

REPORT ON OIL ENGINE MACHINERY.

No. 45559
12 MAR '35

Received at London Office
1 MAR 1935 Port of **HULL**
Date, First Survey **28th Nov. 1934** Last Survey **9th March, 1935**
Number of Visits **4**

When handed in at Local Office **Goole**
Survey held at **Goole**
Book **"RIVER TRENT."**
Screw vessel **"RIVER TRENT."**
Tons: Gross **246**, Net **116**

Builder **Goole Shipbuilding & Repairing Co. Yard No. 306** When built **1935**
Engines made at **Manchester** By whom made **L. Gardner & Son Ltd.** Engine No. **32358** When made **1935**
Monkey Boilers made at **None** By whom made **None** Boiler No. **None** When made **None**
Horse Power **190** Owners **Richard Henry Hunt.** Port belonging to **Hull**
Horse Power as per Rule **106** Is Refrigerating Machinery fitted for cargo purposes **None** Is Electric Light fitted **None**
Trade for which vessel is intended **Coasting: Great Britain & Ireland & Continent. Brack to Hamburg.**

ENGINES, &c.—Type of Engines **Heavy Oil - Curtis Injection 2 or 4 stroke cycle 2** Single or double acting **S.A.**
Maximum pressure in cylinders **580 lbs./sq. in.** Diameter of cylinders **11"** Length of stroke **13 1/4"** No. of cylinders **5** No. of cranks **5**
Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge **18 1/4"** Is there a bearing between each crank **Yes**
Revolutions per minute **320** Flywheel dia. **44"** Weight **2655 lbs.** Means of ignition **Comp.** Kind of fuel used **Heavy Oil**
Crank Shaft, dia. of journals as per Rule **App.** as fitted **6 3/4"** Crank pin dia. **6 3/4"** Crank Webs Mid. length breadth **8 1/4"** Thickness parallel to axis **Solid**
Mid. length thickness **3 1/16"** shrunk Thickness around eye hole **None**
Crank Wheel Shaft, diameter as per Rule **App.** as fitted **3 7/16"** Thrust Shaft, diameter at collars as per Rule **App.** as fitted **4 1/4" & 4 1/2"**
Propeller Shaft, diameter as per Rule **App.** as fitted **4 5/8"** Is the tube screw shaft fitted with a continuous liner **None**

Is the after end of the liner made watertight in the stern 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**
If so, state type **Similar to that App. for Tug Roman** Length of Bearing in Stern Bush next to and supporting propeller **18 1/2"**
Propeller, dia. **56"** Pitch **42** No. of blades **4** Material **C.I.** whether Moveable **Solid** Total Developed Surface **8 3/4** sq. feet
Method of reversing Engines **Direct** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Means of lubrication **Oil**
Remainder Thickness of cylinder liners **Yes** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with non-conducting material **Yes** If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine **Up funnel**

Cooling Water Pumps, No. **One** Main Engine, also connected to Bilge pump - Is the sea suction provided with an efficient strainer which can be cleared within the vessel **Yes**
Are special arrangements made for dealing with cooling water if discharged into bilges **Discharged overboard**
Lubricating Pumps worked from the Main Engines, No. **One** Diameter **2 3/8"** Stroke **3"** Can one be overhauled while the other is at work **Yes**
Pumps connected to the Main Bilge Line { No. and Size **One @ 2 1/8 x 3"** One Centrifugal **25 tons** One Centrifugal **30/40 tons**
How driven **Main Engine** **Aux. Engine** **Aux. Engine**
Lubricating Pumps, No. and size **One (Cent. 30/40 tons)** (includes Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **One 2" dia x 1/2 stroke & One - Spare**)
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" dia, 2 @ 2 1/4"** In Pump Room **Yes**

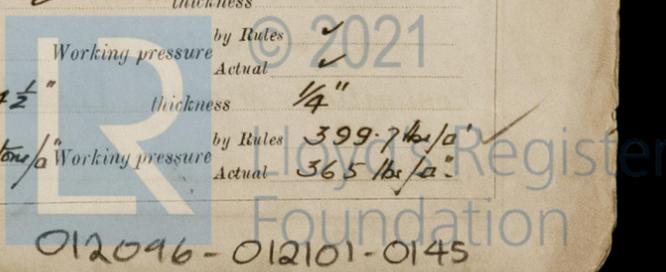
Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size **2 @ 2 1/4" dia included above**
Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes **Yes** Are the Bilge Suctions in the Machinery Spaces from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges & strums **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 **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**

Are all pipes pass through the bunkers **None** How are they protected **Yes**
Are all pipes pass through the deep tanks **Yes** Have they been tested as per Rule **Yes**
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 **None** Is it fitted with a watertight door **Yes** worked from **None**
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. **One** No. of stages **2** Diameters **2 1/8" & 7"** Stroke **3"** Driven by **Main Engine**
Auxiliary Air Compressors, No. **One** (Hand Starting) No. of stages **Single** Diameters **10 cu ft of free air** Driven by **Aux Engine**
All Auxiliary Air Compressors, No. **None** No. of stages **None** Diameters **None** Stroke **None** Driven by **None**
Lubricating Air Pumps, No. **None** Diameter **None** Stroke **None** Driven by **None**

Auxiliary Engines crank shafts, diameter as per Rule **2.29"** as fitted **2 3/8", Paris. 2 3/4"** No. **One** Position **Starboard side of Engine Room**
RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule **Yes** (on main line)
Are 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. **None** Cubic capacity of each **None** Internal diameter **None** thickness **None**
Unless, lap welded or riveted longitudinal joint **Yes** Material **Steel** Range of tensile strength **28/32 tons/sq. in.** Working pressure by Rules **399.7 lbs/sq. in.** Actual **365 lbs/sq. in.**
Working Air Receivers, No. **2** { 231375, 231379 Total cubic capacity **18.3 cu ft.** Internal diameter **14 1/2"** thickness **1/4"**
Unless, lap welded or riveted longitudinal joint **Seamless** Material **Steel** Range of tensile strength **28/32 tons/sq. in.** Working pressure by Rules **399.7 lbs/sq. in.** Actual **365 lbs/sq. in.**



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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

Yes

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 Main Engine:- One breech safety valve assembly. One breech starting valve box assembly. 3 sprayer assemblies, 5 piston & One scraper ring. One HP & One LP Air compressor valve assemblies; One Bosch fuel pump complete, One fuel pump strainer pipe of each size used, One set of bottom end, main bearing & coupling bolts.

Cox Engine:- One complete set of valves for one cylinder with springs, One fuel needle valve & One set of piston rings; one gudgeon pin & bush; One set of crank pin bearing bolts & nuts; One set of piston rings for air compressor. One fuel pump complete.

The foregoing is a correct description.

Manufacturer.

Dates of Survey while building: During progress of work in shops-- 1934 - Nov- 28-29 Dec 3-6 & 7. During erection on board vessel--- 1934 - Dec. 12-28-31. 1935 Jan- 1-3-4-10. Mar. 4. Total No. of visits 14.

Dates of Examination of principal parts-Cylinders Man Rpt Covers Man Rpt Pistons Man Rpt Rods Man Rpt Connecting rods Man Rpt Crank shaft Man Rpt Flywheel shaft Thrust shaft Man Rpt Intermediate shafts 12-12-34. Tube shaft None. Screw shaft 6-12-34 Propeller 7-12-34 Stern tube 29-11-34. Engine seatings 7-12-34 Engines holding down bolts 1-1-35. Completion of fitting sea connections 7-12-34 Completion of pumping arrangements 4-1-35 Engines tried under working conditions 4-1-35. Crank shaft, Material Steel. Identification Mark 5094-A.R.S. Flywheel shaft, Material 5084 A. Identification Mark Thrust shaft, Material Steel Identification Mark 5084 A. Intermediate shafts, Material Steel Identification Marks #615 M.A. Tube shaft, Material None Identification Mark Screw shaft, Material Steel Identification Mark 1615 M.A.

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 No. If so, state name of vessel

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

This vessel's machinery has been fitted on board in accordance with the Rules & the approved plans. The workmanship & materials are good. and the machinery was found satisfactory in every respect when tried under working conditions.

The Machinery of the vessel is eligible, in my opinion, to be classed with records of L.M.C. 3-35 and O.G. and to have the notation of Oil Eng. 2 S.C. SA. 5 Cy. 11"-13 1/4". 106 N.H.P.

The amount of Entry Fee .. £ : : When applied for, Special 1/5 ... £ 5 : 6. : 1 MAR 1935 Donkey Boiler Fee ... £ : : When received, Travelling Expenses (if any) £ : : 2/5/35

Signature of John Mackintosh, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 22 MAR 1935 Assigned + LMC 3.35 O.G. Oil Engines

TUE. 13 AUG 1935 © 2021 Lloyd's Register Foundation

Vertical text on the left margin: (The Surveyors are requested not to write on or below the space for Committee's Minutes.)