

## REPORT ON MACHINERY

No. 15800.

Received at London Office

WED. 15 JUN 1910

Date of writing Report

19

When handed in at Local Office

10/6/10 Port of Greenock

No. in Survey held at  
Reg. Book.

Greenock.

Date, First Survey

7<sup>th</sup> June 1909

Last Survey

6<sup>th</sup> June 1910

(Number of Visits

72.)

on the SCREW STEAMER "ROSERIC."

Master Shotton

Built at Port Glasgow.

By whom built

Russell &amp; Co.

Tons

Gross 4438.02

Net 3004.60

When built 1910.

Engines made at

Greenock

By whom made

Rankin &amp; Blackmore.

when made

1910.

Boilers made at

Greenock.

By whom made

Rankin &amp; Blackmore.

when made

1910.

Registered Horse Power

Owners The Bank Line Limited

Port belonging to Glasgow.

Nom. Horse Power as per Section 28

478

Is Refrigerating Machinery fitted for cargo purposes

No

Is Electric Light fitted

Yes.

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

Triple Expansion

No. of Cylinders Three

No. of Cranks Three

Dia. of Cylinders

27"-44"-73"

Length of Stroke

48"

Revs. per minute

70

Dia. of Screw shaft

as per rule 14.8

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 on length

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

67"

Dia. of Tunnel shaft

as per rule 13.37

Dia. of Crank shaft journals

as per rule 14.7

Dia. of Crank pin

14"

Size of Crank webs

18 1/2" x 9"

Dia. of thrust shaft under

collars

14"

Dia. of screw

18' 0"

Pitch of Screw

18' to 19'

No. of Blades

4"

State whether moveable

Yes.

Total surface

1045 sq. ft.

No. of Feed pumps

2

Diameter of ditto

4"

Stroke

26"

Can one be overhauled while the other is at work

Yes.

WEIR'S FEED PUMP

No. of Bilge pumps

2

Diameter of ditto

4 1/2"

Stroke

26"

Can one be overhauled while the other is at work

Yes.

9 1/2" x 7" x 2 1/4"

No. of Donkey Engines

Sizes of Pumps

10 x 7 x 10, 7 x 4 x 8, 9 x 12 x 12.

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

In Engine Room

Three.

3 1/2" dia.

In Holds, &amp;c.

No. 1 HOLD: Two-3 1/2" dia.

No. 2 HOLD: Two-3 1/2" dia.

No. 3 HOLD (DEPT. TANK): Two-6" dia. and two-3 1/2" dia.

No. 4 HOLD: Two-3 1/2" dia.

TUNNEL WELL: One-2 1/2" dia.

No. of Bilge Injections

1

size

6"

Connected to condenser, or to circulating pump

C. P.

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

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

26/4/10

of Stern Tube

26/4/10

Screw shaft and Propeller

26/5/10.

Is the Screw Shaft Tunnel watertight

Yes.

Is it fitted with a watertight door

Yes.

worked from Upper platform.

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

Manufacturers of Steel D. Colville &amp; Sons.

Total Heating Surface of Boilers

6764

Is Forced Draft fitted

Yes.

No. and Description of Boilers

2: Multi-Steel Single End Cylinders

Working Pressure

180 lb

Tested by hydraulic pressure to

360 lb

Date of test

3/5/10

No. of Certificate

967.

Can each boiler be worked separately

Yes.

Area of fire grate in each boiler

73 sq. ft.

No. and Description of Safety Valves to

each boiler

2: Direct Spring.

Area of each valve

14 1/9"

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

About 16"

Mean dia. of boilers

14' 0"

Length

12' 0"

Material of shell plates

Steel

Thickness

1 1/2"

Range of tensile strength

28 to 32 tons

Are the shell plates welded or flanged

No.

Descrip. of riveting: cir. seams

Lap Double.

long. seams

Butt Straps.

Diameter of rivet holes in long. seams

1 1/2"

Pitch of rivets

9 1/2"

Lap of plates or width of butt straps

20 1/2"

Per centages of strength of longitudinal joint

rivets 88.5

plate 85.5

Working pressure of shell by rules

180 lb

Size of manhole in shell

16" x 12"

Size of compensating ring

plate flanged.

No. and Description of Furnaces in each boiler

4: Deighton's

Material

Steel

Outside diameter

3' 9 1/4"

Length of plain part

top 7' 10 1/2"

Thickness of plates

crown 1 1/4"

bottom 3/4"

Description of longitudinal joint

Weld.

No. of strengthening rings

None.

Working pressure of furnace by the rules

181 lb

Combustion chamber plates: Material

Steel

Thickness: Sides

9/16"

Back

5/8"

Top

1/16"

Bottom

3/4"

Pitch of stays to ditto: Sides

4 5/8" x 8"

Back

9 1/4" x 7 1/8"

Top

10 1/4" x 7 3/4"

If stays are fitted with nuts or riveted heads

Nuts.

Working pressure by rules

180 lb.

Material of stays

Steel.

Diameter at smallest part

1 1/2"

Area supported by each stay

71"

Working pressure by rules

199 lb.

End plates in steam space:

Material

Steel

Thickness

1 3/8"

Pitch of stays

14 1/2" x 19 1/2"

How are stays secured

Double nuts.

Working pressure by rules

195 lb

Diameter at smallest part

3 1/2"

Area supported by each stay

342"

Working pressure by rules

211 lb

Material of Front plates at bottom

Steel

Thickness

1 3/8"

Material of Lower back plate

Steel

Thickness

1 3/8"

Greatest pitch of stays

12 1/2"

Working pressure of plate by rules

189 lb.

Diameter of tubes

2 1/2"

Pitch of tubes

3 3/32" x 3 3/32"

Material of tube plates

Steel

Thickness: Front

3/4" to 1/2"

Back

3/4"

Pitch across wide water spaces

13 1/4"

Working pressures by rules

217 lb

Girders to Chamber tops: Material

Steel

Depth and

thickness of girder at centre

10" x 1 5/8"

Length as per rule

34.6"

Distance apart

10 1/2"

Number and pitch of stays in each

3: 7 3/4"

Working pressure by rules

181 lb.

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. *One.* Description *Cylindrical Multi Single End.*  
 Made at *Glasgow.* By whom made *Lindsay Burnett & Co.* When made *1910* Where fixed *on main deck*  
 Working pressure *110 lb* tested by hydraulic pressure to *220 lb* Date of test *12/5/10* No. of Certificate *10399* Fire grate area *39.8* Description of Safety  
 Valves *Direct Spring* No. of Safety Valves *2* Area of each *7.08* Pressure to which they are adjusted *115 lb* Date of adjustment *3/6/10*  
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Dia. of donkey boiler Length  
 FOR OTHER PARTICULARS SEE GLASGOW REPORT.  
 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  
 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:— *1 Propeller shaft 2 Propeller Blades. 3 Cylinders escape valves & springs*  
*2 Crank pin Bolt & nuts 2 Crosshead Bolt & nuts 2 Main Bearing Bolt & nuts. 6 Joint Ring Studs 1 Set Packing*  
*Rings for 4 P & M Cylinders. 1 Set Feed pump valves & seats, 1 Set Air pump valves, 2 Bilge pump valves, 12 Boiler but*  
*20 Condenser tubes, 2 main & 2 Donkey feed check valves, 1 Set valves for each Donkey, 2 sets Coupling Bolts, 12 Holding down Bolts,*  
*6 Cylinders Copper studs & nuts, 1 set Circulating pump valves, 1 set Crank pin Bushes, 1 Feed pump escape valve & springs*  
 The foregoing is a correct description, 1 set Safety valve springs, 1 set Piston valve packing Rings, 1 set main metal  
*24 feet main metal Rods. Flat & Bar Iron etc.*  
*Randall & Macmillan* Manufacturer.

Dates of Survey while building  
 During progress of work in shops— *1909 June 7, 10 Aug. 4, 9, 20, 25 Sept. 6, 9, 17, 21, 27, 30 Oct. 6, 11, 15, 19, 22, 26 Nov. 25, 29 Dec. 2, 6, 7, 9, 14, 16*  
 During erection on board vessel— *21, 22, 23, 1910 Jan 7, 10, 13, 17, 19, 25, 31 Feb 8, 12, 16, 18, 22, 25 Mar 1, 7, 11, 16, 17, 22, 25, 29, 31 Apr 6, 13, 15, 19, 20*  
 Total No. of visits *72* Is the approved plan of main boiler forwarded herewith *Yes*

Dates of Examination of principal parts—Cylinders *6/12/09* Slides *1/3/10* Covers *6/6/10* Pistons *1/3/10* Rods *9/12/09*  
 Connecting rods *9/12/09* Crank shaft *Report* Thrust shaft *15/4/10* Tunnel shafts *15/4/10* Screw shaft *22/3/10* Propeller *15/4/10*  
 Stern tube *15/4/10* Steam pipes tested *27/5/10* Engine and boiler seatings *26/4/10* Engines holding down bolts *1/6/10*  
 Completion of pumping arrangements *4/6/10* Boilers fixed *3/6/10* Engines tried under steam *6/6/10*  
 Main boiler safety valves adjusted *3/6/10* Thickness of adjusting washers *PORT BOILER. STARBOARD BOILER. DONKEY BOILER*  
 Material of Crank shaft *Steel* Identification Mark on Do. *1311* Material of Thrust shaft *Steel* Identification Mark on Do. *950*  
 Material of Tunnel shafts *Steel* Identification Marks on Do. *25, 146E* Material of Screw shafts *Steel* Identification Marks on Do. *952*  
 Material of Steam Pipes *Copper* Test pressure *360 lb*

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

The Engines and Boilers of this vessel have been built under special survey and the materials and workmanship are good. After completion they were examined when running full power trials in the dock, and found to work well.

The machinery throughout is now in good and efficient condition and eligible in my opinion to have the record of **LMC 6,10** marked in the Society's Register Book.

It is submitted that this vessel is eligible for THE RECORD.  $\frac{1}{1}$  LMC 6.10

F.D. *GRB*  
*JPM*  
*16/6/10*

The amount of Entry Fee .. £ *3* : - :  
 Special .. £ *43* : *18* :  
 Donkey Boiler Fee .. £ : :  
 Travelling Expenses (if any) £ : :  
 When applied for, *10/6/10*  
 When received, *11/6/10* F.C.A.

Committee's Minute **GLASGOW 14 JUN. 1910**

Assigned **+ LMC 6,10**

*Wm. R. Austin*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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Lloyd's Register Foundation

Greenock

Certificate (if required) to be sent to

13-6-10-