

# REPORT ON OIL ENGINE MACHINERY.

No. 7716.

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Port of Copenhagen

No. in Survey held at Copenhagen Reg. Book.

Date, First Survey 15<sup>th</sup> August 1927. Last Survey 16<sup>th</sup> May 1928 Number of Visits 45.

Single on the Triple Quadruple Screw vessel

YARD N=146.

Tons Gross Net

Built at Yama, Japan. By whom built Mitsui Bussan Kaisha Yard No. 146 When built

Engines made at Copenhagen By whom made Akt. Burmeister & Wain's Engine No. 1400 When made 1927-28

Donkey Boilers made at By whom made Designated MITSUBI. Boiler No. When made

Brake Horse Power 2100 Owners Port belonging to

Nom. Horse Power as per Rule 473 Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted

Trade for which vessel is intended

**OIL ENGINES, &c.**—Type of Engines Vertical Diesel Oil Engine (Crosshead type) 2 or 4 stroke cycle 4, Single or double acting Single.

Maximum pressure in cylinders 35 kg/cm<sup>2</sup> Diameter of cylinders 630 mm = 24 13/16" Length of stroke 300 mm = 51 3/16" No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 892 mm Is there a bearing between each crank Yes

Revolutions per minute 120 Turning wheel dia. 1902 mm Weight 1160 kg. Means of ignition Air compression Kind of fuel used Bude oil, flash point above 150°F

Crank Shaft, dia. of journals as per Rule 412.6 mm as fitted 414 mm Crank pin dia. 414 mm Crank Webs Mid. length breadth 720 mm Thickness parallel to axis 266 mm Mid. length thickness 266 mm shrunk Thickness around eyehole 193 mm

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collar as per Rule 12.39" as fitted 12 1/2"

Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted Is the tube screw shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the

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

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 the tube shaft Length of Bearing in Stern Bush next to and supporting propeller

Propeller, dia. Pitch No. of blades Material whether Moveable Total Developed Surface sq. feet

Method of reversing Engines Direct reversible Is a governor or other arrangement fitted to prevent racing of the engine when de-clutched Yes Means of lubrication

Thickness of cylinder liners 44 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material Lagged If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine

Cooling Water Pumps, No. 1 off - Centrifugal, 120 tons. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 2 off Diameter of tanks 160 mm Stroke 234 mm Can one be overhauled while the other is at work Yes

Pumps connected to the Main Bilge Line No. and Size How driven

Ballast Pumps, No. and size 1 off; Rotary wing pump, 150 tons Lubricating Oil Pumps, including Spare Pump, No. and size 2 off; Log wheel pumps, 45 tons each.

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

In Holds, &c.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Are the Bilge Suctions 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

Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Are the Overboard Discharges above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate

What pipes pass through the bunkers How are they protected

What 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

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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

If 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. 1 off. No. of stages 3. Diameters 750 - 675 - 150 mm Stroke 440 mm Driven by the main engine.

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. 1 off. No. of stages 2. Diameters 2 1/2" - 1 5/16" Stroke 5" Driven by hand.

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted 170 mm

**AIR RECEIVERS:**—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 Yes What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver Yes I - 225 litres I - 358 mm I - 21 mm

High Pressure Air Receivers, No. I - 2 Spare for main & auxiliary engines. Cubic capacity of each I - 450 " Internal diameter I - 450 " thickness I - 25 " I - 72.2 kg/cm<sup>2</sup>

Seamless, lap welded or riveted longitudinal joint Lap welded Material S.M. Steel. Range of tensile strength 37.2 - 40.5 kg/mm<sup>2</sup> Working pressure by Rules I - 70.3 " "

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness Working pressure by Rules

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



