

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY

No. 6621.

23 SEP 1929

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Port of Kobe.

No. in Survey held at Kobe.

Date, First Survey Oct. 5th 1928. Last Survey 15th Aug 1929.

Number of Visits 109.

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel

"HINO MARU"

Tons { Gross 2666.
Net 1604.

Built at Kobe By whom built Mitsubishi Zosen Kaisha. Yard No. 188. When built 1929.
Engines made at Kobe By whom made Mitsubishi Zosen Kaisha. Engine No. 188. When made 1929.
Donkey Boilers made at Kobe By whom made Mitsubishi Zosen Kaisha. Boiler No. 188. When made 1929.
Brake Horse Power 1500. Owners Nippon Shokuen Kaisha Kabushiki Kaisha Port belonging to Sarami.
Nom. Horse Power as per Rule 388 Is Refrigerating Machinery fitted for cargo purposes ☒ Is Electric Light fitted ☒
Trade for which vessel is intended Ocean Going.

MAIN ENGINES, &c.—Type of Engines Mitsubishi-Sulzer. 2 or 4 stroke cycle 2 Single or double acting Single.
Maximum pressure in cylinders 43 Kgs. cm^2 Diameter of cylinders 600 $\frac{1}{2}$ " Length of stroke 1.060 $\frac{1}{2}$ " No. of cylinders Four. No. of cranks Four.
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 850 $\frac{1}{2}$ ". Is there a bearing between each crank ☒ YES.
Revolutions per minute 110 Flywheel dia. 2,100 $\frac{1}{2}$ " Weight 8000 Kgs. Means of ignition Air Compression Kind of fuel used Diesel oil F.P. above 150° F.
Crank Shaft, dia. of journals as per Rule 392 $\frac{1}{2}$ " as fitted 405 $\frac{1}{2}$ " Crank pin dia. 405 $\frac{1}{2}$ " Crank Webs Mid. length breadth 550 $\frac{1}{2}$ " Thickness parallel to axis ☒ YES.
Flywheel Shaft, diameter as per Rule 392 $\frac{1}{2}$ " as fitted 405 $\frac{1}{2}$ " Intermediate Shafts, diameter as per Rule 284 $\frac{1}{2}$ " as fitted 310 $\frac{1}{2}$ " Thrust Shaft, diameter at collars as per Rule 392 $\frac{1}{2}$ " as fitted 405 $\frac{1}{2}$ "
Stern Shaft, diameter as per Rule 292 $\frac{1}{2}$ " as fitted 325 $\frac{1}{2}$ " Is the ☒ shaft fitted with a continuous liner ☒ YES.
Bronze Liners, thickness in way of bushes as per Rule 17 $\frac{1}{2}$ " as fitted 20 $\frac{1}{2}$ " Thickness between bushes as per rule 13 $\frac{1}{2}$ " as fitted 15 $\frac{1}{2}$ ". Is the after end of the liner made watertight in the ☒ YES.
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 ☒ YES.
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 ☒ YES.
If two liners are fitted, is the shaft lapped or protected between the liners ☒ YES. Is an approved Oil Gland or other appliance fitted at the after end of the tube ☒ YES.
If so, state type ☒ YES. Length of Bearing in Stern Bush next to and supporting propeller 1,400 $\frac{1}{2}$ " MET.
Propeller, dia. 4,040 $\frac{1}{2}$ " Pitch 3,430 $\frac{1}{2}$ " No. of blades 4 Material Bronze, whether Moveable ☒ YES. Total Developed Surface 4.80 sq. feet
Method of reversing Engines Direct. Is a governor or other arrangement fitted to prevent racing of the engine when decelerated ☒ YES. Means of lubrication
Feed feed Thickness of cylinder liners 45 $\frac{1}{2}$ ". 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 ☒ YES.
Cooling Water Pumps, No. 2 @ 22 c.m. per hour (PISTON COOLING) 2 @ 60 c.m. per hour JACKET. 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 170 $\frac{1}{2}$ " Stroke 120 $\frac{1}{2}$ ". Can one be overhauled while the other is at work ☒ YES.
Pumps connected to the Main Bilge Line { No. and Size One 70 c.m./h. Bilge. One 70 c.m./h. Bilge & Gen. Service. One 70 c.m./h. Ballast & Bilge.
How driven Electric motors.
Ballast Pumps, No. and size One 70 c.m./h. Lubricating Oil Pumps, including Spare Pump, No. and size 2 @ 1.5 c.m./h. 2 @ 10.5 c.m./h.
Are there 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 One 6". Two 4 $\frac{1}{2}$ ". One 3 $\frac{1}{2}$ ". One 2 $\frac{1}{2}$ ".
In Holds, &c. Two 3 $\frac{1}{2}$ " in fore hold. Two 3 $\frac{1}{2}$ " in after hold.
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 6". Two 4 $\frac{1}{2}$ ".
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes ☒ YES. Are the Bilge Suctions in the Machinery Spaces ☒ 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 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.
How are they protected ☒ YES.
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.
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork ☒ YES.

AIR COMPRESSORS.—Main Air Compressors, No. One. No. of stages 3. Diameters 150 $\frac{1}{2}$ " 570 $\frac{1}{2}$ " Stroke 400 $\frac{1}{2}$ ". Driven by Main Engine.
Auxiliary Air Compressors, No. Two. No. of stages 2. Diameters 40 $\frac{1}{2}$ " 120 $\frac{1}{2}$ " Stroke 130 $\frac{1}{2}$ ". Driven by Electric motors.
Small Auxiliary Air Compressors, No. One. No. of stages 3. Diameters 65 $\frac{1}{2}$ " 325 $\frac{1}{2}$ " Stroke 180 $\frac{1}{2}$ ". Driven by Hot built engine.
Scavenging Air Pumps, No. One. 205 c.m./h. Diameter ☒ YES. Stroke ☒ YES. Driven by Electric motor.
Auxiliary Engines crank shafts, diameter as per Rule 151 $\frac{1}{2}$ " as fitted 165 $\frac{1}{2}$ ".

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 Manholes & covers.
Is there a drain arrangement fitted at the lowest part of each receiver ☒ YES.
High Pressure Air Receivers, No. 5. Cubic capacity of each 800 LITRES. Internal diameter 328 $\frac{1}{2}$ ". Thickness 30 $\frac{1}{2}$ ".
Seamless, lap welded or riveted longitudinal joint ☒ YES. Material O.H.S. Range of tensile strength 28/32 Working pressure by Rules 147 Kgs.
Starting Air Receivers, No. 1. Total cubic capacity 4.80 c.m. Internal diameter 1,200 $\frac{1}{2}$ ". Thickness 1 $\frac{1}{16}$ ".
Seamless, lap welded or riveted longitudinal joint ☒ YES. Material O.H.S. Range of tensile strength 26/30 & 28/32 Working pressure by Rules 437 Kgs.

Water Capacity.
Tons.
61.5
37.15

12 13 18

June 20

Visits 35

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