

# REPORT ON MACHINERY.

No. 12453

Port of Glasgow

Received at London Office **SAT 3 MAR 1894**

No. in Survey held at Glasgow  
Reg. Book.

Date, first Survey 1<sup>st</sup> Sept. 1893 Last Survey 24<sup>th</sup> Feb. 1894  
(Number of Visits 24)

on the S.S. Blanche Rock

Tons { Gross 141  
Net 142  
When built 1894

Master Green Built at Traon By whom built Nilsa Shipbuilding Co.

Engines made at Glasgow By whom made Muir & Houston when made 1894

Boilers made at Glasgow By whom made Muir & Houston when made 1894

Registered Horse Power 69 7/8 Owner's Alfred Rowland & Co. Port belonging to Liverpool

Nom. Horse Power as per Section 28

**ENGINES, &c.** — Description of Engines Compound inverted deactivating No. of Cylinders two  
Diameter of Cylinders 21 and 42 Length of Stroke 30 Revolutions per minute \_\_\_\_\_ Diameter of Screw shaft as per rule 8 1/2  
as fitted 8 1/4  
Diameter of Tunnel shaft as per rule \_\_\_\_\_ Diameter of Crank shaft journals 8 1/4 Diameter of Crank pin 8 1/4 Size of Crank webs 5 1/2 x 11  
as fitted none  
Diameter of screw 9' 6" Pitch of screw 12' 6" No. of blades four State whether moveable yes Total surface 28 sq ft.  
No. of Feed pumps one Diameter of ditto 2 1/2 Stroke 14 Can one be overhauled while the other is at work \_\_\_\_\_  
No. of Bilge pumps one Diameter of ditto 3 Stroke 14 Can one be overhauled while the other is at work \_\_\_\_\_  
No. of Donkey Engines one duplex Sizes of Pumps 6 x 4 x 6" No. and size of Suctions connected to both Bilge and Donkey pumps  
In Engine Room Two 2 1/2" in centre (Engine room aft) In Holds, &c. 2 1/2"  
No. of bilge injections one sizes 3 Connected to condenser, or to circulating pump cap. Is a separate donkey suction fitted in Engine room & size 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 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 Tank & Hold pipes How are they protected cased in  
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  
When were stern tube, propeller, screw shaft, and all connections examined in dry dock before launching Is the screw shaft tunnel watertight None  
Is it fitted with a watertight door \_\_\_\_\_ worked from \_\_\_\_\_

**BOILERS, &c.** — (Letter for record S) Total Heating Surface of Boilers 1360  
No. and Description of Boilers One Cyl. return Multitubular Working Pressure 115 Tested by hydraulic pressure to 230  
Date of test 2.2.94 Can each boiler be worked separately \_\_\_\_\_ Area of fire grate in each boiler 63 No. and Description of safety valves to  
each boiler two spring Area of each valve 9' 6" Pressure to which they are adjusted 115 Are they fitted  
with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean diameter of boilers 162  
Length 10' 0" Material of shell plates Stal Thickness 7/8 Description of riveting: circum. seams lap. 2 1/4 long. seams D. Butt 3. Rivets  
Diameter of rivet holes in long. seams 1 1/16 Pitch of rivets 5 1/2 Lap of plates or width of butt straps 17 1/4  
Per centages of strength of longitudinal joint \_\_\_\_\_ rivets 106 Working pressure of shell by rules 115 Size of manhole in shell 12 x 16  
plate 78.4  
Size of compensating ring Mac Neil's No. and Description of Furnaces in each boiler Three plain Material Stal Outside diameter 43"  
Length of plain part top 6' bottom 8 1/2' Thickness of plates crown 5/8 bottom 5/8 x 3/4 description of longitudinal joint Welded No. of strengthening rings none  
Working pressure of furnace by the rules 124 Combustion chamber plates: Material Stal Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 3/4"  
Pitch of stays to ditto: Sides 8x8 Back 8x8 Top 8x7 If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 120  
Material of stays Stal area Diameter at smallest part 9/8 Area supported by each stay 64 Working pressure by rules 116 End plates in steam space:  
Material Stal Thickness 5/16 Pitch of stays 14" How are stays secured d. Nuts & washers Working pressure by rules 120 Material of stays Stal  
area Diameter at smallest part 2 7/8 Area supported by each stay 196 Working pressure by rules 124 Material of Front plates at bottom Stal  
Thickness 5/8 Material of Lower back plate Stal Thickness 5/8 x 9/16 doubling Greatest pitch of stays 12 1/8 Working pressure of plate by rules 171  
Diameter of tubes 3 1/2 Pitch of tubes 4 3/4 Material of tube plates Stal Thickness: Front 5/8 x 9/16 doubling Back 5/8 Mean pitch of stays 10.6  
Pitch across wide water spaces 14" Working pressures by rules 126, 129 Girders to Chamber tops: Material Iron Depth and  
thickness of girder at centre 4 x 2 x 3/4 Length as per rule 32 Distance apart 7" Number and pitch of Stays in each 3 x 8"  
Working pressure by rules 123 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 \_\_\_\_\_

If not, state whether, and when, one will be sent? In a Report also sent on the Hull of the Ship?

12753

**DONKEY BOILER**— Description *Cylindrical with 2 cross tubes*  
 Made at *Glasgow* By whom made *Wm & Howden* When made *1894* Where fixed *Shetland*  
 Working pressure *70* tested by hydraulic pressure to *140* No. of Certificate *3522* Fire grate area *10 3/4* Description of safety valves *Spring*  
 No. of safety valves *one* Area of each *5"* Pressure to which they are adjusted *70* If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no* Diameter of donkey boiler *57"* Length *9' 6"* Material of shell plates *Steel* Thickness *3/8"*  
 Description of riveting long seams *Cap. double* Diameter of rivet holes *1 5/16"* Whether punched or drilled *drilled* Pitch of rivets *3 1/4"*  
 Lap of plating *5"* Per centage of strength of joint *76* Rivets *76* Thickness of shell crown plates *9/16"* Radius of do. *4' 9"* No. of Stays to do. *3"*  
*one* *148* Diam. of stays *1 1/4"* Diameter of furnace Top *36"* Bottom *45"* Length of furnace *4' 0"* Thickness of furnace plates *9/16"* Description of joint *Cap. 2 1/2"* Thickness of furnace crown plates *7/16 7/16* Stayed by *5 stays uptake* Working pressure of shell by rules *120*  
 Working pressure of furnace by rules *77* Diameter of uptake *10"* Thickness of uptake plates *7/16"* Thickness of water tubes *3/8"*

SPARE GEAR. State the articles supplied:— *As required by the rules.*

The foregoing is a correct description,

*Wm & Howden* Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *The engines and boilers have been built under the conditions of Special Survey, and have been securely fitted on board and satisfactorily worked under steam. The material is good.*

*In my opinion this vessel is eligible for the record + L.M.C. 2-94*

It is submitted that this vessel is eligible for THE RECORD + L.M.C. 2-94

*W.A. 5-3-94*

*Glasgow*

Certificate (if required) to be sent to

The amount of Entry Fee.. £ 1 : " :  
 Special .. .. £ 10 : 4 :  
 Donkey Boiler Fee .. .. £ " : " :  
 Travelling Expenses (if any) £ " : " :

When applied for,

*24/2/94*

When received,

*24/2/94*

*C.E. Stromeyer.*

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

Committee's Minute

TUES. 6 MAR 1894

WRITTEN.

Assigned

*+ L.M.C. 2,94*



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