

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 30 SEP 1927

Writing Report 78th Sept 1927 When handed in at Local Office 29th Sept 1927 Port of Belfast

Survey held at Belfast Date, First Survey 25th April 1927 Last Survey 23rd Sept 1927
 (Number of Visits 4-8)

Book. 165 on the STEEL TW. SC. "ORANVESTAD"

at Belfast By whom built Harland & Wolff Ltd. Yard No. 809 When built 1927

Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 809 when made 1927

Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 809 when made 1927

Registered Horse Power LAGO SHIPPING CO. A. WEIR & CO. Port belonging to LONDON

Horse Power as per Rule 196 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Use for which Vessel is intended Ocean going

DETAILS OF ENGINES, &c.—Description of Engines Two screw inverted triple expansion Revs. per minute 125

of Cylinders 13 1/2" - 23 1/2" - 36" Length of Stroke 27" No. of Cylinders 6 No. of Cranks 6

Crk shaft, dia. of journals as per Rule 7 3/8" as fitted 7 3/8" Crank pin dia. 7 3/8" Crank webs Mid. length breadth 1 1/2" Thickness parallel to axis 1 1/8"

as fitted 7 3/8" Mid. length thickness 4 3/8" shrunk Thickness around eye-hole 3 3/8"

Intermediate Shafts, diameter as per Rule 6.858" Thrust shaft, diameter at collars as per Rule 7 3/8" as fitted 7 3/8"

Propeller Shafts, diameter as per Rule 7 3/4" as fitted 7 3/4" Is the tube shaft fitted with a continuous liner Yes

Liner thickness in way of bushes as per Rule 5/8" as fitted 5/8" Thickness between bushes as per Rule 3/4" as fitted 5/8" Is the after end of the liner made watertight in the collar 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

Does the liner do 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

When no 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 36"

Propeller, dia. 9'0" Pitch 9'6" No. of Blades 4 Material Manilla whether Moveable No Total Developed Surface each 28 sq. feet

Working Pumps worked from the Main Engines, No. 2 Diameter 2 1/4" Stroke 13 1/2" Can one be overhauled while the other is at work Yes

Emergency Pumps worked from the Main Engines, No. 2 Diameter 2 1/4" Stroke 13 1/2" Can one be overhauled while the other is at work Yes

Other 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 15" }
 How driven STEAM Main Bilge Line How driven STEAM

Emergency Pumps, No. and size One 9" x 10" x 24" Lubricating Oil Pumps, including Spare Pump, No. and size NONE

Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary Pumps;—In Engine and Boiler Room FORWARD 1-2 1/2" AFT 1-3 1/2" (2-2 1/2" IN E.R. COFFERDAM TO O.F. PUMPS)

Holds, &c. (CONNECTED TO PUMP IN CARGO TUMP ROOM) FORWARD PUMP ROOM 1-2" No. 1 BUOYANCY SPACES 2-2 1/2" No. 2 BUOYANCY SPACES 2-2 1/2"

3 BUOYANCY SPACES 2-2 1/2" AFTER COFFERDAM FRAMES 4 TO 45 1-2 1/2")

Water Circulating Pump Direct Bilge Suctions, No. and size Two 4" Independent Power Pump Direct Suctions to the Engine Room Bilges, and size One 3 3/4" Are all the Bilge Suction Pipes in holds and ~~well~~ 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

How are they protected None 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 Yes

MAIN BOILERS, &c.—(Letter for record S.) Total Heating Surface of Boilers 3702 sq. ft.

Forced Draft fitted No No. and Description of Boilers Two Single-end Cyl. Multi? Working Pressure 180 lb.

IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes

IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting Yes Main Boilers 13:4:27 Auxiliary Boilers Yes Donkey Boilers Yes

(If not state date of approval)

Superheaters Yes General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements Yes

SPARE GEAR. State the articles supplied:—Two TOP END BOLTS & NUTS: TWO BOTTOM END BOLTS & NUTS: TWO MAIN BEARING BOLTS: ONE SET OF COUPLING BOLTS: ONE SET OF PACKING BOLTS FOR H.P. & I.P. PISTONS: ONE SET OF VALVES FOR EACH DONKEY PUMP: TWO SETS OF VALVES FOR FEED, BILGE, AIR AND CIRCULATING PUMPS: ONE TOP END BUSH: ONE BOTTOM END BUSH: TWO ECCENTRIC STRAPS: ONE PAIR OF PUMP LINK BRASSES OF EACH SIZE: ONE BUCKET, ROD & NUT FOR AIR PUMP: ONE BUCKET, ROD & NUT FOR CIRCULATING PUMP: ONE SET OF SAFETY VALVE SPRINGS: ONE SCREW SHAFT: TWO CAST IRON PROPELLERS: 24 CONDENSER TUBES: ONE SET OF ESCAPE VALVE SPRINGS: ONE SET OF VALVE LIDS FOR BOILER VALVES: TWO OIL FUEL BURNERS: 18 TIPS: ONE SUCTION AND ONE DELIVERY FILTER BASKET

ASSORTED BOLTS, NUTS AND IRON Yes

The foregoing is a correct description,
 For HARLAND AND WOLFF, LIMITED,

P. Tebbeck

Manufacturer.



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W203-0246

1927
 April 25 May 9-10-16-20-24-25-31 June 7-9-10-16-20-23-24-25-27-28
 29 July 5-8 Aug. 1-8-10-11-12-15-16-17-18-19-22-24-26-29-30-31
 Sept 2-5-6-8 9-12-13-19-20-22-23
 Dates of Survey while building
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits 48

Dates of Examination of principal parts - Cylinders 17.8.27 19.8.27 Slides 29.8.27 Covers 19.8.27
 Pistons 15.8.27 Piston Rods 11.8.27 Connecting rods 16.8.27
 Crank shaft 1.8.27 9.8.27 Thrust shaft 9.8.27 1.8.27 Intermediate shafts
 Tube shaft Screw shaft 24.8.27 Propeller 24.8.27
 Stern tubes 22.8.27 24.8.27 Engine and boiler seatings 31.8.27 Engines holding down bolts 13.9.27
 Completion of fitting sea connections 31.8.27 Engines tried under steam 22.9.27
 Completion of pumping arrangements 27.9.27 Boilers fixed 13.9.27
 Main boiler safety valves adjusted 27.9.27 Thickness of adjusting washers Pat Boilers 1 1/2" S 3/16" Standard Rivets P 5 3/16"
 Crank shaft material S.M. INGOT STEEL Identification Mark No. 7 R.L.A. Thrust shaft material S.M. INGOT STEEL Identification Mark No. 7 R.L.A.
 Intermediate shafts, material Identification Marks Tube shaft, material Identification Mark
 Screw shaft, material S.M. STEEL Identification Mark No. 7 R.L.A. Steam Pipes, material S.P. COPPER Test pressure 360 LBS. Date of Test 16.8.27
 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 "SAN CARLOS" No.

General Remarks (State quality of workmanship, opinions as to class, &c.)
 The machinery of this vessel has been constructed under special survey. The materials and workmanship sound and good. It has been efficiently installed on board the vessel. The main and auxiliary engines have been tried under steam. The oil fuel pipe lines have been tested in accordance with the rules. The controls of the oil fuel lines are capable of being operated as required by the rules. In my opinion the machinery of this vessel is eligible for notation in the Society's Register. Boilers fitted for oil fuel 9.27 F.P. above 150°F.

It is submitted that this vessel is eligible for THE RECORD. + L.M.C. 9.27. CL. Fitted for oil fuel 9.27. F.P. above 150°F.

JWD
 30/9/27

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

The amount of Entry Fee ... £ 2 : - :
 Special ... £ 49 : - :
 Donkey Boiler Fee ... £ : - :
 Travelling Expenses (if any) £ : - :
 When applied for, 29 Sept 1927
 When received, 15.10.1927

Committee's Minute TUES. 4 OCT 1927

Assigned + L.M.C. 9:27 CL. Fitted for Oil fuel 9:27 F.P. above 150°F



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