

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 10509

Received at London Office 24 NOV 1930

Date of writing Report 19 Nov 1930 When handed in at Local Office 19 Nov 1930 Port of BELFAST

No. in Survey held at BELFAST Date, First Survey 24 Sept 1929 Last Survey 13 Nov 1930 Number of Visits 139

Reg. Book. Single on the Twin Triple Quadruple Screw vessel STEEL TWIN SC. FOYLEBANK

Built at BELFAST By whom built HARLAND & WOLFF LD. Yard No. 878 When built 1930

Engines made at BELFAST By whom made HARLAND & WOLFF LD. Engine No. 878 When made 1930

Donkey Boilers made at BELFAST By whom made HARLAND & WOLFF LD. Boiler No. 878 When made 1930

Brake Horse Power 4600 Owners BANK LINE LTD. (A. WEIR & CO. LD. MANAGERS) Port belonging to GLASGOW 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

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

Maximum pressure in cylinders 500 LBS Diameter of cylinders 390 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. 390 MM Crank Webs Mid. length breadth 640 MM shrunk Thickness parallel to axis 250 MM

Flywheel Shaft, diameter as per Rule APPROVED Intermediate Shafts, diameter as per Rule APPROVED Thrust Shaft, diameter at collars as per Rule APPROVED

Tube Shaft, diameter as per Rule APPROVED Screw Shaft, diameter as per Rule APPROVED Is the tube shaft fitted with a continuous liner YES

Bronze Liners, thickness in way of bushes as per Rule 32 Thickness between bushes as per Rule 32 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. If so, state type Length of Bearing in Stern Bush next to and supporting propeller 4'-6"

Propeller, dia. 4'-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 disengaged 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 TUNNEL

Cooling Water Pumps, No. 2 VERT. CENTRIF. 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/HR ONE BALLAST 150 TONS/HR

How driven ELECTRIC MOTORS Lubricating Oil Pumps, including Spare Pump, No. and size Two 70 TONS/HR

Ballast Pumps, No. and size ONE VERT. CENT. 6" BORE Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge

Are two independent means arranged for circulating water through the Oil Cooler YES In Pump Room

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 Holds, &c. No. 1 HOLD TWO 3 No. 2 HOLD TWO 3 1/2 No. 3 HOLD (DEEP TANK) TWO 2 1/2 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

ed 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. 3 1/2 2 HOLDS' BILGE SUCTIONS 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. 1 180 MM No. 2 180 MM Position MAIN ROOM MACHINERY

IR 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 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 1 150 2 150 Internal diameter 295 MM thickness 15 MM

Seamless, lap welded or riveted longitudinal joint SEAMLESS Material STEEL Range of tensile strength 28-32 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

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

W37-0082

IS A DONKEY BOILER FITTED? ONE If so, is a report now forwarded? YES Rpt.

Is the donkey boiler intended to be used for domestic purposes only? No

PLANS. Are approved plans forwarded herewith for Shafting 6th Feb 1938 Receivers 1.7.29 Separate Tanks 29.1.30

Donkey Boilers 24.6.29 General Pumping Arrangements 27.3.30 Oil Fuel Burning Arrangements 10.2.30

SPARE GEAR.

Has the spare gear required by the Rules been supplied? Yes

State the principal additional spare gear supplied see list attached.

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

A. Marshall
Assistant Secretary

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

Dates of Examination of principal parts--Cylinders 11.7.30 15.10.30 Covers 26.5.30 15.10.30 Pistons 27.6.30 Rods 31.7.30 26.8.30 Connecting rods 31.7.30 26.8.30

Crank shaft 22.5.30 29.7.30 Flywheel shaft 4.7.30 Thrust shaft 4.7.30 Intermediate shafts 8.5.30 4.6.30 6.6.30 Tube shaft 17.10.30

Screw shaft 22.5.30 Propeller 22.5.30 Stern tube 30.4.30 Engine seatings 1.5.30 Engines holding down bolts 17.10.30

Completion of fitting sea connections 12.6.30 Completion of pumping arrangements 13.11.30 Engines tried under working conditions 12.11.30

Crank shaft, Material S.M. STEEL Identification Mark 136-138 R.L.A. Flywheel shaft, Material Identification Mark 3350: 3350: 3394: 3394: 2

Thrust shaft, Material S.M. STEEL Identification Mark 3305 R.L.A. Intermediate shafts, Material S.M. STEEL Identification Marks 3478: 3495: 3532: 3532: 1

Tube shaft, Material Identification Mark Screw shaft, Material S.M. STEEL Identification Mark 3496: 3496: 3497: 1

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 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 and auxiliary machinery has 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. 11.30 C.L. OIL ENGINES. D.B. 120 H.P. FITTED FOR OIL FUEL 11.30 F.P. ABOVE 150° F. ELECTRIC LIGHT.

It is submitted that
this vessel is eligible for
THE RECORD. + L.M.C. 11.30. C-L

Oil Engines 45 C.S.A. 16cy. 23 1/4" - 47 1/4"
N.H.P. 830. D.B. - 120 H.P.

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

The amount of Entry Fee .. £ 6 :- When applied for, 19th Nov 1930

Special ... £ 116 :- 10 When received, 16/12/30

Donkey Boiler Fee ... £ 5 :-

Travelling Expenses (if any) £ 8 :-

Committee's Minute

Assigned

+ L.M.C. 11.30 C.L. oil Eng
D.B. - 120 H.P.

CERTIFICATE WRITTEN

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