

REPORT ON MACHINERY

No. 27010.

WED. 23 SEP 1908

Received at London Office

Date of writing Report

19

When handed in at Local Office

21st Sept.

1908.

Port of Glasgow

No. in Survey held at

Glasgow

Date, First Survey

7th Dec. 1905.

Last Survey

10th Sept.

1908.

Reg. Book.

Ship on the

S.S. "Rinaldo"

(Number of Visits

83)

Master

Built at Port Glasgow

By whom built

Russell & Co.

Tons

Gross 44321.

Net

2792.

When built

1908

Engines made at

Glasgow

By whom made

David Rowan & Co.

when made

1908

Boilers made at

do

By whom made

do

when made

1908

Registered Horse Power

owners Thomas Wilson & Sons & Co. Ltd.

Port belonging to

Hull

Nom. Horse Power as per Section 28

394

Is Refrigerating Machinery fitted for cargo purposes

no

Is Electric Light fitted

no

ENGINES, &c.—Description of Engines

Triple Expansion

No. of Cylinders

3

No. of Cranks

3

Dia. of Cylinders

26.42.70

Length of Stroke

48"

Revs. per minute

60

Dia. of Screw shaft

as per rule 14.6"

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

If two

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

Length of stern bush

4.11"

Dia. of Tunnel shaft

as per rule 12.99"

Dia. of Crank shaft journals

as per rule 13.623"

Dia. of Crank pin

14"

Size of Crank webs

8 7/8"

Dia. of thrust shaft under

collars 14 1/2"

Dia. of screw

17.10"

Pitch of Screw

18.6"

No. of Blades

4

State whether moveable

no

Total surface

98.7

No. of Feed pumps

2

Diameter of ditto

3 3/4"

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

9x12x10, 8x5x9, 5x3x5

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

No. of Bilge Injections

1

sizes

6"

Connected to condenser, or to circulating pump

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 the sluices on Engine room bulkheads always accessible

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

704" Suctions

How are they protected

Wood covering

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

7

of Stern Tube

7

Screw shaft and Propeller

Is the Screw Shaft Tunnel watertight

Yes

Is it fitted with a watertight door

Yes

worked from Top grating

BOILERS, &c.—(Letter for record (3))

Manufacturers of Steel

The Clyde Bridge Steel Co. Ltd.

Total Heating Surface of Boilers

6438.7

Is Forced Draft fitted

no

No. and Description of Boilers

3 Single Ended

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

26/11/06

No. of Certificate

8292

Can each boiler be worked separately

Yes

Area of fire grate in each boiler

57.7

No. and Description of Safety Valves to

each boiler

Cockburn, double

Area of each valve

5.9

Pressure to which they are adjusted

185 lb

Are they fitted with easing gear

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

abt. 2 ft.

Mean dia. of boilers

14.6"

Length

11.6"

Material of shell plates

steel

Thickness

1 3/16"

Range of tensile strength

28.2631.7

Are the shell plates welded or flanged

no

Descrip. of riveting: cir. seams

D.R.L.

long. seams

D.B.S.

Diameter of rivet holes in long. seams

1 5/16"

Pitch of rivets

8 3/4"

Lap of plates or width of butt straps

19 1/4"

Per centages of strength of longitudinal joint

rivets 96.7

plate 85

Working pressure of shell by rules

184 lb

Size of manhole in shell

16 x 12

Size of compensating ring

2.3 x 2.7

No. and Description of Furnaces in each boiler

3 Dighton

Material

steel

Outside diameter

3.10 3/8"

Length of plain part

top

bottom

Thickness of plates

crown 9 1/16"

Description of longitudinal joint

weld

No. of strengthening rings

Working pressure of furnace by the rules

190 lb

Combustion chamber plates: Material

steel

Thickness: Sides

9 1/32"

Back

9 1/32"

Top

9 1/32"

Bottom

7 1/8"

Pitch of stays to ditto: Sides

7 1/8"

Back

7 1/8"

Top

7 1/8"

If stays are fitted with nuts or riveted heads

no

Working pressure by rules

195 lb

Material of stays

steel

Diameter at smallest part

1.48"

Are supported by each stay

62"

Working pressure by rules

190

End plates in steam space:

Material

steel

Thickness

1 3/8"

Pitch of stays

18 x 20 1/2"

How are stays secured

D. nuts

Working pressure by rules

180 lb

Material of stays

steel

Diameter at smallest part

8.85"

Area supported by each stay

370"

Working pressure by rules

240

Material of Front plates at bottom

steel

Thickness

7 1/8"

Material of Lower back plate

steel

Thickness

1 3/8"

Greatest pitch of stays

13 1/4"

Working pressure of plate by rules

190

Diameter of tubes

3 1/4"

Pitch of tubes

4 1/2 x 4 5/8"

Material of tube plates

steel

Thickness: Front

7 1/8"

Back

13 1/16"

Mean pitch of stays

11 3/8"

Pitch across wide water spaces

13 1/2"

Working pressures by rules

184

Girders to Chamber tops: Material

steel

Depth and

thickness of girder at centre

9 x 7 1/2 x 2

Length as per rule

35"

Distance apart

7 1/8"

Number and pitch of stays in each

3 - 7 1/8"

Working pressure by rules

200

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

VERTICAL DONKEY BOILER

Manufacturers of Steel

No. _____ Description None.

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 _____ Stayed by _____

Diameter of uptake _____ Thickness of uptake plates _____ Thickness of water tubes _____ Dates of survey _____

SPARE GEAR. State the articles supplied:— Propeller, set of air pump valves, put & hinge pump valves, set of safety valve springs, 12 condenser gaskets, 12 boiler tubes, etc., & the bolts & nuts required by the rules.

The foregoing is a correct description.

Manufacturer.

David Rowan & Co.

Dates	During progress of work in shops	During erection on board vessel	Total No. of visits
1905. Dec 7. 16. 21. 28.	July 9. 11. Aug 1. 16. 31.	16. 21. 26. Mar. 13. 22. 25. Apr. 8. 13. 26. 30. May 3. 13. 20. 27. June 4. 7. 18. 24. July 8. 12. Aug 16. 20. 24. Sept 14. 15. 25. 26. Oct. 3. 7. 11. 15. Nov. 27. Dec. 2. 1908. Mar. 13. May 12. Aug. 3. 18. 21. 23. Sept. 2. 4. 7. 10.	83.

Is the approved plan of main boiler forwarded herewith Yes

Dates of Examination of principal parts—Cylinders 16/9/07 Slides 16/9/07 Covers 16/9/07 Pistons 16/9/07 Rods 16/9/07

Connecting rods 16/9/07 Crank shaft 3/8/08 Thrust shaft 3/8/08 Tunnel shafts 3/8/08 Screw shaft 16/9/07 Propeller 16/9/07

Stern tube 16/9/07 Steam pipes tested 28/8/06 Engine and boiler seatings 21/8/06 Engines holding down bolts 21/8/06

Completion of pumping arrangements 21/8/08 Boilers fixed 21/8/08 Engines tried under steam 10/9/08

Main boiler safety valves adjusted 4/9/08 Thickness of adjusting washers B.B. 5/8 P 1/4, C 5/16 P 1/16, P.B. 5/32 P 1/8

Material of Crank shaft steel Identification Mark on Do. H.B. Material of Thrust shaft steel Identification Mark on Do. H.B.

Material of Tunnel shafts steel Identification Marks on Do. H.B. Material of Screw shafts steel Identification Marks on Do. H.B.

Material of Steam Pipes Copper Test pressure 360 lbs

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

These engines & boilers have been constructed under Special Survey or are of good materials & workmanship. They have been securely fitted on board & satisfactorily tried under steam.

This vessel is in my opinion eligible to have notation L.M.C. 9.08 in the Register-Book.

It is submitted that this vessel is eligible for the notation L.M.C. 9.08

The amount of Entry Fee. 39.14

Special _____

Donkey Boiler Fee _____

Travelling Expenses (if any) £ _____

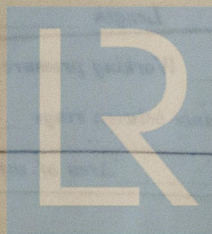
When applied for.

When received.

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

Committee's Minute GLASGOW 22 SEP. 1908

Assigned + LMC 9.08. B.B. 6



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