

Rpt. 4b

REPORT ON OIL ENGINE MACHINERY

No. 5767
25 JUL 1927

Received at London Office

Date of writing Report 10 When handed in at Local Office 10 Port of Kobe
 No. in Survey held at Kobe + Osaka Date, First Survey 5-3-26 Last Survey 18th June 1927
 Reg. Book. Number of Visits 129
 on the Single Screw vessel "CHOKO MARU" Tons Gross 2618.47
Triple Net 1395.43
Quadruple
 Built at Osaka By whom built Osaka Iron Works Yard No. 1095 When built 1927
 Engines made at Kobe By whom made Kobe Steel Works Engine No. 70 When made 1927
 Donkey Boilers made at Annan, Scotland By whom made Cochran Boiler No. 17156 When made 6-26
 Brake Horse Power 2250 Owners Osaka Shosen Kaisha Port belonging to Osaka
 Nom. Horse Power as per Rule 582 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which vessel is intended Japan & North China Passenger & Cargo Service

OIL ENGINES, &c. Type of Engines Sulzer Diesel 2 or 4 stroke cycle 2 Single or double acting Single
 Maximum pressure in cylinders 43 kg/cm² Diameter of cylinders 600 mm Length of stroke 1060 mm No. of cylinders 6 No. of cranks 6
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 840 mm Is there a bearing between each crank Yes
 Revolutions per minute 110 Flywheel dia. 2100 mm Weight 102,000 kg Means of ignition Temp. Due To Compression Kind of fuel used Diesel Oil
 Crank Shaft, dia. of journals as per Rule 400.85 mm Crank pin dia. 405 mm Crank Webs Mid. length breadth 550 mm Thickness parallel to axis shrunk
 as fitted 405.0 Mid. length thickness 225 mm Thickness around eye-hole shrunk
 Flywheel Shaft, diameter as per Rule 400.85 mm Intermediate Shafts, diameter as per Rule 11.94 Thrust Shaft, diameter at collars as per Rule 315.9 mm
 as fitted 405.0 as fitted 12.5 as fitted 390.0
 Tube Shaft, diameter as per Rule 13.92 Is the screw shaft fitted with a continuous liner Yes
 as fitted 13.25
 Bronze Liners, thickness in way of bushes as per Rule 23/32 Thickness between bushes as per rule 1/32 Is the after end of the liner made watertight in the
 as fitted 3/4 as fitted 9/16 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 shaft No Length of Bearing in Stern Bush next to and supporting propeller 4'7"
 Propeller, dia. 13'0" Pitch 13'9" No. of blades 4 Material Bronze whether Moveable Moveable Total Developed Surface 59.7 sq. feet
 Method of reversing Engines Direct Is a governor or other arrangement fitted to prevent racing of the engine Yes Means of lubrication
FORCED Thickness of cylinder liners 45/20 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 back to the engine Yes
 Cooling Water Pumps, No. 2 Rotary Jacket Cooling Pumps Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes
2 Reciprocating Piston
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 100 mm Stroke 100 mm Can one be overhauled while the other is at work Yes
 Pumps connected to the Main Bilge Line { No. and Size ONE - 50 Ton/HR Bilge } ONE - 100 Ton/HR Ballast } ONE - GENERAL SERVICE - 100 Ton/HR } J.C.M. PUMP ENERGY
 How driven ELECTRIC MOTOR } ELECTRIC MOTOR } ELECTRIC MOTOR } ELECTRIC MOTOR
 Ballast Pumps, No. and size ONE, 100 TONS / PR HOUR Lubricating Oil Pumps, including Spare Pump, No. and size 2 1 INSDIG TYPE (HEADS ONLY)
 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 2, 3" DIA FORW^d 2, 3" DIA: AFT. 1, 2 1/4" DIA: DOWNTON PUMP SUCTION, 2 IN BUNKER 2 3/4" DIA (JEIS)
 In Holds, &c. FOR^d 1 @ 2" DIA: TO COFF. DAM 2 @ 3 1/2" DIA: (Boiler Rm @ 2 1/2" DIA) AFT - 4 @ 3" DIA: 1 @ 2 1/2" TO COFF. DAM & 1 @ 2 1/2" DIA TUNNEL WELL.
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 @ 6" DIA: 1 @ 5" DIA: 2 @ 4" DIA:
 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 BILGE & BALLAST SUCTIONS How are they protected STRONG WOOD CASINGS
 What pipes pass through the deep tanks 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 DE LEVEL
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes
Main Air Compressors, No. 2 No. of stages 3 Diameters 120 x 510 x 560 mm Stroke 350 mm Driven by MAIN SHAFT
Auxiliary Air Compressors, No. 1 No. of stages 3 Diameters 65 x 300 x 325 mm Stroke 180 mm Driven by ELECTRIC MOTOR
Small Auxiliary Air Compressors, No. 1 No. of stages 2 Diameters 35 x 110 mm Stroke 120 mm Driven by JAT BULO ENGINE
Scavenging Air Pumps, No. 1 BROWN-ROVERI TURBO-BLOWER of 11200 cu ft/min. Driven by ELECTRIC MOTOR
Auxiliary Engines crank shafts, diameter as per Rule M.A.N TYPE. SEE BREMEN CERTIFICATE DATED 26-5-27; 1-6-26 &
 as fitted 24-6-26 ENGINES NOS 27650, 27652 & 277650

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 HOLES: 10 5/8" DIAM TOP & BOTTOM
 Is there a drain arrangement fitted at the lowest part of each receiver Yes
High Pressure Air Receivers, No. 8 Cubic capacity of each 800 LITRES Internal diameter 150 SEE DUSSELDORF CERTIFICATE of 31/6/26
1 (INJECTION) NO 96134 thickness 1 1/2" " SHEFFIELD " 23/1/25
 Seamless, lap welded or riveted longitudinal joint Material STEEL Range of tensile strength 25/32 Working pressure by Rules 4 1/2
Starting Air Receivers, No. 1 Total cubic capacity 176 cu ft Internal diameter 3' 1 1/2" thickness 7/8"
 Seamless, lap welded or riveted longitudinal joint RIVETTED Material STEEL Range of tensile strength 25/32 Working pressure by Rules 4 1/2
STARTING AIR RECEIVER of 200 LITRES CAPACITY for AUX ENGINES SEE BREMEN CERTIFICATE of 12/7/26 N° 298/2
 W1331-0052

ad a List of

kuwib

35.84 ft.

if not give

Water Capacity.

Tons.

24.15 FN

12.10 FN.

75.4 FN.

27

63

sits

Wholesale

retail

Lloyd's Register
 2021
 SEE DUSSELDORF CERTIFICATE of 31/6/26
 W1331-0052

IS A DONKEY BOILER FITTED? **YES**

NO **SEE TOBE LETTERS OF RECEIVERS** 7/10/26

If so, is a report now forwarded? **NO SEE GLASGOW RPT N° 45785**

PLANS. Are approved plans forwarded herewith for Shafting (If not, state date of approval) 14/10/26

Separate Tanks

Donkey Boilers

General Pumping Arrangements 5/1/26

Oil Fuel Burning Arrangements

SPARE GEAR

See attached list

The foregoing is a correct description **OKAKA IRON WORKS, LTD.,**

Manufacturer.

Dates of Survey while building: During progress of work in shops - from 5/3/26 to 13/2/27 Total visits 109. During erection on board vessel - FROM APRIL 9TH TO JUNE 18TH 1927. Total visits 20. Total No. of visits 129.

Dates of Examination of principal parts: Crank shaft 2-12-26, Flywheel shaft 23-12-26, Thrust shaft 23-12-26, Intermediate shafts 13-7-26, Tube shaft 13-7-26, Pistons 29-12-26, Rods 29-12-26, Connecting rods 22-1-27, Engines holding down bolts 22-4-27, Engines tried under working conditions 30-5-27, Completion of fitting sea connections 2-4-27, Completion of pumping arrangements 30-5-27, Crank shaft, Material F.S., Identification Mark N° 559, Flywheel shaft, Material F.S., Identification Mark N° 561, Intermediate shafts, Material F.S., Identification Marks N° 561, 14-12-26, Screw shaft, Material F.S., Identification Mark N° 561, 14-12-26, Tube shaft, Material F.S., Identification Mark N° 561, 14-12-26.

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 **"CHOAN MARU" (Kakina N° 723)**

General Remarks (State quality of workmanship, opinions as to class, &c.) The machinery of this vessel has been constructed under special survey in accordance with the Rules & approved plans, all materials have been tested, found efficient, & the workmanship throughout is good. This machinery has been efficiently installed on board & tried under full working conditions with satisfactory results. This case is eligible in my opinion to have the Record of + L.M.C. 6-27 in the Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 6.27. CL. Oil Engines 2 SC.SA. 582 NH. 6 Cy. 23 5/8" - 4 1/4" DB 100 lb.

J.W.D. 25/7/27. J. McCrean & H. Buchanan, Engineer Surveyor to Lloyd's Register of Shipping.

Certificate (if required) to be sent to the Surveyors are requested not to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £63. Special ... £1250. Donkey Boiler Fee ... £327. Travelling Expenses (if any) ... SEE HULL RPT.

Committee's Minute Assigned

+ L.M.C. 6:27 Cl. Oil Engines D.B. 100 lb.