

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 10.529  
18 DEC 1930

Received at London Office

Date of writing Report

19

When handed in at Local Office

12<sup>th</sup> Dec 1930 Port of

BELFAST

No. in Survey held at  
Reg. Book.

BELFAST

Date, First Survey 24<sup>th</sup> Sept. 1929 Last Survey 11<sup>th</sup> Dec. 1930

Number of Visits 133

76346

on the <sup>Single</sup>  
Twin } Screw vessel  
Triple }  
Quadruple }

LAGANBANK

Tons { Gross  
Net

Built at BELFAST

By whom built HARLAND &amp; WOLFF LD.

Yard No. 879 When built 1930

Engines made at BELFAST

By whom made HARLAND &amp; WOLFF LD.

Engine No. 879 When made 1930

Donkey Boilers made at BELFAST

By whom made HARLAND &amp; WOLFF LD.

Boiler No. 879 When made 1930

Brake Horse Power

Owners BANK LINE LD (AWEIR &amp; Co. LD. MGRS)

Port belonging to BELFAST

Nom. Horse Power as per Rule 830

Is Refrigerating Machinery fitted for cargo purposes YES.

Is Electric Light fitted YES.

Trade for which vessel is intended

OCEAN GOING.

474

OIL ENGINES, &amp;c. Type of Engines HARLAND &amp; WOLFF - B+W 234 2 or 4 stroke cycle 4 Single or double acting SINGLE

Maximum pressure in cylinders 500 LBS. S. Diameter of cylinders 530 MM. Length of stroke 1200 MM. No. of cylinders 16 No. of cranks 16

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 820 MM. Is there a bearing between each crank YES.

Revolutions per minute 138 Flywheel dia. 1654 MM. Weight 975 KGS. Means of ignition COMPRESSION Kind of fuel used DIESEL OIL

Crank Shaft, dia. of journals as per Rule APPROVED Crank pin dia. 330 MM. Crank Webs Mid. length breadth 640 MM shrunk Thickness parallel to axis 250 MM.  
as fitted 330 BORED 115 MM. Mid. length thickness 250 MM. Thickness around eye hole 165 MM.Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule APPROVED Thrust Shaft, diameter at collars as per Rule APPROVED  
as fitted as fitted 11" as fitted 12"Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule APPROVED Is the shaft fitted with a continuous liner YES.  
as fitted as fitted 12 1/4"Bronze Liners, thickness in way of bushes as per Rule 20" 3/2 Thickness between bushes as per rule 15" 3/2 Is the after end of the liner made watertight in the  
as fitted 3 3/4 as fitted 19 3/2 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. If so, state type

Length of Bearing in Stern Bush next to and supporting propeller 4' 6"

Propeller, dia. 13'-3" Pitch 11'-8" No. of blades 3 Material MANG. BR. whether Moveable YES. Total Developed Surface EACH 48 sq. feet

Method of reversing Engines DIRECT - ENGINE Is a governor or other arrangement fitted to prevent racing of the engine when decoupled YES. Means of lubrication

FORCED Thickness of cylinder liners 43 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

Cooling Water Pumps, No. 2 VERT. CENT. 7" BORE Is the sea suction provided with an efficient strainer which can be cleared within the vessel YES.

Bilge Pumps worked from the Main Engines, No. Diameter Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line { No. and Size Two ONE BILGE 80 TONS/HOUR ONE BALLAST 150 TONS/HOUR  
How driven ELECTRIC MOTORS.

Ballast Pumps, No. and size ONE VERT. CENT. 6" BORE Lubricating Oil Pumps, including Spare Pump, No. and size Two 70 TONS/HOUR

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-3 1/2 Six-2 1/2 TUNNEL ONE-3 1/2 TWO-2 1/2 In Pump Room

In Holds, &amp;c. No. 1 Hold Two-3 No. 2 Hold Two-3 1/2 No. 3 Hold (DEEP TANK) Two-2 No. 4 Hold Two-3 1/2 No. 5 Hold Two-3 1/2

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two-5

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 AT D.W.L.

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 How are they protected

What pipes pass through the deep tanks No. 1 &amp; 2 HOLDS BILGE SUCTION 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. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. THREE No. of stages THREE Diameters 320-280-82 MM Stroke 220 MM. Driven by DIESEL ENGINES.

Small Auxiliary Air Compressors, No. ONE No. of stages TWO Diameters 106-34 MM. Stroke 80 MM. Driven by STEAM.

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule 176-5 MM. No. 3 Position — MAIN ROOM WINGS  
as fitted 180 MM.

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule YES AND/OR FUSIBLE PLUGS.

Can the internal surfaces of the receivers be examined and cleaned YES. Is a drain fitted at the lowest part of each receiver YES.

High Pressure Air Receivers, No. FOUR Cubic capacity of each ONE OF 150 " Internal diameter 295 MM. thickness 15 MM.

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material STEEL Range of tensile strength 23-32 Tons Working pressure by Rules 1405 LBS.

Starting Air Receivers, No. TWO Total cubic capacity 1400 " Internal diameter 72 3/8" thickness 1 1/2" Actual 1000 LBS.

Seamless, lap welded or riveted longitudinal joint V.D.B.S. Material STEEL Range of tensile strength 28-32 " Working pressure by Rules 373 LBS. 0"

Actual 356 LBS. 0"

W524-0217

Lloyd's Register  
Foundation



IS A DONKEY BOILER FITTED?

Yes.

If so, is a report now forwarded?

Yes.

Is the donkey boiler intended to be used for domestic purposes only

No

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

Receivers

Yes

Separate Tanks

Yes

Donkey Boilers

Yes

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

Yes

### SPARE GEAR.

Has the spare gear required by the Rules been supplied

Yes

State the principal additional spare gear supplied

PLEASE SEE ATTACHED LIST.

The foregoing is a correct description.

For HARLAND AND WOLFF, LIMITED.

*A. J. Marshall*

Manufacturer.

Assistant Secretary.

Dates of Survey while building  
During progress of work in shops--  
During erection on board vessel--  
Total No. of visits

1929  
Sept 24 Oct 3, 16, 22 Nov 1, 11, 27 Dec 4, 10, 12, 13  
1930  
Jan 8, 22 Feb 10, 14, 19, 27 Mar 19, 19 Apr 2, 3, 11, 14, 15, 23, 24, 30  
May 2, 5, 9, 20, 30 June 5, 6, 9, 11, 12, 16, 17, 19, 20, 23, 24, 25 July 1, 2, 4, 5, 9, 8, 22, 23, 25, 29 Aug 4, 9, 8, 11, 12, 14, 15, 18, 19, 21, 22, 23, 24, 27, 29 Sept 1, 3, 4, 5, 8, 9, 10, 11, 12, 13, 15, 17, 18, 19, 20, 22, 23, 24, 25, 26, 27, 28 Oct 2, 3, 6, 9, 8, 9, 10, 13, 14, 15, 16, 17, 20, 21, 22, 23, 24, 27 Nov 3, 6, 7, 10, 11, 13, 14, 17, 19, 20, 21, 24, 25, 26, 27, 28 Dec 1, 2, 3, 4, 5, 6, 8, 9

= 133

Dates of Examination of principal parts—Cylinders 17.9.30 to 27.10.30 Covers 15.8.30 to 27.10.30 Pistons 30.9.30 Rods 30.9.30 to 17.10.30 Connecting rods 30.9.30 to 16.10.30

Crank shaft 27.9.30 30.9.30 Flywheel shaft Thrust shaft 22.9.30 Intermediate shafts 4.9.30 Tube shaft

Screw shaft 4.7.30 7.7.30 Propeller 25.7.30 Stern tube 24.6.30 Engine seatings 17.10.30 Engines holding down bolts 1.12.30

Completion of fitting sea connections 1.12.30 Completion of pumping arrangements 9.12.30 Engines tried under working conditions 11.12.30

Crank shaft, Material S.M. STEEL Identification Mark 143 : 145 R.L.A. Flywheel shaft, Material Identification Mark 3811 : 3811 : 3821 : 3848 : 3861

Thrust shaft, Material S.M. STEEL Identification Mark 3704 R.L.A. Intermediate shafts, Material S.M. STEEL Identification Marks 3811 : 3821 : 3848 : 3861

Tube shaft, Material Identification Mark Screw shaft, Material S.M. STEEL Identification Mark 3840 : 3862 : 3898 R.L.A. 3685 T.D.S. 3800 T.D.S. 3787 J.K.W.

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.

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 "FOYLEBANK"

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 and auxiliary machinery have been tried under working conditions with satisfactory results.

In my opinion the vessel is eligible for notation in the Society's Register Book + L.M.C. 12.30. C.L. OIL ENGINES.

D.B. 120400" FITTED FOR OIL FUEL 12.30 F.P. ABOVE 150° F. ELECTRIC LIGHT.

The amount of Entry Fee .. £ 6 :-

Special ... £ 116 : 10

Donkey Boiler Fee ... £ 5 :-

AIR RESERVOIRS.

Travelling Expenses (if any) £ 8 : 8

Committee's Minute

Assigned

TUE. 30 DEC 1930

+ Lmb 12.30 oil Eng

CERTIFICATE WRITTEN.

*R. Lee Anness*

Engineer Surveyor to Lloyd's Register of Shipping.



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