

REPORT ON OIL ENGINE MACHINERY.

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Date of writing Report 19 When handed in at Local Office 19 Port of Shimonsaki

No. in Survey held at Nagasaki Date, First Survey 11th June 1951 Last Survey 27th February 1953

Reg. Book. Number of Visits 97

Single on the Twin Triple Quadruple motor Screw vessel "ARITA MARU" Tons Gross 7655.50 Net 4287.40

Built at Nagasaki By whom built Nagasaki WKS Mitsubishi Shipbuilding & Engineering Co. Ltd. Yard No. 1430 When built 1953.2 Mo.

Engines made at Nagasaki By whom made Nagasaki WKS Mitsubishi Shipbuilding & Engineering Co. Ltd. Engine No. 248249 When made 1952.11 Mo.

Donkey Boilers made at Nagasaki By whom made Nagasaki WKS Mitsubishi Shipbuilding & Engineering Co. Ltd. Boiler No. 1376 When made 1952.12 Mo.

Brake Horse Power 2 x 4,300 Owners Nippon Yusen Kaisha Port belonging to Tokyo

M.N. Power as per Rule 1720 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended Ocean going

OIL ENGINES, &c. — Type of Engines 6 MS 72/125 3 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 6 per eng No. of cranks 6 per eng

Mean Indicated Pressure 5.77 kg/cm² Ahead Firing Order in Cylinders 6-2-4-3-5-1 Span of bearings, adjacent to the crank, measured from inner edge to inner edge 460 mm Is there a bearing between each crank Yes Revolutions per minute 134

Flywheel dia 2,500 mm Weight 4,480 kgs Moment of inertia of flywheel (lbs. in² or Kg. cm²) 17,000 kgm² Means of ignition Compression Kind of fuel used Heavy oil

Crank Shaft, Solid forged dia. of journals as per Rule 445.9 mm Crank pin dia 500 mm Crank webs Mid. length breadth 830 mm Thickness parallel to axis 315 mm

Semi built dia. as fitted 500 mm Crank webs Mid. length thickness 315 mm Thickness around eyehole 227.5 mm

All built

Flywheel Shaft, diameter as per Rule 500 mm Intermediate Shaft, diameter as per Rule 328 mm Thrust Shaft, diameter at collars as fitted 500 mm

Tube Shaft, diameter as per Rule 358 mm Screw Shaft, diameter as fitted 370 mm Is the tube shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule 18.8 mm Thickness between bushes as fitted 17 mm Is the after end of the liner made watertight in the propeller boss Yes

If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner One length

If 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 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 1,470 mm

Propeller, dia. 4,400 mm Pitch 4,150 mm No. of blades 4 Material Manganese Bronze whether moveable Solid Total developed surface 71.4 sq. feet

Moment of inertia of propeller (lbs. in² or Kg. cm²) 96,400 kg-cm-sec² 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 lubrication Forced Thickness of cylinder liners 25 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Yes lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine (No FW. Cool.)

Cooling Water Pumps, No. 2 S.W. 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. None Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and size 2-360 mm dia, 2-100 mm dia, 1-30 mm dia How driven Electric motor drive

Is the cooling water led to the bilges No If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size 1-160 mm dia, 1-100 mm dia Power Driven Lubricating Oil Pumps, including spare pump, No. and size 2-270 mm dia

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both main bilge pumps and auxiliary bilge pumps, No. and size In machinery spaces 3-90 mm dia, 1-130 mm dia, 1-270 mm dia, 3-50 mm dia In pump room

In holds, Etc. No. 123 Holds 3-80 mm dia, 4-80 mm dia, 4-80 mm dia, 1-80 mm dia, 2-70 mm dia, 2-50 mm dia, 1-50 mm dia, 1-50 mm dia, 2-50 mm dia

Independent Power Pump Direct Suctions to the engine room bilges, No. and size 2-130 mm dia, 1-240 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

Are all Sea Connections fitted direct on the skin of the Ship Yes Are they fitted with valves or cocks Yes Are they fixed sufficiently 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

What pipes pass through the bunkers How are they protected

What pipes pass through the deep tanks Heating coil Have they been tested as per Rule Yes

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 spaces, or from one compartment to another Yes Is the shaft tunnel watertight Yes Is it fitted with a watertight door Yes worked from upper deck

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

Main Air Compressors, No. 2 No. of stages 3 diameters 105, 130, 105 mm stroke 220 mm driven by Dynamo engine

Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 93, 12 mm stroke 10 mm driven by Manual

Small Auxiliary Air Compressors, No. 1 No. of stages 1 diameters 93, 12 mm stroke 10 mm driven by Manual

What provision is made for first charging the air receivers Small auxiliary air compressor described above

scavenging Air Pumps, No. 1 for each working cylinder diameter 600 mm stroke 1,250 mm driven by Main engine

Auxiliary Engines crank shafts, diameter as per Rule 140 mm as fitted 150 mm Position Engine room flat

Have the auxiliary engines been constructed under special survey Yes Is a report sent herewith Yes

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