

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Port of **Glasgow** 18 MAY 1932
 Date, First Survey 31-8-31 Last Survey 3-5-1932
 (Number of Visits 58)
 Tons { Gross 607
 Net 226
 Date, First Survey 31-8-31 Last Survey 3-5-1932
 on the new steel S/S "ROYAL IRIS II."
 Built at **Glasgow** By whom built **Harland & Wolff Ltd** Yard No. **918 G** When built **1932**
 Engines made at **Glasgow** By whom made **D & W. Henderson & Co. Ltd** Engine No. **918 G** when made **1932**
 Boilers made at **Glasgow** By whom made **D & W. Henderson & Co. Ltd** Boiler No. **918 G** when made **1932**
 Registered Horse Power **185** Owners **Mayor, Aldermen & Burgesses of the Borough of Wallasey** Port belonging to **Liverpool**
 Is Refrigerating Machinery fitted for cargo purposes **no** Is Electric Light fitted **yes**
 For which Vessel is intended **Mersey Ferry**

ENGINES, &c.—Description of Engines **Twin Triple expansion** Revs. per minute **140**
 No. of Cylinders **6** No. of Cranks **6**
 Length of Stroke **24"** Mid. length breadth **13 5/8"** Thickness parallel to axis **5"**
 Crank pin dia. **7 1/4"** Crank webs **5"** shrunk Thickness around eye-hole **3 3/16"**
 Intermediate Shafts, diameter as per Rule **6.882"** Thrust shaft, diameter at collars as per Rule **7.226"**
 as fitted **6 15/16"** as fitted **7 1/4"**
 Shafts, diameter as per Rule **7.81"** Is the tube shaft fitted with a continuous liner **no**
 as fitted **8 1/2" in tube** Is the screw shaft fitted with a continuous liner **no**
 Liners, thickness in way of bushes as per Rule **9 1/2" bearings** Is the after end of the liner made watertight in the stern tube **no**
 as fitted **none** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner **no**
 Is an approved Oil Gland or other appliance fitted at the after end of the stern tube **no**
 Length of Bearing in Stern Bush next to and supporting propeller **48"**
 Pitch **11'0"** No. of Blades **4** Material **Bronze** whether Moveable **no** Total Developed Surface **19.5** sq. feet
 Pumps worked from the Main Engines, No. **none** Diameter **-** Stroke **-** Can one be overhauled while the other is at work **-**
 Pumps worked from the Main Engines, No. **none** Diameter **-** Stroke **-** Can one be overhauled while the other is at work **-**
 No. and size **2, 8'-6" x 15" (Halls)** Pumps connected to the Main Bilge Line (No. and size **Gen service single 8'-6" x 15". Sanitary, single 5'-4" x 12"**)
 How driven **Steam** How driven **Steam**
 independent means arranged for circulating water through the Oil Cooler **no** Suctions, connected to both Main Bilge Pumps and Auxiliary Pumps, No. and size **Engine room - 1 @ 2 1/2". Boiler room - 3 @ 2 1/2".**
 In Engine and Boiler Room **Forward - 2 @ 2".**

Water Circulating Pump Direct Bilge Suctions, No. and size **1 @ 6"** Independent Power Pump Direct Suctions to the Engine Room Bilges, size **1 @ 2 1/2"** Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes **yes**
 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**
 Sea Connections fitted direct on the skin of the ship **yes** Are they fitted with Valves or Cocks **both**
 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**
 each fitted with a Discharge Valve always accessible on the plating of the vessel **all valves in inner shell** 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**
 Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times **yes**
 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 **no** Is it fitted with a watertight door **no** worked from **-**

BOILERS, &c.—(Letter for record **S**) Total Heating Surface of Boilers **3171 sq ft**
 Draft fitted **no** No. and Description of Boilers **Three SB** Working Pressure **200**

REPORT ON MAIN BOILERS NOW FORWARDED? **yes**
 DONKEY BOILER FITTED? **no** If so, is a report now forwarded? **-**

Are approved plans forwarded herewith for Shafting **yes** Main Boilers **yes** Auxiliary Boilers **-** Donkey Boilers **-**
 (If not state date of approval)
 General Pumping Arrangements **yes** Oil fuel Burning Piping Arrangements **-**

GEAR. State the articles supplied:— **as per Rules and in addition, 1 eccentric complete, pair bottom end brasses, one air pump bucket, 2 sets of US packing for piston and valve spindles.**

The foregoing is a correct description,
 DAVID & WILLIAM HENDERSON & CO., LIMITED.

T. Patiel Director

Manufacturer.



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1931 Aug 31 Oct: 22 Nov: 4 9 11 16 17 20 26 27 30 Dec: 2 7 10 11 14 16 21 23 24 (19
 During progress of work in shops - - - Jan: 12 13 19 22 26 27 Feb: 1 2 3 4 11 15 19 21 23 26 29 Mar: 1 4 8 9 10 11 14 15 25
 Dates of Survey while building During erection on board vessel - - - Apr: 1 4 6 7 8 11 14 18 28 29 May: 3
 Total No. of visits 58

Dates of Examination of principal parts—Cylinders 12-1-32 Slides 11-2-32 Covers 22-1-32
 Pistons 26-1-32 Piston Rods 19-2-32 Connecting rods 13-1-32
 Crank shaft Thrust shaft 1-2-32 Intermediate shafts 23-2-32
 Tube shaft Screw shaft 23-2-32 Propellers 19-2-32
 Stern tube P26-2-32 S1-3-32 Engine and boiler seatings 9-3-32 Engines holding down bolts 4-4-32
 Completion of fitting sea connections 9-3-32 Boilers fixed 14-4-32 Engines tried under steam 3-5-32
 Completion of pumping arrangements 18-4-32 Thickness of adjusting washers 14-4-32
 Main boiler safety valves adjusted 29-4-32 Thrust shaft material J. Steel Identification Mark
 Crank shaft material J. Steel Identification Mark
 Intermediate shafts, material J. Steel Identification Marks
 Screw shaft, material J. Steel Identification Mark
 Steam Pipes, material steel Test pressure 600 Date of Test 4-4-32

Is the flash point of the oil to be used over 150°F. -
 Is an installation fitted for burning oil fuel no
 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 -
 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 materials and workmanship are good.
 The machinery has been constructed under Special Survey in accordance with the Rules, satisfactorily fitted in the vessel, tried under steam and found good. It is eligible in my opinion for Classification and the Record LMC 5.32 - Subject to the fore and after peak valves being made non-return. This has since been done at Singapore a letter 12-5-32.
 The vessel has left for Seawoods where it is stated the fore and after peak valves will be made non return. Liverpool Surveyors advised.

A.S.
 9/5/32

GLASGOW

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

The amount of Entry Fee ... £ 3 : :
 Special ... £ 46 : 5 : :
 Donkey Boiler Fee ... £ : : :
 Travelling Expenses (if any) £ : : :
 When applied for, 13 5 1932
 When received, 28/5/1932

S. Davis.
 Engineer Surveyor to Lloyd's Register of Ships

FRI. 3 JUN 1932

Committee's Minute GLASGOW 17 MAY 1932

Assigned + LMC 5.32.
 CERTIFICATE WRITTEN.



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