

REPORT ON OIL ENGINE MACHINERY.

No. 96791.

19 MAR 1930

Date of writing Report Mar 10th 1930 When handed in at Local Office 14/3/1930 Port of LiverpoolNo. in Survey held at Birkenhead
Reg. Book.Date, First Survey May 14th 1929 Last Survey March 4th 1930Number of Visits 7439333 on the Single Twin Triple Quadruple Screw vessel S.S. 'Athollaird'Tons Gross 8999
Net —

Built at Birkenhead By whom built John Cammell & Co. Ltd. Yard No. 959 When built 1930
 Engines made at Greenock By whom made John Cammell & Co. Ltd. Engine No. — When made —
 Donkey Boilers made at Birkenhead By whom made Cammell & Co. Ltd. Boiler No. 959 When made 1930
 Brake Horse Power 3200 Owners United Molasses Co. Ltd. Port belonging to Liverpool
 Nom. Horse Power as per Rule 759 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted yes
 Trade for which vessel is intended —

OIL ENGINES, &c.—Type of Engines Horizontal & Vertical (2 sets) 2 or 4 stroke cycle 4 Single or double acting Single
 Maximum pressure in cylinders 500 lb Diameter of cylinders 630 mm Length of stroke 1300 mm No. of cylinders 12 No. of cranks 12
 Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 892 mm Is there a bearing between each crank yes
 Revolutions per minute 110 Flywheel dia. 2620 mm Weight 13.75 kg Means of ignition Compression Kind of fuel used Diesel
 Crank Shaft, dia. of journals as per Rule 4.15 mm Crank pin dia. 4.15 mm Crank Webs as per Rule 10.6 mm Mid. length breadth shrunk Thickness parallel to axis 270 mm
 Flywheel Shaft, diameter as per Rule 16 mm Intermediate Shafts, diameter as per Rule 11 mm Thrust Shaft, diameter at collars as per Rule 12 mm
 Tube Shaft, diameter as per Rule 11 mm Screw Shaft, diameter as per Rule 13 mm Is the tube shaft fitted with a continuous liner yes
 Bronze Liners, thickness in way of bushes as per Rule .693 Thickness between bushes as per Rule .593 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 one length
 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 tight fit
 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 shaft no
 Length of Bearing in Stern Bush next to and supporting propeller 4'-4"
 Propeller, dia. 13'-3" Pitch 11'-0" No. of blades 4 Material Brass whether Moveable no Total Developed Surface 52 sq. feet
 Method of reversing Engines air Is a governor or other arrangement fitted to prevent racing of the engine when detached yes Means of lubrication oil
 Thickness of cylinder liners 36/106 mm 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 yes
 Cooling Water Pumps, No. 2 Is the sea suction provided with an efficient strainer which can be cleared within the vessel yes
 Bilge Pumps worked from the Main Engines, No. none Diameter — Stroke — Can one be overhauled while the other is at work yes
 Pumps connected to the Main Bilge Line { No. and size 2 one 7' x 7 1/2' x 9" one 8' x 9' x 10" How driven steam
 Ballast Pumps, No. and size one 8' x 9' x 10" Lubricating Oil Pumps, including Spare Pump, No. and size 2-7' x 8"
 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 2-direct Suctions 3 1/2" one 4" @ 3 1/2" one 4" @ 2 1/2" one 4" @ 2" one 6" to gutterways
 In Holds, &c. 2 @ 2 1/2" one
 Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2- @ 5 1/2" one
 Are all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes yes Are the Bilge Suctions in the Machinery Spaces yes
 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 below
 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 yes
 What pipes pass through the deep tanks none Have they been tested as per Rule yes
 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 to tunnel Is it fitted with a watertight door yes worked from yes
 If a wood vessel, what means are provided to prevent leakage of either fuel oil or of lubricating oil from saturating the woodwork yes
 Main Air Compressors, No. Two No. of stages 3 Diameters 600-540-500 mm Stroke 480 mm Driven by Main Engine
 Auxiliary Air Compressors, No. one No. of stages 3 Diameters 400-350-320 mm Stroke 260 mm Driven by steam
 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 —

IR RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve as per Rule yesCan the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Access through manholeIs there a drain arrangement fitted at the lowest part of each receiver yesHigh Pressure Air Receivers, No. 4 Cubic capacity of each 150 cu ft Internal diameter 12" thickness 1 1/2"Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 29-33 tons Working pressure by Rules 1000 lbStarting Air Receivers, No. 2 Total cubic capacity 1300 cu ft Internal diameter 6'-4" to thickness 1 1/2"Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 3674 lb

IS A DONKEY BOILER FITTED? *Yes. Two.*

If so, is a report now forwarded? *Yes*

PLANS

Are approved plans forwarded herewith for Shafting *15/5/30*
(If not, state date of approval)
Donkey Boilers *Yes* General Pumping Arrangements *Yes*

Receivers *Yes*

Separate Tanks *Yes*

Oil Fuel Burning Arrangements *Yes*

SPARE GEAR

as per requirements of Rules, and attached list.

The foregoing is a correct description,

Robt. S. Johnson
MANAGING DIRECTOR

Manufacturer.

Dates of Survey while building

During progress of work in shops -
During erection on board vessel -
Total No. of visits

May 14, July 6, 9, 17, Aug 2, 10, 23, 26, 29, Sept 4, 6, 9, 10, 11, 13, 16, 20, 26, 30, Oct 2, 4, 7, 8, 10, 14, 15, 18, 22, 25, 29, Nov 4, 18, 26, 27, Dec 4, 5, 6, 9, 11, 13, 17, 18, 19, 20, 23, 26, 31, Jan 7, 9, 13, 15, 20, 21, 22, 24, 28, 30, Feb 1, 3, 6, 8, 10, 12, 4, 17, 19, 20, 24, 26, 28, 28, Mar 3, 4.

74

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

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

Identification Marks *13849, 13832*

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark *13850, 3027, 13851*

Is the flash point of the oil to be used over 150° F. *Yes.*

Is this machinery duplicate of a previous case *Yes.* If so, state name of vessel *Whelshallan*

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

The machinery of this vessel (Exh. Rpt. 2 19136), has been satisfactory fitted on board, in accordance with the Rules & the approved plans. It has been examined during sea trials, under full working conditions and found satisfactory and is eligible in my opinion for record of 4 LMC 3.30 in Register book.

It is submitted that this vessel is eligible for THE RECORD. *4 LMC 3.30*

*oil engines 4 s.c.s.a.
12cy 84 1/16 - 51 3/16
709 NHP. 200 180 Cl.
J.S.M. 25/3/30*

The amount of Entry Fee ... £
Special ... £ 22 : 2 : 0
Donkey Boiler Fee ... £ 8 : 8 : 0
Travelling Expenses (if any) £

When applied for, *17/3/1930*

When received, *30/12/29*

Committee's Minute *LIVERPOOL 18 MAR. 1930*

Assigned

+ LMC 3.30. F.D.

CERTIFICATE WRITTEN.

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

Lloyd's Register Foundation