

Rpt. 4.

## REPORT ON MACHINERY.

No. 10187

THU. 22 AUG. 1918

Date of writing Report

19

When handed in at Local Office

19/8/18

Port of

Registered at London Office

Middlesbrough 28 Sep. 1918.

No. in Survey held at

Middlesbrough

Date, First Survey

22<sup>nd</sup> Feb. 18. Last Survey 13<sup>th</sup> Aug. 1918.

Reg. Book.

No. 3 on the

S.S. "Ravens Point"

Number of Visits

Master

Built at

Liverpool

By whom built

H. H. Grayson

(No. 102)

When built

1918

Engines made at

Middlesbrough

By whom made

Messrs. Richardson's Westgate Works

When made

1918

Boilers made at

"

By whom made

when made

1918

Registered Horse Power

Owners

Sir John Esplen K.B.E.

Port belonging to

Liverpool

Nom. Horse Power as per Section 28

262

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes

## ENGINES, &amp;c.—Description of Engines

No. of Cylinders

Three

No. of Cranks

3

Dia. of Cylinders

21, 34, 56

Length of Stroke

36

Revs. per minute

11.4

Dia. of Screw shaft

2

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

in the propeller boss

Yes

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

Yes

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

Yes

Length of stern bush

4-3

Dia. of Tunnel shaft

as per rule

10.22

Dia. of Crank shaft journals

as per rule

10.74

Dia. of Crank pin

11 3/4

Size of Crank webs

11 1/2 x 7

Dia. of thrust shaft under

collars

10 1/2

Dia. of screw

14-9

Pitch of Screw

15-5

No. of Blades

4

State whether moveable

No

Total surface

408

No. of Feed pumps

2

Diameter of ditto

3

Stroke

2

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

2

Diameter of ditto

3 1/2

Stroke

2

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Three

Sizes of Pumps

Stroke (dupla) 6x4 1/2 x 6

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

Feed 8x6 1/2 x 12

Ballast 7 3/4 x 9 x 10

In Engine Room

Three 2 1/2"

In Holds, &amp;c.

Forehold two 2 1/2"

afterhold two 2"

No. of Bilge Injections

One

size 5 1/2"

Connected to condenser, or to circulating pump

Yes

Is a separate Donkey Suction fitted in Engine room &amp; size

Yes 2 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

Yes

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

Yes

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

Hold suction

How are they protected

Hanging

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

ER platform

## BOILERS, &amp;c.—(Letter for record 2.)

Manufacturers of Steel

John D. Jones &amp; Sons

Total Heating Surface of Boilers

1840

Is Forced Draft fitted

No

No. and Description of Boilers

2 S.L. Cyl.

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

1-8-18

No. of Certificate

5020

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

63-25

No. and Description of Safety Valves to

each boiler

2 Spring loaded

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

12-3

Mean dia. of boilers

14-9

Length

11-3

Material of shell plates

Steel

Thickness

1 3/16

Range of tensile strength

27-32

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

2 R. 6 1/2

long. seams

5-2.08

Diameter of rivet holes in long. seams

1 3/16

Pitch of rivets

8-3/8

Lap of plates or width of butt straps

18 1/2

Per centages of strength of longitudinal joint

rivets 86.8

plate 85.8

Working pressure of shell by rules

181.5

Size of manhole in shell

16-12

Size of compensating ring

29-14 1/2

No. and Description of Furnaces in each boiler

3 Single

Material

Steel

Outside diameter

3-8 1/2

Length of plain part

top

bottom

Thickness of plates

crown 3/32

bottom 1/16

Description of longitudinal joint

Weld

No. of strengthening rings

4

Working pressure of furnace by the rules

185.5

Combustion chamber plates: Material

Steel

Thickness: Sides

1/16

Back

2 1/2

Top

1/16

Bottom

1/8

Pitch of stays to ditto: Sides

8-10 1/2

Back

9-9 1/2

Top

9-9 1/2

Are stays fitted with

riveted heads

Yes

Working pressure by rules

193 lbs

Material of stays

Steel

Area at smallest part

2-36

Area supported by each stay

100

Working pressure by rules

212 lbs

End plates in steam space:

Material

Steel

Thickness

1 3/16

Area at smallest part

6

Area supported by each stay

344

Working pressure by rules

184.5

Material of Front plates at bottom

Steel

Thickness

1/8

Greatest pitch of stays

1/4 x 8 1/2

Diameter of tubes

2 1/4

Pitch of tubes

4 1/2 x 4 3/8

Material of tube plates

Steel

Thickness: Front

1

Back

13/16

Mean pitch of stays

1 1/8

Pitch across wide water spaces

14 1/2

Working pressures by rules

188.5

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

8 x 1 3/4

Length as per rule

2-68

Working pressure by rules

180.5

Steam dome: description of joint to shell

None

% of strength of joint

None

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

Pressure to which each is adjusted

Is Easing Gear fitted

Foundation

002543-002549-0108



IS A DONKEY BOILER FITTED?

No

If so, is a report now forwarded?

✓

SPARE GEAR.

State the articles supplied:—

Two top & two bottom end bolts & nuts, two main bearing bolts, set of coupling bolts, set of feed & bilge pump valve, assorted bolts & nuts & iron of various sizes

The foregoing is a correct description,

and on behalf of  
RICHARDSON, WESTGARTH & Co. Ltd.

*W. Jackson*

Manufacturer.

Dates of Survey while building { During progress of work in shops -- 1918. Feb 22. Mar 19. Apr 4. 10. 16. 18. 23. 25. 29. May 1. 2. 7. 13. 14. 16. 21. 29. June 1. 3. 14.  
During erection on board vessel -- June 6. 12. 14. 21. 24. 25. 26. 27. 28. 29. 30. 31. Aug 2. 7. 12. 13.  
Total No. of visits 10. 38.

Is the approved plan of main boiler forwarded herewith

Yes.

Dates of Examination of principal parts—Cylinders 14. 5. 8. Slides 24. 6. 8. Covers 14. 5. 8. Pistons 24. 5. 8. Rods 24. 5. 8. Connecting rods 14. 6. 8. Crank shaft 23. 2. 8. Thrust shaft 16. 4. 8. Tunnel shafts 15. 5. 8. Screw shaft 24. 6. 8. Propeller 24. 6. 8.

Stern tube 13. 5. 8. Steam pipes tested 24/9/18 Engine and boiler seatings 12/7/18 Engines holding down bolts 14/8/18

Completion of pumping arrangements 18/9/18 Boilers fixed 28/9/18 Engines tried under steam 26/9/18

Completion of fitting sea connections 6/6/18 Stern tube 12/7/18 Screw shaft and propeller 12/7/18

Main boiler safety valves adjusted 26/9/18 Thickness of adjusting washers Port Bl. 3/8" Starb 1/2"

Material of Crank shaft Steel Identification Mark on Do. 5978/23-2-8 AB Material of Thrust shaft Steel Identification Mark on Do. 6011 AB

Material of Tunnel shafts Iron Identification Marks on Do. 6011 AB Material of Screw shafts Iron Identification Marks on Do. 43-24-6-8 T. 18

Material of Steam Pipes Steel Test pressure 540 lb sq"

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 Yes. If so, state name of vessel Heron Bridge

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 boilers were tested under hydraulic pressure and found satisfactory. When placed on board in accordance with the Rules this machinery, in my opinion, will be eligible to have the notation of  $\frac{1}{2}$  L.M.C. with date.

The machinery has now been satisfactorily fitted on board and examined under steam, and is eligible in my opinion for record of + LMC 9.18. in Register book.

It is submitted that this vessel is eligible for THE RECORD. + LMC 9.18.

*W. D. H. 10/10/18.*

*Thomas Miller J. D. Milton*  
Engineer Surveyor to Lloyd's Register of Shipping.

The amount of Entry Fee ... £ 2 : 0 :  
2/3 Special ... £ 22 : 1 :  
Donkey Boiler Fee ... £ 11 : 1 :  
Life Assurance ... £ 1 : 1 : 0  
Travelling Expenses (if any) £ : : :  
When applied for, 2/18/19  
When received, 11/9/18

Committee's Minute

Assigned ... LMC 9.18