

Rpt. 4b.

# REPORT ON OIL ENGINE MACHINERY.

No. 19605

22 JAN 1936

Received at London Office

Date of writing Report 21<sup>st</sup> Jan 1936. When handed in at Local Office

21. 1. 31 Port of *Grimsey*.

No. in Survey held at *Lincoln*.

Date, First Survey 19<sup>th</sup> Dec 1935. Last Survey 20<sup>th</sup> Jan 1936

Reg. Book.

Number of Visits 9.

Single  
on the Twin  
Triple  
Quadruple

Screw vessel

Tons  
Gross  
Net

Built at

By whom built

Yard No.

When built

Engines made at *Lincoln*.

By whom made *Ruston & Hornsby, Ld.*

Engine No.

When made 1936.

Donkey Boilers made at

By whom made

Boiler No.

When made

Brake Horse Power 27 each

Owners

Port belonging to

Nom. Horse Power as per Rule 5.9 each

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

[4 Engines. Type 3 J.P.]

II. ENGINES, &c. Type of Engines *Oilless injection, cold starting* 2 or 4 stroke cycle 4 Single or double acting *single*

Maximum pressure in cylinders 750 lbs. Diameter of cylinders 4 1/2" Length of stroke 5 1/2" No. of cylinders 3 No. of cranks 3

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 6.69" Is there a bearing between each crank *yes*

Revolutions per minute 1000 Flywheel dia. 26" Weight 288 lbs. Means of ignition *compression* Kind of fuel used *crude oil*

Crank Shaft, dia. of journals as approved 3" Crank pin dia. 3" Crank Webs Mid. length breadth 3 1/2" Mid. length thickness 1 1/4" Thickness parallel to axis ✓ Thickness around eye hole ✓

Flywheel Shaft, diameter as approved 3" Intermediate Shafts, diameter as per Rule ✓ as fitted ✓ Thrust Shaft, diameter at collars as per Rule ✓ as fitted ✓

Tube Shaft, diameter as per Rule ✓ as fitted ✓ Screw Shaft, diameter as per Rule ✓ as fitted ✓ Is the tube screw shaft fitted with a continuous liner ✓

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

Length of Bearing in Stern Bush next to and supporting propeller ✓

Propeller, dia. ✓ Pitch ✓ No. of blades ✓ Material ✓ whether Movable ✓ Total Developed Surface ✓ sq. feet

Method of reversing Engines *None* Is a governor or other arrangement fitted to prevent racing of the engine when declutched *yes* Means of lubrication

*forced* Thickness of cylinder liners 5/16" Are the cylinders fitted with safety valves ✓ Are the exhaust pipes and silencers water cooled or lagged with

insulating 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, *None* Is the sea suction provided with an efficient strainer which can be cleared within the vessel ✓

What special arrangements are made for dealing with cooling water if discharged into bilges ✓

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

Pumps connected to the Main Bilge Line No. and size ✓ How driven ✓

Ballast Pumps, No. and size ✓ Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *one geared*

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

Are they fitted with Valves or Cocks ✓

Are all Sea Connections fitted direct on the skin of the ship ✓ Are the Overboard Discharges above or below the deep water line ✓

Are they fixed sufficiently high on the ship's side to be seen without lifting the platform plates ✓ Are the Blow Off Cocks fitted with a spigot and brass covering plate ✓

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel ✓ How are they protected ✓

What pipes pass through the bunkers ✓ Have they been tested as per Rule ✓

What pipes pass through the deep tanks ✓

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 ✓ No. ✓ Driven by ✓

Auxiliary Engines crank shafts, diameter as per Rule ✓ as fitted ✓ Position ✓

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

Are 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. *None* Cubic capacity of each ✓ Internal diameter ✓ Thickness ✓ by Rules ✓ Actual ✓

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

Starting Air Receivers, No. *None* Total cubic capacity ✓ Internal diameter ✓ Range of tensile strength ✓ Working pressure ✓ thickness ✓ by Rules ✓ Actual ✓

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



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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? ☒

Are approved plans forwarded herewith for Shafting *24.9.32.17.12.35* Receivers ☒

(If not, state date of approval)

Separate Tanks ☒

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 ☒

*Request form attached.*

The foregoing is a correct description.

*L. Onions 14/1/36*

Manufacturer.

Dates of Survey while building: During progress of work in shops - *1935 Dec 19 23 30 1936 Jan 2 8 9 13 16 20 + Jan 24 29*  
During erection on board vessel -  
Total No. of visits *9 + 2 = 11*

Dates of Examination of principal parts—Cylinders *23.12.35* Covers *26.1.36* Pistons *9.1.36* Rods ☒ Connecting rods *9.1.36*

Crank shaft *9.1.36 + 16.1.36* Flywheel shaft ☒ 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 *24.12.35*

Crank shaft, Material *Sm. steel* Identification Mark *2347, 2, 1, 0* Flywheel shaft, Material ☒ Identification Mark ☒

Thrust shaft, Material ☒ Identification Mark ☒ 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? ☒

Is the insulation 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, etc.) *The workmanship & materials are good.*

*These engines have been partly built under Special Survey in accordance with the Rules and approved plans at the works of Messrs Ruston & Hornsby, Ltd., of Lincoln.*

*The engines have been forwarded to the works of Messrs R.A. Hister & Co., of Dunstable, where they will be completed & the running trials carried out.*

*The Bristol Surveyor has been advised.*

*These engines have been examined under working conditions on the test bed with satisfactory results. They have been despatched to the Hornsby Langfords are shown to be for lighting sets & supplying power to electric winches for the Goolen S.B. & Co. Yards Nos 312-13-14 & 15*

+848/35/14/1009-10-11-12

P/14/5748/9/50/51

Amount of Entry Fee ☒

Special ☒

Donkey Boiler Fee ☒

Travelling Expenses (if any) ☒

Committee's Minute

signed

When applied for.

19

When received.

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*J. L. Fieditch & John L. Dwyne*  
Engineer Surveyor to Lloyd's Register of Shipping.



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