

# REPORT ON OIL ENGINE MACHINERY.

No. 32143

JUL 21 1937

Received at London Office

Date of writing Report

When handed in at Local Office 20 JULY 1937 Port of *Sunderland.*

No. in Survey held at *Sunderland.*

Date, First Survey *Mar. 24* Last Survey *July 20 1937.*

Number of Visits *41*

on the *Single* Screw vessel

## "ALDERSDALE"

Tons <sup>Gross</sup> <sub>Net</sub>

built at *Birkenhead*

By whom built *Cammell Laird & Co. Ld.*

Yard No. *1025* When built *1934.*

Engines made at *Sunderland*

By whom made *Wm. Grayford & Sons Ld.*

Engine No. *200* When made *1934.*

Donkey Boilers made at

By whom made

Boiler No. When made

Indicated Horse Power *2850*

Owners

Port belonging to

Net Horse Power as per Rule *684*

Is Refrigerating Machinery fitted for cargo purposes

Is Electric Light fitted

Trade for which vessel is intended

*23 5/8 - 91 5/16*

MAIN ENGINES, &c. Type of Engines *Opposed piston airless injection 2 or 4 stroke cycle 2* Single or double acting *Single.*

Maximum pressure in cylinders *540 lbs/sq. in.* Diameter of cylinders *600 in.* Length of stroke *Upper. 980 in. Lower. 1340 in.* No. of cylinders *4.* No. of cranks *(3 throws).*

Mean Indicated Pressure *84 lbs/sq. in.* Crank pin dia. *450 in.* Crank webs *Mid. length breadth 650 in. Mid. length thickness 255 in.* Kind of fuel used *Leamington*

Distance between bearings, adjacent to the Crank, measured from inner edge to inner edge *940 in.* Is there a bearing between each crank *Yes*

Revolutions per minute *94.* Flywheel dia. *2050 in.* Weight *562 cwt.* Means of ignition *Temperature*

Crank Shaft, dia. of journals *as per Rule 425 in. as fitted 450 in.* Crank pin dia. *450 in.* Crank webs *Mid. length breadth 650 in. Mid. length thickness 255 in.* Thickness parallel to axis *255 in.* Thickness around eyehole *200 in.*

Flywheel Shaft, diameter *as per Rule 425 in. as fitted 450 in.* Intermediate Shafts, diameter *as per Rule 425 in. as fitted 450 in.* Thrust Shaft, diameter at collars *as per Rule 425 in. as fitted 450 in.*

Propeller Shaft, diameter *as per Rule 425 in. as fitted 450 in.* Screw Shaft, diameter *as per Rule 425 in. as fitted 450 in.* Is the <sup>tube</sup> <sub>screw</sub> shaft fitted with a continuous liner

Brass Liners, thickness in way of bushes *as per Rule 25 in. as fitted 25 in.* Thickness between bushes *as per Rule 25 in. as fitted 25 in.* Is the after end of the liner made watertight in the stern tube

Propeller boss *If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner*

Is 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

When 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 *If so, state type*

Propeller, dia. *46 in.* Pitch *18 in.* No. of blades *3.* Material *Cast Iron* whether Moveable *No.* Total Developed Surface *100 sq. feet*

Method of reversing Engines *Hand lever.* Is a governor or other arrangement fitted to prevent racing of the engine *Yes.* Means of lubrication *Oil*

Thickness of cylinder liners *25 in.* Are the cylinders fitted with safety valves *Yes.* Are the exhaust pipes and silencers water cooled or lagged with non-conducting material *Yes.*

Is the exhaust is led overboard near the waterline, what means are arranged to prevent water from being syphoned back to the engine *one main engine drain*

Cooling Water Pumps, No. *one main engine drain* Is the sea suction provided with an efficient strainer which can be cleared within the vessel

Large Pumps worked from the Main Engines, No. *none* 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*

Power Driven Lubricating Oil Pumps, including Spare Pump, No. and size *one engine driven 100 in. = 610 in. stroke.*

Are there 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

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 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*

How are they protected *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 Shaft Tunnel watertight *Is it fitted with a watertight door* worked from

On a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork

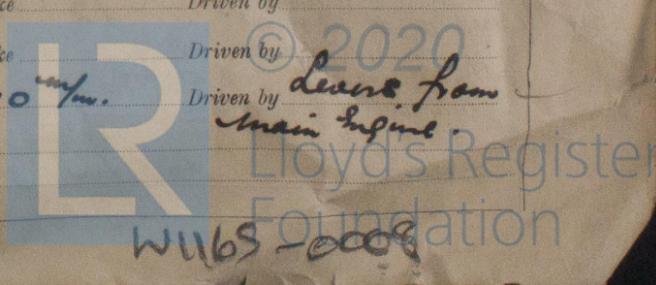
Main Air Compressors, No. *No. of stages* Diameters *Stroke* Driven by

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. *One.* Diameter *1960 in.* Stroke *610 in.* Driven by *Leads from Main Engine*

Auxiliary Engines crank shafts, diameter *as per Rule* No. *Position*



Vertical text on the left margin: *Final*, *61442*, *books*, *4.5.9.12.16.*, *2.4.7.8.11.15.*, *1/8/37*, *7/9/37*, *46 csp*, *44, 78*, *26.10.89*, *calgate*, *wood*, *it was*, *found*, *Regis*, *Shipping.*

**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?**

Is the donkey boiler intended to be used for domestic purposes only  If so, is a report now forwarded?

**PLANS.** Are approved plans forwarded herewith for Shafting 20/4/35 Receivers \_\_\_\_\_ Separate Fuel Tanks \_\_\_\_\_

(If not, state date of approval) \_\_\_\_\_

Donkey Boilers \_\_\_\_\_ General Pumping Arrangements \_\_\_\_\_ Pumping Arrangements in Machinery Space \_\_\_\_\_

**SPARE GEAR.**

Has the spare gear required by the Rules been supplied  No.  Yes.

State the principal additional spare gear supplied One cylinder liner + jacket Complete, one starting air non-return valve Complete, one cyl. relief valve Complete, 4 Scavenge pump Suct. + del. valve discs (halves), two fuel pump bodies Complete with Suct. + del. Valves, one intermediate crosshead with Slint Valve, 1 bell crank lever suction tappet for fuel pump, four fuel valves Complete, 1 roller Chain for Camshaft drive.

The foregoing is a correct description,  
**WILLIAM DOXFORD & SONS, Limited.**

*W. H. Miller*  
Director

Manufacturer.

Dates of Survey while building

During progress of work in shops--	1936. Mch. 24. Apr. 13, 26, 28, 29, 30. May. 4, 5, 6, 10, 11, 13, 21, 25, 28, 31. June 1, 4, 7, 8, 10, 14, 15, 17.
During erection on board vessel--	25, 28, 29, 30. July 2, 5, 6, 7, 8, 9, 12, 13, 14, 15, 16, 20.
Total No. of visits	41

Dates of Examination of principal parts—Cylinders 26/4/37 Covers  Pistons 2/7/34 9/7/34 Rods 2/4/37 9/7/34 Connecting rods 6/7/34

Crank shaft 25/5/37 Flywheel shaft 15/6/34 Crank do Thrust shaft do Intermediate shafts \_\_\_\_\_ Tube shaft \_\_\_\_\_

Screw shaft \_\_\_\_\_ Propeller \_\_\_\_\_ Stern tube \_\_\_\_\_ Engine sealings \_\_\_\_\_ Engines holding down bolts \_\_\_\_\_

Completion of fitting sea connections \_\_\_\_\_ Completion of pumping arrangements \_\_\_\_\_ Engines tried under working conditions \_\_\_\_\_

Crank shaft, Material Ingot Steel Identification Mark No 200 Flywheel shaft, Material do Crank. Identification Mark do Crank.

Thrust shaft, Material do Crank. 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  If so, have the requirements of the Rules been complied with

Is the vessel (not being an oil tanker) fitted for carrying oil as cargo

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 M/V. "BRITISH FAME"

**General Remarks** (State quality of workmanship, opinions as to class, etc.) This machinery has been built under Special Survey in accordance with the Rules of the Society & the Secretary's letter E 25/4/34.

The materials & workmanship are good.

The engine has been tried under full load conditions on test bed with satisfactory results & has been despatched to Messrs Cammell Laird & Co, Birkenhead for installation on board the vessel, after which it will be eligible, in my opinion, to have notation of L.M.C. (with date) oil eng. in the Register Book.

The amount of Entry Fee ... £ 6 : - : When applied for, 20 JULY 1937

4/5 Special ... £ 84 : 10 : When received from Donk. Co. 6/5/37.

Donkey Boiler Fee ... £ 12 : 12 : Welded Condy.

Travelling Expenses (if any) £ : : 1/5 to be charged at Liv.)

Committee's Minute

*J. S. Fraser.*  
Engineer Surveyor to Lloyd's Register of Shipping.



SUNDERLAND

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

Assigned