

## REPORT ON OIL ENGINE MACHINERY.

No. 51068

10 FEB 1931

Date of writing Report 27<sup>th</sup> Dec 1930 When handed in at Local Office 4. 12. 1930 Port of Glasgow  
 No. in Survey held at Blydebank Date, First Survey 27<sup>th</sup> Nov Last Survey 1<sup>st</sup> Dec 1930  
 Reg. Book. Number of Visits 2

on the Single Motor "Aguila" Tons Gross  
Twin Screw vessel Net  
Triple  
Quadruple  
 Built at Leith By whom built Henry Robt & Co Yard No. 181 When built  
 Engines made at By whom made The Atlas Diesel Co Engine No. When made  
 Donkey Boilers made at By whom made Boiler No. When made  
 Brake Horse Power Owners Port belonging to  
 Nom. Horse Power as per Rule Is Refrigerating Machinery fitted for cargo purposes Is Electric Light fitted  
 Trade for which vessel is intended

**L ENGINES, &c.**—Type of Engines Polar 2 or 4 stroke cycle 2 Single or double acting 8.  
 Maximum pressure in cylinders Diameter of cylinders Length of stroke No. of cylinders No. of cranks  
 Position 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 Crank pin dia. Crank Webs Mid. length breadth Thickness parallel to axis  
 as fitted Mid. length thickness shrunk Thickness around eyehole  
 Flywheel Shaft, diameter as per Rule Intermediate Shafts, diameter as per Rule 12-7-30 Thrust Shaft, diameter at collars as per Rule  
 as fitted 6" as fitted 6" as fitted  
 Tube Shaft, diameter as per Rule 12-7-30 Is the tube shaft fitted with a continuous liner Yes  
 as fitted 6 7/8" as fitted 6 7/8" as fitted Yes  
 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  
 as fitted none as fitted Yes  
 Propeller boss If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner none  
 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 Yes  
 If two liners are fitted, is the shaft lapped or protected between the liners Yes Is an approved Oil Gland or other appliance fitted at the after end of the tube  
 If so, state type newark Length of Bearing in Stern Bush next to and supporting propeller 36"  
 Propeller, dia. 6'-10" Pitch 6'-0" No. of blades 4 Material C.I. whether Moveable solid Total Developed Surface 17 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  
 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  
 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  
 Do any pipes pass through the bunkers How are they protected  
 Do any 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  
 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  
 All Auxiliary Air Compressors, No. No. of stages Diameters Stroke Driven by  
 Driven by Air Pumps, No. Diameter Stroke Driven by

Auxiliary Engines crank shafts, diameter as per Rule  
 as fitted  
**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 What means are provided for cleaning their inner surfaces  
 Is there a drain arrangement fitted at the lowest part of each receiver

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  
 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



IS A DONKEY BOILER FITTED?

If so, is a report now forwarded?

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

Receivers

Separate Tanks

Donkey Boilers

General Pumping Arrangements

Oil Fuel Burning Arrangements

SPARE GEAR

The foregoing is a correct description,

Manufacturer.

Dates of Survey while building  
During progress of work in shops - - 1930 Nov. 27 Dec 1  
During erection on board vessel - -  
Total No. of visits 2

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

Crank shaft Flywheel shaft Thrust shaft Intermediate shafts 27 h.p., 1" Dec Tube shaft ✓

Screw shaft 27 h.p., 1" Dec Propeller 27 h.p., 1" Dec Stern tube 27 h.p., 1" Dec Engine seatings Engines holding down bolts

Completion of fitting sea connections 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 8. Identification Marks 8821.

Tube shaft, Material Identification Mark Screw shaft, Material 8. Identification Mark 8821.

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 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 undermentioned materials machined, and finished by Aitchison Blair L<sup>d</sup> for shipment to Leith, have been examined, and the materials and workmanship were found good. Viz two propellers, two stern tubes, two screw shafts, and two intermediate shafts.

The Signs of shafting were submitted by Aitchison Blair L<sup>d</sup> see last letter of approval 12-7-30.

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

Committee's Minute

Assigned

TUE 17 FEB 1931

See L.H. J.E. 17948

Jas. Cairns,  
Engineer Surveyor to Lloyd's Register of Shipping.



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Foundation