

REPORT ON OIL ENGINE MACHINERY.

No. 45559

12 MAR '35

of writing Report

19

When handed in at Local Office

1 MAR 1935

Port of

Received at London Office

HULL.

in Survey held at

Goole

Date, First Survey

28th Nov. 1934

Last Survey

9th March, 1935.

Book.

Number of Visits

4

on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel

"RIVER TRENT."

Tons { Gross 246
Net 116.

built at

Goole

By whom built

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

Boiler No. When made

Indicated Horse Power

190

Owners

Richard Henry Hunt.

Port belonging to

Hull.

Indicated Horse Power as per Rule

106

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

No.

Trade for which vessel is intended

Coasting: Great Britain & Ireland & Continent. Brack to Hamburg.

Type of Engines Heavy Oil - Airless 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.

No. of 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 shrunk Thickness around eye-hole

Flywheel Shaft, diameter as per Rule as fitted Intermediate Shafts, diameter as per Rule as fitted 3 1/16" Thrust Shaft, diameter at collars as per Rule as fitted 4 1/4" & 4 1/2"

Propeller Shaft, diameter as per Rule as fitted Screw Shaft, diameter as per Rule as fitted 4 5/8" Is the tube screw shaft fitted with a continuous liner No

Copper 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

If 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

at Main Bearings Thickness of cylinder liners Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with

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

What special arrangements are made for dealing with cooling water if discharged into bilges Discharged overboard.

Large Pumps worked from the Main Engines, No. One Diameter 2 3/8" Stroke 3" Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size One 2 1/8 x 3" One Centrifugal 25/100 One Centrifugal 30/40 Torque How driven Main Engine Aux Engine

Lubricating Pumps, No. and size One Centrifugal 30/40 Torque (includes Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size One 2" dia x 1/8 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

Holds, etc. F.P. One 2 3" dia - Hold. 3 @ 2 1/4" A.P. One 2 3" dia -

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

Do all pipes pass through the bunkers None How are they protected

Do all 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

apartment to another Yes. Is the Shaft Tunnel watertight None 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

Main Air Compressors, No. One No. of stages 2 Diameters 2 1/8 x 7" Stroke 3" Driven by Main Engine

Auxiliary Air Compressors, No. One No. of stages Single Diameters 10 cu ft of free air Driven by Aux Engine

(Hand Starting) Hand Starting No. of stages Diameters Stroke Driven by

All Auxiliary Air Compressors, No. Diameter Stroke Driven by

Suctioning Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted 2 29" No. - One Position - 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 Internal diameter thickness

Unless, lap welded or riveted longitudinal joint Material Range of tensile strength Working pressure by Rules Actual

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 Actual 399.7 lbs/sq. in. 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

(If not, state date of approval)

Donkey Boilers

General Pumping Arrangements

Receivers

Separate Tanks

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 sprayer pipe of each size used, One set of bottom end, main bearing & coupling bolts.

Aux 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-ARS Flywheel shaft, Material 5084-ARS Identification Mark ✓
Thrust shaft, Material Steel Identification Mark 5084-ARS Intermediate shafts, Material Steel Identification Marks 1615 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. S.A. 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

Committee's Minute

FRI. 22 MAR 1935

Assigned

+ LMC 3.35 O.G.

Oil Engines

TUE. 13 AUG 1935

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