

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office 17 JUN 1936

Date of writing Report 19 When handed in at Local Office 13. 6. 36 Port of Glasgow
 No. in Survey held at Troon Date, First Survey 9-12-35 Last Survey 12th June 1936
 Reg. Book. on the S.S. "THE EARL" (Number of Vents 18) (Gross 926 Tons Net 481)
 Built at Troon By whom built Messrs Ailsa S. B. Co. Ltd Yard No. 422 When built 1936
 Engines made at Troon By whom made do. Engine No. 157 When made 1936
 Boilers made at Glasgow By whom made David Rowan & Co. Ltd Boiler No. 416 When made 1936
 Registered Horse Power 71.08 Owners J. Hay & Sons Ltd Port belonging to Glasgow
 Nom. Horse Power as per Rule 112 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes
 Trade for which Vessel is intended Coasting

ENGINES, &c.—Description of Engines Steam Triple expansion reciprocating Revs. per minute 89
 Dia. of Cylinders 13 1/2"-22 1/2"-38" Length of Stroke 30" No. of Cylinders 3 No. of Cranks 3
 Crank shaft, dia. of journals as per Rule 7.965" as fitted 8.125" Crank pin dia. 8.125" Crank webs Mid. length breadth 15 1/2" Thickness parallel to axis 5" Thickness around eye-hole 3 9/16"
 Intermediate Shafts, diameter as per Rule 7.586" as fitted none Thrust shaft, diameter at collars as per Rule 7.965" as fitted 8.125"
 Tube Shafts, diameter as per Rule 8.544" as fitted 8.75" Is the screw shaft fitted with a continuous liner? Yes
 Bronze Liners, thickness in way of bushes as per Rule .556" as fitted .563" Thickness between bushes as per Rule .417" as fitted .438" 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? Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft? Yes If so, state type Cast iron Length of Bearing in Stern Bush next to and supporting propeller 35"
 Propeller, dia. 11' 6" Pitch 13'-3" No. of Blades 4 Material Cast iron whether Moveable No Total Developed Surface 45.7 sq. feet
 Feed Pumps worked from the Main Engines, No. 2 Diameter 2 5/8" Stroke 15" Can one be overhauled while the other is at work? Yes
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 2 5/8" Stroke 15" Can one be overhauled while the other is at work? Yes
 Feed Pumps No. and size 1 @ 6 1/2" x 4 1/4" x 6" How driven Steam Pumps connected to the Main Bilge Line No. and size 1 @ 7" x 8" x 8" How driven Steam
 Ballast Pumps, No. and size 2 @ 7" x 8" x 8" + 6 1/2" x 4 1/4" x 6" Lubricating Oil Pumps, including Spare Pump, No. and size 2
 Are two independent means arranged for circulating water through the Oil Cooler? Yes
 Bilge Pumps;—In Engine and Boiler Room 1. 2 1/4" Engine room aft. 2. 2 1/4" Boiler room
 In Pump Room In Holds, &c. 2. 3" Hold.

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 @ 4" **Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size** 1 @ 3"
 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? Hold Bilges How are they protected? Wood covered
 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? None Is it fitted with a watertight door? Yes worked from? Yes

MAIN BOILERS, &c.—(Letter for record 5) Total Heating Surface of Boilers 1930 sq. ft.
 Is Forced Draft fitted? No No. and Description of Boilers One Single ended Cylinder Working Pressure 215 lb.
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Please see Glasgow report No. 56746
 IS A DONKEY BOILER FITTED? No If so, is a report now forwarded? Yes
 Is the donkey boiler intended to be used for domestic purposes only? Yes

PLANS. Are approved plans forwarded herewith for Shafting 25-10-35 Main Boilers? Yes Auxiliary Boilers? Yes Donkey Boilers? Yes
 Superheaters? Yes General Pumping Arrangements? Yes Oil fuel Burning Piping Arrangements? Yes

SPARE GEAR.

Has the spare gear required by the Rules been supplied? Yes.
 State the principal additional spare gear supplied: 1. Propeller, 1 set of air and circulating pump valves, 6 condenser tubes, 1 eccentric strap, 4 Boiler tubes, 1 safety valve spring, 1 set Boiler feed check valves, 1 set junk ring bolts, 1 set Piston rod and valve spindle metallic packing

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

J. McManishton
ENGINEER MANAGER

Manufacturer.



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During progress of work in shops - - 1935 Dec. 9 (1936) Jan. 9 20 Feb. 3 18 21 Mar. 6 13 27 31 Apr. 17 29 May: 11 25 28 June 8 11 12

Dates of Survey while building During erection on board vessel - - -

Total No. of visits 18

Dates of Examination of principal parts—Cylinders 13.3.36 31.3.36 Slides 13.3.36 Covers 13.3.36 31.3.36

Pistons 13.3.36 Piston Rods 13.3.36 Connecting rods 13.3.36

Crank shaft 13.3.36 Thrust shaft 31.3.36 Intermediate shafts none

Tube shaft none Screw shaft 31.3.36 Propeller 11-5.36

Stern tube 11-5.36 Engine and boiler seatings 21-2.36 Engines holding down bolts 28-5.36

Completion of fitting sea connections 11-5.36

Completion of pumping arrangements 8-6.36 Boilers fixed 25-5.36 Engines tried under steam 12.6.36

Main boiler safety valves adjusted 8.6.36 Thickness of adjusting washers Port 3/8" Starb 7/16"

Crank shaft material steel Identification Mark 2290 13.3.36 G.E.M. Thrust shaft material steel Identification Mark 2368 31.3.36 G.E.M.

Intermediate shafts, material none Identification Marks Tube shaft, material none Identification Mark

Screw shaft, material steel Identification Mark 31.3.36 G.E.M. Steam Pipes, material Copper Test pressure 450 lbs. Date of Test 29-4.36

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 NO. If so, have the requirements of the Rules been complied with ✓

If the notation for Ice Strengthening is desired, state whether the requirements in this respect have been complied with NO.

Is this machinery duplicate of a previous case YES. If so, state name of vessel S.S. THE PRESIDENT.

General Remarks (State quality of workmanship, opinions as to class, &c. These engines have been built under Special Survey in accordance with the Rules and approved plans. The materials and workmanship are good. They have been properly fitted on board, tried under full working condition and found satisfactory, and eligible in my opinion for the record in the Register Book of + L.M.C. 6-36.

13/6/36

Certificate to be sent to Glasgow

The amount of Entry Fee ... £ 3. 0. 0: When applied for, 15/6/1936

Special ... 3/5. £ 16. 16. 0: When received, 2/7

Donkey Boiler Fee ... £ : ✓ :

Travelling Expenses (if any) £ / 15. 0: 1-7 36

G. E. Murdoch.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 16 JUN 1936

Assigned + L.M.C. 6.36.



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