

REPORT ON OIL ENGINE MACHINERY.

No. 10,401

26 JUN 1930

Received at London Office

When handed in at Local Office 25th June 1930 Port of Belfast
Date, First Survey 24th Sept. 1929 Last Survey 18th June 1930
Number of Visits 108

Survey held at BELFAST
on the Silvercypress Screw vessel Tons Gross
at BELFAST By whom built HARLAND AND WOLFF LTD. Yard No. 882 When built 1930
Engines made at BELFAST By whom made HARLAND AND WOLFF LTD Engine No. 882 When made 1930
Key Boilers made at ANNAN AND LINCOLN By whom made COCHRAN & CO. ANNAN, LTD BARCOCK & WILCOX, LD. Boilers Nos. 11547-11548
Horse Power 6600 Owners SILVER LINE LD (STANLEY & JOHN THOMPSON LD. AGENTS.) Port belonging to LONDON.
Horse Power as per Rule 979 Is Refrigerating Machinery fitted for cargo purposes YES Is Electric Light fitted YES.
Use for which vessel is intended Ocean going. 29 1/8" - 59 1/8"

ENGINES, &c.—Type of Engines Harland + Wolff. B.T.M. with pressure main drive or 4 stroke cycle H Single or double acting Single
Maximum pressure in cylinders 650 lbs. sq. in. Diameter of cylinders 740 mm. Length of stroke 1500 mm. No. of cylinders 12 No. of cranks 12
No. of bearings, adjacent to the Crank, measured from inner edge to inner edge 1004 mm. Is there a bearing between each crank YES
Revolutions per minute 110 Flywheel dia. 2.489 metres Weight 2,400 Kgs. Means of ignition Compression Kind of fuel used diesel oil
Crank Shaft, dia. of journals as per Rule approved Crank pin dia. 515 bored 230 mm. Crank Webs Mid. length breadth 860 mm. Thickness parallel to axis 320 mm.
Wheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule approved Thrust Shaft, diameter at collars as per Rule approved
Main Shaft, diameter as per Rule Screw Shaft, diameter as per Rule approved Is the shaft fitted with a continuous liner YES
Liner Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule Is the after end of the liner made watertight in the hull 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 YES
Length of Bearing in Stern Bush next to and supporting propeller 70"

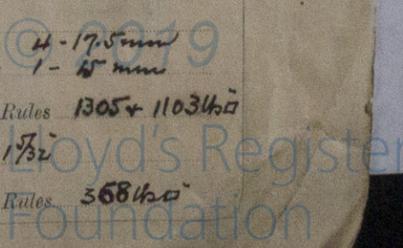
Propeller, dia. 16'-0" Pitch 15'-3" No. of blades three Material Man. Bx whether Moveable YES Total Developed Surface each 56 sq. feet
Method of reversing Engines direct engine Is a governor or other arrangement fitted to prevent racing of the engine when disengaged YES Means of lubrication oil
Thickness of cylinder liners 53 mm. Are the cylinders fitted with safety valves YES Are the exhaust pipes and silencers water cooled or lagged with non-conducting material YES
If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine to funnel
Boiling Water Pumps, No. TWO VERT. CENT. 8" BORE Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES
Large Pumps worked from the Main Engines, No. NONE Diameter YES Stroke YES Can one be overhauled while the other is at work YES
Pumps connected to the Main Bilge Line { No. and Size ONE BILGE 4 1/2" 100 TONS/HR ONE BALLAST 8" 150 TONS/HR.
How driven ELECTRIC MOTORS

Ballast Pumps, No. and size ONE VERT. CENT. 8" Lubricating Oil Pumps, including Spare Pump, No. and size TWO - 100 TONS/HR.
Are two independent means arranged for circulating water through the Oil Cooler YES Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces Two of 3 1/2" Four of 2 1/2" Tunnel One - 3 1/2" One - 2 1/2" (Showers) One - 2 1/2" (Repair Spaces)
In Holds, &c. No. 1 HOLD Two of 3 1/2" No. 2 HOLD Two of 3 1/2" Forward DEEP TANKS. 4 of 3 1/2" Repair Cargo spaces 2 of 3 1/2" No. 5 Hold 2 of 3 1/2" DRY TANK 1 of 2 1/2"
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size THREE 5 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 Spaces 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 YES
Are they fixed sufficiently high on the ship's side to be seen without lifting the platform 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 { No. 1 & 2 Hold Suctions How are they protected YES
What pipes pass through the deep tanks { YES 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
If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork —
Main Air Compressors, No. TWO No. of stages THREE Diameters 750-675-150 mm. Stroke 500 mm Driven by Main Engine
Auxiliary Air Compressors, No. ONE No. of stages THREE Diameters 460-405-92 mm. Stroke 260 mm Driven by Electric motor
Small Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 106-84 mm. Stroke 80 mm Driven by Petrol motor
Scavenging Air Pumps, No. — Diameter — Stroke — Driven by —
Auxiliary Engines crank shafts, diameter as per Rule 132 mm.
as fitted 140 mm.

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES and/or fusible plug
Can the internal surfaces of the receivers be examined YES What means are provided for cleaning their inner surfaces open-ends
Is there a drain arrangement fitted at the lowest part of each receiver YES
High Pressure Air Receivers, No. FIVE Cubic capacity of each 4-230 litres Internal diameter 4-416 mm thickness 4-17.5 mm
1-295 mm 1-15 mm
Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 26-30 tons Working pressure by Rules 1305 + 1103 lbs. sq. in.
Starting Air Receivers, No. THREE Total cubic capacity 2175 cu. ft. Internal diameter 6-11 7/16" thickness 1 7/32"
Seamless, lap welded or riveted longitudinal joint d.b.s. Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 568 lbs. sq. in.

W516-0338



IS A DONKEY BOILER FITTED? Two

If so, is a report now forwarded? Yes

PLANS. Are approved plans forwarded herewith for Shafting 11.10.29.
(If not, state date of approval)

Receivers 20.6.29.

Separate Tanks 1.11.29.

Donkey Boilers 16.12.29.

General Pumping Arrangements 14.2.30

Oil Fuel Burning Arrangements 3.3.30

SPARE GEAR In excess of rule requirements: see attached list

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

Rebeck

Manufacturer.

1929
Dates of Survey while building
During progress of work in shops-- Sept 24 Oct 5, 14, 29 Nov 1, 8, 11, 12, 13, 14, 15, 19, 20, 21, 22, 25, 26, 27, 28, 29 Dec 2, 11, 14, 19, 20, 31
During erection on board vessel-- 17, 18, 19, 20, 21, 24, 25, 26, 27, 28, 31 Apr 1, 4, 10, 11, 15, 17, 28 May 1, 6, 9, 12, 13, 15, 20, 22, 29, 30 June 2, 5, 18
Total No. of visits = 108

Dates of Examination of principal parts—Cylinders 30.12.29 Covers 11.11.29
Crank shaft 9.1.30 + 19.3.30 Flywheel shaft Thrust shaft 14.2.30 Intermediate shafts 12.2.30 + 25.2.30 Tube shaft
Screw shaft 7.2.30 Propeller 5.2.30 Stern tube 17.1.30 Engine seatings 12.3.30 Engines holding down bolts 1.5.30
Completion of fitting sea connections 17.2.30 Completion of pumping arrangements 14.6.30 Engines tried under working conditions 18.6.30

Crank shaft, Material S.M. STEEL Identification Mark 406 + 116 R.L.A. Flywheel shaft, Material Identification Mark
Thrust shaft, Material S.M. STEEL Identification Mark 2839 + 2719 R.L.A. Intermediate shafts, Material S.M. STEEL Identification Marks 2785, 2719, 2834, 2785, 2759, 2834, 2785, 2799, 2934, 2688, 2778, 2778 + R.L.A.
Tube shaft, Material Identification Mark Screw shaft, Material S.M. STEEL Identification Mark

Is the flash point of the oil to be used over 150° F? Yes
Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with Yes
Is the vessel (not being an oil tanker) fitted for carrying oil as cargo Yes If so, have the requirements of the Rules been complied with Yes

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 machinery of this vessel has been constructed under special survey. The materials and workmanship are sound and good. The main engines and auxiliaries have been tried at moored and sea trials with satisfactory results.
In my opinion the vessel is eligible for notation in the Society's Register Book
+ L.M.C. 6.30. C.L. D.B. pressure 150 lbs. max. Heat B pressure 100 lbs. fitted for oil fuel 630 F.P. not exceed 150° F. Electric light.

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 6.30. CL 59 1/16
Oil Engines 45 C.S.A. 12 Cy. 29 1/8 - 59 1/16
N.H.P. 979 D.B. (Upper) 100 lb D.B. 150 lb

J. J. 1/7/30.

The amount of Entry Fee ... £ 6 : - :
Special ... £ 123 : 19 :
A.R. RECEIVERS Donkey Boiler Fee ... £ 12 : 12 :
Travelling Expenses (if any) £ - : - :
When applied for, 20 June 1930
When received, 14.7.30

R. J. James
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 4 JUL 1930
Assigned + L.M.C. 6.30 C.L.

CERTIFICATE WRITTEN

