

REPORT ON MACHINERY.

No. 24241

Received at London Office

TUE. SEP. 26. 1911

Date of writing Report

10

When handed in at Local Office

22.9.11. Port of Hull

No. in Survey held at Reg. Book.

263 on the

Hull Steel S.S. Harrogate

Date, First Survey

Jan 3rd

Last Survey

22nd Sep. 1911

(Number of Visits 56)

Master

Built at Hull

By whom built

Messrs Earle's & Co. Ltd. When built 1911

Engines made at

By whom made

Messrs

when made 1911

Boilers made at

Hull

By whom made

Earle's & Co. Ltd

when made 1911

Registered Horse Power

Owners

Milsons & N. E. Rly Shipping Co. Ltd, Port belonging to Hull

Net Horse Power as per Section 28

272

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 1/2 - 34 - 56

Length of Stroke

39

Revs. per minute

98

Dia. of Screw shaft

as per rule 12

Material of screw shaft

S

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

No

Is the after end of the liner made water tight

Is the propeller boss

Yes

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

Two liners

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

If two

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

no liners

Length of stern bush

4' 8 1/2"

Dia. of Tunnel shaft

as per rule 10.4

Dia. of Crank shaft journals

as per rule 10.9

Dia. of Crank pin

11.375

Size of Crank webs

17 1/2 x 7 1/2

Dia. of thrust shaft under

Collars

1 1/8

Dia. of screw

13.9

Pitch of Screw

14.9

No. of Blades

4

State whether moveable

No

No. of Feed pumps

Two

Diameter of ditto

3 1/4

Stroke

21

Can one be overhauled while the other is at work

Yes

No. of Bilge pumps

Two

Diameter of ditto

3 1/4

Stroke

21

Can one be overhauled while the other is at work

Yes

No. of Donkey Engines

Four

Sizes of Pumps

one 8" Cent. Cur pump, one 7 1/2 x 8 x 8, one 7 1/2 x 5 x 8, one 5 x 4 1/2 x 5

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

In Engine Room Three 1 1/2", One 3", One 5 1/2" In Holds, &c. One 2 1/2" FPT, One 2 3/4" 1/2" tank, Two 3" 1/2" tank, 1/2" 4 tank, one 3" 1/2" tank, One 2 1/2" A.P.T. Two 2 1/2" 1/2" hold, also 1/2", 1/2" 3 hold, one 2 1/2" tunnel well, two 2 1/2" 1/2" tank

No. of Bilge Injections

1

sizes

5 1/2"

Connected to condenser, or to circulating pump

Is a separate Donkey Suction fitted in Engine room & size

Yes

3"

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 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

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

29.6.11

of Stern Tube

29.6.11

Screw shaft and Propeller

29.6.11

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from top platform

BOILERS, &c.—(Letter for record 5)

Manufacturers of Steel

John Spencer Sons

Total Heating Surface of Boilers

5000 sq ft

Is Forced Draft fitted

No

No. and Description of Boilers

Working Pressure

180 lbs

Tested by hydraulic pressure to

360 lbs

Date of test

29.6.11

No. of Certificate

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

69 sq ft

No. and Description of Safety Valves to each boiler

Two Spring

Area of each valve

7.07 sq ft

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

16"

Mean dia. of boilers

15'-6"

Length

11'-6"

Material of shell plates

Thickness

1 1/2"

Range of tensile strength

30.34 tons

Are the shell plates welded or flanged

No

Descrip. of riveting: cir. seams

long. seams

D.S.S.I.R.

Diameter of rivet holes in long. seams

1 3/8"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets 90, plate 84.9

Working pressure of shell by rules

209 lbs

Size of manhole in shell

Size of compensating ring

12" x 1 1/2"

No. and Description of Furnaces in each boiler

3

Neighbors

Material

S

Outside diameter

Length of plain part

top bottom

Thickness of plates

top bottom

Description of longitudinal joint

Welded

No. of strengthening rings

0

Working pressure of furnace by the rules

226 lbs

Combustion chamber plates: Material

S

Thickness: Sides

1/16"

Back

1/16"

Pitch of stays to ditto: Sides

9 1/2" x 8 1/2"

Back

8 1/2" x 8 1/2"

Top

8" x 8"

If stays are fitted with nuts or riveted heads

Yes

Working pressure by rules

Material of stays

S

Diameter at smallest part

1 1/2"

Area supported by each stay

77.875

Working pressure by rules

181 lbs

End plates in steam space:

Material

S

Thickness

3/32"

Pitch of stays

15 1/2" x 14 1/4"

How are stays secured

D.N.

Working pressure by rules

Diameter at smallest part

2 1/16"

Area supported by each stay

228.6 sq ft

Working pressure by rules

234 lbs

Material of Front plates at bottom

S

Thickness

15/16"

Material of Lower back plate

S

Thickness

15/16"

Greatest pitch of stays

10 x 14 1/2"

Working pressure of plate by rules

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2" x 4 1/2"

Material of tube plates

S

Thickness: Front

15/16"

Back

Pitch across wide water spaces

14 1/4"

Working pressures by rules

188 lbs

Girders to Chamber tops: Material

S

Depth and thickness of girder at centre

8 3/4" x 12"

Length as per rule

Working pressure by rules

185 lbs

Superheater or Steam chest; how connected to boiler

Can the superheater be shut off and the boiler worked separately

Yes

Diameter

Length

Thickness of shell plates

Material

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

Working pressure of end plates

Area of safety valves to superheater

VERTICAL DONKEY BOILER— Manufacturers of Steel

No. _____ 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 _____

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:— Two each top and bottom end connecting rod bolts and nuts, two main bearing bolts and nuts, one set coupling bolts and nuts, one set feed and bilge pump valves, a quantity of assorted bolts and nuts, Iron of various sizes etc etc

The foregoing is a correct description,
F. J. Salethorpe Manufacturer.

Dates of Survey while building	During progress of work in shops --	1911 - Jan 3, 7, 10, 12, 14, 31, Feb 2, 8, 10, 13, 15, 21, 22, 24, Mar 6, 8, 13, 22, 23, Apr 1, 4, 5, 7, 13, 21
	During erection on board vessel --	Apr 27, May 1, 4, 9, 16, 19, 25, 27, 31, Jun 1, 8, 12, 14, 19, 26, 28, 29, July 1, 3, 7, 11, 19, 21, 25, 27, 29
	Total No. of visits	56

Is the approved plan of main boiler forwarded herewith **Yes**
 " " " donkey " " "

Dates of Examination of principal parts—Cylinders	5.4.11	Slides	28.6.11	Covers	12.2.11	Pistons	5.4.11	Rods	5.4.11
Connecting rods	26.6.11	Crank shaft	5.4.11	Thrust shaft	21.5.11	Tunnel shafts	11.7.11	Screw shaft	26.6.11
Propeller	26.6.11	Stern tube	19.5.11	Steam pipes tested	3.7.11	Engine and boiler seatings	1.7.11	Engines holding down bolts	26.8.11
Completion of pumping arrangements	26.8.11	Boilers fixed	26.8.11	Engines tried under steam	26.8.11	Main boiler safety valves adjusted	26.8.11	Thickness of adjusting washers	At Blr. $P. \frac{1}{2}$ For Blr. $P. \frac{1}{2}$ $32 \frac{1}{2}$ "
Material of Crank shaft	8	Identification Mark on Do.	5078.6.34	Material of Thrust shaft	5	Identification Mark on Do.	6955	Material of Tunnel shafts	5
Identification Marks on Do.	3055, 6485	Material of Screw shafts	5	Identification Marks on Do.	7721 N	Material of Steam Pipes	Iron	Test pressure	600 lbs per sq. inch

General Remarks (State quality of workmanship, opinions as to class, &c. The engines, and boilers) of this vessel have been constructed under special survey in accordance with the Rules. The workmanship and materials are good. The boiler tested by hydraulic pressure, and with the engines secured on board & tested under steam, they are now in good order and safe working condition and respectfully submitted as being eligible in my opinion to be classed with the notation of $\frac{1}{2}$ L.M.C. 9.11 in the Register Book

It is submitted that this vessel is eligible for THE RECORD + LMC 9.11. J.W.D. 26/9/11

James Barclay
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

The amount of Entry Fee	£ 2	When applied for,	25.9.1911
Special	£ 33	When received,	30/9/1911
Donkey Boiler Fee	£ v		
Travelling Expenses (if any)	£ v		

Committee's Minute _____
 Assigned _____
 FRI. SEP. 29 1911
 + LMC 9.11



Certificate (if required) to be sent to Hull

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

MACHINERY CERTIFICATE WRITER.