

REPORT ON OIL ENGINE MACHINERY.

No. 628

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Date, First Survey 28th Oct, 1950 Last Survey 10th Nov. 1951

Number of Visits 66

on the Twin Screw vessel ASO-MARU

By whom built Nagasaki Shipyard & Engine Works West Japan Heavy-Industries Ltd. Yard No. 1421 When built 1951.11mo

Engines made at Nagasaki By whom made Nagasaki Shipyard & Engine Works Engine No. 235 When made 1951.8mo

Boilers made at Nagasaki By whom made Nagasaki Shipyard & Engine Works Boiler No. 1358 When made 1951.8mo

Gross Tons 7,576.88 Net Tons 4,312.51

Horse Power 8,400 (Total) Owners Nippon Yusen K. K. Port belonging to Tokyo

Power as per Rule 1,678 (Total) Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Use for which vessel is intended U.S.A.

MAIN 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

Mean 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 on inner edge to inner edge 960 mm Is there a bearing between each crank Yes Revolutions per minute 133

Flywheel dia 2,500 mm Weight 4,480 kg Moment of inertia of flywheel (lbs. m² or Kg. cm²) 170,000,000 Means of ignition Compression Kind of fuel used Heavy oil

Crankshaft, dia. of journals as per Rule 440.4 mm as fitted 500 mm Crank pin dia 500 mm Crank webs Mid. length breadth 830 mm Thickness parallel to axis 315 mm Mid. length thickness 315 mm Thickness around eye-hole 227.5 mm

Propeller Shaft, diameter as per Rule 440.4 mm as fitted 500 mm Intermediate Shaft, diameter as per Rule 325.9 mm as fitted 335 mm Thrust Shaft, diameter at collars as per Rule 342.2 mm as fitted 500 mm

Propeller Shaft, diameter as per Rule 356.5 mm as fitted 370 mm Is the shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 18.5 mm as fitted 22 mm Thickness between bushes as per Rule 13.9 mm as fitted 17 mm Is the after end of the liner made watertight in the after end boss Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Yes

Does 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-corrosive 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 end 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

Moment of inertia of propeller (lbs. m² or Kg. cm²) 378,000,000 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 starting 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

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and size 2x 360 m³/hr., 2x 100 m³/hr., 1x 30 m³/hr. How driven Electric motor driven

Is the 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 arrangements

Oil Pumps, No. and size 1x 160 m³/hr. Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2x 270 m³/hr.

Are 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., 1x 130 mm dia., 1x 240 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-1x 130 mm dia., Cofferdam-2x 50 mm dia.

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 4x 90 mm dia., 1x 130 mm dia., 1x 240 mm dia.

Are 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 accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Yes

All Sea Connections fitted direct on the skin of the Ship Yes with pads Are they fitted with valves or cocks Yes Are they fixed permanently 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

Are they 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

Do the pipes pass through the bunkers How are they protected

Do the pipes pass through the deep tanks Have they been tested as per Rule

Are all pipes, cocks, valves and pumps in connection with the machinery and all boiler mountings accessible at all times Yes

Is the 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 machinery or from one compartment to another Yes Is the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from 2nd deck

For a 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 380/20, 380/310, 120 mm stroke 180 mm driven by Main

Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 92/42 mm stroke 70 mm driven

Is provision is made for first charging the air receivers Small manual air compress

Charging Air Pumps, No. 6 dia. 170 mm

Other Engines crank

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