

## REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Date of writing Report 19 When handed in at Local Office 29-6-1927 Port of Belfast Received at London Office 30 JUN 1927 21 SEP 1927

No. in Survey held at Belfast Date, First Survey 12 March Last Survey 27 June 1927  
Reg. Book. T/E Tug Lahey (Number of Visits 2)

Built at Greenock By whom built Harland & Wolff Ltd. Yard No. 796 GK When built 1927  
Engines made at Belfast By whom made Harland & Wolff Ltd. Engine No. 796 GK when made 1927  
Boilers made at Belfast By whom made Harland & Wolff Ltd. Boiler No. 796 GK when made 1927  
Registered Horse Power Owners P & O. Steam Nav Co. Ltd. Port belonging to Aden  
Nom. Horse Power as per Rule 175 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yes  
Trade for which Vessel is intended Ocean-going

ENGINES, &c.—Description of Engines Inverted triple expansion twin screw Revs. per minute 120  
Dia. of Cylinders 13 1/2" 23 1/2" 36" Length of Stroke 27" No. of Cylinders Six No. of Cranks Six  
Crank shaft, dia. of journals as per Rule 7.19" Crank pin dia. 7 3/8" Crank webs Mid. length breadth 14 1/2" Thickness parallel to axis 4 1/8"  
as fitted 7 3/8" Mid. length thickness 4 1/2" shrunk Thickness around eye-hole 3 3/8"  
Intermediate Shafts, diameter as per Rule 6.85" Thrust shaft, diameter at collars as per Rule 7.19"  
as fitted 7 3/8"  
Tube Shafts, diameter as per Rule as fitted Screw Shaft, diameter as per Rule 7.64"  
as fitted 7 3/8" Is the tube screw shaft fitted with a continuous liner Yes  
Bronze Liners, thickness in way of bushes as per Rule 5.27" Thickness between bushes as per Rule 5.395"  
as fitted 5 3/8" 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  
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  
If two liners are fitted, is the shaft lapped or protected between the liners Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No  
Propeller, dia. 9'-6" Pitch 10'-6" No. of Blades 3 Material Pump blades whether Movable Yes Total Developed Surface 35 sq. feet  
Feed Pumps worked from the Main Engines, No. None Diameter Stroke Can one be overhauled while the other is at work  
Bilge Pumps worked from the Main Engines, No. None Diameter Stroke Can one be overhauled while the other is at work  
Feed Pumps { No. and size Two 8 1/2" x 6" x 18" Pumps connected to the { No. and size Two 5 1/2" x 6" x 15" 6 1/2" x 7" x 15"  
How driven Steam Main Bilge Line How driven Steam  
Ballast Pumps, No. and size One 6 1/2" x 7" x 15" Lubricating Oil Pumps, including Spare Pump, No. and size  
Are two independent means arranged for circulating water through the Oil Cooler  
Bilge Pumps;—In Engine and Boiler Room Forward 1-2" Affli well 1-2" Suctions, connected to both Main Bilge Pumps and Auxiliary (Oil filters 4-1 1/2" to O.F. pumps)  
In Holds, &c. Forward in lower stow 1-2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size One 6" Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size One 2 1/2"  
Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes  
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  
Are all Sea Connections fitted direct on the skin of the ship Are they fitted with Valves or Cocks  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the Overboard Discharges above or below the deep water line  
Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Are the Blow Off Cocks fitted with a spigot and brass covering plate  
What Pipes pass through the bunkers How are they protected  
What pipes pass through the deep tanks Have they been tested as per Rule  
Are all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times  
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 Is the Shaft Tunnel watertight Is it fitted with a watertight door worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2470 sq. ft.  
Is Forced Draft fitted Yes No. and Description of Boilers Two P.B. cyl. Mult. Working Pressure 180 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 Yes Oil fuel Burning Piping Arrangements

SPARE GEAR. State the articles supplied:—

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

E. Hebbel

Manufacturer.



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Lloyd's Register  
Foundation

003581-003590-0300



1927  
During progress of work in shops -- { Mar 22 Apr 11, 22 May 2, 4, 10, 11, 17, 15 June 1, 3, 6, 7, 10, 13, 14, 22  
22, 23, 25, 27 = 21  
Dates of Survey while building {  
During erection on board vessel -- {  
Total No. of visits

Dates of Examination of principal parts—Cylinders 4.5.27 + 17.5.27 Slides 1.6.27 Covers 17.5.27  
Pistons 1.6.27 Piston Rods 6.6.27 Connecting rods 17.5.27  
Crank shafts 18.5.27 Thrust shafts { 18.5.27 Intermediate shafts ✓  
Tube shaft ✓ Screw shafts 22.6.27 Propellers 21.6.27  
Stern tubes 22.6.27 Engine and boiler seatings Engines holding down bolts  
Completion of fitting sea connections  
Completion of pumping arrangements Boilers fixed Engines tried under steam  
Main boiler safety valves adjusted Thickness of adjusting washers  
Crank shaft material ON Engr Steel Identification Mark 5410D R.L.A. Thrust shaft material ON Engr Steel Identification Mark 5410D R.L.A.  
Intermediate shafts, material ✓ Identification Marks ✓ Tube shaft, material Identification Mark ✓  
Screw shaft, material ON Engr Steel Identification Mark 5410D R.L.A. Steam Pipes, material Test pressure Date of Test  
Is an installation fitted for burning oil fuel Is the flash point of the oil to be used over 150°F.  
Have the requirements of the Rules for carrying and burning oil fuel 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.)  
This machinery has been constructed under special survey, the materials and workmanship are sound and good. It is eligible, in my opinion for installation on a classed vessel. It has been shipped to Greenwich.

The amount of Entry Fee ... £ 3 : — : When applied for,  
Special ... £ 43. : 15 : 29-6-1927  
charged at Belfast 4 fee £ 35 : 0 :  
Donkey Boiler Fee  
Travelling Expenses (if any) £ : : When received,  
8th August 1927

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

Committee's Minute GLASGOW 20 SEP 1927

Assigned See G.R.K. Rpt. No. 18762