

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 25 APR 1928

Date of writing Report 19 When handed in at Local Office 27 April 1928 Port of Belfast
 No. in Survey held at Belfast Date, First Survey 28 Nov. 1927 Last Survey 25 April 1928
 Reg. Book. on the STEEL TWIN SC. "HOUBERG" (Number of Visits 31)
 Built at Belfast By whom built Harland & Wolff Ltd. Yard No. 834 Tons } Gross
 Engines made at Glasgow By whom made Harland & Wolff Ltd. Engine No. 834 When built 1928 } Net
 Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 834 when made 1928
 Registered Horse Power Owners Lagan Shipping Co. Ltd. (A. Weir & Co. Mgrs.) Port belonging to London
 Nom. Horse Power as per Rule 196 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes
 Trade for which Vessel is intended Ocean-going

ENGINES, &c.—Description of Engines

Dia. of Cylinders Length of Stroke No. of Cylinders Revs. per minute 125
 Crank shaft, dia. of journals as per Rule Length of Stroke No. of Cranks
 as fitted Crank pin dia. Crank webs Mid. length breadth Thickness parallel to axis
 as fitted Crank webs Mid. length thickness shrunk Thickness around eye-hole
 Intermediate Shafts, diameter as per Rule Thrust shaft, diameter at collars as per Rule
 as fitted as fitted
 Tube Shafts, diameter as per Rule Screw Shaft, diameter as per Rule Is the tube shaft fitted with a continuous liner
 as fitted as fitted
 Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the
 as fitted as fitted 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 Length of Bearing in Stern Bush next to and supporting propeller 36"
 Propeller, dia. Pitch No. of Blades Material whether Movable Total Developed Surface sq. feet
 Feed Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work
 Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work
 Feed Pumps { No. and size Two 8 1/2" x 6" x 15" ✓ Pumps connected to the { No. and size Two 9" x 10" x 24" 8 1/2" x 6" x 13" ✓
 { How driven Steam Main Bilge Line { How driven Steam
 Ballast Pumps, No. and size One 9" x 10" x 24" ✓ Lubricating Oil Pumps, including Spare Pump, No. and size ✓
 Are two independent means arranged for circulating water through the Oil Cooler ✓
 Bilge Pumps;—In Engine and Boiler Room Forward 1-2 1/2" Aft 1-3 1/2" (2-2 1/2" in C.R. Cofferdam to O.F. Pump) ✓
 In Holds, &c. (Connected to pump in Cargo Pump Room - Forward Pump room 1-2; No. 1 Buoyancy Spaces 2-2 1/2"; No. 2 Buoyancy
 Spaces 2-2 1/2"; No. 3 Buoyancy Spaces 2-2 1/2"; After Cofferdam Frames 41 & 45 One 2 1/2") ✓
 Main Water Circulating Pump Direct Bilge Suctions, No. and size Two 4" ✓ Independent Power Pump Direct Suctions to the Engine Room Bilges,
 No. and size One 3 3/4" 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 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 stokehold 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 None ✓ How are they protected ✓
 What pipes pass through the deep tanks None ✓ 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 None Is it fitted with a watertight door worked from ✓

MAIN BOILERS, &c.—(Letter for record 5 ✓) Total Heating Surface of Boilers 3702 sq. ft. ✓
 Is Forced Draft fitted No. No. and Description of Boilers Two S.E. Cyl. 150" Working Pressure 180 lbs. ✓
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes ✓
 IS A DONKEY BOILER FITTED? No. If so, is a report now forwarded? ✓
 PLANS. Are approved plans forwarded herewith for Shafting ✓ Main Boilers 7.11.27 Auxiliary Boilers ✓ Donkey Boilers ✓
 Superheaters (If not state date of approval) General Pumping Arrangements 23.11.27 Oil fuel Burning Piping Arrangements 23.11.27
 SPARE GEAR. State the articles supplied:— See Attached List.

The foregoing is a correct description,
of HARLAND AND WOLFF, LIMITED.

A. J. Marshall
Assistant Secretary. Manufacturer.



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Lloyd's Register
Foundation

1927
 Nov 28 Dec 6. 8. 9. 13. 14. 22
 1928
 Jan 6. 13. 20. 24. 30 Feb 1. 3. 13. 17. 21
 During progress of work in shops - - 23. 28. 29 Mar 1. 2. 21. 22. 26 Apr 2. 4. 12. 16. 20. 25
 Dates of Survey while building }
 During erection on board vessel - - - }
 Total No. of visits 31

Dates of Examination of principal parts—Cylinders Slides Covers
 Pistons Piston Rods Connecting rods
 Crank shaft Thrust shaft Intermediate shafts
 Tube shaft Screw shaft Propellers 28. 2. 28.
 Stern tube Engine and boiler seatings 26. 3. 28 Engines holding down bolts 16. 4. 28
 Completion of fitting sea connections 26. 3. 28
 Completion of pumping arrangements 20. 4. 28 Boilers fixed 16. 4. 28 Engines tried under steam 25. 4. 28
 Main boiler safety valves adjusted 20. 4. 28 Thickness of adjusting washers PORT BOILER P 5/16" S 3/8" STARBOARD BOILER P 3/8" S 1/2"
 Crank shaft material Identification Mark Thrust shaft material Identification Mark
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
 Screw shaft, material Identification Mark Steam Pipes, material S.D. Copper Test pressure 360 lb Date of Test 4. 4. 28
 Is an installation fitted for burning oil fuel YES Is the flash point of the oil to be used over 150°F. YES
 Have the requirements of the Rules for carrying and burning oil fuel been complied with YES
 Is this machinery duplicate of a previous case YES If so, state name of vessel "LAGUNILLA Co"

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel was constructed under Special Survey see Glasgow report No. 47772.
 It has been efficiently installed and fastened on board and tried out under working conditions.
 The oil fuel lines have been tested in accordance with the rules. In my opinion the vessel
 is now eligible for notation in the Society's Register Book
 -|- L.M.C. 4. 28 C.L. FITTED FOR OIL FUEL 4. 28. F.P. ABOVE 150°F.

It is submitted that
 this vessel is eligible for
 THE RECORD. 4. 28 C.L.
 Fitted for oil fuel 4. 28. F.P. above 150°F.
 J.A.
 1/5/28.

The amount of Entry Fee T.A.P. GLASGOW : When applied for,
 Special ... £ 29 : 8 : 27th April 1928
 Donkey Boiler Fee ... £ — : — :
 Travelling Expenses (if any) £ — : — : 21. 5. 28

R. Lee Ames.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 4 MAY 1928
 Assigned L + L.M.C. 4. 28 C.L.
 Fitted for oil fuel, 4. 28 F.P. above 150°F.



The Surveyors are requested not to write on or below the space for Committee's Minute.

Date of writing to
 No. in Reg. Book.
 on the
 Master
 Engines made at
 Boilers made at
 Nominal Horse
 MULTITUDE
 Manufacturers of
 Total Heating S
 o. and Descrip
 ested by hydran
 rea of Firegra
 rea of each set
 a case of donkey
 smallest distance
 smallest distance
 largest internal
 thickness 1 3/8
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 percentage of str
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 At body of
 or
 Over throu
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 At turned o
 Over throu