

REPORT ON OIL ENGINE MACHINERY.

No. 105988.

Received at London Office 11 SEP 1935

Iron Ship. Inche per Rtu

Date of writing Report 19... When handed in at Local Office 6 SEP 1935 Port of Liverpool

No. in Survey held at Northwich Date, First Survey 4.7.35 Last Survey 4.9.1935

Reg. Book. on the ^{Single} ~~Twin~~ ~~Triple~~ ~~Quadruple~~ Screw vessel 'Luneral'

Built at Northwich By whom built W. J. Garwood & Sons. Ltd. Yard No. 490 When built 1935

Engines made at Manchester By whom made Crossley Bros. Ltd. Engines No. 11902/3 When made 1935

Donkey Boilers made at ✓ By whom made ✓ Boiler No. ✓ When made ✓

Brake Horse Power 150 Owners Mayor, Aldermen & Burgesses of Fleetwood Port belonging to Fleetwood

Nom. Horse Power as per Rule 52 ✓ Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes

Trade for which vessel is intended Ferry Service

Tons { Gross 47
Net 21

IL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

Mean Indicated Pressure Span of bearings, adjacent to the Crank, measured from inner edge to inner edge Is there a bearing between each crank

Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

Crank Shaft, dia. of journals as per Rule as fitted Crank pin dia. Crank Webs Mid. length breadth Mid. length thickness Thickness parallel to axis shrunk Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted **Intermediate Shafts**, diameter as per Rule as fitted approved 2.335 **Thrust Shaft**, diameter at collars as per Rule as fitted

Tube Shaft, diameter as per Rule as fitted **Screw Shaft**, diameter as per Rule as fitted approved 2 1/8" Is the screw shaft fitted with a continuous liner no

Bronze Liners, thickness in way of bushes as per Rule as fitted Thickness between bushes as per rule as fitted Is the after end of the liner made watertight in the propeller boss ✓ 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 yes ✓ If so, state type Garwood ✓ Length of Bearing in Stern Bush next to and supporting propeller 1'-1" ✓

Propeller, dia. 1'-2" Pitch 2'-8" No. of blades 3 Material Bronze whether Moveable no Total Developed Surface 4 sq. feet

Method of reversing Engines Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves Are the exhaust pipes and silencers water cooled or lagged with non-conducting material 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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 How driven

Is the cooling water led to the bilges If so, state what special arrangements are made to deal with this water in addition to the ordinary bilge pumping arrangements

Ballast Pumps, No. and size **Power Driven Lubricating Oil Pumps**, including Spare Pump, No. and size 2-1" dia. ✓

Are two independent means arranged for circulating water through the Oil Cooler no ✓ **Suctions**, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 2-2" ✓ In Pump Room ✓

In Holds, &c. hold 1-2", saloon 1-2" ✓

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size one, 2" ✓

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 yes ✓

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 ✓

That pipes pass through the bunkers 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 ✓ Is it fitted with a watertight door ✓ worked from ✓

If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork metal lined to above turn of bilge

Main Air Compressors, No. No. of stages Diameters Stroke Driven by

Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Small Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by

Scavenging Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

W1319 - 0163

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule.

Can the internal surfaces of the receivers be examined and cleaned.

Is a drain fitted at the lowest part of each receiver.

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. _____

Total cubic capacity _____

Internal diameter _____

thickness _____

Seamless, lap welded or riveted longitudinal joint _____

Material _____

Range of tensile strength _____

Working pressure by Rules _____

Actual _____

IS A DONKEY BOILER FITTED? *No*

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

If so, is a report now forwarded?

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

State the principal additional spare gear supplied _____

The foregoing is a correct description,
For W. J. YARWOOD & SONS, LTD.

Manufacturer.

Dates of Survey while building

During progress of work in shops

During erection on board vessel

Total No. of visits

July 4, 17, 31. Aug 21, 29. Sept 4.

6

Dates of Examination of principal parts—Cylinders

Covers

Pistons

Rods

Connecting rods

Crank shaft

Flywheel shaft

Thrust shaft

Intermediate shafts *4.7.35*

Tube shaft

Screw shaft *4.7.35*

Propeller *4.7.35*

Stern tube *4.7.35*

Engine seatings *17.7.35*

Engines holding down bolts *21.8.35*

Completion of fitting sea connections *17.7.35*

Completion of pumping arrangements *29.8.35*

Engines tried under working conditions *29.8.35*

Crank shaft, Material _____

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material _____

Identification Mark

Intermediate shafts, Material *M.S.*

Identification Marks *2085/6/7/8*

Tube shaft, Material

Identification Mark

Screw shaft, Material *M.S.*

Identification Mark *2085/6/7/8*

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 If so, state name of vessel _____

General Remarks (State quality of workmanship, opinions as to class, &c.)

The machinery & auxiliaries of this vessel have now been satisfactorily installed on board, after being built under Special Survey, & the materials & workmanship being good.

On completion the machinery has been examined under running conditions & the spare gear checked, and is now eligible for record of + L.M.C. 9.35

The following plans are forwarded herewith:—

*Stern tube and Shafting. Pipe Arrangement. Pipe list. Pumping Arrangement
Oil fuel tanks. Daily Service tank.*

The amount of Entry Fee ... £ _____

Balance Special ... £ *2 : 14*

Donkey Boiler Fee ... £ _____

Travelling Expenses (if any) £ *3 : 1/3*

When applied for, *6 SEP 1935*

When received, *1-11-35*

S. Lowndes

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

LIVERPOOL 10 SEP 1935

Assigned

+ L.M.C. 9.35.

O.C.

CERTIFICATE WRITTEN 6.11.35



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