

REPORT ON MACHINERY.

No. 10132

Received at London Office

Date of writing Report

19

When handed in at Local Office

21/6/1918 Port of

Middlesbrough

21 JUN. 1918

No. in Survey held at
Reg. Book.

Stockton-on-Tees

Date, First Survey

7th Dec 1917

Last Survey

13th June 1918

on the

Steel Screw Steamer WAR VULTURE

(S.S. No 671)

Tons

Gross

Net

Master

Built at

Stockton

By whom built

Messrs Richardson Duck & Co

When built

1918

Engines made at

Stockton

By whom made

Messrs Blair & Co Lim (No 1883)

when made

1918

Boilers made at

Stockton

By whom made

Messrs Blair & Co Lim

when made

1918

Registered Horse Power

Owners

Port belonging to

Nom. Horse Power as per Section 28

578

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

yes

MACHINES, &c.—Description of Engines

Tri-compound

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 14.7

Material of

screw shaft

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 in or

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

tight fit

If two

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

Length of stern bush

5'-1 1/2"

Dia. of Tunnel shaft

as per rule 13.33

Dia. of Crank shaft journals

as per rule 14.0

Dia. of Crank pin

14 1/2"

Size of Crank webs

28x9"

Dia. of thrust shaft under

collars

14 3/4"

Dia. of screw

17'-6"

Pitch of Screw

16'-6"

No. of Blades

4

State whether moveable

no

Total surface

98.2 sq

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

10 1/2 x 14 x 24

20 9 1/2 x 7 x 18

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

In Engine Room

4 @ 3 1/2"

In Holds, &c. 2 @ 3 1/2" each hold except aftermost where one

@ 3 1/2" Tunnel will one @ 3" arranged to carry oil in DB tanks: Ballast pump valves fibre, Tank valve boxes fitted with

No. of Bilge Injections

2

sizes 8" x 10"

Connected to

yes

Is a separate Donkey Suction fitted in Engine room of size

yes-8 1/2"

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

none

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

yes

above or below the deep water line

both

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

Suctions to forward holds

How are they protected

wood ceiling

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

8.4.18

of Stern Tube

8.4.18

Screw shaft and Propeller

1.5.18

Is the Screw Shaft Tunnel watertight

yes

Is it fitted with a watertight door

no

entered worked from by trunks from deck

BOILERS, &c.—(Letter for record (S))

Manufacturers of Steel

Messrs John Spencer & Sons Lim

Total Heating Surface of Boilers

7668

Is Forced Draft fitted

yes

No. and Description of Boilers

3 single ended

Working Pressure

180

Tested by hydraulic pressure to

360

Date of test

11.5.18

No. of Certificate

5897

Can each boiler be worked separately

yes

Area of fire grate in each boiler

63.3 sq

No. and Description of Safety Valves to

each boiler

2 direct spring

Area of each valve

9.62

Pressure to which they are adjusted

185

Are they fitted with easing gear

yes

Smallest distance between boilers or uptakes and bunkers or woodwork

7'-0"

Mean dia. of boilers

15'-6"

Length

11'-6"

Material of shell plates

steel

Thickness

1 1/4"

Range of tensile strength

28-32

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

2 R lap

long. seams

2 B-3 Riv

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

19 1/2" + 1 1/2" out

Per centages of strength of longitudinal joint

rivets 88.3

Working pressure of shell by rules

182

Size of manhole in shell

16" x 12"

Material of stays

steel

Size of compensating ring

Flanged

No. and Description of Furnaces in each boiler

3 Dighton

Material

steel

Outside diameter

50 3/4"

Length of plain part

top 12"

Thickness of plates

32

Description of longitudinal joint

weld

No. of strengthening rings

yes

Working pressure of furnace by the rules

188

Combustion chamber plates: Material

steel

Thickness: Sides

2 3/32"

Back

4"

Top

2 3/32"

Bottom

2 3/32"

Pitch of stays to ditto: Sides

10 5/8" x 9 1/4"

Back

10 1/4" x 8 3/4"

Top

10 5/8" x 9 1/4"

If stays are fitted with nuts or riveted heads

nuts

Material of stays

steel

Diameter at smallest part

2.31

Area supported by each stay

98.5

Working pressure by rules

211

End plates in steam space

Material

steel

Thickness

1 3/32"

Pitch of stays

20 1/2" x 21 1/2"

How are stays secured

nuts & washers

Working pressure by rules

191

Material of stays

steel

Diameter at smallest part

8.29

Area supported by each stay

4.67

Working pressure by rules

185

Material of Front plates at bottom

steel

Thickness

3/32"

Material of Lower back plate

steel

Thickness

2 3/32"

Greatest pitch of stays

13 5/8" x 8 3/4"

Working pressure of plate by rules

187

Diameter of tubes

2 3/4"

Pitch of tubes

4" x 3 3/8"

Material of tube plates

steel

Thickness: Front

3/32"

Back

3/4"

Mean pitch of stays

9 1/2"

Pitch across wide water spaces

13 5/8"

Working pressures by rules

181

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

10" x 1 1/4"

Length as per rule

35 1/2"

Distance apart

10 5/8"

Number and pitch of stays in each

3 @ 9 1/4"

Working pressure by rules

188

Superheater or Steam chest; how connected to boiler

none

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 easing gear

yes

Working pressure of end plates

Area of safety valves to super

IS A DONKEY BOILER FITTED?

no

If so, is a report now forwarded? -

SPARE GEAR.

State the articles supplied: - Two each of connecting rod top end and bottom end and main bearing bolts and nuts, 3 crank shaft & 3 tunnel shaft coupling bolts and nuts; one set each feed and bilge pump valves; 3 each main & donkey feed check valves, assorted bolts & nuts, iron of various sizes, one propeller and minor gear.

The foregoing is a correct description,

For BLAIR & Co., LIMITED

Geo Pittman

Manufacturer.

Dates of Survey while building
During progress of work in shops - 1917 Dec 7. 10. 1918 Jan 18. 23. 25. 28. 30. Feb 1. 4. 6. 7. 11. 14. 18. 22. 25. 27 Mar 2. 5. 7. 8. 11. 12. 14
During erection on board vessel - 18. 19. 20. 22. 25. 26. 28 Apr 2. 4. 5. 8. 10. 11. 12. 15. 17. 19. 22. 24. 26. 29. 30. May 1. 3. 6. 7. 8. 9. 11. 13. 14. 16. 17
Total No. of visits 66

Is the approved plan of main boiler forwarded herewith? yes

Return for duplicate boiler plan

Returned

Dates of Examination of principal parts - Cylinders 5. 3. 18 Slides 5. 3. 18 Covers 5. 3. 18 Pistons 7. 3. 18 Rods 18. 3. 18
Connecting rods 18. 3. 18 Crank shaft 13. 3. 18 Thrust shaft 7. 3. 18 Tunnel shafts 13. 3. 18 Screw shaft 22. 4. 18 Propeller 17. 4. 18
Stern tube 4. 4. 18 Steam pipes tested 11. 8. 17 Engine and boiler seatings 4. 4. 18 Engines holding down bolts 22. 5. 18
Completion of pumping arrangements 4. 6. 18 Boilers fixed 4. 6. 18 Engines tried under steam 3. 6. 18
Main boiler safety valves adjusted 3. 6. 18 Thickness of adjusting washers P. Bls $\frac{3}{16}$: C. Bls $\frac{3}{16}$: S. Bls $\frac{3}{16}$
Material of Crank shaft Eng Steel Identification Mark on Do. 7131 Material of Thrust shaft Eng Steel Identification Mark on Do. 2977-N
Material of Tunnel shafts Eng Steel Identification Marks on Do. 2977-N Material of Screw shafts Eng Steel Identification Marks on Do. 7131
Material of Steam Pipes Lap welded steel Test pressure 540 lbs

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 Section 49 of the Rules 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 specification and amendments to same, stated to have been sanctioned by the C. G. M. S. The materials and workmanship are good. On completion the engines, boilers and auxiliaries were examined under full working conditions and found satisfactory.

The machinery being in a good and efficient condition renders the vessel eligible in my opinion to have the notations of \star L.M.C.-6.18 and "Carrying fuel oil F.P. above 150°Fah in D.B." in the Register Book, subject to the rubber valves in the tank valve boxes remaining efficient.

Note: - The vessel is fitted with Electric Light and "Wireless"

It is submitted that this vessel is eligible for THE RECORD + LMC 6.18. F.D.

The amount of Entry Fee ... £ 115-13-0
Special ... £
Donkey Boiler Fee ... £
Travelling Expenses (if any) £

When applied for,

17/6/18

When received,

25-6-18

Wm Morrison
Engineer-Surveyor to Lloyd's Register of British & Foreign Shipping

Committee's Minute

Assigned

+ L.M.C. 6.18. F.D.

MIDDLESBRO'

Certificate (If required) to be sent to



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