

Rpt. 4.

REPORT ON MACHINERY

Sld. No. 29371

Gls. No. 40172

THU. JUL. 15 1920

Received at London Office

Date of writing Report

19

When handed in at Local Office

10-7-20 Port of Glasgow

No. in Survey held at

Glasgow

Date, First Survey 3.6.19.

Last Survey 22-6-

1920.

Reg. Book.

on the *Engines & Boilers for SS Bymess*

(Number of Visits 32)

Master

Built at *Barcelona*By whom built *J. L. Thompson & Sons Ltd*Gross 1896
Net 1115
When built 1924

Engines made at

Glasgow

By whom made *Nelson & Rowan & Co. Ltd* (No 739)

when made 1920

Boilers made at

No

By whom made

No

(No 739)

when made 1920

Registered Horse Power

Owners *Messrs Joseph & Thompson Ltd*

Nom. Horse Power as per Section 28

213

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

ENGINES, &c.—Description of Engines *Triple Expansion*

No. of Cylinders 3

No. of Cranks 3

Dia. of Cylinders

20-33-54

Length of Stroke 36

Revs. per minute

Dia. of Screw shaft

as per rule 11.7

Material of screw shaft

Steel

Is the screw shaft fitted with a continuous liner the whole length of the stern tube

Yes

Is the after end of the liner made water tight

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

Length of stern bush 4-0

Dia. of Tunnel shaft

Dia. of Crank shaft journals

Dia. of Crank pin

Size of Crank webs

Dia. of thrust shaft under

collars

No. of Feed pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Bilge pumps

Diameter of ditto

Stroke

Can one be overhauled while the other is at work

No. of Donkey Engines

Sizes of Pumps

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room

In Holds, &c.

No. of Bilge Injections

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Are all the bilge suction pipes fitted with roses

Are the roses in Engine room always accessible

Are the sluices on Engine room bulkheads always accessible

Are all connections with the sea direct on the skin of the ship

Are they Valves or Cocks

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

Are the Discharge Pipes above or below the deep water line

Are they each fitted with a Discharge Valve always accessible on the plating of the vessel

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

What pipes are carried through the bunkers

How are they protected

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

Are the Bilge Suction Pipes, Cocks, and Valves arranged so as to prevent any communication between the sea and the bilges

Is the Screw Shaft Tunnel watertight

Is it fitted with a watertight door

worked from

BOILERS, &c.—(Letter for record)

Manufacturers of Steel

Total Heating Surface of Boilers

Is Forced Draft fitted

No. and Description of Boilers

Working Pressure

Tested by hydraulic pressure to

Date of test

No. of Certificate

Can each boiler be worked separately

Area of fire grate in each boiler

No. and Description of Safety Valves to

each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

Smallest distance between boilers or uptakes and bunkers or woodwork

Mean dia. of boilers

Length

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

Descrip. of riveting: cir. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

Working pressure of shell by rules

Size of manhole in shell

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

Thickness of plates

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Area at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of stays in each

Working pressure by rules

Steam dome: description of joint to shell

% of strength of joint

Diameter

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Pitch of rivets

Working pressure of shell by rules

Crown plates

Thickness

How stayed

SUPERHEATER. Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Date of Test

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve

Pressure to which each is adjusted

Is Easing Gear fitted

THE SURVEYORS ARE REQUESTED NOT TO WRITE ACROSS THE MARGIN.

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IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:—

Two connecting rod top and bottom end bolts and nuts, two main bearing bolts, one set of coupling bolts, one set of feed and bilge pump valves, iron and bolts of various sizes.

The foregoing is a correct description,

David Rowan & Co Ltd *per Alex Sand* *Manufacturer.*

Dates of Survey while building { During progress of work in shops -- 1919 June 3 July 14 Oct 1-15-16- Nov 3-5-20- Dec 1-24-
During erection on board vessel -- 1920 Jan 12-20-28 Feb 10-12-13-16-17- Mar 1-2-12-22-25 Apr 19-28 May 13-15-17-24 June 7-22
Total No. of visits 32

Is the approved plan of main boiler forwarded herewith *yes*

Slid. 23. Oct. 18. 19. 23. 24. 21. Nov. 6. Dec. 12. 24. Apr. 7. 8. 9. 11. 14. 16. 24. Feb. 11. 27. Jan. 20. Feb. 1. " " " donkey " " " " ✓

Dates of Examination of principal parts—Cylinders 20.1.20 Slides 20.1.20 Covers 20.1.20 Pistons 16.2.20 Rods 10.2.20

Connecting rods 12.3.20 Crank shaft 17.2.20 Thrust shaft 30.3.20 Tunnel shafts 22.3.20 Screw shaft 7.6.20 Propeller 7.6.20

Stern tube 28.4.20 Steam pipes tested 14.4.24 Engine and boiler seatings 7.4.24 Engines holding down bolts 14.4.24

Completion of pumping arrangements ✓ Boilers fixed 14.4.24 Engines tried under steam 16.4.24

Completion of fitting sea connections 7.4.24 Stern tube 8.4.24 ✓ Screw shaft and propeller 9.4.24

Main boiler safety valves adjusted ✓ Thickness of adjusting washers ✓

Material of Crank shaft *Steel* Identification Mark on Do. *529* Material of Thrust shaft *Steel* Identification Mark on Do. *739*

Material of Tunnel shafts *Steel* Identification Marks on Do. *10. 14. 19. 20 BX 22.3.20 T.M.* Material of Screw shafts *Steel* Identification Marks on Do. *739*

Material of Steam Pipes *Lap welded. Wot. Iron* Test pressure *boolds* ✓

Is an installation fitted for burning oil fuel ✓ Is the flash point of the oil to be used over 150°F. ✓

Have the requirements of Section 49 of the Rules been complied with ✓

Is this machinery duplicate of a previous case *yes* If so, state name of vessel *no 740*

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

*The materials and workmanship are good.
The Engines and Boilers have been constructed under Special Survey in accordance with the Rules and approved Plans, they have been forwarded to Barcelona where they are to be fitted to the vessel, and when this has been done to the satisfaction of the Society's Surveyors the machinery will, in our opinion, be eligible to be Classed + LMC with date*

SUNDERLAND (22-7-24) The machinery was returned to this port, cleaned, overhauled, examined and found good. (Please see Repair Report attached)

It has now been satisfactorily fitted in the vessel and is eligible in my opinion for Classification and the Record + LMC 2.27.

The amount of Entry Fee ... £ 2 : 0 :
Special ... £ 23 : 0 :
Donkey Boiler Fee ... £
as per Secy. LTR-E.31-7-23 - 10 : 10 :
Travelling Expenses (if any) £
When applied for, 17.5.1920
When received, 19.5.1920

Committee's Minute GLASGOW 14 JUL 1920
Assigned *Deques*
See Secy LTR-E.31-7-23
No 2937
See Secy LTR-E.31-7-23
No 2937
See Secy LTR-E.31-7-23
No 2937

GLASGOW

Certificate (if required) to be sent to

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

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