

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 Liverpool

No. in Survey held at Birkenhead Date, First Survey May 14th 1929 Last Survey March 4th 1930
Reg. Book. 39333 on the Single Screw vessel S.S. 'Athelaid' Number of Visits 74

Built at Birkenhead By whom built John Commell Ltd Yard No. 959 When built 1930
Engines made at Greenock By whom made John Kincaid Engine No. When made

Donkey Boilers made at Birkenhead By whom made Commell 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

RETAIN

OIL ENGINES, &c.—Type of Engines Sumner's Twin (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 11.15 mm Crank pin dia. 44.5 mm Crank Webs Mid. length breadth Thickness parallel to axis 270 mm
as fitted 11.15 mm Crank Webs Mid. length thickness shrunk Thickness around eyehole 184.4 mm

Flywheel Shaft, diameter as per Rule 16 3/8 Intermediate Shafts, diameter as per Rule 10.6 Thrust Shaft, diameter at collars as per Rule 12 3/8
as fitted 16 3/8 as fitted 11 3/4 as fitted 12 3/8

Tube Shaft, diameter as per Rule Screw Shaft, diameter as per Rule 11.7 Is the no shaft fitted with a continuous liner yes
as fitted as fitted 13 as fitted

Bronze Liners, thickness in way of bushes as per Rule 693 Thickness between bushes as per rule 52 Is the after end of the liner made watertight in the propeller boss yes
as fitted 75 as fitted 593

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 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 breed

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

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

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 1/2"

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 to gutterway
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 led from easily accessible mud-boxes, placed above the level of the working floor, with straight tail pipes to the bilges 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

What pipes pass through the deep tanks none 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 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 no tunnel 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. Two No. of stages 3 Diameters 600-540-170 mm Stroke 480 mm Driven by Main Engine

Auxiliary Air Compressors, No. one No. of stages 3 Diameters 400-350-82 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 yes

Can the internal surfaces of the receivers be examined yes What means are provided for cleaning their inner surfaces Access through manhole

Is there a drain arrangement fitted at the lowest part of each receiver yes

High 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 lb

Starting Air Receivers, No. 2 Total cubic capacity 1300 cu ft Internal diameter 6'-4" thickness 1 1/2"

Seamless, lap welded or riveted longitudinal joint welded 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 (9 in all) Are approved plans forwarded herewith for Shafting *15/5/30* Receivers *Yes* Separate Tanks *✓*
Donkey Boilers *Yes* General Pumping Arrangements *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 - - } *May 14, July 5, 9, 17, Aug 2, 20, 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, 26, 28, Mar 3, 4.*
{ During erection on board vessel - - }
Total No. of visits *74*

Dates of Examination of principal parts—Cylinders Covers Pistons Rods Connecting rods
Crank shaft Flywheel shaft Thrust shaft Intermediate shafts *7/11/29* Tube shaft
Screw shaft *4-9-29, 4/10/29, 15/11/29, 25/11/29* Propeller *27/11/29* Stern tube *25/11/29* Engine seatings *4/11/30, 3/1/30* Engines holding down bolts *20/1/30, 3/2/30*
Completion of fitting sea connections *4/12/29* Completion of pumping arrangements *26/2/30* Engines tried under working conditions *4/2/30*
Crank shaft, Material *steel* Identification Mark Flywheel shaft, Material *steel* Identification Mark
Thrust shaft, Material *steel* Identification Mark Intermediate shafts, Material *steel* Identification Marks *13849, 13852*
Tube shaft, Material Identification Mark Screw shaft, Material *steel* 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 *Whelsaltan*

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

The machinery of this vessel (Gr. Rpt 2 19136) has been satisfactorily 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's book.

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

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

The amount of Entry Fee ... £ : : When applied for, *17/3/1930*
(See Gr. Rpt) Special *£ 22. 2. 0.*
Donkey Boiler Fee ... £ *8. 8. 0.*
Travelling Expenses (if any) £ : : When received, *30/12/29*

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

Committee's Minute **LIVERPOOL 18 MAR. 1930**

Assigned *+ LMC 3.30. F.D.*

CERTIFICATE WRITTEN.

