

REPORT ON OIL ENGINE MACHINERY.

No. 95585.

29 JUN 1929

Received at London Office

LIVERPOOL

Date of writing Report

10.

When handed in at Local Office

28 JUNE 1929 Port of

No. in Survey held at
Reg. Book.

Birkenhead

Date, First Survey

Oct 25th 1929

Last Survey

June 14th 1929

Number of Visits

54

92330 on the ^{Single} ~~Twin~~ ^{Triple} ~~Quadruple~~ Screw vessel

Thurland Castle

Tons { Gross 7000 6372
Net 3858

Built at Birkenhead

By whom built

Cammell Laird & Co Ltd

Yard No.

906

When built

1929

Engines made at Wallsend on Tyne

By whom made

H. E. Mainie Eng Ltd

Engine No.

20823

When made

1929

Donkey Boilers made at Annan

By whom made

Cochran & Co Ltd

Boiler No.

11095

When made

1929

Brake Horse Power 4200

Owners

Lincolnshire Ship Co Ltd

Port belonging to

Liverpool

Nom. Horse Power as per Rule 953

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 North Eastern Liverpool type 2 or 4 stroke cycle 4 Single or double acting Single

Maximum pressure in cylinders 500 lb. Diameter of cylinders 730 mm Length of stroke 1500 mm No. of cylinders 12 No. of cranks 12

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 110 Flywheel dia. 2590 mm Weight 436 tons Means of ignition Compression Kind of fuel used oil fuel 24 strokes 7

Crank Shaft, dia. of journals as per Rule 465 mm Crank pin dia. 480 mm Crank Webs Mid. length breadth 932 mm Thickness parallel to axis 290 mm

Flywheel Shaft, diameter as per Rule 465 mm Intermediate Shafts, diameter as per Rule 12.52" Thrust Shaft, diameter at collars as per Rule 13.14"

Tube Shaft, diameter as per Rule 13.9" Is the shaft fitted with a continuous liner Yls.

Bronze Liners, thickness in way of bushes as per Rule 725" Thickness between bushes as per Rule 625" 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 Yls.

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 Yls. Length of Bearing in Stern Bush next to and supporting propeller 5' 5 1/8"

Propeller, dia. 14' 2" Pitch 13' 6" No. of blades 4 Material bronze whether Moveable No Total Developed Surface 74 sq. feet

Method of reversing Engines Compression Is a governor or other arrangement fitted to prevent racing of the engine when detached 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 up funnel

Cooling Water Pumps, No. 10 Ballast pump for main bilge 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. 4 Diameter 120 mm Stroke 450 mm Can one be overhauled while the other is at work Yls.

Pumps connected to the Main Bilge Line No. and size two general service duplex 7" bore by 6 stroke; ballast 270 mm per line.

Ballast Pumps, No. and size one ballast as above Lubricating Oil Pumps, including Spare Pump, No. and size two on main engines

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 three 3" dia; In Hold 2 2 1/2" dia; In hold 2 2 3/4" dia; In hold 2 2 1/2" dia; In hold 2 2 1/2" dia; In hold 2 2 1/2" dia

Independent Power Pump Direct Suctions to the Engine Room Bilges, No. and size two 8"; one 5"

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

What pipes pass through the deep tanks bilge suction only Have they been tested as per Rule Yls.

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 Yls. Is it fitted with a watertight door Yls. worked from upper deck

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

Main Air Compressors, No. two No. of stages three Diameters 140/160-530/1620 500 mm Driven by Main Engines

Auxiliary Air Compressors, No. two No. of stages three Diameters 15 1/2 x 8 type Driven by Elec motor

Small Auxiliary Air Compressors, No. one No. of stages two Diameters 6" x 4 1/2 type Driven by Steam

Scavenging Air Pumps, No. none Diameter 5" Stroke 5" Driven by Yls.

Auxiliary Engines crank shafts, diameter as per Rule Yls.

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 Manhole

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

High Pressure Air Receivers, No. four Cubic capacity of each 8.15 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 200 lb/sq in

Starting Air Receivers, No. two Total cubic capacity 2200 cu ft Internal diameter 6' 8 3/16" thickness 1 3/32"

Seamless, lap welded or riveted longitudinal joint Yls. Material Steel Range of tensile strength 28-32 tons Working pressure by Rules 358 lb/sq in

IS A DONKEY BOILER FITTED? *Yes*

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

PLANS. Are approved plans forwarded herewith for Shafting *Yes*

Receivers *Yes*

Separate Tanks *Yes (4 plans)*

Donkey Boilers *Yes*

General Pumping Arrangements *Yes*

Oil Fuel Burning Arrangements *Yes*

SPARE GEAR

See attached list.

The foregoing is a correct description,

GAMMELL LAIRD AND COMPANY LIMITED.

Manufacturer.

SECRETARY.

Dates of Survey while building
During progress of work in shops - *1928*
During erection on board vessel - *Oct 25, Dec 17, 28, Jan 2, 5, 11, 14, 17, 21, 24, Feb 4, 11, 18, 19, 20, 21, 22, 25, 27, Mar 1, 4, 11, 15, 19, 20, 21, 22, 26, 28, Apr 2, 5, 8, 15, 16, 19, 25, 26, May 1, 16, 17, 23, 24, 25, 27, 28, 29, 30, June 3, 6, 7, 10, 11, 14.*
Total No. of visits *54.*

Dates of Examination of principal parts—Cylinders ✓ Covers ✓ Pistons ✓ Rods ✓ Connecting rods ✓
Crank shaft ✓ Flywheel shaft ✓ Thrust shaft ✓ Intermediate shafts *8.12.29, 27.2.29, 20.3.29, 25.4.29* Tube shaft ✓
Screw shaft *17.12.29, 24.12.29, 27.1.29, 28.2.29* Propeller *27.1.29* Stern tube *19.2.29* Engine seatings *20.3.29, 25.4.29* Engines holding down bolts *26.4.29*
Completion of fitting sea connections *28.3.29* Completion of pumping arrangements *30.5.29, 7.6.29* Engines tried under working conditions *10.6.29*
Crank shaft, Material *Steel* Identification Mark ✓ Flywheel shaft, Material *Steel* Identification Mark ✓
Thrust shaft, Material *Steel* Identification Mark ✓ Intermediate shafts, Material *Steel* Identification Marks *855, 843, 940, 871, 1011, 878, 873.*
Tube shaft, Material ✓ Identification Mark ✓ Screw shaft, Material *Steel* Identification Mark *843, 855*

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 *Manchester Castle.*

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

The Machinery of this vessel (Lwe Rpt 83983, Elw Rpt 8791, 48792, Ans 1088) has been satisfactorily installed, in accordance with the approved plans and the Rules. It has been examined under full working conditions during sea trial, and found satisfactory, and is eligible in my opinion for record of LMC 6.29 in Register book.

It is submitted that this vessel is eligible for THE RECORD.

+ L.M.C. 6.29

C.L.

N.H.P. 953.

Oil Engines, 4 S.C.S.A. 12cy. 28 3/4" - 59 1/2"

2 D.B. 125 1/2.

The amount of Entry Fee ... £ : :
5" balance special fee ... £ 24 : 10 : 8
Special ... £ 8 : 8 : 0
Donkey Boiler Fee ... £ 8 : 8 : 0
Travelling Expenses (if any) £ : :
Committee's Minute

When applied for, *28 JUNE 1929*

When received, *11.7.29*

LIVERPOOL

28 JUNE 1929

Assigned

+ L.M.C. 6.29. C.L.
Oil Engines

J. J. Milton.

Engineer Surveyor to Lloyd's Register of Shipping.



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