

REPORT ON MACHINERY.

No. 27609

Received at London Office

Date of writing Report

19

When handed in at Local Office

15 SEP 1919

Port of

SUNDERLAND.

No. in Survey held at
Reg. Book. *Lat 315*
on the *COMERIC*

Date, First Survey

30th Oct. 18

Last Survey

13th Sept 1919

(Number of Visits 34)

Gross 6701
Tons Net 4074
When built 1919Master *Blackmore* Built at *Sunderland*By whom built *Messrs Wm Doxford & Sons Ltd (537)*Engines made at *Sunderland*By whom made *Messrs Wm Doxford & Sons Ltd (537)* when made 1919Boilers made at *Sunderland*By whom made *Messrs Wm Doxford & Sons Ltd (537)* when made 1919

Registered Horse Power

Owners

Andrew Wair & Co

Port belonging to

Glasgow

Nom. Horse Power as per Section 28

620 619

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

ENGINES, &c.—Description of Engines

Tripoli

No. of Cylinders

3

No. of Cranks

*3*Dia. of Cylinders *27, 45, 75*Length of Stroke *54*Revs. per minute *79*

Dia. of Screw shaft

as per rule 15.26

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

liners are fitted, is the shaft lapped or protected between the liners

Length of stern bush *5-6*

Dia. of Tunnel shaft

as per rule 13.96

Dia. of Crank shaft journals

as per rule 14.14

Dia. of Crank pin

14 1/2

Size of Crank webs

30 1/2 x 9 1/2

Dia. of thrust shaft under

collars *14 1/2*

Dia. of screw

18-0

Pitch of Screw

16-6

No. of Blades

4

State whether moveable

yes

Total surface

96 1/2

No. of Feed pumps

2 Wais

Diameter of ditto

12 x 9 x 2 1/2

Stroke

30

Can one be overhauled while the other is at work

yes

No. of Bilge pumps

2

Diameter of ditto

4 1/2

Stroke

30

Can one be overhauled while the other is at work

yes

No. of Donkey Engines

2

SIZES OF PUMPS

9 1/2 x 7 x 1 1/2, 10 1/2 x 4 x 2 1/4

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

Two in each hold 3 1/2, Two in dunn

In Engine Room

Six 3 1/2"

In Holds, &c.

Two in each hold 3 1/2, Two in dunn

No. of Bilge Injections

2 sizes 1 1/2"

Connected to condenser or to circulating pump

yes

Is a separate Donkey Suction fitted in Engine room & size

yes 3 1/2"

Are all the bilge suction pipes fitted with roses

yes

Are the roses in Engine room always accessible

yes

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

yes

Are they 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 Discharge Pipes 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

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

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

yes

worked from

upper platform

BOILERS, &c.—(Letter for record

5)

Manufacturers of Steel

Spencer & Sons

Total Heating Surface of Boilers

9525 1/2

Is Forced Draft fitted

yes

No. and Description of Boilers

Three Single Ended

Working Pressure

185 lbs

Tested by hydraulic pressure to

310 lbs

Date of test

16.6, 21.6, 2.7.19

No. of Certificate

3574.6.8

Can each boiler be worked separately

yes

Area of fire grate in each boiler

73 1/2

No. and Description of Safety Valves to

see list of 20/9/19

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

Way bolins

Mean dia. of boilers

16-2 1/2

Length

12-5

Material of shell plates

S

Thickness

1 1/2

Range of tensile strength

28 1/2 - 33

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

lap d

long. seams

1 1/2 x 1 1/2

Diameter of rivet holes in long. seams

1 1/8

Pitch of rivets

9 1/2

Lap of plates or width of butt straps

20 1/2

Per centages of strength of longitudinal joint

88.5

Working pressure of shell by rules

191

Size of manhole in shell

16 x 12

Size of compensating ring

flange

No. and Description of Furnaces in each boiler

4 Brighton

Material

S

Outside diameter

3-7

Length of plain part

top 3 1/2

Thickness of plates

bottom 3 1/2

Description of longitudinal joint

Weld

No. of strengthening rings

2

Working pressure of furnace by the rules

190

Combustion chamber plates: Material

S

Thickness: Sides

2 1/2

Back

3/4

Top

2 1/2

Bottom

2 1/2

Pitch of stays to ditto: Sides

10 1/2 x 8 1/4

Back

9 1/2 x 9 1/2

Top

8 1/2 x 10 1/2

If stays are fitted with nuts or riveted heads

nuts

Working pressure by rules

190

Material of stays

S

Area at smallest part

2.13 1/2

Area supported by each stay

88.75 1/2

Working pressure by rules

205

End plates in steam space

S

Material

S

Thickness

1 1/2

Pitch of stays

23 1/2 x 21 1/2

How are stays secured

d.n + w.

Working pressure by rules

185

Material of stays

S

Area at smallest part

9.66

Area supported by each stay

628 1/2

Working pressure by rules

189

Material of Front plates at bottom

S

Thickness

3 1/2

Material of Lower buck plate

S

Thickness

7/8

Greatest pitch of stays

13 1/2

Working pressure of plate by rules

187

Diameter of tubes

2 1/2

Pitch of tubes

3 3/4 x 3 3/4

Material of tube plates

S

Thickness: Front

3/2

Back

3/4

Mean pitch of stays

11 1/4 x 7 1/4

Pitch across wide water spaces

13 1/2

Working pressures by rules

180

Girders to Chamber tops: Material

S

Depth and

*thickness of girder at centre**10 1/2 x 1 1/2*

Length as per rule

36 1/2

Distance apart

10 1/2

Working pressure by rules

200

Steam dome: description of joint to shell

yes

% of strength of joint

yes

Diameter

yes

Thickness of shell plates

yes

Material

yes

Description of longitudinal joint

Pitch of rivets

yes

Working pressure of shell by rules

yes

Crown plates

yes

Thickness

yes

How stayed

yes

PERHEATER. Type

yes

Date of Approval of Plan

Date of Test

yes

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

yes

Pressure to which each is adjusted

yes

Is Easing Gear fitted

yes

Diam. of rivet holes

yes

PERHEATER. Type

yes

Date of Approval of Plan

Date of Test

yes

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

yes

IS A DONKEY BOILER FITTED? *no*

If so, is a report now forwarded? *✓*

SPARE GEAR. State the articles supplied:— *Two top end, two bottom end connecting rod bolts and nuts, two main bearing bolts, one at coupling bolts, one at feed and lift pump valves, assorted bolts and nuts, some of various sizes, one propeller*

The foregoing is a correct description,
WILLIAM DOXFORD & SONS, Limited.

R. H. H. H.

Manufacturer.

Dates of Survey while building
During progress of work in shops -- *1918. Dec. 20. Dec. 12. Jan. 9. Feb. 11. 17. 24. Mar. 11. 19. Apr. 10. 24. May 5. 12. 20. 22. 27. 28. 29. June 16. 21. 24. 30.*
During erection on board vessel -- *July 12. 19. Aug. 7. 9. 10. 25. 27. Sep. 2. 3. 13.*
Total No. of visits *(34)*

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

Dates of Examination of principal parts—Cylinders *12.5.19* Slides *11.3.19* Covers *11.3.19* Pistons *12.5.19* Rods *30.4.19*
Connecting rods *20.5.19* Crank shaft *29.5.19* Thrust shaft *31.3.19* Tunnel shafts *31.3.19* Screw shaft *11.7.19* Propeller *24.1.19*
Stern tube *12.5.19* Steam pipes tested *30.6. 9.8.19* Engine and boiler seatings *29.7.19* Engines holding down bolts *18.8.19*
Completion of pumping arrangements *7.8.18* Boilers fixed *29.7.19* Engines tried under steam *29.8.19*
Completion of fitting sea connections *28.5.19* Stern tube *28.5.19* Screw shaft and propeller *29.7.19*
Main boiler safety valves adjusted *29.8.19, 3.9.19.* Thickness of adjusting washers *10" B. P. 2 3/4" 13. P. Hand down 5 1/2" 5 1/2" 13. P. 2 5/8"*
Material of Crank shaft *Steel* Identification Mark on Do. *537 GAH* Material of Thrust shaft *Steel* Identification Mark on Do. *537 GAH*
Material of Tunnel shafts *Steel* Identification Marks on Do. *537 GAH* Material of Screw shafts *Steel* Identification Marks on Do. *537 GAH*
Material of Steam Pipes *Copper* Test pressure *360 lbs*
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 *✓ as per approved plan*
Is this machinery duplicate of a previous case *✓* If so, state name of vessel *F Type S/S "Osteric"*

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

The machinery of this vessel has been built under special survey. The materials and workmanship are sound and good. The vessel has been fitted with an installation for burning oil fuel in accordance with the approved plan and Sec. 49 of Rules. The vessel is fitted in my opinion to have used 1 + L.M.C. 9.19. Fitted for oil fuel 9.19 F.P. above 150°F.

It is submitted that
this vessel is eligible for
THE RECORD + LMC 9.19. F.D.

Fitted for oil fuel 9.19. F.P. above 150°F.

The amount of Entry Fee ... £ : : When applied for,
Special ... £ *148: 18: 3* *11.8.19*
Donkey Boiler Fee ... £ : : When received,
Travelling Expenses (if any) £ : : *12.9.19*

W. H. H.

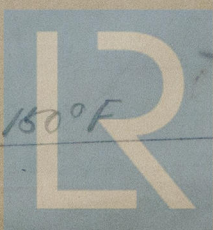
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *FRI. 19 SEP. 1919* *TUE. NOV. 4 1919*

Assigned

+ LMC 9.19

Fitted for oil fuel 9.19. F.P. above 150°F



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Foundation