

REPORT ON OIL ENGINE MACHINERY.

No. **8235**

Received at London Office **18 JAN 1935**

Date of writing Report **14/9/35** When handed in at Local Office **14/9/35** Port of **Manchester**

No. in Survey held at **Manchester** Date, First Survey **14 Aug 1914** Last Survey **14/9/35** 19**35**
No. of Visits **12 (incl)**

on the **Single** Screw vessel **River Trent** Tons **Gross** _____
Triple _____
Quadruple _____
Net _____

By whom built **Goole Shipbuilding** Yard No. **306** When built _____

By whom made **L. Gardner & Sons Ltd** Engine No. **52558** When made _____

By whom made _____ Boiler No. _____ When made _____

Owners _____ Port belonging to _____

Is Refrigerating Machinery fitted for cargo purposes _____ Is Electric Light fitted _____

Trade for which vessel is intended **Coasting Great Britain & Ireland & Continent Best to Hamburg**

ENGINES, &c.—Type of Engines **Vertical airless injection Reversing 2 or 4 stroke cycle 2** Single or double acting **Single**

Maximum pressure in cylinders **580 lb** Diameter of cylinders **11"** Length of stroke **13 1/4"** No. of cylinders **5** No. of cranks **5**

Indicated Pressure **50 lb** Weight **2655 lb** Means of ignition **Compression** Kind of fuel used **Heavy oil**

Revolutions per minute **320** Flywheel dia. **44"** Is there a bearing between each crank **Yes**

Bank Shaft, dia. of journals **as per Rule approved** Crank pin dia. **6 3/4"** Crank Webs Mid. length breadth **8 1/4"** Thickness parallel to axis **Solid**

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

Propeller Shaft, diameter **as per Rule** Screw Shaft, diameter **as per Rule** Is the **tube** shaft fitted with a continuous liner **Yes**

Thickness of cylinder liners **as per Rule** Thickness between bushes **as per Rule** Is the after end of the liner made watertight in the **Yes**

Propeller boss **as per Rule** If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner _____

Does the liner do 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 _____

Are two liners 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 so, state type _____ Length of Bearing in Stern Bush next to and supporting propeller _____

Propeller, dia. _____ Pitch _____ No. of blades _____ Material _____ whether Moveable _____ Total Developed Surface _____ sq. feet

Method of reversing Engines **Camshaft act.** Is a governor or other arrangement fitted to prevent racing of the engine when declutched **Yes** Means of lubrication _____

Thickness of cylinder liners **Solid** Are the cylinders fitted with safety valves **Yes** Are the exhaust pipes and silencers water cooled or lagged with _____

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 _____

Boiling Water Pumps, No. **One on engine** Is the sea suction provided with an efficient strainer which can be cleared within the vessel _____

Large Pumps worked from the Main Engines, No. **One** Diameter **2 1/8"** Stroke **3"** 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 _____

Engines _____ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size **One 2" dia x 5 1/2" stroke**

Are two independent means arranged for circulating water through the Oil Cooler _____ Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge _____

Pumps, No. and size:—In Machinery Spaces _____ In Pump Room _____

Holds, &c. _____

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size _____

Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes _____ Are the Bilge Suctions in the Machinery Spaces _____

Are they fitted with Valves or Cocks _____

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

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel _____ Are the Blow Off Cocks fitted with a spigot and brass covering plate _____

How are they protected _____

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 _____

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 _____

Is the Shaft Tunnel watertight _____ Is it fitted with a watertight door _____ worked from _____

Are means provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork _____

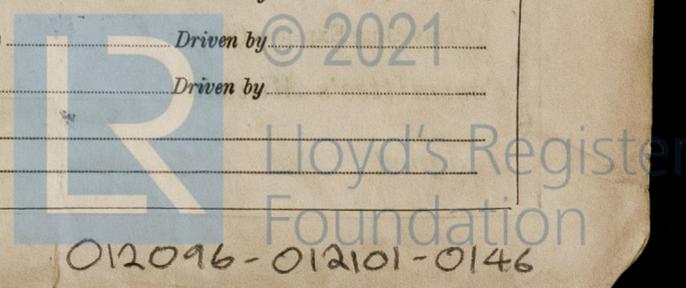
Auxiliary Air Compressors, No. **One** No. of stages **2** Diameters **2 1/8" & 1 1/2"** Stroke **3"** Driven by **Crank shaft**

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

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

Revolving Air Pumps, No. _____ Diameter _____ Stroke _____ Driven by _____

Auxiliary Engines crank shafts, diameter **as per Rule** _____ **as fitted** _____



012096-012101-0146

AIR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule *Yes* *fusible plug - air receiver safety valves in air compressors*

Can 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. *✓* 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. *2* *Nº 21175* Total cubic capacity *18.3 cu ft* Internal diameter *14 1/2* thickness *Side 1/4 - Head 1/2 at Centre*

Seamless, lap welded or riveted longitudinal joint *Seamless* Material *Steel* Range of tensile strength *28/32 L* Working pressure by Rules *399.7 lb.* Actual *365 lb.*

IS A DONKEY BOILER FITTED?

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 *General* *Yes* Receivers *Yes* Separate Tanks *Yes*

Donkey Boilers *✓* General Pumping Arrangements *✓* Oil Fuel Burning Arrangements *✓*

SPARE GEAR.

Has the spare gear required by the Rules been supplied *✓*

State the principal additional spare gear supplied *5 piston rings, 1 Schraper assembly, one fuel pipe to Schraper, 2 bilge pump valves, 2 bilge pump cup washers, 2 water pump valves, 2 water pump cup washers, 2 fuel pump delivery valves & seats, 5 fuel pump delivery valves, one lubricator, oil pump and washers, Spring for CA Control valve air starting valve, Lubricator pump relief del. valves, Air Compressor fuel pump plunger & delivery valves, fuel pump suction & del. valves, fueling (outboard), fresh water valve, 2 number of spools and washers.*

The foregoing is a correct description,

L. GARDNER & SONS LD.

William Gardner. Manufacturer.

Dates of Survey while building { During progress of work in shops - - *14-8-34, 19-21-34, 25-9-34, 2-19-10-34, 5-8-11-34, 14-12-34, 8-17-1-25* }
 { During erection on board vessel - - }
 Total No. of visits *12 (incl)*

Dates of Examination of principal parts—Cylinders *19-21-34* Covers *19-21-34* Pistons *21-9-34* Rods *✓* Connecting rods *19-9-34*

Crank shaft *25-9-34* Flywheel shaft *✓* Thrust shaft *2-10-34* 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 *Engt Steel* Identification Mark *Engt N° 5094 A* Flywheel shaft, Material *✓* Identification Mark *✓*

Thrust shaft, Material *Engt Steel* Identification Mark *Engt N° 5094 A* 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. *✓*

Have the requirements of the Rules for oil fuel pipes and tank fittings been complied with *✓*

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 *✓*

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 *No* If so, state name of vessel *✓*

General Remarks (State quality of workmanship, opinions as to class, &c. *This main engine N° 52358 has been built under special survey and the materials used in accordance with the Rules. The materials so far as can be seen are sound & the workmanship is good.*

The engine has been satisfactorily tested under full load & the work & has been dispatched to Messrs. Goble S.B. & Co for installation in vessel N° 506.

Certificate (if required) to be sent to (The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £ 3 : 0 : *When applied for, 14/11/1934*
 Special ... £ 21 : 4 : *When received, 14/11/1934*
 Donkey Boiler Fee ... £ : : *14/11/1934*
 Travelling Expenses (if any) £ : : *14/11/1934*

George Anderson
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 22 MAR 1935*
 Assigned *See minute on F.B. Rpt.*

TUE. 13 AUG 1935



© 2021

Lloyd's Register Foundation