

REPORT ON MACHINERY.

No. 38402

Received at London Office

TUE. 31 DEC. 1918

Date of writing Report

19

When handed in at Local Office

19

Port of Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey 8th May 1918. Last Survey 14th December, 1918

(Number of Visits 62)

on the

S.S. WAR COWSLIP

Master

Built at

Glasgow

By whom built

Harland & Wolff (No 529)

When built

Gross
Tons
Net

1918

Engines made at

Glasgow

By whom made

Harland & Wolff Ltd (No 548)

when made

1918

Boilers made at

Dumbarton

By whom made

W Denny & Bros (No 303)

when made

1918

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

517

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

27-44-73

Length of Stroke

48

Revs. per minute

77

Dia. of Screw shaft

as per rule

15½

Material of

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

in the propeller boss

Yes

If the liner is in more than one length are the joints burned

—

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

5-0½

Dia. of Tunnel shaft

as per rule

13½

13.33

Dia. of Crank shaft journals

as per rule

14½

14.0

Dia. of Crank pin

14½

Size of Crank webs

28x9

Dia. of thrust shaft under

collars

14½

Dia. of screw

17-6

Pitch of Screw

16-6

No. of Blades

4

State whether moveable

No

Total surface

102

4

No. of Feed pumps

2

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

4

Stroke

24

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

3

SIZES OF PUMPS

General 9½x7x18

Ballast 10½x14x24

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

In Engine Room

2 of 3½"

Stokehold 2 of 3½"

In Holds, &c.

No 1, 2 of 3½"

No 2, 2 of 3½"

No. of Bilge Injections

8

Connected to condenser, or to circulating pump

Pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

3½"

Are all the bilge suction pipes fitted with roses

Yes

Are the roses in Engine room always accessible

Yes

Are the sluices on Engine room bulkheads always accessible

No

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

Yes

Are they 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 Discharge Pipes above or below the deep water line

Below

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

7 & Suctions

How are they protected

Wood Casings

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

Yes

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

Yes

Dates of examination of completion of fitting of Sea Connections

20.11.18

of Stern Tube

20.11.18

Screw shaft and Propeller

20.11.18

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

No

marked from entry by trunkway

BOILERS, &c.—(Letter for record

S)

Manufacturers of Steel

See Separate Report

Total Heating Surface of Boilers

7668

Is Forced Draft fitted

Yes

No. and Description of Boilers

3 Single enders

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

14.11.18, 8.11.18

No. of Certificate

14523, 14522

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

63.34

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Area of each valve

9.624

Pressure to which they are adjusted

185 lb

Smallest distance between boilers or uptakes and bunkers or woodwork

1-9

Mean dia. of boilers

15-6

Length

11-6

Material of shell plates

Thickness

Range of tensile strength

Are the shell plates welded or flanged

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

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

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

Material of stays

Diameter 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 stays

Diameter at smallest part

Area supported by each stay

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

Working pressure by rules

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked

separately

Diameter

Length

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet

holes

Pitch of rivets

Working pressure of shell by rules

Diameter of flue

Material of flue plates

Thickness

If stiffened with rings

Distance between rings

Working pressure by rules

End plates: Thickness

How stayed

Working pressure of end plates

Area of safety valves to superheater

Are they fitted with casing gear

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Lloyd's Register

Foundation

009030 - 009039 - 0181

VERTICAL DONKEY BOILER— Manufacturers of Steel

| | | | | | |
|--------------------------------------|--|---------------------------|-------------------------------------|----------------------------------|-----------------------|
| No. <i>June</i> | Description | | | | |
| Made at | By whom made | When made | Where fixed | | |
| Working pressure | tested by hydraulic pressure to | Date of test | No. of Certificate | Fire grate area | Description of Safety |
| Valves | No. of Safety Valves | Area of each | Pressure to which they are adjusted | Date of adjustment | |
| If fitted with easing gear | If steam from main boilers can enter the donkey boiler | Dia. of donkey boiler | Length | | |
| Material of shell plates | Thickness | Range of tensile strength | Descrip. of riveting long. seams | | |
| Dia. of rivet holes | Whether punched or drilled | Pitch of rivets | Lap of plating | Per centage of strength of joint | Rivets Plates |
| Working pressure of shell by rules | Thickness of shell crown plates | Radius of do. | No. of stays to do. | Dia. of stays | |
| Diameter of furnace Top | Bottom | Length of furnace | Thickness of furnace plates | Description of joint | |
| Working pressure of furnace by rules | Thickness of furnace crown plates | Radius of do. | Stayed by | | |
| Diameter of uptake | Thickness of uptake plates | Thickness of water tubes | Dates of survey | | |

SPARE GEAR. State the articles supplied:— *2 top end, 2 bottom end, 2 main bearing and 6 coupling bolts and nuts, set of feed and bilge Pump Valves assorted Iron Bolts and Nuts and other Spares as required by Specification*
The foregoing is a correct description,
F. H. Black Manufacturer.

| | | |
|--------------------------------|-------------------------------------|---|
| Dates of Survey while building | During progress of work in shops -- | <i>1918. May 8. 16. 21. 23. 28. 30. June 3. 5. 12. 19. 24. 27. July 1. 3. 5. 8. 10. 11. 24. 29. 30. 31. Aug. 2. 19. 22. 26. 27. 28. Sep. 9. 11.</i> |
| | During erection on board vessel -- | <i>17. 19. 24. 26. 28. 29. 30. Oct. 2. 4. 9. 14. 15. 17. 29. Nov. 4. 19. 20. 25. 29. Dec. 3. 5. 9. 10. 13. 14. 16.</i> |
| | Total No. of visits | <i>63.2</i> |

Is the approved plan of main boiler forwarded herewith

" " " donkey " " "

Dates of Examination of principal parts—Cylinders *4.10.18* Slides *30.7.18* Covers *3.6.18* Pistons *3.6.18* Rods *3.6.18*

Connecting rods *4.10.18* Crank shaft *9.10.18* Thrust shaft *30.7.18* Tunnel shafts *30.7.18* Screw shaft *4.11.18* Propeller *4.11.18*

Stern tube *4.11.18* Steam pipes tested *15.10.17* Engine and boiler seatings *20.11.18* Engines holding down bolts *10.12.18*

Completion of pumping arrangements *10.12.18* Boilers fixed *13.12.18* Engines tried under steam *10.12.18 14.12.18*

Main boiler safety valves adjusted *10.12.18* Thickness of adjusting washers *Sta B₁ S₅ 5/32" P₅ 5/32" center B₁ S₁₆ 3/16" P₃₂ P₁ B₁ S₃₂ 3/32" P₃₂ 1154*

Material of Crank shaft *Steel* Identification Mark on Do. *548JE* Material of Thrust shaft *Steel* Identification Mark on Do. *2088JP*

Material of Tunnel shafts *Steel* Identification Marks on Do. *2086JP 2474JP 2083JP 21232JP 2119JP 2085JP*

Material of Steam Pipes *Iron* Test pressure *540 lb*

General Remarks (State quality of workmanship, opinions as to class, &c. *The Machinery of this Vessel has been constructed under Special Survey in accordance with the Rules & approved Plans and has been seen working under steam satisfactorily, materials and workmanship are good.*

The Machinery is eligible in my opinion to be
Class A + LMC 12.18.

It is submitted that
 this vessel is eligible for
 THE RECORD. + LMC 12.18. F.D.

| | | | |
|--------------------------------|----------------|-------------------|-------------------|
| The amount of Entry Fee | £ <i>17.12</i> | When applied for, | <i>16/12/1918</i> |
| Special | £ | When received, | <i>8.3.19</i> |
| Donkey Boiler Fee | £ | | |
| Travelling Expenses (if any) £ | | | |

Committee's Minute *GLASGOW. 80 DEC 1918*

Assigned *+ LMC 12.18.*

Jas Eastgate.
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



GLASGOW.
 Certificate (if required) to be sent to
 (The Surveyors are requested not to write on or below the space for Committee's Minute.)