

REPORT ON OIL ENGINE MACHINERY.

No. 91980

Received at London Office

Date of writing Report 19 34 When handed in at Local Office 20/11/34 Port of NEWCASTLE-ON-TYNE

No. in Survey held at Newcastle-on-Tyne Date, First Survey 13.3.34 Last Survey 14.11.1934
Reg. Book. Number of Visits 50

Single on the Twin } Screw vessel Motor vessel
Triple }
Quadruple }

Tons } Gross
Net

Built at Belfast By whom built Workman Clark & Co Yard No. 536 When built 1935

Engines made at Newcastle-on-Tyne By whom made R. W. Hawthorn Leslie & Co Engine No. 3823 When made - do -

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

Brake Horse Power 3500 Owners Anglo Saxon Petroleum Co, Ltd Port belonging to London

Nom. Horse Power as per Rule 502 Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted yes

Trade for which vessel is intended Carrying oil in bulk. 25 7/8 55 3/8

OIL ENGINES, &c. Type of Engines Werkspoon supercharged 2 or 4 stroke cycle 4 Single or double acting single

Maximum pressure in cylinders 400 lbs Diameter of cylinders 6 5/8 Length of stroke 14 0/8 No. of cylinders 8 No. of cranks 8

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8 6/8 Is there a bearing between each crank yes

Revolutions per minute 120 Flywheel dia. 4'-5 1/4" Weight 6.8 Tons Means of ignition compression Kind of fuel used Diesel Oil

Crank Shaft, dia. of journals as per Rule 4 4/8 as fitted 4 6/8 Crank pin dia. 4 6/8 Crank Webs Mid. length breadth 8 4/8 Thickness parallel to axis 2 6/8 as fitted 2 4/8 Mid. length thickness 3 4/8 Thickness around eye-hole 2 0/8

Flywheel Shaft, diameter as per Rule 4 4/8 as fitted 4 6/8 Intermediate Shafts, diameter as per Rule 3 6/8 as fitted 4 6/8 Thrust Shaft, diameter at collars as per Rule 3 6/8 as fitted 4 6/8

Tube Shaft, diameter as per Rule 3 6/8 as fitted 4 6/8 Screw Shaft, diameter as per Rule 3 6/8 as fitted 4 6/8 Is the tube shaft fitted with a continuous liner

Bronze Liners, thickness in way of bushes as per Rule 3 6/8 as fitted 4 6/8 Thickness between bushes as per Rule 3 6/8 as fitted 4 6/8 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 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 Air Sewalokoi Is a governor or other arrangement fitted to prevent racing of the engine when declutched yes Means of lubrication

forced Thickness of cylinder liners 5 5/8 Are the cylinders fitted with safety valves yes 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. 1 Rotary on main eng. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Bilge Pumps worked from the Main Engines, No. 1 Bilge Diameter Rotary Stroke Can one be overhauled while the other is at work

Pumps connected to the Main Bilge Line No. and Size Two 3 5/8" Rotary How driven Main engine.

Ballast Pumps, No. and size Lubricating Oil Pumps, including Spare Pump, No. and size

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

In 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

led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges

Are all Sea Connections fitted direct on the skin of the ship 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

What pipes pass through the bunkers Belfast Report 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

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 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

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 No. as fitted Position

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

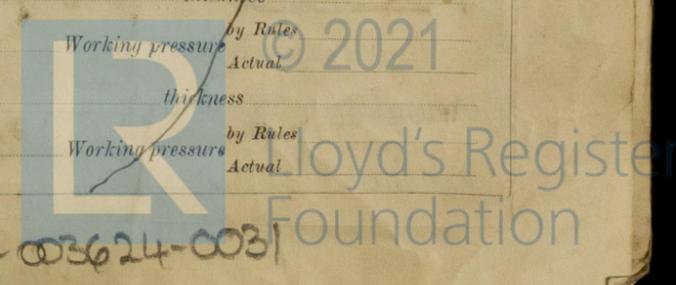
Can the internal surfaces of the receivers be examined and cleaned Is a drain fitted at the lowest part of each receiver

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



003620-003624-0031

IS A DONKEY BOILER FITTED?

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 *Crank. Yes.*
(If not, state date of approval)

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR.

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

State the principal additional spare gear supplied *As required by the Rules of the Society & as per attached list.*

The foregoing ^{For} is a correct description.

R. & W. HAWTHORN, LESLIE & CO. LIMITED

R. Johnston

Manufacturer.

1934
 Dates of Survey while building
 During progress of work in shops - Mar. 13. 21. Apr. 3. 10. 16. 23. 25. May 1. 4. 9. 18. 22. 28. June 1. 19. 22. July 6. 9. 12. 17. 18. 24. 26. 30.
 During erection on board vessel - Aug. 3. 8. 10. 14. 16. 20. 23. Sep. 4. 6. 10. 13. 18. 19. 24. 28. Oct. 1. 3. 5. 10. 12. 18. 23. 29. Nov. 1. 6. 14.
 Total No. of visits *50*

Dates of Examination of principal parts - Cylinders *28. 5. 34* Covers *23. 8. 34* Pistons *28. 5. 34* Rods *26. 7. 34* Connecting rods *26. 7. 34*

Crank shaft *11. 6. 34* Flywheel shaft *11. 6. 34* 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 *S* Identification Mark *LLOYDS No 2109/2110* Flywheel shaft, Material *S* Identification Mark *LLOYDS No 2111*
 Thrust shaft, Material *S* Identification Mark *11. 6. 34* Intermediate shafts, Material - Identification Marks *LLOYDS No 2111*
 Tube shaft, Material *---* Identification Mark *LLOYDS No 2111* Screw shaft, Material - Identification Mark *11. 6. 34*

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. *The Machinery has been built*

under Special Survey in accordance with the approved plans & the Rules of the Society & has been forwarded to Belfast to be fitted on board the vessel.

The workmanship & materials are of good quality throughout.

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 .. £ 6 : - :
 Special £ : :
4/5 Fee Insurance £ 80 : 1 :
 Travelling Expenses (if any) £ : :
 When applied for, 21. 11. 19. 34
 When received, 24. 11. 19. 34

Chas. A. Ferguson
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned
 See Ref. J.E. 11456
 TUE. 12. FEB. 1935

