

REPORT ON OIL ENGINE MACHINERY.

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Date of writing Report 19 When handed in at Local Office 22. 2. 1938 Port of Belfast
No. in Survey held at Belfast Date, First Survey 26th Nov, 1936 Last Survey 14th Feb 1938
Reg. Book. Number of Visits 151

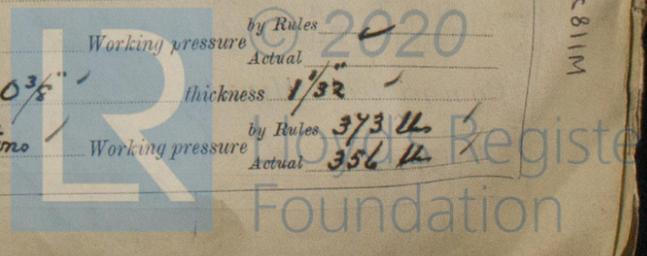
on the Single }
Twin } Screw vessel
Triple }
Quadruple }
SINGLE SCREW **DEVIS** Tons { Gross 6054
Net 3744
Built at Belfast By whom built Harland & Wolff Ltd Yard No. 1002 When built 1935
Engines made at Belfast By whom made Harland & Wolff Ltd Engine No. 1002 When made 1935
Donkey Boilers made at Belfast By whom made Harland & Wolff Ltd Boiler No. 1002 When made 1935
Brake Horse Power 4,400 Owners Lampson & Hold Ltd Port belonging to Liverpool
Nom. Horse Power as per Rule 898 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes
Trade for which vessel is intended Ocean going

OIL ENGINES, &c. Type of Engines Harland B & W airless injection 2 or 4 stroke cycle 2 Single or double acting Yes
Maximum pressure in cylinders 49 Kg/cm² Diameter of cylinders 530 mm 20 1/8 Length of stroke 1250 mm 49 1/4 No. of cylinders 6 No. of cranks 6
Span 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. 2281 mm Weight 2150 Kgs Means of ignition Compression Kind of fuel used Diesel oil
Crank Shaft, dia. of journals as per Rule as fitted 420 mm Crank pin dia. 420 mm Crank Webs Mid. length breadth 800 mm Thickness parallel to axis 225 mm
as fitted 420 mm Mid. length thickness 225 mm Thickness around eye-hole 185 mm
Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 1'-2 3/4" Thrust Shaft, diameter at collars as per Rule as fitted 420 mm
Tube Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 1'-4 1/2" Is the tube shaft fitted with a continuous liner Yes
Bronze Liners, thickness in way of bushes as per Rule as fitted 7/8" Thickness between bushes as per Rule as fitted 1/16" 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 No If so, state type Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft No
Propeller, dia. 17'-3" Pitch 13'-6" No. of blades 4 Material MB whether Moveable Solid Total Developed Surface 104 sq. feet
Method of reversing Engines Air Brake cylinder Is a governor or other arrangement fitted to prevent racing of the engine when declutched Yes Means of lubrication Forced
Thickness of cylinder liners 36 mm Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged
Cooling Water Pumps, No. Two 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. 1 Rotary Diameter Stroke Can one be overhauled while the other is at work Yes
Pumps connected to the Main Bilge Line No. and Size Three - two 100 tons & one 180 tons How driven One on main engine, two steam driven 1-100 tons & 1-180 tons
Ballast Pumps, No. and size One 180 tons Lubricating Oil Pumps, including Spare Pump, No. and size Main engine, 1 steam 180 tons
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 5" Two 3 1/2" Two 2 1/2" One 2 1/2" eng pump, One 2 1/2" off dam. In Pump Room Two 2" Sludge tank
In Holds, &c. Four 3" Two 3 1/2" in for holds Five 3" Two 3 1/2" in tunnel & aft hold.
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 Valves
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 None How are they protected
What pipes pass through the deep tanks None 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 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 Main 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 Two Diameters 3 1/2" 8 1/4" Stroke 7" Driven by Steam
Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by
2 Scavenging Air Pumps, No. 208 m³/min capacity of each at Diameter 280 mm Pressure Stroke 1.2 atmos abs. Driven by Main engine
Auxiliary Engines crank shafts, diameter as per Rule 1 Steam driven 2 1/2 dia No. as fitted 1 Diesel " 3 1/8 dia Position - Engine room

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule Yes
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. Cubic capacity of each Internal diameter thickness
Seamless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual
Starting Air Receivers, No. One Total cubic capacity 538 cuft. Internal diameter 6'-0 3/8" thickness 1/32
Seamless, lap welded or riveted longitudinal joint riveted Material S. Range of tensile strength 28/32 tons Working pressure by Rules Actual 373 lb 356 lb

25-2-38

W1187-0129



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 *Auxiliary machinery*

PLANS. Are approved plans forwarded herewith for Shafting *Yes*

Receivers *Yes*

Separate Tanks *Yes*

Donkey Boilers *Yes*

General Pumping Arrangements *1-4-37*

Oil Fuel Burning Arrangements *1-4-37*

SPARE GEAR.

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

State the principal additional spare gear supplied

See attached list

The foregoing is a correct description, *FOR HARLAND AND WOLFE, LIMITED.*

A. J. Marshall
Secretary, Manufacturer.

Dates of Survey while building	During progress of work in shops--	1936 Nov 26, 28 Dec. 23, 24 Jan 5, 11, 13 Feb 2, 6, 8, 9, 12, 13, 15, 16, 18, 19, 25 Mar 2, 4, 15, 19, 22, 23, 24, 26 Apr 5, 8, 12, 16, 28 May 3, 4, 5, 10, 11, 14, 17, 18, 21, 24, 25, 27, 29, 31 June 7, 8, 15, 16, 17, 18, 23, 24, 30 July 1, 5, 9, 21, 23, 27, 28 Aug 2, 3, 4, 5, 11, 25, 30, 31 Sept 1, 13, 14, 15, 16, 23, 27, 28, 29, 30 Oct 1, 2, 6, 11, 12, 18, 19, 21, 29 Nov 1, 2, 3, 4, 5, 11, 12, 18, 19, 20, 22, 23, 24, 25, 26, 27, 30 Dec 1, 2, 3, 4, 7, 8, 9, 10, 11, 13, 14, 15, 16, 17, 18, 20, 21, 22, 23, 24, 31
	During erection on board vessel--	1938 Jan 4, 5, 7, 11, 12, 13, 14, 17, 20, 21, 22, 24, 15, 26, 27, 31 Feb 1, 2, 3, 4, 10, 11, 14
	Total No. of visits	= 151

Dates of Examination of principal parts—Cylinders *3/18/37-4/2/38* Covers *2/11/37-2/2/38* Pistons *11/10/37-23/12/37* Rods *3/12/37* Connecting rods *30/11/37*

Crank shaft *24/11/37* Flywheel shaft *✓* Thrust shaft *24/11/37* Intermediate shafts *30/9/37-2/11/37* Tube shaft *✓*

Screw shaft *6/10/37* Propeller *18/10/37* Stern tube *1/11/37* Engine seatings *19/11/37* Engines holding down bolts *28/1/38*

Completion of fitting sea connections *19/11/37* Completion of pumping arrangements *14/2/38* Engines tried under working conditions *14/2/38*

Crank shaft, Material *S* Identification Mark *LLOYDS N°265* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *S* Identification Mark *LLOYDS N°265* Intermediate shafts, Material *S* Identification Marks *LLOYDS N°314*

Tube shaft, Material *✓* Identification Mark *✓* Screw shaft, Material *S* Identification Mark *LLOYDS N°314*

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 *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 *No*

Is this machinery duplicate of a previous case *Yes* If so, state name of vessel *DELANE Bel apt N°12071 12/1/37*

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 good. The main & auxiliary machinery have been efficiently installed and tried out under working conditions with satisfactory results. In our opinion this vessel is eligible for notation in the Society's Register Book + LMC 2-38. CL. 2 DBs 120 lbs Oil Engine

Certificate (if required) to be sent to

The amount of Entry Fee ..	£ 6 :	When applied for,
Special ...	£ 119 : 18 :	22 2 1938
Donkey Boiler Fee ...	£ 15 : 4 :	When received,
AIR RECEIVER	£ 4 : 4 :	28/2 1938
Travelling Expenses (if any)	£ :	

Charles J. Hunter & R. Lee James
Engineer Surveyor to Lloyd's Register of Shipping.



Committee's Minute *FRI. 25 FEB 1938*
Assigned *+ LMC 2-38*
2 DB - 120 lbs
oil Eng. Ch.