

REPORT ON OIL ENGINE MACHINERY.

No. 603
10 OCT 1927

Received at London Office

of writing Report 16th Sep. 1927 When handed in at Local Office 16th Sep. 1927 Port of NAGASAKI.
in Survey held at NAGASAKI. Date, First Survey 26th June 1926 Last Survey 30th Aug. 1927.
Book. Number of Visits 127.

Single
on the ~~Triple~~ Screw vessel "OLYMPIA MARU". Tons { Gross 5611.74
Net 3515.60

uilt at Nagasaki. By whom built Mitsubishi Zosen Kaisha, Ltd. Yard No. 428 When built 1927.
Engines made at Nagasaki. By whom made Mitsubishi Zosen Kaisha, Ltd. Engine No. 428 When made 1927.
nkey Boilers made at Annan, Scotland By whom made Cochran & Co (Annan) Ltd., Boiler No. 10178 When made 1926.
ake Horse Power 2300. Owners Mitsubishi Shoji Kaisha, Ltd., Port belonging to Tokio.
m. Horse Power as per Rule 582. Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes.
ade for which vessel is intended North American.

ENGINES, &c. Type of Engines Mitsubishi-Sulzer. 2 or 4 stroke cycle 2 Single or double acting Single.
Maximum pressure in cylinders 43 atm. Diameter of cylinders 600 m/m Length of stroke 1060 m/m No. of cylinders 6 No. of cranks 6
an of bearings, adjacent to the Crank, measured from inner edge to inner edge 810 m/m Is there a bearing between each crank Yes
volutions per minute 112 Flywheel dia. 2100 m/m Weight 10300 kg. Means of ignition Compression Kind of fuel used Heavy Fuel Oil.
rank Shaft, dia. of journals as per Rule 400 m/m Crank pin dia. 405 m/m Crank Webs Mid. length breadth 550 m/m Thickness parallel to axis /
as fitted 405 m/m Mid. length thickness 225 m/m shrunk Thickness around eyehole /
lywheel Shaft, diameter as per Rule 400 m/m Intermediate Shafts, diameter as per Rule 301 m/m Thrust Shaft, diameter at collars as per Rule 316 m/m
as fitted 405 m/m as fitted 12 1/2" as fitted 390 m/m
Tube Shaft, diameter as per Rule / Screw Shaft, diameter as per Rule 331 m/m Is the ~~screw~~ shaft fitted with a continuous liner Yes.
as fitted / as fitted 350.8 m/m
Bronze Liners, thickness in way of bushes as per Rule 17.7 m/m as per rule 13.3 m/m Is the after end of the liner made watertight in the
as fitted 19 m/m Thickness between bushes as fitted 14.8 m/m
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 /
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 No. Length of Bearing in Stern Bush next to and supporting propeller 1410 m/m
Propeller, dia. 14'-3" Pitch 11'-3" No. of blades 4 Material Bronze whether Moveable Yes Total Developed Surface 72 sq. feet
Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication
Forced Thickness of cylinder liners at top 45 m/m Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or 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 back to the engine /
Cooling Water Pumps, No. Two. 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. One Diameter 115 m/m Stroke 140 m/m Can one be overhauled while the other is at work One only
Pumps connected to the Main Bilge Line { No. and Size Three:- One- 200 tons Bilge & Ballast. One- 100 ton Bilge & G.S.
How driven Electric Motors. One- 50 ton Bilge.
Ballast Pumps, No. and size Two Duplex. (One- 200 ton) Lubricating Oil Pumps, including Spare Pump, No. and size 2- 15 cm. per hour.
(One- 100 ton) 1- 2.4 cm. per hour.
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 4 @ 3 1/2". 2 @ 2". 1 @ 2" (No. 1 C.D.). 1 @ 2" (No. 2 C.D.). Tunnel well 1 @ 2 1/2".
In Holds, &c. No. 1 Hold 2 @ 3". No. 2 Hold 2 @ 3 1/2". Deep Tanks 2 @ 6". No. 4 Hold 2 @ 3 1/2".
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One @ 8". 2 @ 5".
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes. 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 Yes.
Are all Sea Connections fitted direct on the skin of the ship Yes. Are they fitted with Valves or Cocks Both.
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 Above
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 / 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 spaces, or from one
compartment to another Yes Is the Shaft Tunnel watertight Yes Is it fitted with a watertight door Yes worked from Top platform
at Bridge deck level.
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. Two No. of stages 3 Diameter 560/510/120 Stroke 350 m/m Driven by Main Engine.
Auxiliary Air Compressors, No. Two No. of stages 3 Diameters 325/290/65 Stroke 180 m/m Driven by Elec. Motor.
Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters 110/35 Stroke 120 m/m Driven by Oil Engine.
Scavenging Air Pumps, No. One- Double. Diameter Rotary- 10,600 Cu. Ft. of air per min. Driven by Elec. Motor.
Auxiliary Engines crank shafts, diameter as per Rule /
as fitted /

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 Handholes.
Is there a drain arrangement fitted at the lowest part of each receiver Yes.
High Pressure Air Receivers, No. One Cubic capacity of each 800 litres. Internal diameter 540 m/m thickness 25 m/m
Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28-35 ton Working pressure by Rules 98.1 kg/sq. cm
Starting Air Receivers, No. One Total cubic capacity 5 c.m. Internal diameter 1200 m/m thickness 11/16" Working pressure by Rules 363.3 lbs.
Seamless, lap welded or riveted longitudinal joint T.R.D.B.S. Material Steel. Range of tensile strength 28-35 ton and 25 to 30 ton.

IS A DONKEY BOILER FITTED? Yes. ✓

If so, is a report now forwarded? Yes. ✓

PLANS. Are approved plans forwarded herewith for Shafting Yes
(If not, state date of approval)

Receivers Yes Separate Tanks Yes

Donkey Boilers No. (Annan Setld.) General Pumping Arrangements Yes.

Oil Fuel Burning Arrangements Yes

SPARE GEAR As per Rules and in addition:- (See separate list). ✓

The foregoing is a correct description,
NAGASAKI WORKS, MITSUBISHI ZOSEN KAISHA, LTD.

General Manager.

Manufacturer.

Dates of Survey while building
During progress of work in shops:- 1926/ June 26. July 6.8.12.20.23. Aug. 2.4.21. Sep. 9.21.29. Oct. 11.23. Nov. 1.4. Dec. 21.24. 1927./ Jan. 13.21.25.26.28.31. Feb. 9.18.22.24.26. Mar. 11.16.18.22.23.25. 31. Apr. 4.7.9.11.13.14.15.19.20.22.28.30. May. 2.3.4.5.6.7.10.13.20.23.24.25.26. 30.31. June 1.2.3.4.6.7.9.10.11.13.14.15.17.18.20.21.23.24.25.27.28.29.30. July 6.7.9.11.12.13.18.19.20.21.26.27. Aug. 1.2.3.5.6.8.9.10.11.12.13.18.19.20.22.26.29.30. Total No. of visits 127.

Dates of Examination of principal parts—Cylinders 25-5-27 Covers 2-5-27 Pistons 13-6-27 Rods 26-5-27 Connecting rods 26-5-27
Crank shaft 12-8-26 (Hakodate) and Thrust shaft 13-7-27. Intermediate shafts 20-5-27 Tube shaft /

Screw shaft 17-6-27 Propeller 9-6-27 Stern tube 15-6-27 Engine seatings 1-7-27 Engines holding down bolts 3-8-27
Completion of fitting sea connections 29-6-27 Completion of pumping arrangements 22-8-27 Engines tried under working conditions 23-8-27

Crank shaft, Material Ingot steel Identification Mark LLOYD'S No. 508 & 509. 2-8-12-8-26. Flywheel shaft, Material Ingot steel Identification Mark LLOYD'S No. 7310. 7051-1288. G.A. 13-12-8-26. See Flywheel Intermediate shafts, Material Ingot steel Identification Mark LLOYD'S No. 7051-1288. 12898. G.A. 20-8-26. 12898. G.A. 17-12-8-26.

Thrust shaft, Material Ingot steel Identification Mark See Flywheel Intermediate shafts, Material Ingot steel Identification Mark LLOYD'S No. 7310. 7051-1288. 12898. G.A. 20-8-26. 12898. G.A. 17-12-8-26.
Tube shaft, Material / Identification Mark / Screw shaft, Material Ingot steel Identification Mark LLOYD'S No. 7310. 7051-1288. 12898. G.A. 20-8-26. 12898. G.A. 17-12-8-26.

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

Is this machinery duplicate of a previous case Yes ✓ If so, state name of vessel "Columbia Maru" Nag. Rpt. No. 1600.

General Remarks (State quality of workmanship, opinions as to class, &c. The machinery has been constructed under Special survey and installed in the vessel in accordance with the Rules and approved plans.

The materials and workmanship are good and the machinery has been examined under working conditions found satisfactory.

The machinery of this vessel is eligible in my opinion to have the record of LMO, 8-27

The amount of Entry Fee ... ¥ 60:00

Special ... ¥ 1561:50

Donkey Boiler Fee ... ¥ 50:00

Air vessel. Travelling Expenses (if any) ¥ 31:50

When applied for,

1. 9. 1927

When received,

17. 9. 1927

Committee's Minute

FRI. 14 OCT 1927

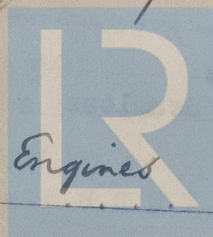
Assigned

+ Rmc 8.27

Oil Engines

DB-100 lb

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