

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

20 MAR 1935

Date of survey Report 8. 3 35 which was made in at Local Office 16<sup>th</sup> MARCH 1935. Port of Greenock

No. in Survey held at Greenock Date, First Survey 23<sup>rd</sup> APRIL 1934 Last Survey 14<sup>th</sup> MARCH 1935  
 Reg. Book. 315 DARCOLM (Number of Visits 104) Tons { Gross 4296.53.  
 Net 2163.34.

Built at Greenock By whom built Wm. Hamilton & Co. Ltd. Yard No. 409 When built 1935  
 Engines made at Greenock By whom made John Kincaid & Co. Ltd. Engine No. 660 When made 1935  
 Boilers made at ditto By whom made ditto Boiler No. 660 When made 1935  
 Registered Horse Power Owners Hearns Shipping Co. Ltd. Port belonging to Greenock  
 Nom. Horse Power as per Rule 436 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes  
 Trade for which Vessel is intended 476 with Foreign

**ENGINES, &c.**—Description of Engines Triple Expansion Revs. per minute 65  
 Dia. of Cylinders 25"-38"-70" Length of Stroke 48" No. of Cylinders 3 No. of Cranks 3  
 Crank shaft, dia. of journals as per Rule 13.707 Crank pin dia. 13 3/4" Crank webs shrunk Thickness parallel to axis 8 1/2"  
 Intermediate Shafts, diameter as per Rule 13.06 Thrust shaft, diameter at collars as per Rule 13.707  
 Tube Shafts, diameter as per Rule 14.5 Screw Shaft, diameter as per Rule 14 3/4" Is the lube shaft fitted with a continuous liner Yes  
 Bronze Liners, thickness in way of bushes as per Rule 3/4" Thickness between bushes as per Rule 5/8" 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 No If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 59"  
 Propeller, dia. 17 1/2" Pitch 17.9" No. of Blades 4 Material Brass whether Movable No Total Developed Surface 100 sq. feet  
 Feed Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 2 1/2" Can one be overhauled while the other is at work Yes  
 Bilge Pumps worked from the Main Engines, No. 2 Diameter 4" Stroke 2 1/2" Can one be overhauled while the other is at work Yes  
 Feed Pumps { No. and size one 8 1/2" x 8" (Duplex) Pumps connected to the { No. and size one 9 1/2" x 10"  
 How driven Steam Main Bilge Line { How driven Steam  
 Ballast Pumps, No. and size one 9 1/2" x 10" Lubricating Oil Pumps, including Spare Pump, No. and size one 9 1/2" x 10"  
 Are two independent means arranged for circulating water through the Oil Cooler Yes Suctions, connected to both Main Bilge Pumps and Auxiliary  
 Bilge Pumps;—In Engine and Boiler Room Sal. 3" Tunnel Well. 1-2 1/2" In Holds, &c. No. 2. 2 1/4" No. 3. 2 1/2" No. 4. 2 3/4"  
 In Pump Room No. 5. 2. 2 1/4"  
 Main Water Circulating Pump Direct Bilge Suctions, No. and size one 8" Independent Power Pump Direct Suctions to the Engine Room Bilges,  
 No. and size Yes 4 1/2" (one) 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 & 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 None How are they protected None  
 What pipes pass through the deep tanks 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 VER Platform

**MAIN BOILERS, &c.**—(Letter for record 3) Total Heating Surface of Boilers 4895 sq. ft. Working Pressure 200  
 Is Forced Draft fitted No No. and Description of Boilers 3 Single Ended  
 IS A REPORT ON MAIN BOILERS NOW FORWARDED? Yes  
 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 Yes Main Boilers Yes Auxiliary Boilers — Donkey Boilers —  
 (If not state date of approval) 11-1-29 General Pumping Arrangements Yes Oil fuel Burning Piping Arrangements —  
 Superheaters — SPARE GEAR.  
 Has the spare gear required by the Rules been supplied Yes  
 State the principal additional spare gear supplied one cast Iron Propeller

The foregoing is a correct description,  
 For JOHN G. KINCAID & CO. LIMITED.

Director. Manufacturer.



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Lloyd's Register  
 Foundation  
 W146-0042



During progress of work in shops - - (1929) April 27-29, May 13-14, 20-22, 24-28, June 13, July 11-15, 18, Aug 11-22, Sept 11, Oct 18-21, Nov 1-15, 25, Dec 2-5 (1930) Feb 3-24, Mar 5-10, 12, 14, 20-31, April 1-7, May 5-7, 21-22, June 1-10, 14, 24-26, 30, July 25-30, Aug 1, Oct 22-28, 30, Nov 1-4 (1931) Feb 12, Mar 19-24, 31, April 6-8, 15-21, May 5-25, Oct 1-3, Nov 13-26 (1932) Jan 8, Mar 11, April 25, Aug 19, Oct 24 (1933) May 1, Dec 1 (1934) Feb 28, Nov 24-28, Dec 4-5, 11, 13, 19, 27 (1935) Jan 8-9, 11-14, 16-17, 23-25, 28-31, Feb 5-4, 12, 13-15, 16, 18, 20-22, 27-28, Mar 1-4, 5-4, 8-11, 12, 14.

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

Total No. of visits 104.

Dates of Examination of principal parts - Cylinders 5- 3- 30 Slides 25- 7- 30 Covers 5- 3- 30  
 Pistons 23- 1- 35 Piston Rods 23- 1- 35 Connecting rods 31- 3- 30  
 Crank shaft 31- 1- 35 Thrust shaft 14- 1- 35 Intermediate shafts 14- 1- 35  
 Tube shaft ✓ Screw shaft 31- 1- 35 Propeller 31- 1- 35  
 Stern tube 4- 12- 34 Engine and boiler seatings 23- 1- 35 Engines holding down bolts 7- 3- 35  
 Completion of fitting sea connections 23- 1- 35  
 Completion of pumping arrangements 7- 3- 35 Boilers fixed 20- 2- 35 Engines tried under steam 14- 3- 35  
 Main boiler safety valves adjusted 12- 3- 35 Thickness of adjusting washers PV 3/8 SV 7/16 Port Y 7/16 Star V 3/8 PV 3/8 SV 7/16  
 Crank shaft material S Identification Mark LR 660 WGM Thrust shaft material S Identification Mark LR 1803 WGM  
 Intermediate shafts, material S Identification Marks 1822, 1803 WGM Tube shaft, material - Identification Mark -  
 Screw shaft, material S Identification Mark LR 1803 WGM Steam Pipes, material S Test pressure 600 Date of Test 16.2.35  
 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 -  
 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. These Engines & Boilers have been built under special survey in accordance with the approved plan & the workmanship & material are of good quality. They have now been securely fitted on board, also the Rowan-Hotchkiss Turbo Compressor designated No TC 154. Tried under working conditions & found satisfactory.  
 The machinery is eligible in my opinion for the record of L.M.C. 3-35

The Surveyors are requested to write on or below the space for Committee's Minute.

The amount of Entry Fee ... £ 5 -  
 Special ... £ 90 -  
 Fitting & alterations ... £ 4 -  
 Travelling Expenses (if any) £ :  
 Committee's Minute GLASGOW 19 MAR 1935  
 Assigned T.M.C. 3, 35.  
 T.S. (C.L.)

When applied for, 17th MARCH 1935.  
 When received, 19.3.35

W. Gordon-Mucliss  
 Engineer Surveyor to Lloyd's Register of Shipping.

Is a Report also sent on the Hull of the Ship? If not, state whether, and when, one will be sent.