

Rpt. 4b.

## REPORT ON OIL ENGINE MACHINERY.

No. 105988.

Received at London Office 11 SEP 1935

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 } Screw vessel 'Luneral' Triple }  
Quadruple }  
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

## OIL ENGINES, &amp;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 eyehole  
Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 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 2 1/8" Is the { tube } 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 40 ✓ 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, &amp;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 40 ✓ 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 40 ✓

Are all Sea Connections fitted direct on the skin of the ship 40 ✓ Are they fitted with Valves or Cocks 40 ✓

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates 40 ✓ Are the Overboard Discharges above or below the deep water line 40 ✓

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel 40 ✓ 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 40 ✓

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 40 ✓ 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 life

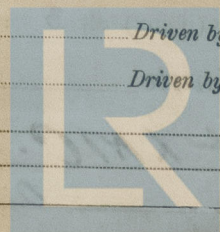
Main Air Compressors, No. No. of stages Diameters Stroke Driven by

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



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**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

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

(If not, state date of approval)

Yes

Receivers

Yes

Separate Tanks

Yes

Donkey Boilers

Yes

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

Yes

**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

Tube shaft

Screw shaft

Propeller

Stern tube

Engine seatings

Engines holding down bolts

Completion of fitting sea connections

Completion of pumping arrangements

Engines tried under working conditions

Crank shaft, Material

Identification Mark

Flywheel shaft, Material

Identification Mark

Thrust shaft, Material

Identification Mark

Intermediate shafts, Material

Identification Marks

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

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

Yes

Is this machinery duplicate of a previous case

Yes

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

£

When applied for,

Balance Special

£

2 : 14

6 SEP 1935

Donkey Boiler Fee

£

When received,

Travelling Expenses (if any)

£

3 : 1/3

1-11-35

Committee's Minute

Assigned

+ L.M.C. 9.35.

O.C.

S. Lowndes

Engineer Surveyor to Lloyd's Register of Shipping.



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