

REPORT ON OIL ENGINE MACHINERY.

No. 98861

24 JUN 1931

Received at London Office

Date of writing Report

19

When handed in at Local Office

22/6/31 Port of

Liverpool

No. in Survey held at
Reg. Book.

Birkenhead

Date, First Survey 19th Mar 1930 Last Survey 19th June 1931

Number of Visits 99

89429 on the ^{Single} ^{Twin} ^{Triple} ^{Quadruple} Screw vessel

'Athel foam'

Tons { Gross 655.4
Net 378.9

Built at Birkenhead By whom built Messrs. Cammell Laird & Co. Ltd. No. 977 When built 1930

Engines made at Wallsend By whom made North Eastern Marine & Cold Engine No. 27524 When made 1930

Donkey Boilers made at Birkenhead By whom made Cammell Laird & Co. Ltd. No. 977 When made 1930

Brake Horse Power 2150 Owners United Molasses Co. Ltd. Port belonging to Liverpool

Nom. Horse Power as per Rule 476 Is Refrigerating Machinery fitted for cargo purposes No. Is Electric Light fitted Yls

Trade for which vessel is intended

OIL ENGINES, &c.—Type of Engines *Wicksport* 2 or 4 stroke cycle 4 Single or double acting SA

Maximum pressure in cylinders 500 lb./sq. in. Diameter of cylinders 28 3/4" Length of stroke 59" No. of cylinders 6 No. of cranks 6

Span of bearings, adjacent to the Crank, measured from inner edge to inner edge 980 mm Is there a bearing between each crank Yls

Revolutions per minute 105 Flywheel dia. 2590 mm Weight 4.36 tons Means of ignition Compression Kind of fuel used FP above 150 F

Crank Shaft, dia. of journals as per Rule 4587 3/4" as fitted 480 Crank pin dia. 4.80" Crank Webs Mid. length breadth 932 mm Mid. length thickness 290 mm Thickness parallel to axis 290 mm Thickness around eyehole 222 mm

Flywheel Shaft, diameter as per Rule 4587 3/4" as fitted 480 Intermediate Shafts, diameter as per Rule 117" as fitted 157 1/2" Thrust Shaft, diameter at collars as per Rule 12285" as fitted 13 3/4"

Tube Shaft, diameter as per Rule 1303" as fitted 157 1/2" Is the { tube } screw } shaft fitted with a continuous liner { Yls

Bronze Liners, thickness in way of bushes as per Rule 696" as fitted 812" Thickness between bushes as fitted 57" Is the after end of the liner made watertight in the

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 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 Yls 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 57"

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

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

forced Thickness of cylinder liners 70 mm Are the cylinders fitted with safety valves Yls Are the exhaust pipes and silencers water cooled or lagged with

non-conducting material Yls 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

Cooling Water Pumps, No. 1 & 2 275 1/2" dia 350 mm stroke Is the sea suction provided with an efficient strainer which can be cleared within the vessel Yls

Bilge Pumps worked from the Main Engines, No. 2 Diameter 140 mm Stroke 350 mm Can one be overhauled while the other is at work Yls

Pumps connected to the Main Bilge Line { No. and Size 2 — 140 mm x 350 mm main engines; 1 — 8" x 9" x 8" 1 — 7" x 7" x 8" — steam } How driven Auxiliary driven by steam

Ballast Pumps, No. and size 1 — 8" x 9" x 8" Lubricating Oil Pumps, including Spare Pump, No. and size 1 — 8" 130 mm x 350 mm stroke

Are 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. 2 3/4" — 10 2 1/2" — 2 2 1/2"

In Holds, &c. 2 2 3/4" in Cargo pump room; 2 2 1/2" in fir pump room; 2 2 1/2" to hold from fir pump room

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size 2 2 1/2"

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

Are all Sea Connections fitted direct on the skin of the ship Yls 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 Yls Are the Overboard Discharges above or below the deep water line above

Are 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

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 Yls

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 Yls 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. one No. of stages 3 Diameters 140, 620, 520, 620 mm Stroke 500 mm Driven by Main Engines

Auxiliary Air Compressors, No. one No. of stages 3 Diameters 60, 40 mm Stroke 9" Driven by Steam Engine

Small Auxiliary Air Compressors, No. 1 No. of stages 1 Diameters 40 mm Stroke 9" Driven by

Scavenging Air Pumps, No. 1 Diameter 40 mm Stroke 9" Driven by

Auxiliary Engines crank shafts, diameter as per Rule as fitted

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

Can the internal surfaces of the receivers be examined Yls What means are provided for cleaning their inner surfaces hatched door provided

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

High Pressure Air Receivers, No. 2 Cubic capacity of each 18.15 cu ft Internal diameter 15 3/4" thickness 5/8"

Seamless, lap welded or riveted longitudinal joint Seamless Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 1094 lb./sq. in.

Starting Air Receivers, No. 2 Total cubic capacity 1100 cu ft Internal diameter 6'-3" thickness 1 1/4"

Seamless, lap welded or riveted longitudinal joint riveted Material steel Range of tensile strength 28-32 tons Working pressure by Rules 367 lb./sq. in.

ARK

IS A DONKEY BOILERS FITTED?

Yes (two)

If so, is a report now forwarded?

Yes

PLANS. Are approved plans forwarded herewith for Shafting

(If not, state date of approval)

Yes

Receivers Separate Tanks

Atmelbach

Donkey Boilers

Yes

General Pumping Arrangements

Yes

Oil Fuel Burning Arrangements

Atmelbach

SPARE GEAR

As per attached list and requirements of Rules

The foregoing is a correct description,

GAMMELL LAIRD AND COMPANY, LIMITED,

Manufacturer.

SECRETARY

Dates of Survey while building

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

1930

Mar: 19, 20, 25, 28, 31. Apr: 5, 7, 10, 22, 25. May: 6, 13, 16, 20, 22, 23. June: 3, 10, 11, 12, 16, 18, 19, 20, 23, 25. July: 1, 4, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30. Sept: 1, 5, 8, 10, 11, 12, 14, 19, 20, 24, 25, 28, 29, 30. Oct: 1, 2, 3, 10, 13, 14, 16, 17, 24, 25, 29. Nov: 3, 4, 5, 6, 7, 20, 22. Dec: 2, 16, 1931 Jan: 2, 7, 14, 15, 21, 22, Feb: 25, Mar: 20, 24, 26, June: 15, 19.

99

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

Tube shaft, Material

Identification Mark

Screw shaft, Material

Identification Mark

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

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 machinery of this vessel (two Rpt 86170) has been satisfactorily fitted on board and is in accordance with the Rules and the approved plans. It has been examined under full working conditions during sea trials and is eligible in my opinion for record of +MC 6.31 in Register book.

During the first sea trial a 'ham' at the after end of the vessel was apparent. This was attributed to the bronze propeller and after repeated trials a replace bronze propeller has been fitted and tried with satisfactory results.

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

When applied for,

When received,

J. D. Milton

Engineer Surveyor to Lloyd's Register of Shipping.

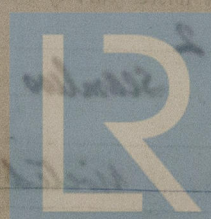
Committee's Minute

LIVERPOOL 23 JUNE 1931

Assigned

+ MC 6.31

Oil Engine Ch.
Elec light



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Lloyd's Register Foundation

Liverpool

Certificate (if required) to be sent to

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