-KW (G) generator unit.

Located next inboard on the starboard side are main control panels fitted with three panels for main generators and two auxiliary generators.

Located on centerline is the main operating control room fitted with the following equipment:

- Fire alarm control panel
- Pump monitor panel
- Ballast pump and anchor generator panel
- Navigation light panel
- Two internal telephone systems
- General alarm equipment panel
- Remote watertight door panel
- Liquid magnetic compass

## **SUPERSTRUCTURE INTERNAL: (continued)**

- Air pressure gauge
- Port and starboard diesel pump switches
- Port and starboard electric pump switches
- Ballast/de-ballast panel
- Tank level indicator panel
- Two sets of inclinometers
- One desk fitted with fax machine, GPS unit, and PA system
- Two ICOM, IC-M59, VHF radios
- One metal desk
- One L-shaped cushioned settee with backs

All spaces are finished with painted decks, marlite type overhead, and painted bulkheads.

Metal joiner doors lead to weather deck on forward and port sides.

Located next down below are a quarters area, galley, and lounge.

Located forward to port is a local storage area complete with chain locker, sanitary and potable water pressure units, and electric water heater.

Located aft of the above are three bunkrooms outfitted to accommodate a total of ten persons.

Located forward inboard to port is a galley fitted with one stainless steel counter, one small refrigerator, and one dining table.

Located next inboard is a water closet fitted with two stainless steel washbasins, two urinals, one commode set in stall, and one shower stall.

Located next to starboard is a lounge which, at time of survey, was devoid of any furniture.

Located on an after bulkhead is a watertight door actuator with hydraulic tank and 5-HP electric motor and hand-operated remote unit.

Located to starboard outboard is a storage area fitted with miscellaneous parts, ropes and tools.

## **SUPERSTRUCTURE INTERNAL: (continued)**

A laddered staircase leads down a closed stairwell to pump rooms.

## **SUPERSTRUCTURE EXTERIOR:**

Control housetop is fitted with an exhaust muffler for generator unit, mushroom type vents, day tank, and two additional exhaust fans. This area is raised on starboard side.

Located next inboard to center are two air conditioning units, one tripod type mast fitted with navigation lights, and additional vents. A 48" high 3-course safety rail encompasses the entire area with a vertical ladder leading down to port.

Located to port, atop of the superstructure, is one anchor windlass with HPU unit driven 150-HP electric motor with a capacity of 100 tons and reeved with 3" stud link chain on double roller, one 20-ton mooring winch, driven by a 75-KW electric motor, and an auxiliary 25-KW motor ( All G).

One 15-ton mooring winch driven by a 30-KW electric motor. (G)

Located to starboard is a 20-ton mooring winch, driven by a 75-KW electric motor. (G)

One 15-ton mooring winch driven by a 30-KW electric motor. (G)

One Chinese made hydraulically operated pedestal crane with 2-ton capacity and fitted with a fixed boom. (G)

Three-course 48" high safety rail with forward fitted inclined ladders leading down to each level and down to the main deck.

## **MAIN DECK AREA:**

Superstructure forward is fitted with an approximate 50' wide x 60' high breezeway allowing access from the forward bow area aft to the stern.

Main cargo deck is fitted with seven each port and starboard 24" diameter x 42' high stanchions utilized to secure tarps and covers to docked vessel for environmental issues.

Additionally, three breasting poles, also comprised of a 24" diameter pipe set with diagonal knee braces on doublers, are on deck but not permanently secured to the deck and are movable as desired. At time of survey, two were fitted to starboard side and one was fitted forward center to allow placing of the vessel and to assist in the alignment for drydocking purposes.

The vessel is fitted with, as needed, 6' x 3' x 4' concrete and timbered blocks and are removable and shifted as needed. The vessel's perimeter is also encompassed by an 8" high containment rail.

## **MAIN DECK AREA: (continued)**

The stern of the vessel is fitted with a centerline I-beam constructed pushknee allowing the pushing vessel, if needed, to make up to the barge.

Located on both port and starboard sides, aft of the ballast towers, are Danforth type anchors secured to bolster and slide.

Port and starboard after ballast towers are set on newly built sponsons which were moved outboard by 8' from the original design. Bolsters are constructed of a combination I-beam and angle permanently mounted to the vessel and properly secured in design to support the after towers.

## **MACHINERY:**

Located forward down below the main deck are pump rooms outfitted with the following machinery:

- One MSD unit (G)
- One Nantong, model 12V-135Z-F2, 12-cylinder diesel engine driving a 200-KW generator unit. Engine is raw water cooled and air started. (G)
- Two 22-KW electric motors, atop a covered reservoir for HPU units (G) (G)
- Three Yanmar 3-cylinder radiator cooled diesel engines, each driving a 15-KW generator (G) (G) (G)
- One Yanmar 6-cylinder diesel engine driving a stripping pump (G)
- One diesel driven air pump with air receiver (N)
- One water cooled start air compressor (N)
- Four control panels

Located below is an additional machinery space fitted with the following equipment:

- Two Nantong, model 6135, 6-cylinder diesel engines each driving a 105-KW ballast pump with power take-off unit (G) (G)
- Two 185-KW electric motors each driving ballast pumps (G) (G)
- One oily water separator
- One air compressor (G)

## **MACHINERY: (continued)**

- One sanitary pump driven by a 5-HP electric motor (G) (G)
- Two potable water pumps driven by 5-HP electric motors (G) (G)
- Two saltwater cooling pumps for hydraulic winches each driven by 25-HP electric motors (G) (G)
- One fire pump driving by a 30-KW electric motor (G)

Located aft of the machinery space is a centerline longitudinal tunnel housing a 36" diameter manifold pipe which taps into port and starboard 14" supply/discharge valves which are hydraulically/electrically operated.

An additional 36" manifold pipe is located in the starboard ballast tanks and tie-ins are at amidships and stern.

## **ELECTRICAL OUTFITTING:**

The vessel is wired with basketweave metal armored cable and neoprene type marine cable. Fixtures are of the vaporproof marine type and fluorescent type. Switchboard is of the deadfront type. Overload protection is obtained by means of circuit breakers. Electrical service is provided by means of two diesel generators as well as shore power connections in which the vessel may receive power from shore based operations in lieu of running generators while dockside.

## **SAFETY EQUIPMENT:**

The vessel is fitted with firefighting deck risers along the entire port and starboard sides' external main deck, as well as inside the superstructure and living areas. Additionally, the vessel is fitted with strategically placed CO<sub>2</sub> and dry chemical portable fire extinguishers.

Safety equipment is outfitted onboard in an "as needed" basis while operations are underway.

FLOATING DRYDOCK  
"FAITHFUL SERVANT"

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PHOTO 1



PHOTO 2





FLOATING DRYDOCK  
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Page 2

PHOTO 3



PHOTO 4



PHOTO 5

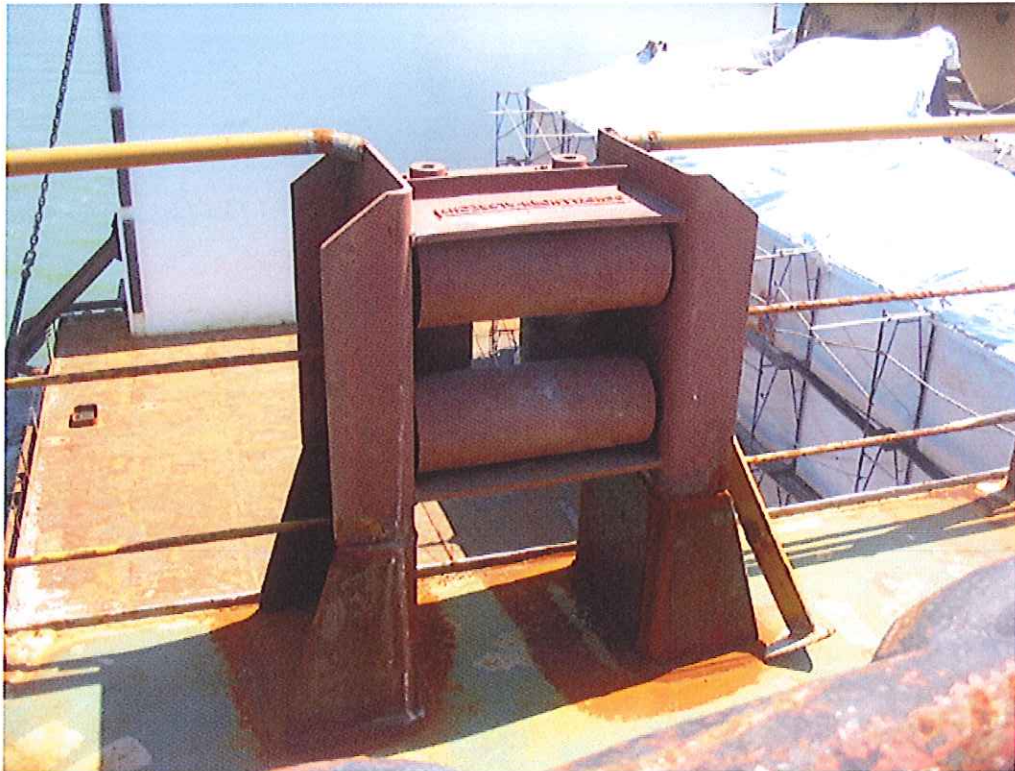


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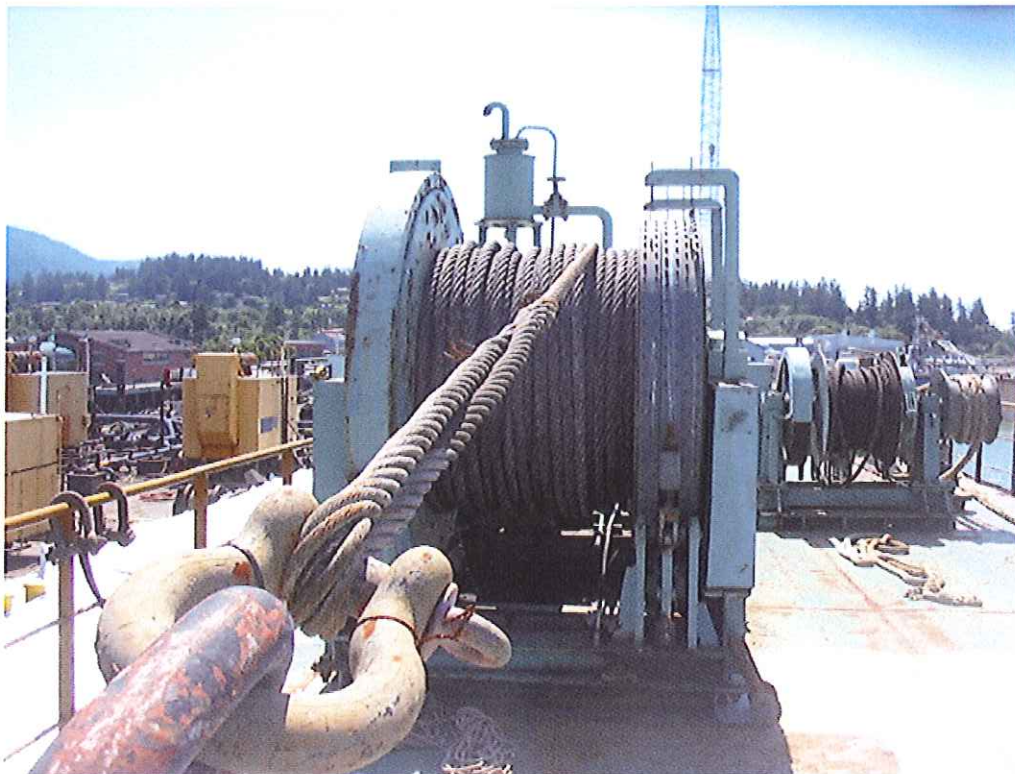




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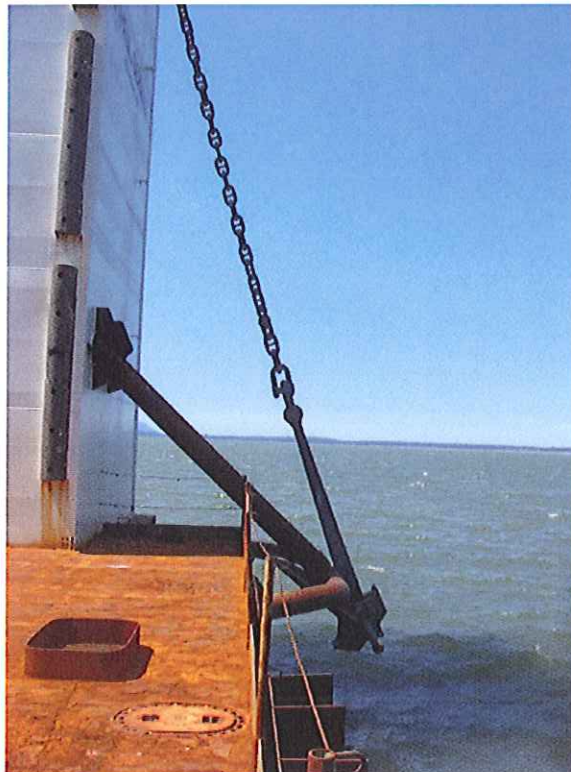


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PHOTO 12





PHOTO 13



PHOTO 14





PHOTO 15



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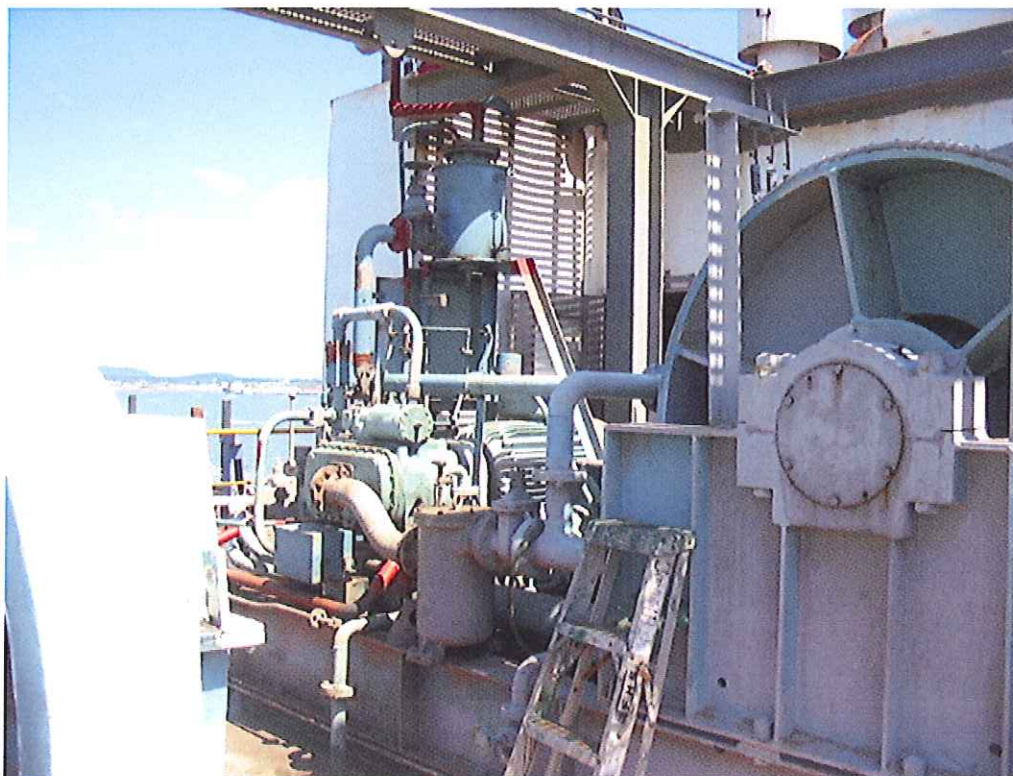




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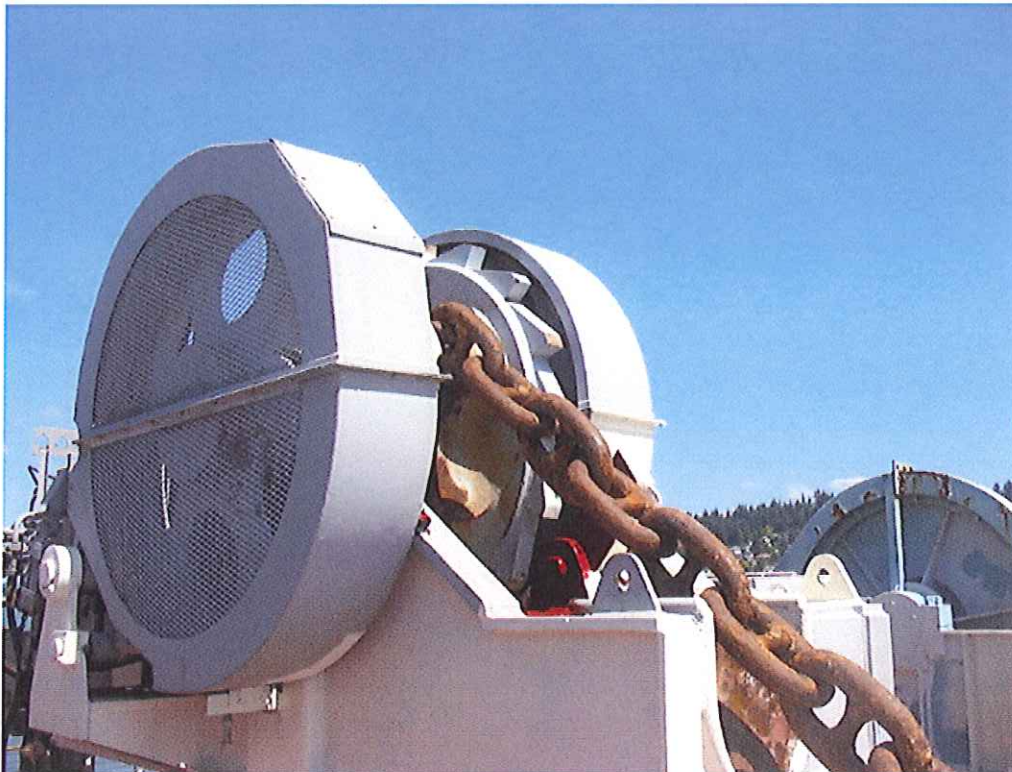




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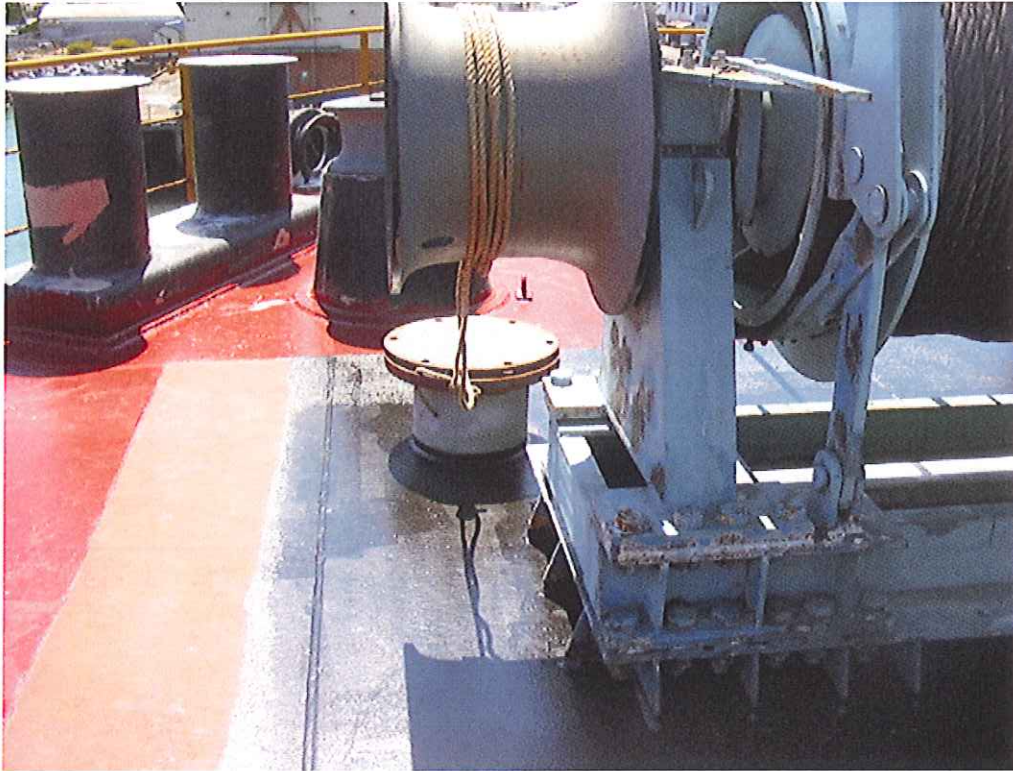


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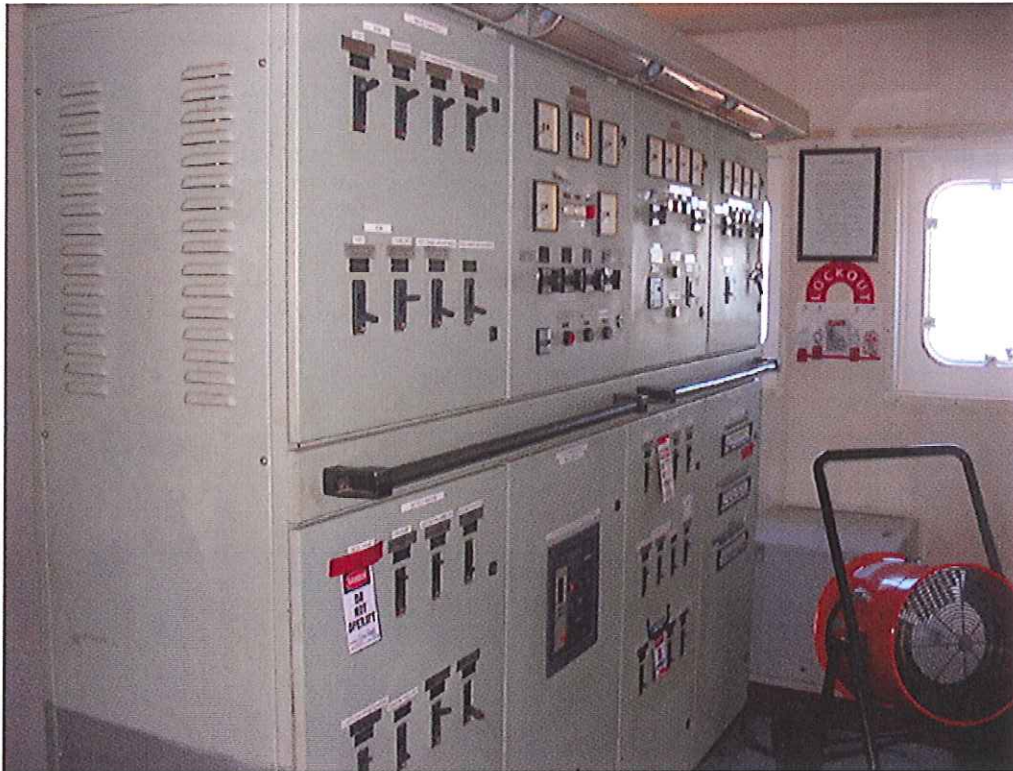


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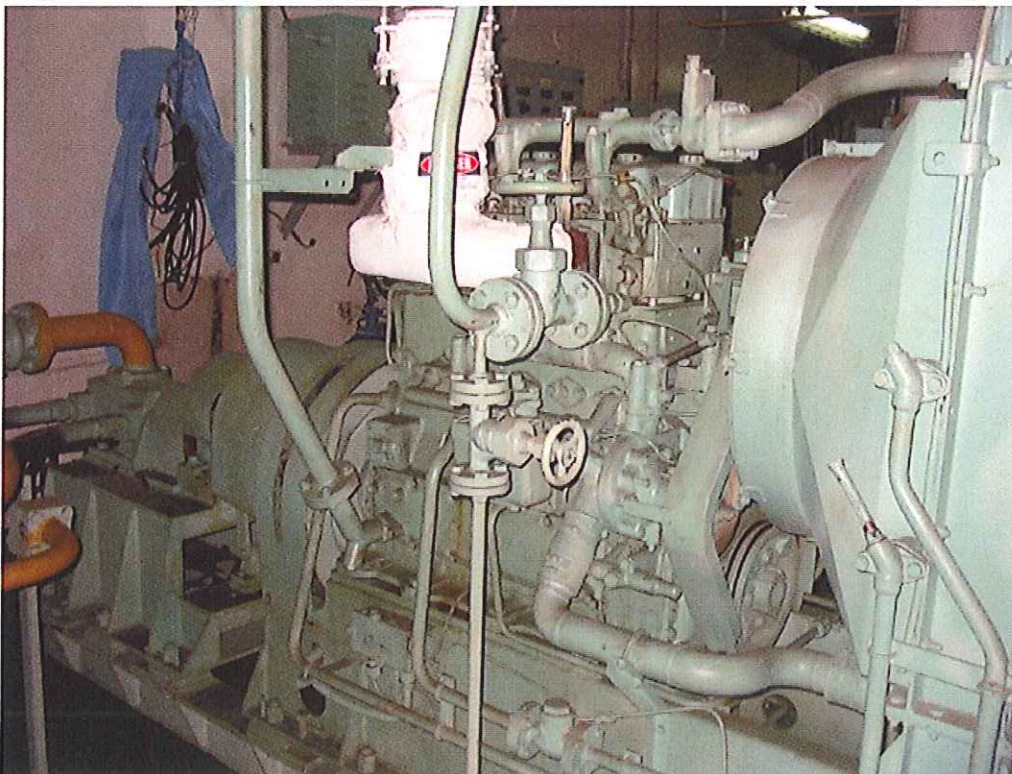




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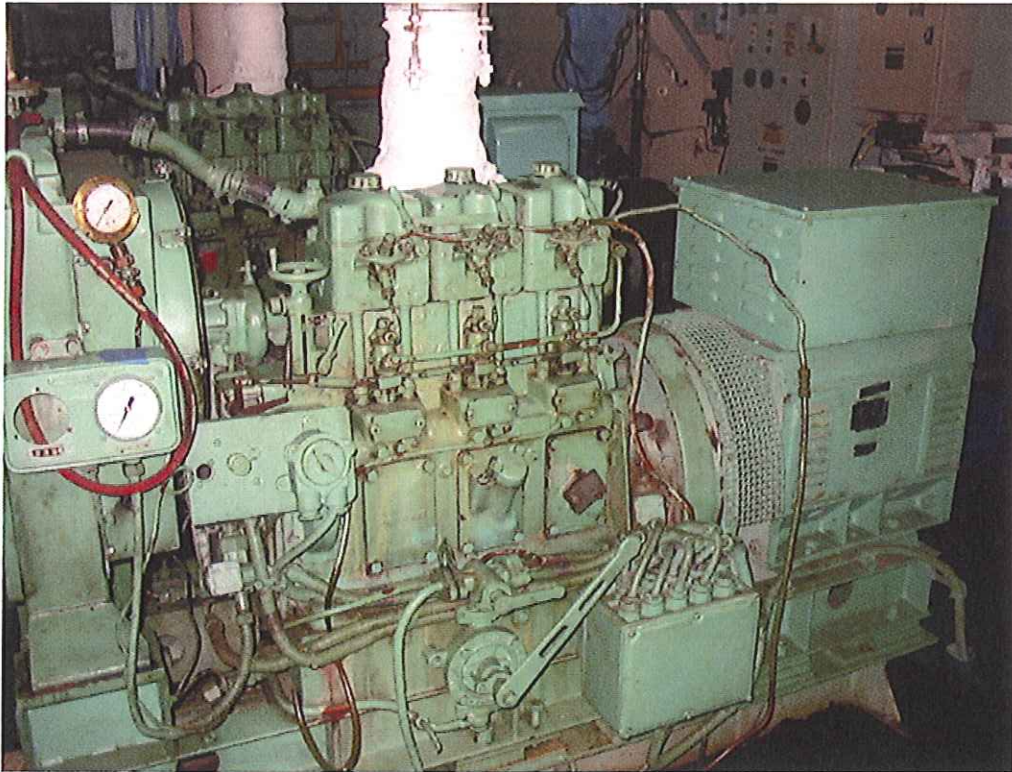


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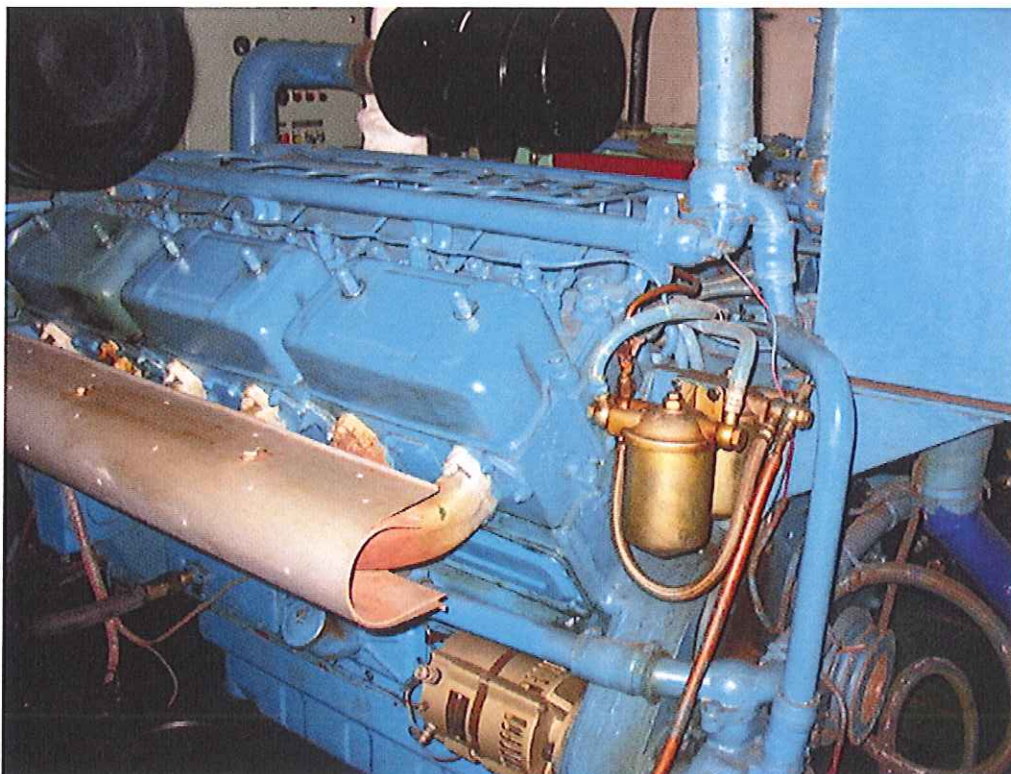




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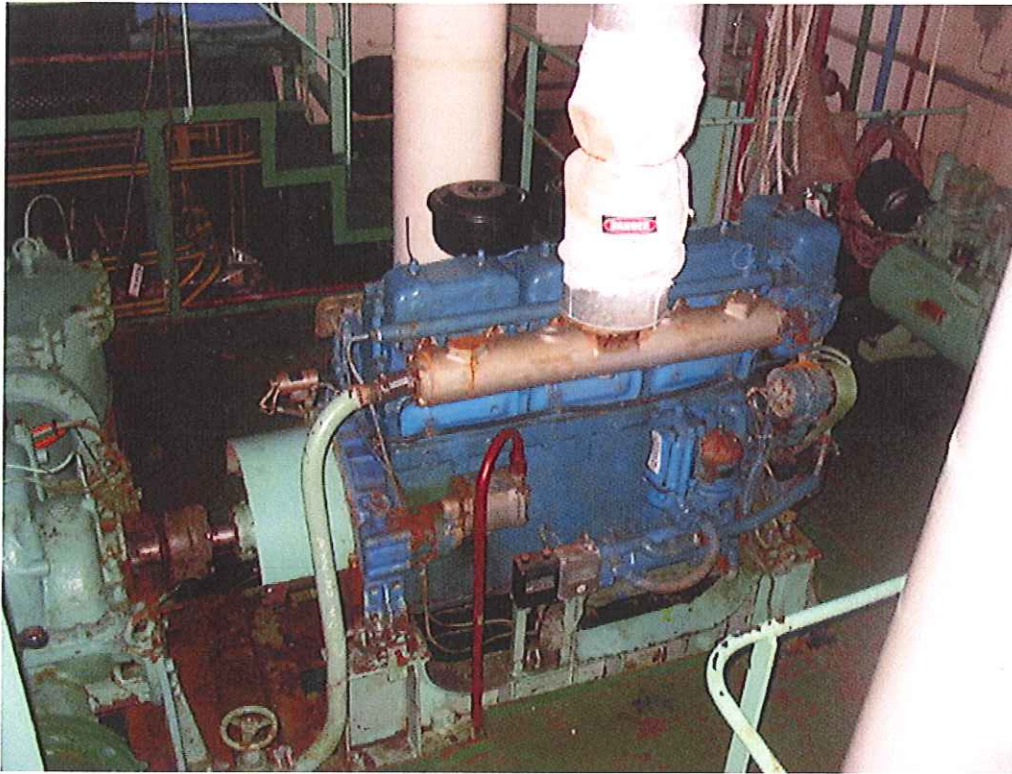


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