

REPORT ON OIL ENGINE MACHINERY.

No. 19929

20 MAR 1935

Received at London Office

Date of writing Report 1.3.35 When handed in at Local Office 16th MARCH 1935 Port of Greenock
 No. in Survey held at Greenock Date, First Survey 23rd MARCH 1935 Last Survey 15th MARCH 1935
 Reg. Book. Greenock Number of Visits 81

Single on the Tenth Screw vessel MS "Triester" Tons { Gross 6032.29
 Net 3563.69
 Built at Greenock By whom built Lithgoun & Co Yard No. 872 When built 1935
 Engines made at Greenock By whom made John Macrae & Co Engine No. 1180 When made 1935
 Donkey Boilers made at ditto By whom made ditto Boiler No. 1180 When made 1935
 Brake Horse Power 3600 Owners British Phosphate Commission Port belonging to London
 Nom. Horse Power as per Rule 653 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes
 Trade for which vessel is intended Foreign 298 5976

IL ENGINES, &c.—Type of Engines Four cylinder water (air) injection 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 500 Diameter of cylinders 440 mm Length of stroke 1500 mm No. of cylinders 8 No. of cranks 8
 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 115 Flywheel dia. 2489 mm Weight 2.54 tons Means of ignition Compression Kind of fuel used Diesel
 Crank Shaft, dia. of journals as per Rule 495 mm Crank pin dia. 495 mm Crank Webs Mid. length breadth Thickness parallel to axis 310 mm
 as fitted 495 mm Mid. length thickness Thickness around eye hole 312.5 mm
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 1305 mm Thrust Shaft, diameter at collars as per Rule 139 mm
 as fitted 1318 mm as fitted 139 mm
 Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 1438 mm Is the tube shaft fitted with a continuous liner Yes
 as fitted 15 mm as fitted 15 mm
 Bronze Liners, thickness in way of bushes as per Rule 438 mm Thickness between bushes as per Rule 558 mm Is the after end of the liner made watertight in the
 as fitted 1316 mm as fitted 558 mm
 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 Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube Yes
 shaft 90 If so, state type Yes Length of Bearing in Stern Bush next to and supporting propeller 5.0

Propeller, dia. 16.0 Pitch 12.6 No. of blades 4 Material Brass whether Moveable Yes Total Developed Surface 848 sq. feet
 Method of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when detached Yes Means of lubrication Forced
 Thickness of cylinder liners 32.15 mm 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 Yes
 Cooling Water Pumps, No. 2 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. None Diameter — Stroke — Can one be overhauled while the other is at work —
 Pumps connected to the Main Bilge Line { No. and Size H (3 Drysdale Rotor) (No. 10 x 11") 2 4 x 7"
 How driven Motor
 Ballast Pumps, No. and size 2 10 x 11" Lubricating Oil Pumps, including Spare Pump, No. and size 2 80.120 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 4 3" 1 3" ER Well 1 3" Coffordum
 In Holds, &c. 2 3" in each Tunnel Well 1 2 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Yes 2 at 15"
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes Yes Are the Bilge Suctions in the Machinery Spaces Yes

Are they fitted with Valves or Cocks Both
 Are all Sea Connections fitted direct on the skin of the ship Yes Are the Overboard Discharges above or below the deep water line Above

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yes Are the Blow Off Cocks fitted with a spigot and brass covering plate Yes

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel Yes How are they protected Yes

What pipes pass through the bunkers None Have they been tested as per Rule Yes
 What pipes pass through the deep tanks None

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 VER Platform

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork Yes

Main Air Compressors, No. — No. of stages — Diameters — Stroke — Driven by —
 Auxiliary Air Compressors, No. one No. of stages 2 Diameters 4 1/2 x 11" Stroke 8" Driven by Motor

Small Auxiliary Air Compressors, No. one No. of stages 2 Diameters 34 mm 106 mm Stroke 80 mm Driven by Motor
 Scavenging Air Pumps, No. — Diameter — Stroke — Driven by —

Auxiliary Engines crank shafts, diameter as per Rule see London Report No. 100,868. attached
 as fitted —

IR 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 Yes What means are provided for cleaning their inner surfaces Manual

Is there a drain arrangement fitted at the lowest part of each receiver Yes
 High Pressure Air Receivers, No. one Cubic capacity of each 200 litres Internal diameter 14" thickness 1 1/2"

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 29.33 Working pressure by Rules 1000 lb

Starting Air Receivers, No. 2 Total cubic capacity 900 cu ft Internal diameter 6.048" thickness 15/16 x 31/32
 Seamless, lap welded or riveted longitudinal joint Riveted Material S Range of tensile strength 29.33 Working pressure by Rules 36.7

Seamless, lap welded or riveted longitudinal joint Riveted Material S Range of tensile strength 29.33 Working pressure by Rules 36.7

W95-0059

Waste Heat

IS A ~~DONKEY~~ BOILER FITTED?

yes ✓

If so, is a report now forwarded?

yes ✓

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

yes ✓

Receivers

yes ✓

Separate Tanks

-

Donkey Boilers

yes ✓

General Pumping Arrangements

yes ✓

Oil Fuel Burning Arrangements

yes ✓

SPARE GEAR

supplied in accordance with the Rules

Additional Spare Propeller shaft stamped LR
5004 WGM 27.12.34 also 3 Spare Bronze
Propeller Blades & Gunner Heads & 2 Pistons

The foregoing is a correct description,
For JOHN G. KINCAID & CO. LIMITED.

Director.

Manufacturer.

Dates of Survey while building
During progress of work in shops - - (1934) March 23-29 April 24 May 16-28 June 21 July 14-25-31 August 15-19 20-23-24 Sept 5-9 14-19 20-28 Oct 1-3 5-10 11-17 18-19 22-24 25-29 30-31 Nov 1-6 8-12 19-21
During erection on board vessel - - 23-28 Dec 3-6 9-10 12-13 14-15 20-24 26-27 31 (1935) Jan 3-4 8-11 14-15 19-23 30-31 Feb 1-4 9-11 12-13 19-21 23-25 Mar 4-14 15-
Total No. of visits 81.

Dates of Examination of principal parts—Cylinders 25-10-34 Covers 29-10-34 Pistons 10-12-34 Rods 17-1-35 Connecting rods 17-1-35

Crank shaft 19-1-35 Flywheel shaft 14-1-35 Thrust shaft 14-1-35 Intermediate shafts 24-12-34 Tube shaft -

Screw shaft 17-12-34 Propeller 14-12-34 Stern tube 4-12-34 Engine seatings 17-12-34 Engines holding down bolts 23-2-35

Completion of fitting sea connections 12-12-34 Completion of pumping arrangements 23-2-35 Engines tried under working conditions 15-3-35

Crank shaft, Material S Identification Mark LR 5004 WGM Flywheel shaft, Material S Identification Mark LR 5004 WGM

Thrust shaft, Material S Identification Mark LR 5004 WGM Intermediate shafts, Material S Identification Marks LR 5004 WGM

Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material S Identification Mark LR 5004 WGM

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

-

If so, have the requirements of the Rules 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.)

These Engine & Boiler have been built under Special Survey in accordance with the Approved plans & the workmanship & material are of good quality. They have now been securely fitted on board & tried under working conditions & found satisfactory. The Machinery is eligible in my opinion for the rules. L M C 3 35 (Notation of Donkey Boiler WP 100)

The amount of Entry Fee ... £ 6 : 0 : 0

Special ... £ 107 : 13 : 0

Donkey Boiler Fee ... £ 4 : 4 : 0

Committee's Minute GLASGOW 19 MAR 1935

Assigned

+ L.M.C. 3.35

S.B. 100lb.

When applied for,

16th March 1935

When received,

19.3.35

W. Gordon-Maclean
Engine Surveyor to Lloyd's Register of Shipping.



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Foundation