

REPORT ON OIL ENGINE MACHINERY.

No. 628

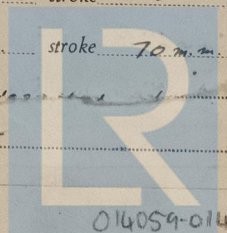
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Date of writing Report 19 When handed in at Local Office 19 Port of Kobe
 Date, First Survey 28th Oct, 1950 Last Survey 10th Nov. 1951
 Number of Visits 66
 Single on the Twin Triple Screw vessel ASO-MARU
 Nagasaki Shipyard & Engine Works
 By whom built West Japan Heavy Industries Ltd. Yard No. 1421 When built 1951.11mo
 234
 Engines made at Nagasaki By whom made Nagasaki Shipyard & Engine Works Engine No. 235 When made 1951.8mo
 Key Boilers made at Nagasaki By whom made Nagasaki Shipyard & Engine Works Boiler No. 1358 When made 1951.8mo
 Net Horse Power 8,400 (Total) Owners Nippon Yusen K. K. Port belonging to Tokyo
 N. Power as per Rule 1,678 (Total) Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 de for which vessel is intended U. S. A.

L ENGINES, &c. — Type of Engines 6HS 72/125 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 45 kg/cm² Diameter of cylinders 720 mm Length of stroke 1,250 mm No. of cylinders 2x6 No. of cranks 2x2
 Indicated Pressure 5.68 kg/cm² Ahead Firing Order in Cylinders 6-1-5-3-4-2 Span of bearings, adjacent to the crank, measured
 inner edge to inner edge 960 mm Is there a bearing between each crank Yes Revolutions per minute 133
 Wheel dia 2,500 mm Weight 4,480 kg Moment of inertia of flywheel (lb-in² or Kg. cm²) 170,000,000 Means of ignition Compression Kind of fuel used Heavy oil
 Crank pin dia 500 mm Crank webs Mid. length breadth 830 mm Thickness parallel to axis 315 mm
 Thrust Shaft, diameter at collars as fitted 500 mm
 Intermediate Shaft, diameter as fitted 335 mm
 Thrust Shaft, diameter at collars as fitted 342.2 mm
 Is the shaft fitted with a continuous liner Yes
 Bronze Liners, thickness in way of bushes as per Rule 18.5 mm Thickness between bushes as per Rule 13.9 mm
 Is the after end of the liner made watertight in the
 of tube shaft Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes
 the liner does not fit tightly at the part between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-
 osive Yes If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after
 of tube shaft If so, state type Length of bearing in Stern Bush next to and supporting propeller 1,450 mm
 Propeller, dia. 4,400 mm Pitch 4,150 mm No. of blades 4 Material Mn. Bronze whether moveable Solid Total developed surface 71.4 sq. feet
 Kind of damper, if fitted
 Method of reversing Engines Hand operation Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of
 cation Forced Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled
 lagged with non-conducting material Yes If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned
 to the engine Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
 ge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work
 nps connected to the Main Bilge Line { No. and size 2x360 mm³/hr., 2x100 mm³/hr., 1x30 mm³/hr.
 How driven Electric motor driven
 be cooling water led to the bilges Yes If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping
 gements
 last Pumps, No. and size 1x160 mm³/hr. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2x270 mm³/hr.
 two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary
 pumps, No. and size:— In machinery spaces 4-90 mm dia., 1x130 mm dia., 1x240 mm dia. In pump room
 olds, &c. No.1-2x80 mm dia., No.2-2x80 mm dia., No.3-2x80 mm dia., No.4-4x80 mm dia. Shaft tunnel-1x130 mm dia., (Cofferdam-2x50 mm dia.)
 pendent Power Pump Direct Suctions to the engine room bilges, No. and size 4x90 mm dia., 1x130 mm dia., 1x240 mm dia.,
 all the bilge suction pipes in holds and tunnel well fitted with strum-boxes Yes Are the bilge suction pipes in the machinery spaces led from easily
 ble mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes
 ll Sea Connections fitted direct on the skin of the Ship Yes with pads Are they fitted with valves or cocks Yes Are they fixed
 ntly high on the ship's side to be seen without lifting the platform plates Yes Are the overboard discharges above or below the deep water line Below
 hey each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate Yes
 pipes pass through the bunkers How are they protected
 pipes pass through the deep tanks Have they been tested as per Rule
 ll pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes
 arrangement of valves and their connections such as to prevent the possibility of water passing from the sea or from water tanks into the cargo or mac
 or from one compartment to another Yes Is the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from 2nd dr
 wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Air Compressors, No. 2 No. of stages 3 diameters 38/120, 38/110, 120 mm stroke 180 mm driven by Main
 iary Air Compressors, No. No. of stages diameters stroke driven
 Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 92/42 mm stroke 70 mm driven
 provision is made for first charging the air receivers Small manual air compress
 ing Air Pumps, No. 6 dia 17 mm
 ary Engines crank 17 mm
 be au



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AIR RECEIVERS:—Have they been made under survey Yes State No. of report or certificate

Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes

Can the internal surfaces of the receivers be examined and cleaned Yes Is a drain fitted at the lowest part of each receiver Yes

Injection Air Receivers, No. — Cubic capacity of each — Internal diameter — thickness —

Seamless, welded or riveted longitudinal joint — Material — Range of tensile strength — Working pressure — by Rules — Actual —

Starting Air Receivers, No. 3 Total cubic capacity 36 m³ Internal diameter 1.800 mm thickness Shell 3.1 mm End 7.5 mm

Seamless, welded or riveted longitudinal joint Riveted Material Boiler quality Range of tensile strength End 26-30 7/8" Working pressure Actual 30 kg by Rules 30 kg

IS A DONKEY BOILER FITTED Yes If so, is a report now forwarded Yes

Is the donkey boiler intended to be used for domestic purposes only And for F.O. tank heating

PLANS. Are approved plans forwarded herewith for shafting 18th July, 1951 Receivers 10th April, 1951 Separate fuel tanks 6th June, 1951

Donkey boilers 27th April, 1951 General pumping arrangements 11th Sep. 1951 Pumping arrangements in machinery space 11th Sep. 1951

Oil fuel burning arrangements 11th Sep. 1951

Have Torsional Vibration characteristics been approved Yes Date of approval 27th Sep. 1951

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes

State the principal additional spare gear supplied

4- Fuel needle valves

5- Sets of piston rings

5- Sets of rubber rings for liner

2- Main bearing bolts & nuts

1- Screw shaft

The foregoing is a correct description,

NAGASAKI SHIPYARD & ENGINE WORKS,
WEST JAPAN HEAVY-INDUSTRIES, LTD.

Dates of Survey while building
During progress of work in shops -- 1950
Oct. 28, Nov. 14, 15, 27, Dec. 13, 14, 1951
Jan. 13, 17, Feb. 28, March 20, 31, May 13, 14, 17, 18, 19, 22, 23, 24, 25, 27, 31, June 18, 11, 15, 20, 21, 22, 25, 26, 27, July 1, 4, 17, 18, 20, 21, 23, 24, 25, 26, 30, 31, Aug. 4, 6, 13, 16, 21, 1951
During erection on board vessel -- 1951
Aug. 24, 27, 29, Sep. 4, 10, 17, 24, 30, Oct. 2, 3, 14, 20, 25, 31, Nov. 3, 6, 10, 1951
Total No. of visits 66

Dates of examination of principal parts—Cylinders 9-7-1951 Covers 19-4-1951 pistons 17-4-1951 Rods — Connecting rods 15-5-1951

Crank shaft 25-4-1951 Flywheel shaft — Thrust shaft 20-6-1951 Intermediate shafts 15-8-1951 Tube shaft —

Screw shaft 15-8-1951 Propeller 15-8-1951 Stern tube 9-8-1951 Engine castings 21-8-1951 Engine holding down bolts 18-9-1951

Completion of fitting sea connections 16-8-1951 Completion of pumping arrangements 30-10-1951 Engines tried under working conditions 31-10-1951

Crank shaft, material Forged steel Identification mark M.S.F. 589, Y-893 Flywheel shaft, material, Identification mark —

Thrust shaft, material Forged steel Identification mark Y-894 Intermediate shafts, material Forged steel Identification marks M.S.F. 492

Tube shaft, material Identification mark — Screw shaft, material Forged steel Identification mark M.S.F. 492

Identification marks on air receivers For Main engine: AR 232-A 13-8-51 15-8-51 23-8-51 For Dynamo engine: AR 234 7-9-51

Welded receivers, state Makers' Name —

Is the flash point of the oil to be used over 150°F Yes

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes

Description of fire extinguishing apparatus fitted Machinery space: 4 water hose couplings of 70 mm dia. 2- Lux RICH openings with reel, 3- portable hydrants, 2 lengths steam smothering pipes

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Yes If so, have the requirements of the Rules been complied with Yes

If the notation for ice strengthening is desired, state whether the requirements in this respect have been complied with —

Is this machinery duplicate of a previous case NO If so, state name of vessel —

General Remarks (State quality of workmanship, opinions as to class, &c.)

These machineries have been constructed under Special Survey in accordance with the Rules, Approved plans and Secretary's

The materials and workmanship are good.

On completion these machineries were installed in the vessel in accordance with the Rules. Afterwards tested under full working condition and eligible in our opinion for classification with the record of
+L.M.C. 11-51, Oil Engine. DB 7Kgs per square cm. T.S.(CL) 11-51.

Entry Fee ... ¥ 863.856.-
Receivers ... ¥ 72.576.-
When applied for 19
When received 19

Engineer Surveyor to Lloyd's Register of Shipping

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