

REPORT ON OIL ENGINE MACHINERY.

No. 11852
-1 DEC 1936

Received at London Office

Date of writing Report 19... When handed in at Local Office 30. 11. 1936 Port of Belfast

No. in Survey held at Belfast Date, First Survey 27. April 1936 Last Survey 28. 11. 36 19
Reg. Book. Number of Visits 15

on the Single Twin Triple Quadruple Screw vessel Walmer Castle Tons {Gross 906
Net 350

Built at Belfast By whom built Harland & Wolff L^r Yard No. 983 When built 1936
Engines made at Belfast By whom made Harland & Wolff L^r Engine No. 983 When made 1936
Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓
Brake Horse Power 2250 Owners Union Castle Mail S.S. Co. L^r Port belonging to London
Nom. Horse Power as per Rule 538.8 Is Refrigerating Machinery fitted for cargo purposes No ✓ Is Electric Light fitted Yes ✓
Trade for which vessel is intended 539 United Kingdom and Continent

OIL ENGINES, &c. Type of Engines Diesel principle 35% 2 or 4 stroke cycle two Single or double acting single
Maximum pressure in cylinders 700 lbs Diameter of cylinders 500% Length of stroke 900% No. of cylinders 8 No. of cranks 8
Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 698% Is there a bearing between each crank Yes ✓
Revolutions per minute 140 Flywheel dia. 1654% Weight 1000 Kgs. Means of ignition Compression Kind of fuel used Diesel Oil
Crank Shaft, dia. of journals as per Rule approved 27/5/36 Crank pin dia. 340% Crank Webs Mid. length breadth 800% ✓ Thickness parallel to axis 208% ✓
as fitted 340% ✓ Mid. length thickness 208% ✓ Thickness around eye-hole 153% ✓
Flywheel Shaft, diameter as per Rule approved 15/4/36 Intermediate Shafts, diameter as per Rule approved 15/4/36 Thrust Shaft, diameter at collars as per Rule approved 27/5/36
as fitted 11 1/2" ✓ as fitted 10 1/4" ✓ as fitted 306% ✓
Tube Shaft, diameter as per Rule approved 15/4/36 Is the tube shaft fitted with a continuous liner Yes ✓
as fitted 11 1/2" ✓ as fitted 11 1/2" ✓ as fitted 11 1/2" ✓
Bronze Liners, thickness in way of bushes as per Rule app^d Thickness between bushes as per rule app^d Is the after end of the liner made watertight in the
as fitted 11/16" ✓ as fitted 11/32" ✓ as fitted 11/32" ✓
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 3'-11" ✓
Propeller, dia. 11'-3" Pitch 13'-0" No. of blades 4 Material Mang. Bronze Whether Moveable No Total Developed Surface 42 sq. feet
Method of reversing Engines Air Motor 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% ✓ Are the cylinders fitted with safety valves Yes ✓ Are the exhaust pipes and silencers water cooled or lagged with
non-conducting material lagged ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine ✓
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. ✓ Diameter ✓ Stroke ✓ Can one be overhauled while the other is at work ✓
Pumps connected to the Main Bilge Line { No. and Size Two, each 70 tons/hr.
How driven Electric Motor ✓
Ballast Pumps, No. and size Two same pumps used for bilge Lubricating Oil Pumps, including Spare Pump, No. and size Two, each 70 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 2- 2 1/2" bilge ✓ 2- 2" Crank pit wells ✓ 1- 2 1/2" tunnel well ✓ In Pump Room ✓
In Holds, &c. 2- 2 1/2" N°1 ✓ 2- 2 1/2" N°2 ✓ 2- 2 1/2" N°3 ✓
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two 4" dia. ✓
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 Below ✓
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 ✓
What pipes pass through the bunkers None 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 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 ✓

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. One Cubic capacity of each 150 litres Internal diameter 1'-6" thickness 3/8"
Seamless, lap welded or riveted longitudinal joint riveted Material Steel Range of tensile strength 28/32 tons Working pressure by Rules 375 lb
Actual 356 lb / sq. in.
Starting Air Receivers, No. Two ✓ Total cubic capacity 380 cub. ft. Internal diameter 4'-0" thickness 45/64"
Seamless, lap welded or riveted longitudinal joint riveted ✓ Material Steel ✓ Range of tensile strength 28/32 tons Working pressure by Rules 360 lb
Actual 356 lb / sq. in.

IS A DONKEY BOILER FITTED? *No* ✓

If so, is a report now forwarded? ✓

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

PLANS. Are approved plans forwarded herewith for Shafting *No* (If not, state date of approval)

Receivers *Yes*

Separate Tanks *Yes*

Donkey Boilers ✓

General Pumping Arrangements *Yes*

Oil Fuel Burning Arrangements ✓

SPARE GEAR.

Has the spare gear required by the Rules been supplied

State the principal additional spare gear supplied

The foregoing is a correct description.

A. J. Marshall Manufacturer.
Assistant Secretary

1936
Dates of Survey while building
During progress of work in shops - *Apr. 27-29 May 27-28 June 1, 10, 11, 17, 19, 24, 25, 26, 27, 29, 30 July 1, 2, 3, 4, 6, 7, 9, 22, 25, 27*
During erection on board vessel - *28, 30, 31 Aug 1, 7, 10, 11, 12, 13, 20, 21, 22, 24, 25, 26, 27, 28 Sept 1, 2, 3, 4, 7, 9, 10, 11, 14, 17, 18, 25, 26*
Total No. of visits *75*

Dates of Examination of principal parts - Cylinders *1-6, 29-36* Covers *1/4, 36 to 2/7/36* Pistons *June & July* Rods ✓ Connecting rods *12-8-36*

Crank shaft *29-6-36* Flywheel shaft ✓ Thrust shaft *30-6-36* Intermediate shafts *20-8-36* Tube shaft ✓

Screw shaft *12-8-36* Propeller *17-9-36* Stern tube *25-8-36* Engine seatings *27-8-36* Engines holding down bolts *5-10-36*

Completion of fitting sea connections *17-9-36* Completion of pumping arrangements *19-11-36* Engines tried under working conditions *18-20 Nov '36*

Crank shaft, Material *Steel* Identification Mark *249* Flywheel shaft, Material ✓ Identification Mark ✓

Thrust shaft, Material *Steel* Identification Mark *329* Intermediate shafts, Material *Steel* Identification Marks *510*

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material *Steel* Identification Mark *510*

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 ✓
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 and in accordance with the Rules. The workmanship and materials are good. The main engines and auxiliaries have been efficiently installed and tried out under working conditions with satisfactory results. In our opinion the vessel is eligible for notation in the Society's Register Book
+ LMC 11-36 CL. OIL ENGINES

The amount of Entry Fee .. £ *4* : *0* :
Special .. £ *101* : *19* :
Air Receivers
Donkey Boiler Fee .. £ *4* : *4* :
Travelling Expenses (if any) £ : :
When applied for, *30. 11. 1936*
When received, *11. 12. 36*

Charles of Hunter & R. Lee Amess
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute *FRI. 4 DEC 1936*
Assigned *+ d.m.b. 11.36 Oil Eng. Ch.*

