

Rpt. 4.

No. 89401

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

27 NOV 1925

Received at London Office

-2 DEC 1925

Date of writing Report

19

When handed in at Local Office

Port of

LIVERPOOL

No. in Survey held at

Birkenhead

Date, First Survey

14th Nov 1925

Last Survey

26th Nov 1925

1925

Reg. Book.

(Number of Visits)

4/30/ on the

s/s "Upton"

Built at

Birkenhead

By whom built

Cammell, Laird & Co. Ltd.

Yard No. 914

When built 1925

Engines made at

Birkenhead

By whom made

Cammell, Laird & Co. Ltd.

Engine No. 914

when made 1925

Boilers made at

Birkenhead

By whom made

Cammell, Laird & Co. Ltd.

Boiler No. 914

when made 1925

Registered Horse Power

Owners Municipal Corporation of Birkenhead

Port belonging to Liverpool

Nom. Horse Power as per Rule

150

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

Trade for which Vessel is intended

Passenger Ferry Service on River Mersey

ENGINES, &c.—Description of Engines

Triple Expansion Reciprocating Turbine

Revs. per minute 130

Dia. of Cylinders 13 1/2", 21 1/2", 24 1/2"

Length of Stroke 18"

No. of Cylinders 3

No. of Cranks 2

Crank shaft, dia. of journals

as per Rule 6.03"

as fitted 6 1/2"

Crank pin dia. 6 1/2"

Crank webs

Mid. length breadth 7 1/2"

Mid. length thickness 4 1/2"

shrink

Thickness parallel to axis

Intermediate Shafts, diameter

as per Rule 5.75"

as fitted 6"

Thrust shaft, diameter at collars

as per Rule 6.03"

as fitted 6 1/2"

Tube Shafts, diameter

as per Rule

as fitted

Screw Shaft, diameter

as per Rule 6.62"

as fitted 6 3/4"

Is the tube

screw

shaft fitted with a continuous liner

No

Bronze Liners, thickness in way of bushes

as per Rule

as fitted

Thickness between bushes

as per Rule

as fitted

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

Yes

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

Yes

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 shaft

Yes

Length of Bearing in Stern Bush next to and supporting propeller

3'0"

Propeller, dia. 7'3"

Pitch 11'3"

No. of Blades 3

Material Cast Iron

whether Movable

No

Total Developed Surface 25 sq. feet

Feed Pumps worked from the Main Engines, No. 1

Diameter 4"

Stroke 5"

Can one be overhauled while the other is at work

Yes

Bilge Pumps worked from the Main Engines, No. 2

Diameter 4"

Stroke 5"

Can one be overhauled while the other is at work

Yes

Feed Pumps No. and size 2 - 3 1/2" x 8" x 6"

Pumps connected to the

Main Bilge Line

No. and size

Duplex 5" x 5" x 5" direct acting steam 2 - 4" x 5"

How driven direct acting steam

Main Bilge Line

How driven

driven by main engines

Ballast Pumps, No. and size 1 - Duplex 5" x 5" x 5"

Lubricating Oil Pumps, including Spare Pump, No. and size

Are two independent means arranged for circulating water through the Oil Cooler

Yes

Suctions, connected to both Main Bilge Pumps and Auxiliary

Bilge Pumps;—In Engine and Boiler Room 4 - 2 1/2"

In Holds, &c. Fore peak 1-2", after peak 1-2", Hold 1-2"

Main Water Circulating Pump Direct Bilge Suctions, No. and size 1 - 5 1/2"

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size 1 - 3"

Are all the Bilge Suction Pipes in holds and tunnel well fitted with strum-boxes

Yes

Are the Bilge Suctions in the Machinery Space 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

Yes

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates

Yes

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

Yes

Are the Blow Off Cocks fitted with a spigot and brass covering plate

Yes

What Pipes are carried through the bunkers

None

How are they protected

Yes

What pipes pass through the deep tanks

Yes

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

None

Is it fitted with a watertight door

Yes

worked from

MAIN BOILERS, &c.—(Letter for record S) Total Heating Surface of Boilers 2850 sq. feet

Is Forced Draft fitted

No

No. and Description of Boilers Two cylindrical locomotive type

Working Pressure 180 lb per sq. in.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

Yes

PLANS. Are approved plans forwarded herewith for Shafting

Main Boilers

Yes

Auxiliary Boilers

Yes

Donkey Boilers

Yes

(If not state date of approval)

(E) 24/3/25

Superheaters

Yes

General Pumping Arrangements

Yes

Oil fuel Burning Piping Arrangements

Yes

SPARE GEAR. State the articles supplied:—

2 propellers, 1 propeller shaft and nut, 4 connecting rod top and 4 bottom end bolts and nuts, 2 main bearing bolts and nuts, 6 shaft coupling bolts and nuts, 2 pairs of crank pin bushes, condenser tubes and ferrules, plain and stay boiler tubes, metallic packing parts for piston rods, bilge pump valves and seats, valves and seats for duplex pumps, bolts and nuts various sizes, iron various sizes. 2 stern bushes.

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

J. H. LaIRD
LOCAL SECRETARY

Manufacturer.



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Lloyd's Register
Foundation

003591-003598-003598

Dates of Survey while building
 During progress of work in shops - - 1925: Mar. 4. 11. 17. 24. 27. 30. April 1. 2. 7. 16. 23. 28. 29. May 4. 5. 6. 12. 29. June 3. 15. 17. 26. July 13. 14. 16. 17. 18. 20. 21. 22. 24. 27. 29. 30. 31. Aug 10. 16. 18. 20. 24. 27. 28. 31. Sep. 1. 2. 3. 4. 7. 8. 10. 10. 11. 14. 15. 16. 17. 18. 19. 22. 23. 24. 28. 29. 30.
 During erection on board vessel - - - Oct. 2. 3. 6. 8. 14. 19. 21. 23. 27. 29. 30. Nov. 5. 10. 11. 17. 19. 25. 26.
 Total No. of visits 83

Dates of Examination of principal parts—Cylinders 5/6/25 to 1/9/25 Slides 1/9/25 Covers 14/9/25
 Pistons 14/9/25 Piston Rods 1/9/25 Connecting rods 1/9/25
 Crank shafts 26/6/25 to 24/7/25 Thrust shafts 14/7/25 to 1/9/25 Intermediate shafts 14/7/25 to 3/9/25
 Tube shaft ✓ Screw shaft 14/7/25 to 6/10/25 Propeller 14/9/25 to 23/10/25
 Stern tubes 1/9/25 to 16/9/25 Engine and boiler seatings 15/6/25 to 24/8/25 Engines holding down bolts 14/9/25
 Completion of pumping arrangements 30/9/25 Boilers fixed 8/9/25 Engines tried under steam 26/11/25
 Main boiler safety valves adjusted 30/9/25 Thickness of adjusting washers Starb Bd S. 5/16", P. 3/16", Port Bd S. 5/16", P. 5/16"
 Crank shaft material Steel Identification Mark 152, 7430 Thrust shaft material Steel Identification Mark 122.
 Intermediate shafts, material Steel Identification Marks 122, 107 Tube shaft, material ✓ Identification Mark ✓
 Screw shaft, material Steel Identification Mark 122, 139, 152 Steam Pipes, material Copper Test pressure 360 lb Date of Test 14/9/25, 21/9/25
 Is an installation fitted for burning oil fuel No ✓ Is the flash point of the oil to be used over 150°F. ✓
 Have the requirements of the Rules for carrying and burning oil fuel been complied with ✓
 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 has been built under Special Survey in accordance with the Rules, the approved plans and the Secretary's Letters (E) of 14/2/25, 24/3/25, 22/7/25, 4/9/25. The Materials and Workmanship are of good quality. When tried under full working conditions at sea, the Machinery was found satisfactory in every respect and, in my opinion, is eligible for the notation of LMC 11.25 to be recorded in the Register Book.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 11. 25. OG.

C. G. Oxford
 4/12/25

The amount of Entry Fee ... £ 3 : 0 :
 Special ... £ 37 : 10 :
 Donkey Boiler Fee ... £ : :
 Travelling Expenses (if any) £ : :
 When applied for, 30 NOV 1925
 When received, 17 DEC 1925

B. G. Oxford
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute LIVERPOOL - 1 DEC 1925

Assigned + L.M.C. 11.25.

O.G.

CERTIFICATE WRITTEN 2-12-25



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 Foundation