Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 94861

Received at London Office 31 MAR 1937

Date of writing Report ... 19... When handed in at Local Office 27/3/1937 Port of NEWCASTLE-ON-TYNE

No. in Reg. Book. ... Survey held at Newcastle on Tyne Date, First Survey 16 Nov/36 Last Survey 24/3/1937. Number of Visits 33.

... on the Single / ~~Twin~~ / ~~Triple~~ / ~~Quadruple~~ Screw vessel "REGENT LION." Tons Gross 9551 Net 5794

Built at Newcastle on Tyne By whom built Swan Hunter & Wigham Richd's Ltd Yard No. 1521 When built 1937.

Engines made at Greenock By whom made John Kincaid & Co Ltd Engine No. K104 When made 1937.

Donkey Boilers made at do By whom made ditto. Boilers No. K104 When made 1937.

Brake Horse Power 3100 Owners Messrs C.T. Bowring & Co. Ltd Port belonging to LONDON

Nom. Horse Power as per Rule 816 ✓ Is Refrigerating Machinery fitted for cargo purposes No Is Electric Light fitted Yes

Trade for which vessel is intended Ocean going.

OIL ENGINES, &c.—Type of Engines Heavy Oil Solid Inj'n (B&W Type). ~~Set~~ 4 stroke cycle 4. Single ~~or double~~ acting Single

Maximum pressure in cylinders 600 lbs. Diameter of cylinders 740 m/m (29⅛") Length of stroke 1500 m/m (59⅛") No. of cylinders 10. No. of cranks 10.

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge See Greenock Rpt 20300 Is there a bearing between each crank ✓

Revolutions per minute 95. ✓ Turning ~~Flywheel~~ dia. 2483 m/m Weight 2660 Kg Means of ignition Heat of Compression Kind of fuel used Heavy oils.

Crank Shaft, dia. of journals as per Rule ✓ / as fitted ... Crank pin dia. ✓ Crank Webs Mid. length breadth ✓ / Mid. length thickness ... shrunk Thickness parallel to axis ✓ / Thickness around eyehole ...

Flywheel Shaft, diameter as per Rule ✓ / as fitted ... **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 Yes

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 Yes If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner Liner in One piece ✓

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 No If so, state type ✓ Length of Bearing in **Stern Bush** next to and supporting propeller ...

Propeller, dia. 17'-0" ✓ Pitch 12'-9" No. of blades 4. Material Bronze whether Moveable No Total Developed Surface 86 ✓ sq. feet

Method of reversing Engines Air ✓ Is a governor or other arrangement fitted to prevent racing of the engine ~~when declutched~~ Yes Means of lubrication forced. Thickness of cylinder liners ✓ Are the cylinders fitted with safety valves Yes Are the exhaust pipes and silencers water cooled or lagged with non-conducting material lagged ✓ If the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine Loop up Funnel. ✓

Cooling Water Pumps, No. Two. ✓ 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 ✓ discharges overboard ✓

Bilge Pumps worked from the **Main Engines,** No. One ✓ Diameter 4" Rotary Stroke ... Can one be overhauled while the other is at work ✓

Pumps connected to the **Main Bilge Line** { No. and Size Two — one 8"×9"×10" 130 tons/hr & one 7"×8"×8" 100 tons/hr / How driven Steam driven. ✓

Ballast Pumps, No. and size One 8"×9"×10" Duplex ✓ **Power Driven Lubricating Oil Pumps,** including Spare Pump, No. and size 2 MAIN ENGS: 8" of 100 TONS/HR 1 STANDBY: 6" of 100 TONS/HR ✓

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 3 of 3½" and 2 of 2½" ✓ In Pump Room One 3" ✓

In Holds, &c. Forw'd Hold 2 of 2½" & 1 of 2" in Pump Room: Cofferdams. Forw'd 1 of 4"; Aft 1 of 3" Steam ejector.

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size Two of 5½" ✓

Are all the Bilge Suction pipes in Forward Hold ~~and Tunnel Well~~ fitted with strum-boxes Yes. ✓ 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 Yes, to the 3 of 3½" ✓

Are all **Sea Connections** fitted direct on the skin of the ship Yes ✓ Are they fitted with Valves or Cocks both. ✓

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 Yes ✓

What pipes pass through the bunkers None How are they protected ✓

What pipes pass through the deep tanks None 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 compartment to another Yes 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. None No. of stages ✓ Diameters ✓ Stroke ✓ Driven by ✓

Auxiliary Air Compressors, No. Two No. of stages 2 Diameters 4¾" & 11¼" Stroke 8" Driven by Steam Engs ✓

Small Auxiliary Air Compressors, No. One No. of stages 2 Diameters 2⅜" & 5¾" Stroke 4" Driven by Oil Engine Hand. Starting. ✓

Scavenging Air Pumps, No. ✓ Diameter ... Stroke ... Driven by ...

Auxiliary ~~Oil~~ Engines crank shafts, diameter as per Rule ✓ / as fitted ... No.:— One driving Small Auxy Compressor and Stand by Lighting Dyno. Position — Stbd side en Eng. Room. ✓

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

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. 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 ...

Starting Air Receivers, No. Two ✓ Total cubic capacity 1200 Cub. Ft ✓ Internal diameter ✓ thickness ✓

Seamless, lap welded or riveted longitudinal joint ✓ Material ✓ Range of tensile strength See Greenock Rpt No 20,300. Working pressure by Rules 364 lbs/□" / Actual 25 Kg/ (356 lbs)

IS A DONKEY BOILER FITTED? Yes.—Two ✓ If so, is a report now forwarded? See Greenock Repo
Nos 20,300.

Is the donkey boiler intended to be used for domestic purposes only No. ✓

PLANS. Are approved plans forwarded herewith for Shafting ✓ (If not, state date of approval) Receivers ✓ Separate Tanks ✓

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

SPARE GEAR.

Has the spare gear required by the Rules been supplied Yes. ✓

State the principal additional spare gear supplied One Cast Iron Propeller and Screw Shaft C.L.
9 Springs for Exhaust Valves & 9 for Air Inlet Valves
1 set of 2 springs for Air Starting Valve & 4 springs for Fuel Valves.
10 Spindles & sleeves for Fuel Valves
2 sets of 9 rings for pistons, etc. etc.

The foregoing is a correct description,
For JOHN G. KINCAID & CO. LIMITED.
A. H. Carter Director. *Manufacturer.*

Dates of Survey while building — During progress of work in shops— 1936 Nov. 16. 17. 19. 20. 23. 25. 27. 30. Dec. 1. 2. 8. 10. 11. 16. 21. 22. 1937 Jan. 5. 11. 13. 21. 22. 26. Feb. 4. 16. 17
During erection on board vessel— 22. Mar. 1. 8. 10. 15. 18. 19. 24.
Total No. of visits 33.

Dates of Examination of principal parts—Cylinders ✓ See Greenock Rpt No 20300. Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓

Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts ✓ Tube shaft ✓

Screw shaft Propeller 30/11/36 Stern tube 23/11/36 Engine seatings 5/3/37 Engines holding down bolts 5/3/37.

Completion of fitting sea connections 30/11/36 Completion of pumping arrangements 23/3/37 Engines tried under working conditions 24/3/37.

Crank shaft, Material ✓ Identification Mark ✓ 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. 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 ✓ 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 installed under special survey in accordance with the Society's Rules and approved plans, and the materials and workmanship are good.

The machinery was satisfactorily tested under working conditions, and the Vessel is eligible in my opinion for record +LMC 3.37, TSel. and 2DB 180 lbs WP.

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

Certificate (if required) to be sent to

The amount of Entry Fee ..	£	See Greenock Report	When applied for,	19
Special	£	: :		
Donkey Boiler Fee ...	£	: :	When received,	19
Travelling Expenses (if any)	£	: :		

A. Watt.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI 2 APR 1937

Assigned + Dec 2.37 CL die hng
2 DB 180 lb