

Rpt. 4b.

REPORT ON OIL ENGINE MACHINERY.

No. 57721

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Date of writing Report 28.11.36 Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 20.1.36 Last Survey 23.11.1936

on the Twin Screw vessel *John Swan Hunter - Wigham Richardson Ltd. 1504 Tons* Gross 4687 Net 5826

Built at Newcastle-on-Tyne By whom built Swan Hunter & Wigham Richardson Ltd. Yard No. 1515 When built 1937

Engines made at Glasgow By whom made Barclay Curle & Co. Ltd. Engine No. 54108 When made 1936

Donkey Boilers made at ANNAN By whom made COCHRAN & Co. Boiler No. When made

Brake Horse Power 5450 Owners Commonwealth & Dominion Line Port belonging to LONDON

Nom. Horse Power as per Rule 2025 Is Refrigerating Machinery fitted for cargo purposes Yes Is Electric Light fitted Yes

Trade for which vessel is intended UK to New Zealand & Australian Ports

II, ENGINES, &c. Type of Engines *Double opposed piston* 2 or 4 stroke cycle 2 Single or double acting *Single*

Maximum pressure in cylinders 568 lbs. Diameter of cylinders 425 mm Length of stroke 2250 mm No. of cylinders 8 No. of cranks 8

Mean Indicated Pressure 84 lbs. Span of bearings adjacent to the Crank measured from inner edge to inner edge 1410 mm Is there a bearing between each crank -

Revolutions per minute 120 Flywheel dia. - Weight - Means of ignition *Comp.* Kind of fuel used *Diesel*

Crank Shaft, dia. of journals as per Rule *App.* Crank pin dia. 540 mm Crank Webs Mid. length breadth 1020 mm Thickness parallel to axis 310 mm

Flywheel Shaft, diameter as per Rule *App.* Intermediate Shafts, diameter as per Rule Thrust Shaft, diameter at collars as per Rule *App.*

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

Bronze Liners, thickness in way of bushes as per Rule Thickness between bushes as per Rule 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 *Comp. Dist.* Is a governor or other arrangement fitted to prevent racing of the engine when disengaged *Yes* Means of lubrication *Manual*

Thickness of cylinder liners *1 1/2 in. improved* Are the cylinders fitted with safety valves *Yes* Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material *Yes* 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. Is the sea suction provided with an efficient strainer which can be cleared within the vessel

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

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

arrangements

Ballast Pumps, No. and size Power Driven 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

and 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 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

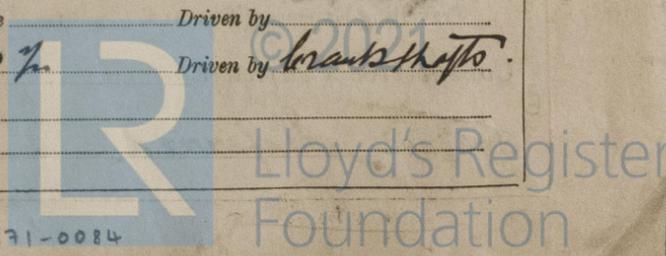
Main Air Compressors, No. No. of stages Diameters Stroke Driven by

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. 2 Diameter 1620 mm Stroke 1400 mm Driven by *crank shafts*

Auxiliary Engines crank shafts, diameter as per Rule as fitted



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 ^{Donkey} Receivers..... Separate Tanks.....
(If not, state date of approval)

Donkey Boilers..... General Pumping Arrangements..... Oil Fuel Burning Arrangements.....

SPARE GEAR.

Has the spare gear required by the Rules been supplied *See List Attached*.....

State the principal additional spare gear supplied.....

The foregoing is a correct description,
FOR BAROLAY, CURLE & Co., LTD

Alexander Macnill.....

Manufacturer.



Dates of Survey while building { During progress of work in shops-- } 1936 *Jan* 30 29 Feb. 4 12 18 21 24 28 Mar. 4 6 10 17 20 25 30 Apr. 3 8 15 24
 { During erection on board vessel-- } May 11 21 25 June 1 4 12 18 26 July 2 9 13 Aug. 4 10 13 17 19 21 24 26 31 Sep. 9 10 14 15 18 22 24 29 Oct. 5 9 13 19 23 27 30 Nov. 9 10 18 23
 Total No. of visits *61*

Dates of Examination of principal parts—Cylinders *22.9.36* Covers — Pistons *22.9.36* Rods *22.9.36* Connecting rods *29.9.36*

Crank shaft *29.9.36* Flywheel shaft *and* 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 *P.A. Ingot steel* Identification Mark *568-CSP* Flywheel shaft, Material *and* 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.....

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 machinery has been built under special Survey and in accordance with the Rules. The materials and workmanship are good. It has been tried on the bench at full power with satisfactory results.

It has been shipped to Newcastle for fitting on board.

At 28/11/36.

This machinery has been satisfactorily installed in the vessel. "PORT JACKSON", SHAW'S Yard No 1515.

For further particulars, see Newcastle Report No.

A. Watt.
Newcastle

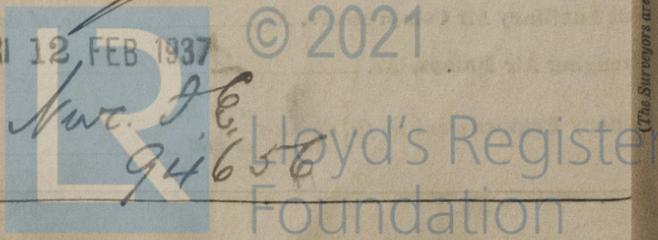
The amount of Entry Fee .. £ 6 : - : When applied for,
 4/5 Special *150.12.6*... £ 80 : 10 : 19
 Donkey Boiler Fee ... £ 25 : 4 :
 Willing Fee.....
 Travelling Expenses (if any) £ : : 19

Geo. Munro
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1 DEC 1936

Assigned *Deferred.*

FRI 12 FEB 1937



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

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