

## REPORT ON OIL ENGINE MACHINERY.

No. 5359

Received at London Office 28 AUG 1926

Date of writing Report 9-7-1926 When handed in at Local Office

Port of Kobe

No. in Survey held at Marina.

Date, First Survey 8-5-26

Last Survey 9-7-1926

Reg. Book. on the <sup>Single</sup>~~Triple~~ Screw vessels

SHELL MARU.

Number of Visits

Tons { Gross 134.03  
Net 69.38

Built at Marina By whom built Kobe Steel Works Harima Dockyard Yard No. 121 When built 1926

Engines made at Amsterdam By whom made H.V. Kromhout Haffken Sabich Engine No. 3607 When made 1926

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

Brake Horse Power 100 Owners Empire Shipping Co. Port belonging to Kobe

Nom. Horse Power as per Rule 29 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

OIL ENGINES, &amp;c.—Type of Engines KROMHOUT HEAVY OIL. 2 or 4 stroke cycle 2 Single or double acting Single

Maximum pressure in cylinders No. of cylinders Diameter of cylinders No. of cranks Length of stroke

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge See also Amsterdam Report + Certificate dated 18-3-26 Is there a bearing between each crank

Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eye-hole

Flywheel Shafts, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted Thrust Shaft, diameter at collars as per Rule as fitted

Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 3.63" 4.5" Is the <sup>tube</sup>~~screw~~ shaft fitted with a continuous liner Yes

Bronze Liners, thickness in way of bushes as per Rule as fitted 1 3/16" 1 1/4" 3/8" 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

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 1' 6 1/2"

Propeller, dia. 3' 1 1/2" Pitch 3' 3" No. of blades 4 Material Bronze whether Moveable No Total Developed Surface 6 sq. feet

Method of reversing Engines clutch Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material Both If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine 40 main mast

Cooling Water Pumps, No. 1 Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yes

Bilge Pumps fitted to the Main Engines, No. 1 Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size 1 - 2" Suction  
How driven main engine

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Pumps, No. and size:—In Engine 1-2" Suction 6 main engine pumps 1-2" Suction 6 Portable Hand pumps

In Holds, &amp;c. { 1-2" Suction 6 main engine pumps { 1-2" Suction 6 main engine pumps { 1-2" Suction 6 main engine pumps { 1-2" Suction 6 main engine pumps

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 1 as above.

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

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges Level with floor.

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

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

What pipes pass through the bunks How are they protected

What pipes pass through the <sup>O.F.</sup>~~deck~~ tanks Bilge Suction 6 hold. 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

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 No Is the Shaft Tunnel watertight Is it fitted with a watertight door Yes 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. No. of stages Diameters Stroke Driven by

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

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

Scavenging Air Pumps, No. Diameter Stroke Driven by

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

Can the internal surfaces of the receivers be examined What means are provided for cleaning their inner surfaces

Is there a drain arrangement fitted at the lowest part of each receiver

High Pressure Air Receivers, No. See Amsterdam Report + Certificate dated 18-3-26 thickness (Rpt No 10149)

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

Starting Air Receivers, No. Total cubic capacity Internal diameter thickness

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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

HYDRAULIC TESTS:-

DESCRIPTION.	DATE OF TEST.	WORKING PRESSURE.	TEST PRESSURE.	STAMPED.	REMARKS.
ENGINE CYLINDERS .....					
"    "    COVERS .....					
"    "    JACKETS.....					
"    PISTON WATER PASSAGES.....	See also Amsterdam Report + certificate dated 18/3/26.				
MAIN COMPRESSORS—1st STAGE.....					
"    2nd " .....					
"    3rd " .....					
AIR RECEIVERS-STARTING .....					
"    INJECTION .....					
AIR PIPES .....					
FUEL PIPES .....					
FUEL PUMPS .....					
SILENCER .....					
"    WATER JACKET .....					
SEPARATE FUEL TANKS .....					

PLANS. Are approved plans forwarded herewith for Shafting No. *See Kaku letter 23.4.26* Receivers *✓* Separate Tanks *✓*  
(If not, state date of approval)  
Donkey Boilers *✓* General Pumping Arrangements No. *See Kaku letter 23.4.26* Oil Fuel Burning Arrangements *✓*

SPARE GEAR 1 cylinder cone (complete)

12 piston rings

1 gudgeon pin

1 set crank + main bearing brasses (each)

1 complete fuel pump.

4 fuel valves + 2 nozzles.

1 air valve

2 Ignition plates

2 Governor springs

2 sets each cooling + help + pump valves + seats

26 crank Brass bolts

2 main bearing - do -  
No of springs etc.

The foregoing is a correct description.

Dates of Survey while building  
During progress of work in shops - -  
During erection on board vessel - -  
Total No. of visits 12.

7.8.12.17.21 of May, 4.9.11.16.24 of June, 3.9. of July

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods  
Crank shaft Flywheel shaft Thrust shaft Intermediate shafts Tube shaft  
Screw shaft { 8.5.26 9.6.26 Propeller 9.6.26 Stern tube 21.5.26 Engine seatings 9.6.26 Engines holding down bolts 24.6.26  
Completion of fitting sea connections 12.6.26 Completion of pumping arrangements 3.7.26 Engines tried under working conditions 3.7.26  
Crank shaft, Material Identification Mark Flywheel shaft, Material Identification Mark  
Thrust shaft, Material Identification Mark Intermediate shafts, Material Identification Marks  
Tube shaft, Material Identification Mark Screw shaft, Material Steel Identification Mark No 877. 9.6.26.  
Is the flash point of the oil to be used over 150° F. Yes

Is this machinery duplicate of a previous case No If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery of this ship has been efficiently installed on board in accordance with the requirements of the Rules, Section 35 of the Rules, and the materials + workmanship are found good.

The machinery has been tried under working conditions at full power, + found satisfactory and is eligible in my opinion to have the notation + LMC 7/26

It is submitted that  
this vessel is eligible for  
THE RECORD. + LMC 7. 26. CL.  
Oil Engines, 2 SC. SA. 23 HP.  
2 Cy 11 13/16 - 12 3/16"

The amount of Entry Fee ... £ : When applied for,  
Special *See Hull Report* : : 19.  
Donkey Boiler Fee ... £ : :  
Travelling Expenses (if any) £ : : 19.

Committee's Minute

31. 3 SEP 1926

Assigned

+ LMC 7. 26

Oil Eng cl

