

Rpt. 4.

No. 29677

REPORT ON STEAM RECIPROCATING ENGINE MACHINERY.

Received at London Office

Date of writing Report

19

When handed in at Local Office

19 MAR. 1928

Port of

Sunderland

20 MAR 1928

No. in Survey held at
Reg. Book.

Sunderland.

Date, First Survey 26 Aug 27 Last Survey 16th Mar 1928

(Number of Visits 49)

on the

S.S. "FORTHBRIDGE"

Built at

Sunderland

By whom built

Wm. Gourlay & Son Ltd.

Yard No. 587

Tons { Gross 5140

Net 3156

When built 1928.

Engines made at

Do

By whom made

Richardson Westgarth & Co. Ltd.

Engine No. 2196

when made 1928.

Boilers made at

W. Dantepool

By whom made

Do.

Boiler No. 2196

when made 1928.

Registered Horse Power

Owners

Messrs. Messers & Co.

Port belonging to

Sunderland.

Nom. Horse Power as per Rule

439.

Is Refrigerating Machinery fitted for cargo purposes

No.

Is Electric Light fitted

Yes.

Trade for which Vessel is intended

General.

ENGINES, &c.—Description of Engines

Triple expansion.

Revs. per minute 70.

Dia. of Cylinders

25 $\frac{1}{2}$ —42—69"

Length of Stroke

48"

No. of Cylinders

3

No. of Cranks

3

Crank shaft, dia. of journals

as per Rule 13.35"

as fitted 14"

Crank pin dia.

14"

Crank webs

Mid. length breadth 20 $\frac{3}{4}$ "Thickness parallel to axis 8 $\frac{1}{2}$ "

Intermediate Shafts, diameter

as per Rule 12.71"

as fitted 13"

Thrust shaft, diameter at collars

as per Rule 13.35"

as fitted 14 $\frac{1}{2}$ "

Tube Shafts, diameter

as per Rule

Screw Shaft, diameter

as per Rule 14.19"

as fitted 15"

Is the tube

screw

shaft fitted with a continuous liner

Yes.

Bronze Liners, thickness in way of bushes

as per Rule 7.33"

as fitted 3 $\frac{1}{4}$ "

Thickness between bushes

as per Rule 5.5"

as fitted 5 $\frac{1}{2}$ "

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

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

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

Yes.

Length of Bearing in Stern Bush next to and supporting propeller

5'-0"

Propeller, dia.

17'-9"

Pitch

17'-6"

No. of Blades

4

Material

C. Iron

whether Moveable

No

Total Developed Surface

101 sq. feet

Feed Pumps worked from the Main Engines, No.

Two

Diameter

3 $\frac{1}{4}$ "

Stroke

27"

Can one be overhauled while the other is at work

Yes.

Bilge Pumps worked from the Main Engines, No.

Two

Diameter

3 $\frac{1}{4}$ "

Stroke

27"

Can one be overhauled while the other is at work

Yes.

Feed

Pumps

No. and size

One 6" x 4 $\frac{1}{2}$ " x 6"

Pumps connected to the

Main Bilge Line

No. and size

One 9" x 10" x 10"

How driven

Steam

Ballast Pumps, No. and size

One 9" x 10" x 10"

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

One 9" x 10" x 10"

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

2 @ 3" ER.

2 @ 3" BR.

In Holds, &c.

No 1, 2 @ 3"

No 2, 3"

2 @ 3 $\frac{1}{2}$ "No 4, 2 @ 3 $\frac{1}{2}$ "No 5, 1 @ 3 $\frac{1}{2}$ "

HOLD WELL.

Main Water Circulating Pump Direct Bilge Suctions, No. and size

Independent Power Pump Direct Suctions to the Engine Room Bilges,

No. and size

One 5"

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

Both.

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 pass through the bunkers

None.

How are they protected

None.

What pipes pass through the deep tanks

None.

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

Yes.

Is it fitted with a watertight door

Yes.

worked from Engine Room

MAIN BOILERS, &c.—(Letter for record S)

Total Heating Surface of Boilers

7878 sq.

Is Forced Draft fitted

No

No. and Description of Boilers

Two main & 1 Aux.

Working Pressure

180 lbs.

IS A REPORT ON MAIN BOILERS NOW FORWARDED?

Yes.

IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

PLAN'S.

Are approved plans forwarded herewith for Shafting

23/8/27.

Main Boilers

Yes.

Auxiliary Boilers

Yes.

Donkey Boilers

No.

Superheaters

No.

General Pumping Arrangements

Yes.

Oil fuel Burning Piping Arrangements

No.

SPARE GEAR.

State the articles supplied:—Two connecting rods top end & 2 bottom end both diamts.

2 main-bearing bolts, 1 set con. bolts, both, 1 set feed & bilge pump valves

a quantity of assorted bolts & nuts & iron of various sizes, 1 C.I. Propeller

& 1 tail shaft.

The foregoing is a correct description,

For RICHARDSONS, WESTGARTH & Co. LIMITED

Deane H. Russell

Manufacturer.

MANAGER, SUNDERLAND WORKS

W494-0341



© 2020

Lloyd's Register
Foundation

1927. Aug. 26. Sep. 9. 12. 17. 19. 20. 27. Oct. 4. 6. 15. 18. 19. 20. 25. Nov. 1. 2. 3. 7. 11. 17. 19. 23. 28. Dec. 1. 6. 17. 20. 30. 1928. Jan. 5. 12. 18. 20. 23. 28. 31. Feb. 2. 9. 21. 24. Mar. 1. 2. 3. 5. 6. 8. 12. 13. 14. 16.

Dates of Survey while building { During progress of work in shops - - }
{ During erection on board vessel - - - }
Total No. of visits 49

Dates of Examination of principal parts—Cylinders 6/10/27, 5/1/28, Slides 19/10/27, Covers 19/10/27
Pistons 20/9/27, Piston Rods 27/9/27, Connecting rods 20/9/27
Crank shaft 1/12/27, Thrust shaft 20/10/27, Intermediate shafts 1/11/27
Tube shaft, Screw shaft 20/12/27, Propeller 17/11/27
Stern tube 11/11/27, Engine and boiler seatings 2/2/28, Engines holding down bolts 1/3/28
Completion of fitting sea connections 23/1/28
Completion of pumping arrangements 16/3/28, Boilers fixed 5/3/28, Engines tried under steam 6/3/28
Main boiler safety valves adjusted 6/3/28, Thickness of adjusting washers P 5/8" S 5/8" P 5/8" S 5/8" P 5/8" S 5/8"
Crank shaft material I. STEEL, Identification Mark 6391 H., Thrust shaft material I. STEEL, Identification Mark 2041
Intermediate shafts, material I. STEEL, Identification Marks 2041, 4861 H., Tube shaft, material I. STEEL, Identification Mark 2041
Screw shaft, material I. STEEL, Identification Mark 2032 SPARE, Steam Pipes, material L. W. S., Test pressure 540, Date of Test 2/3/28
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 engines & boilers of this vessel have been built under special survey & the materials & workmanship are good. On completion the machinery was tried under full working conditions with satisfactory results.
The machinery throughout is now in a good & efficient condition & eligible in my opinion to have the notation LMC-3-28 marked in Red in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 3-28 C.L.

2/3/28. J. J.

The amount of Entry Fee ... £ 57-0-0 When applied for, 19 MAR. 1928
Special ... £ 54. 10. 0
Donkey Boiler Fee ... £ 36. 7. 0
Travelling Expenses (if any) £ : : When received, 20.4.28

Committee's Minute TUES. 27 MAR 1928
Assigned + LMC 3.28 C.L.
Engineer Surveyor to Lloyd's Register of Shipping. J. J.