

## REPORT ON OIL ENGINE MACHINERY.

No. 91980

Received at London Office  
 Date of writing Report 19 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  
 on the ~~Triple~~ <sup>Single</sup> Screw vessel **Motor vessel** Tons <sup>Gross</sup>   
 Built at **Belfast** By whom built **Workman Clark & Co. Ltd** Yard No. 536 When built 1935  
 Engines made at **Newcastle-on-Tyne** By whom made **R. W. Hawthorn Leslie & Co. Ltd** 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 1/8

**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 6.50 <sup>1/4</sup> Length of stroke 14.00 <sup>1/4</sup> No. of cylinders 8 No. of cranks 8  
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 8.44 <sup>1/4</sup> 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 4.48 <sup>1/4</sup> as fitted 4.60 <sup>1/4</sup> Crank pin dia. 4.60 <sup>1/4</sup> Crank Webs Mid. length breadth 8.40 <sup>1/4</sup> Mid. length thickness 3.48 <sup>1/4</sup> Thickness parallel to axis 2.64 <sup>1/4</sup> Thickness around eye-hole 2.04 <sup>1/4</sup>  
 Flywheel Shaft, diameter as per Rule 4.48 <sup>1/4</sup> as fitted 4.60 <sup>1/4</sup> Intermediate Shafts, diameter as per Rule as fitted } **Belfast Report** Thrust Shaft, diameter at collars as per Rule 3.41 <sup>1/4</sup> as fitted 4.60 <sup>1/4</sup>  
 Tube Shaft, diameter as per Rule as fitted } **Belfast Report** Is the { tube { screw } shaft fitted with a continuous liner {  
 Screw Shaft, diameter as per Rule as fitted } **Belfast Report**  
 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 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 Screw & Clutch** 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 <sup>1/4</sup> 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 in 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 35 Gallon 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 as fitted No. 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

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 *Frank. 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 <sup>For</sup> is a correct description.

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

*R. B. Johnson*

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 *LLOYDS No 2112* Intermediate shafts, Material - Identification Marks *LLOYDS No 2113*

Tube shaft, Material *S* Identification Mark *LLOYDS No 2114* Screw shaft, Material - Identification Mark *LLOYDS No 2115*

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.*

The amount of Entry Fee .. £ 6 : -  
Special ... .. £ :  
4/5<sup>th</sup> Donkey Boiler Fee ... £ 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

TUE. 12. FEB. 1935

Assigned

*See Ref. J.E. 11456*



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