

# REPORT ON OIL ENGINE MACHINERY.

No. 51300

18 MAR 1931

Received at London Office

Date of writing Report 16-3-31 When handed in at Local Office 16-3-31 Port of Glasgow

No. in Survey held at Glasgow Reg. Book. Date, First Survey 7-10-30 Last Survey 6-3-1931 Number of Visits 6

Single on the Twin Triple Quadruple } Screw vessel MACDHUI Tons { Gross 4561 Net 2626

Built at Glasgow By whom built Barclay Curle & Co Ltd Yard No. 644 When built 1931

Engines made at Greenock By whom made J. G. Nicaid & Co Ltd Engine No. 1165 When made 1931

Donkey Boilers made at Annan By whom made Cochran (Annan) Ltd. Boiler No. 11738 When made 1931

Brake Horse Power 3820 Owners Burns Philp & Co Ltd. Port belonging to Sydney

Nom. Horse Power as per Rule 653 Is Refrigerating Machinery fitted for cargo purposes yes Is Electric Light fitted yes

Trade for which vessel is intended Foreign

## OIL ENGINES, &c.—Type of Engines 2 or 4 stroke cycle Single or double acting

Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks

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

Revolutions per minute Flywheel dia. Weight Means of ignition Kind of fuel used

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

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 Is a governor or other arrangement fitted to prevent racing of the engine when declutched Means of lubrication

Thickness of cylinder liners Are the cylinders fitted with safety valves 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. 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

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 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

## 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



W192-0297

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... Receivers... 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

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building { During progress of work in shops - 1930 Oct 7 Nov 5 Dec 9 9 (1931) Feb 10 Mar 6; During erection on board vessel - - -; Total No. of visits 6

Dates of Examination of principal parts - Cylinders... Covers... Pistons... Rods... Connecting rods... Crank shaft... Flywheel shaft... Thrust shaft... Intermediate shafts... Tube shaft... Screw shaft... Propeller... Stern tube... Engine seatings 8-12-30... Engines holding down bolts... Completion of fitting sea connections 9-12-30... Completion of pumping arrangements... Engines tried under working conditions... 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.

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... If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)

The stern tube, tail shaft, propeller and sea connections have been properly & securely fitted. The main engines and the Donkey Boilers were fitted at Greenock.

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

Table with 4 columns: Fee Type, Amount (£), When applied for, When received. Rows include Entry Fee, Special, Donkey Boiler Fee, Travelling Expenses.

Committee's Minute GLASGOW 17 MAR 1931

Assigned SEE ACCOMPANYING MACHINERY REPORT.

Signature of H. Sutherland, Engineer Surveyor to Lloyd's Register of Shipping.

