

Port of Glasgow

Received at London Office

No. in Survey held at Paisley Date, first Survey 7th Oct 1901 Last Survey 26th Nov 1901  
Reg. Book. on the Russell & Co. No. 480. N.S. Gibraltar (Number of Visits 19)  
Master X Built at Port Glasgow By whom built Russell & Co. When built 1901 & 2  
Engines made at Greenock By whom made J. G. Sinclair & Co. when made 1901 & 2  
Boilers made at Paisley By whom made Bow McLaughlan & Co. Ltd when made 1901.  
Registered Horse Power Owners X Port belonging to  
Nom. Horse Power as per Section 28 Is Refrigerating Machinery fitted Is Electric Light fitted

ENGINES, &c.—Description of Engines

No. of Cylinders No. of Cranks

Dia. of Cylinders Length of Stroke Revs. per minute Dia. of Screw shaft as per rule as fitted Lgth. of stern bush  
Dia. of Tunnel shaft as per rule as fitted Dia. of Crank shaft journals as per rule as fitted Dia. of Crank pin Size of Crank webs Dia. of thrust shaft under collars  
Dia. of screw Pitch of screw No. of blades State whether moveable Total surface  
No. of Feed pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
No. of Bilge pumps Diameter of ditto Stroke Can one be overhauled while the other is at work  
No. of Donkey Engines Sizes of Pumps No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room In Holds, &c.  
No. of bilge injections sizes Connected to condenser, or to circulating pump Is a separate donkey suction fitted in Engine room & size  
Are all the bilge suction pipes fitted with roses Are the roses in Engine room always accessible Are the sluices on Engine room bulkheads always accessible  
Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line  
Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate  
What pipes are carried through the bunkers How are they protected  
Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times  
Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges  
When were stern tube, propeller, screw shaft, and all connections examined in dry dock Is the screw shaft tunnel watertight  
Is it fitted with a watertight door worked from

BOILERS, &c.— (Letter for record 8) Total Heating Surface of Boilers 5280 sq ft 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 24/10/01 Can each boiler be worked separately Yes Area of fire grate in each boiler 50.8 sq ft No. and Description of safety valves to each boiler Two direct spring Area of each valve 5.94 sq in 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 1 ft. Mean dia. of boilers 13.9" Length 10.6" Material of shell plates Steel  
Thickness 1 1/32" Range of tensile strength 28/32 Are they welded or flanged No Descrip. of riveting: cir. seams Double R Lapong. seams 5 rivets  
Diameter of rivet holes in long. seams 1 1/4" Pitch of rivets 8 9/16" Lap of plates width of butt straps 18 5/8"  
Per centages of strength of longitudinal joint rivets 92.1 plate 85.4 Working pressure of shell by rules 186 lb Size of manhole in shell 16 x 12"  
Size of compensating ring 31 x 27 x 1 1/4" No. and Description of Furnaces in each boiler 3. Doughton's Material Steel Outside diameter 41"  
Length of plain part top 24" Thickness of plates crown 1 1/2" bottom 1 1/2" Description of longitudinal joint Welded No. of strengthening rings None  
Working pressure of furnace by the rules 184 Combustion chamber plates: Material Steel Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 13/16"  
Pitch of stays to ditto: Sides 8 1/2 x 8 Back 9 x 5 1/2 Top 8 1/2 x 8 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 182  
Material of stays Steel Diameter at smallest part 1 1/4" Area supported by each stay 97 sq in Working pressure by rules 216 End plates in steam space:  
Material Steel Thickness 1 5/16" Pitch of stays 22 1/4 x 19 How are stays secured Double Nuts Working pressure by rules 189 Material of stays Steel  
Diameter at smallest part 7.5" Area supported by each stay 427 sq in Working pressure by rules 183 Material of Front plates at bottom Steel  
Thickness 7/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14 1/2" Working pressure of plate by rules 280  
Diameter of tubes 3 1/2" Pitch of tubes 2 1/2" Material of tube plate Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 11 1/4"  
Pitch across wide water spaces 14 1/2" Working pressures by rules 270 lb Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 7 1/4 x 1 3/4" Length as per rule 28 1/2" Distance apart 8 x 7 1/2" Number and pitch of Stays in each Two, 8 1/2"  
Working pressure by rules 200 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  
Working pressure of end plates Area of safety valves to superheater Are they fitted with easing gear



**DONKEY BOILER—** No. \_\_\_\_\_ Description ☒

Made at \_\_\_\_\_ By whom made \_\_\_\_\_ When made \_\_\_\_\_ Where fixed \_\_\_\_\_

Working pressure \_\_\_\_\_ tested by hydraulic pressure to \_\_\_\_\_ No. of Certificate \_\_\_\_\_ Fire grate area \_\_\_\_\_ Description of safety valves \_\_\_\_\_

No. of safety valves \_\_\_\_\_ Area of each \_\_\_\_\_ Pressure to which they are adjusted \_\_\_\_\_ If fitted with easing gear \_\_\_\_\_ If steam from main boiler \_\_\_\_\_

enter the donkey boiler \_\_\_\_\_ Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of \_\_\_\_\_

strength \_\_\_\_\_ Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ 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 \_\_\_\_\_

joint \_\_\_\_\_ Thickness of furnace crown plates \_\_\_\_\_ Stayed by \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_

Working pressure of furnace by rules \_\_\_\_\_ Diameter of uptake \_\_\_\_\_ Thickness of uptake plates \_\_\_\_\_ Thickness of water tubes \_\_\_\_\_

**SPARE GEAR.** State the articles supplied:— ☒

The foregoing is a correct description,

Manufacturer.

FOR BOW, MACLACHLAN, & CO., LTD

Dates of Survey while building { During progress of work in shops - - } 1901 Oct- 7, 8, 14, 24, 29, 30 Nov 6, 14, 22, 26.  
{ During erection on board vessel - - }  
Total No. of visits 10

Is the approved plan of main boilers forwarded

" " " donkey " "

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

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

Is the after end of the liner made water tight in the propeller boss \_\_\_\_\_ If the liner is in more than one length are the joints bur

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 insolub non-corrosive \_\_\_\_\_ If two liners are fitted, is the shaft lapped or protected between the liners

These (Three) main boilers have been built under spec survey, the materials and workmanship are of good quality they have been tested by hydraulic pressure to 360 lbs per inch and found tight and sound at that pressure. These boilers have been forwarded to Greenock to be f Board Messrs Russell & Co's H S No 480.

The amount of Entry Fee. £

Special (4/3.42 fee) £ 12. 5. 0

Donkey Boiler Fee

Travelling Expenses (if any) £

When applied for,

18. 2. 1902

When received,

20. 2. 1902

George Murdoch.  
Engineer Surveyor to Lloyd's Register of British & Foreign Shippers

Committee's Minute Glasgow. 2-DEC-1901

Assigned Deferres for completion

For G.H.



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