

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report Mar 15th 1928 When handed in at Local Office Mar 15th 1928 Port of GLASGOW
 No. in Survey held at Troon Date, First Survey 14. 10. 27 Last Survey Mar 9th 1928
 Reg. Book. on the SS. GRONINGEN (Number of Visits 23)
 Built at Troon By whom built Ailsa S.B. Co Ltd Yard No. 403 Tons 1205
 Engines made at Troon By whom made Ailsa S.B. Co Ltd Engine No. 138 when made 1928
 Boilers made at Glasgow By whom made Barclay Curle & Co Ltd Boiler No. A 6 when made 1928
 Registered Horse Power 302 Owners General Steam Nav. Co Ltd Port belonging to London
 Nom. Horse Power as per Rule 302 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which Vessel is intended

ENGINES, &c.—Description of Engines Triple Expansion Revs. per minute 100
 Dia. of Cylinders 21" 34" 56" Length of Stroke 36" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals 11.01" as per Rule 11.01" Crank pin dia. 11.8" Crank webs 1'-9" Mid. length breadth 4" Thickness parallel to axis 4.16"
 Intermediate Shafts, diameter 10.49" as per Rule 10.49" Thrust shaft, diameter at collars 11.01" as per Rule 11.01"
 Tube Shafts, diameter 11.54" as per Rule 11.54" Is the tube shaft fitted with a continuous liner? Yes
 Screw Shaft, diameter 11.8" as per Rule 11.8"
 Bronze Liners, thickness in way of bushes 3.65" as per Rule 3.65" Thickness between bushes 4.84" as per Rule 4.84" 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 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 No Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft Yes
 Length of Bearing in Stern Bush next to and supporting propeller 3'-11 1/2"
 Propeller, dia. 13'-3" Pitch 14'-9" No. of Blades 4 Material Brass whether Moveable No Total Developed Surface 58 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 3 1/2" Stroke 18" Can one be overhauled while the other is at work Yes
 Feed Pumps { No. and size (2) 6" x 8 1/2" x 18" Pumps connected to the { No. and size 2. 4" x 4" x 5" & 6" x 6" x 6"
 How driven Steam Main Bilge Line How driven Steam
 Ballast Pumps, No. and size 1 @ 4" x 4" x 4" 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;—In Engine and Boiler Room Three @ 2 1/2"
 In Holds, &c. Nº1 Hold, 2 @ 2 1/2" Nº2 Hold 2 @ 2 1/2" Nº3 2 @ 2 1/2" Tunnel Well 1 @ 2 1/2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 6" **Independent Power Pump Direct Suctions to the Engine Room Bilges,**
 No. and size 1 @ 3 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 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 Below
 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 For Bilge How are they protected Wood covering
 What pipes pass through the deep tanks — 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

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 5480 sq. ft.
 Is Forced Draft fitted No No. and Description of Boilers Two S.E. Marine Working Pressure 200 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 Yes Auxiliary Boilers — Donkey Boilers —
 (If not state date of approval)
 Superheaters — General Pumping Arrangements — Oil fuel Burning Piping Arrangements —

SPARE GEAR. State the articles supplied:— Two connecting rod top end bolts and nuts
two bottom end bolts and nuts. Two main bearing bolts. One set of coupling
bolts. One set of feed and bilge pump valves. A quantity of assorted bolts
and nuts and iron of various sizes

The foregoing is a correct description,
 FOR AILSA SHIPBUILDING CO., LIMITED.

J. Menaghon
 ENGINEER MANAGER

Manufacturer.



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Lloyd's Register
 Foundation

005462-005469-0105

1927 Oct 14-24 Nov 1-8-18-25-29 Dec 1-8-12-16-20-22-28-30 (1928) Jan 6-10-20 Feb 2-22 Mar 2-7-9
 During progress of work in shops - -
 During erection on board vessel - - -
 Total No. of visits **23**

Dates of Examination of principal parts—Cylinders 1-12-24 Slides 8-12-24 Covers 1-12-24
 Pistons 8-12-24 Piston Rods 16-12-24 Connecting rods 12-12-24
 Crank shaft 18-11-24 Thrust shaft 18-11-24 Intermediate shafts 18-11-24
 Tube shaft 7-8-24 Screw shaft 20-12-24 Propeller 8-12-24
 Stern tube 8-12-24 Engine and boiler seatings 10-1-28 Engines holding down bolts 2-2-28
 Completion of fitting sea connections 28-12-24
 Completion of pumping arrangements 4-3-28 Boilers fixed 2-2-28 Engines tried under steam 9-3-28
 Main boiler safety valves adjusted 2-3-28 Thickness of adjusting washers SBFV ¹⁷/₃₂ SBAY ¹⁴/₃₂ PBFV ⁹/₁₆ PBAV ¹/₂
 Crank shaft material S Identification Mark

N^o 4884
DCB
18-11-27

 Thrust shaft material S Identification Mark

N^o 204
DCB
18-11-27

 Intermediate shafts, material S Identification Marks

N^o 204 210 4909
DCB
18-11-27

 Tube shaft, material — Identification Mark
 Screw shaft, material S Identification Mark

N^o 204
DCB
20-12-27

 Steam Pipes, material Copper Test pressure 400 lbs Date of Test 22-2-28
 Is an installation fitted for burning oil fuel No Is the flash point of the oil to be used over 150°F.
 Have the requirements of the Rules for the use of oil as fuel been complied with
 Is the vessel (not being an oil tanker) fitted for carrying oil as cargo If so, have the requirements of the Rules been complied with
 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 engines have been constructed under Special Survey in accordance with the Rules of the Society. The workmanship and materials are of good quality. The engines and boilers have been securely fitted on board and tried under steam with satisfactory results. It is submitted that this vessel is eligible for a record of **LMC 3-28**.

It is submitted that this vessel is eligible for THE RECORD. **LMC 3-28** C.L.

J.S.A.
 22/3/28
 J.P.

15/3/28

GLASGOW

Certificate to be sent to the Secretary of the Committee for Committee's Minute.

The amount of Entry Fee ... £ 5 : 0 :
 3/5 of Special ... £ 42 : 3 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ 4 : 5 :
 When applied for, **15 MAR 1928**
 When received, **21/3/28**

David C Barr.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 20 MAR 1928**

Assigned **+ LMC 3,28**

CERTIFICATE WRITTEN.