

REPORT ON OIL ENGINE MACHINERY.

No. 98396.
11 MAR 1931

Received at London Office

Date of writing Report

When handed in at Local Office

9 MAR. 1931 Port of LIVERPOOL

No. in Survey held at Reg. Book

Birkenhead

Date, First Survey

March 19th/30

Last Survey

March 3rd 1931

Number of Visits 86

84440 on the ^{Single} ~~Triple~~ ~~Quadruple~~ Screw vessel 'Athelbeach'

Tons } Gross 6450
Net

Built at Birkenhead By whom built Cammell Laird & Co Ltd Yard No. 973 When built 1930

Engines made at Greenock By whom made John G Kennedy & Co Ltd Engine No. 760 When made 1930

Donkey Boilers made at Birkenhead By whom made Cammell Laird & Co Ltd Boiler No. 973 When made 1930

Brake Horse Power 2300 @ 110 revs Owners United Industralles Ltd Port belonging to Liverpool

Nom. Horse Power as per Rule 490 489 Is Refrigerating Machinery fitted for cargo purposes no Is Electric Light fitted Yls

Trade for which vessel is intended

L ENGINES, &c. Type of Engines Burmeister & Wain 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 lb sq in Diameter of cylinders 740 mm Length of stroke 1500 mm No. of cylinders 6 No. of cranks 6

Distance of bearings, adjacent to the Crank, measured from inner edge to inner edge 1002 mm Is there a bearing between each crank Yls

Revolutions per minute 110 Flywheel dia. 2489 mm Weight 2.5 tons Means of ignition Compression Kind of fuel used Diesel

Crank Shaft, dia. of journals as per Rule 485 mm as fitted Crank pin dia. 485 mm Crank Webs Mid. length thickness shrunk Thickness parallel to axis 310 mm Thickness around eye-hole 210 mm

Flywheel Shaft, diameter as per Rule 1176 mm as fitted Intermediate Shafts, diameter as per Rule 17 1/4 body, 15 1/4 at conplings as fitted Thrust Shaft, diameter at collars as per Rule 12 1/2 as fitted 15

Propeller Shaft, diameter as per Rule 1308 mm as fitted Screw Shaft, diameter as per Rule 1575 mm as fitted Is the screw shaft fitted with a continuous liner Yls

Bronze Liners, thickness in way of bushes as per Rule 696 as fitted Thickness between bushes as per rule 52 as fitted 59 Is the after end of the liner made watertight in the stern tube Yls

Propeller boss Yls If the liner is in more than one length are the junctions made by fusion through the whole thickness of the liner no Length of 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 light fit

When two liners are fitted, is the shaft lapped or protected between the liners Yls Is an approved Oil Gland or other appliance fitted at the after end of the tube shaft no

Propeller, dia. 16'0" Pitch 11'0" No. of blades 4 Material Brass whether Moveable no Total Developed Surface 80 sq. feet

Method of reversing Engines Compressed Air Is a governor or other arrangement fitted to prevent racing of the engine when disengaged Yls Means of lubrication oil

Exhausting material lagged Thickness of cylinder liners 53/32 mm Are the cylinders fitted with safety valves Yls Are the exhaust pipes and silencers water cooled or lagged with lagged

Exhausting 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 led up funnel

Exhausting Water Pumps, No. one on Main Engine Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yls

Exhausting Pumps worked from the Main Engines, No. 1 Diameter 8' x 9' x 8' Stroke 1 - 7' x 7' x 8' Can one be overhauled while the other is at work Yls

Exhausting Pumps connected to the Main Bilge Line No. and Size 1 - 8' x 9' x 8' ; 1 - 7' x 7' x 8' How driven Steam

Exhausting Pumps, No. and size 1 - 8' x 9' x 8' Lubricating Oil Pumps, including Spare Pump, No. and size one 10' x 10'

Exhausting two independent means arranged for circulating water through the Oil Cooler Yls Suctions, connected to both Main Bilge Pumps and Auxiliary Bilge Pumps, No. and size:—In Machinery Spaces 3 @ 3 1/2" ; 1 @ 2 1/2" - 2 @ 2"

Exhausting Holds, &c. 2 @ 3' in Cargo pump room ; 2 @ 2 1/2' in fire pump room ; 2 @ 2 1/2' held from fire pump room

Exhausting Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 @ 5"

Exhausting all the Bilge Suction pipes in Holds and Tunnel Well fitted with strum-boxes mud boxes fitted 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 Yls

Exhausting all Sea Connections fitted direct on the skin of the ship Yls Are they fitted with Valves or Cocks both

Exhausting they fixed sufficiently high on the ship's side to be seen without lifting the platform plates Yls Are the Overboard Discharges above or below the deep water line above

Exhausting they each fitted with a Discharge Valve always accessible on the plating of the vessel Yls Are the Blow Off Cocks fitted with a spigot and brass covering plate Yls

Exhausting at pipes pass through the bunkers none How are they protected Yls

Exhausting at pipes pass through the deep tanks none Have they been tested as per Rule Yls

Exhausting all Pipes, Cocks, Valves, and Pumps in connection with the machinery and all boiler mountings accessible at all times Yls

Exhausting 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 Yls

Exhausting Is the Shaft Tunnel watertight no tunnel Is it fitted with a watertight door Yls worked from Yls

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

Exhausting Main Air Compressors, No. one No. of stages 3 Diameters 150-675-750 mm Stroke 460 mm Driven by Main Engine

Exhausting Auxiliary Air Compressors, No. one No. of stages 3 Diameters 4, 8 1/4, 14 1/4" Stroke 9" Driven by Steam Engine

Exhausting All Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 1 Stroke 1 Driven by 1

Exhausting Ventilating Air Pumps, No. 1 Diameter 1 Stroke 1 Driven by 1

Exhausting Auxiliary Engines crank shafts, diameter as per Rule 1 as fitted

RECEIVERS:—Is each receiver, which can be isolated, fitted with a safety valve Yls

Exhausting the internal surfaces of the receivers be examined Yls What means are provided for cleaning their inner surfaces manhole doors provided

Exhausting Are there a drain arrangement fitted at the lowest part of each receiver Yls

Exhausting Pressure Air Receivers, No. 2 Cubic capacity of each 150 litres Internal diameter 12" thickness 1/2"

Exhausting Seamless, lap welded or riveted longitudinal joint Seamless Material steel Range of tensile strength 29-33 tons Working pressure by Rules 1000 lb sq in

Exhausting Working Air Receivers, No. 2 Total cubic capacity 1100 cuft Internal diameter 6'3" thickness 1 1/16"

Exhausting Seamless, lap welded or riveted longitudinal joint riveted Material steel Range of tensile strength 28-32 tons Working pressure by Rules 307 lb sq in

IS A DONKEY BOILER FITTED? *Yes - two.* If so, is a report now forwarded? *Yes*
 PLANS *(7)* Are approved plans forwarded herewith for Shafting *Yes (1).* Receivers *Yes (1)* Separate Tanks *-*
 Donkey Boilers *Yes (1)* General Pumping Arrangements *Yes (1).* Oil Fuel Burning Arrangements *Yes (3)*
 SPARE GEAR *as per requirements of Rules and attached list.*

The foregoing is a correct description,
GAMMELL LAIRD AND COMPANY LIMITED.

J. H. Laird
 Manufacturer.

SECRETARY

Dates of Survey while building
 During progress of work in shops: Mar 19, 21, 25, 28, 31, Apr 3, 7, 10, 22, 25, May 6, 13, 22, 23, June 3, 10, 11, 12, 14, 15, 19, 25, 27, July 1, 4, 7, 8, 9, 10, 11, 14, 16, 17, 21, 23, 24, 25.
 During erection on board vessel: Aug 1, 12, 15, 18, 20, 22, 25, 27, 30, Sept 1, 3, 5, 10, 12, 14, 20, 23, 24, 30, Oct 1, 8, 9, 10, 13, 16, 20, 21, 22, 30, Nov 3, 4, 7, 9, 10, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, Dec 1, 5, 7, 8, 25, Mar 3.
 Total No. of visits: *86.*

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
 Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts *7/7/30 7/9/30* Tube shaft ✓
 Screw shaft *4/7/30 7/7/30* Propeller *2/4/30 23/9/30* Stern tube *3/9/30 27/9/30* Engine seatings *23/9/30* Engines holding down bolts *4/11/30*
 Completion of fitting sea connections *27/9/30* Completion of pumping arrangements *25/9/30* Engines tried under working conditions *5-12-30*
 Crank shaft, Material *Steel* Identification Mark *SR K 600 WSM* Flywheel shaft, Material ✓ Identification Mark ✓
 Thrust shaft, Material *Steel* Identification Mark *LA. 1905 WSM* Intermediate shafts, Material *Steel* Identification Marks *2866 R*
 Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material *Steel* Identification Mark *3889 R 3906*

Is the flash point of the oil to be used over 150° F. *Yes.*
 Is this machinery duplicate of a previous case *No* If so, state name of vessel

General Remarks (State quality of workmanship, opinions as to class, &c.)
The Machinery of this vessel (Sik Rpt 19235) has been satisf-ly fitted on board, in accordance with the Rules and the approved. It has been examined during sea trials under full working conditions and found satisfactory, and is eligible in my opinion for record of L.M.C. 3.31 in Register's book.

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

The amount of Entry Fee ... £ *19. 14. 0*
 Special ... £ *8. 8. 0*
 Donkey Boiler Fee ... £
 Travelling Expenses (if any) £
 When applied for, *GNK OFFICE 10 MAR. 1931*
 When received, *13-9-30 18-9-30*
 COMMITTEE'S MINUTE
 Assigned *+ L.M.C. 3.31. Oil Engine Oil: Light.*

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



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Date of writing
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 Tube Shaft
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