

## REPORT ON MACHINERY.

Port of Greenock

Received at London Office

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No. in Survey held at Port Glasgow & Greenock Date, first Survey June 7 1893 Last Survey June 23 1894  
Reg. Book. Supplement (Number of Visits 110)58 on the Screw Steamer "Strathairly"Master Rawlings Built at Greenock By whom built Russell & Co.Tons { Gross 4142  
Net 2704When built 1894Engines made at Port Glasgow By whom made Blackwood & Gordonwhen made 1894Boilers made at do By whom made dowhen made 1894Registered Horse Power 353 Owners Burrell & SonPort belonging to GlasgowNom. Horse Power as per Section 28 347

## ENGINES, &amp;c.—

Description of Engines

No. of Cylinders

Diameter of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Revolutions per minute \_\_\_\_\_ Diameter of Screw shaft \_\_\_\_\_ as per rule \_\_\_\_\_  
 Diameter of Tunnel shaft \_\_\_\_\_ as per rule \_\_\_\_\_ Diameter of Crank shaft journals \_\_\_\_\_ Diameter of Crank pin \_\_\_\_\_ as fitted \_\_\_\_\_  
 Diameter of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ State whether moveable \_\_\_\_\_ Size of Crank webs \_\_\_\_\_  
 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, &amp;c.—

(Letter for record \_\_\_\_\_)

Donkey boiler Total Heating Surface of Boilers \_\_\_\_\_

No. and Description of Boilers one round Horizontal Multitubular Working Pressure 100 lbs Tested by hydraulic pressure to 200 lbs  
 Date of test 23.1.94 Can each boiler be worked separately ✓ Area of fire grate in each boiler 30 sq ft No. and Description of safety valves to \_\_\_\_\_  
 each boiler Two Direct Spring Area of each valve 4.9 sq in Pressure to which they are adjusted 100 lbs Are they fitted \_\_\_\_\_  
 with easing gear yes Smallest distance between boilers or uptakes and bunkers or woodwork 9" Mean diameter of boilers 9.6"  
 Length 9.0" Material of shell plates Steel Thickness 5/8" Description of riveting: circum. seams Lap double long. seams 2.5 straps double  
 Diameter of rivet holes in long. seams 7/8" Pitch of rivets 3 5/8" Lap of plates or width of butt straps 9" straps  
 Per centages of strength of longitudinal joint \_\_\_\_\_ rivets 78.8 Working pressure of shell by rules 106 lbs Size of manhole in shell 16" x 12"  
 Size of compensating ring 29 x 26 x 1" No. and Description of Furnaces in each boiler Two plain Material Steel Outside diameter 34"  
 Length of plain part \_\_\_\_\_ top 6.0" Thickness of plates \_\_\_\_\_ crown 1 1/2" Description of longitudinal joint Welded No. of strengthening rings none  
 bottom 8.0" Working pressure of furnace by the rules 110 lbs Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 1/2" Top 1/2" Bottom 5/8"  
 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 120 lbs  
 Material of stays Steel Diameter at smallest part 1 1/8" Area supported by each stay 64" Working pressure by rules 118 lbs End plates in steam space: \_\_\_\_\_  
 Material Steel Thickness 1 1/2" Pitch of stays 14" x 14" How are stays secured Double nut Working pressure by rules 108 lbs Material of stays Steel  
 Diameter at smallest part 1 1/8" Area supported by each stay 196 sq in Working pressure by rules 124 lbs Material of Front plates at bottom Steel  
 Thickness 1 1/2" Material of Lower back plate Steel Thickness 1 1/2" Greatest pitch of stays 12 1/2" Working pressure of plate by rules 146 lbs  
 Diameter of tubes 3" Pitch of tubes 4 1/4" x 4 1/8" Material of tube plates Steel Thickness: Front 1 1/2" Back 1 1/2" Mean pitch of stays 10.4"  
 Pitch across wide water spaces 12 1/2" Working pressures by rules 113 lbs Girders to Chamber tops: Material Steel Depth and \_\_\_\_\_  
 Thickness of girder at centre 5 1/2" Length as per rule 20" Distance apart 7" Number and pitch of Stays in each one 7"  
 Working pressure by rules 113 lbs Superheater or Steam chest; how connected to boiler ✓ Can the superheater be shut off and the boiler worked \_\_\_\_\_  
 Diameter \_\_\_\_\_ Length \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_ Material \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_ Diam. of rivet \_\_\_\_\_  
 Pitch of rivets \_\_\_\_\_ Working pressure of shell by rules \_\_\_\_\_ Diameter of flue \_\_\_\_\_ Material of flue plates \_\_\_\_\_ Thickness \_\_\_\_\_  
 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 \_\_\_\_\_

C2H378-0058



DONKEY BOILER—

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 boilers can enter the donkey boiler \_\_\_\_\_  
Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_  
Description of riveting long. seams \_\_\_\_\_ Diameter of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_  
Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ Rivets \_\_\_\_\_ Thickness of shell crown plates \_\_\_\_\_ Radius of do. \_\_\_\_\_ No. of Stays to do. \_\_\_\_\_  
Plates \_\_\_\_\_  
Dia. of stays. \_\_\_\_\_ Diameter of furnace Top \_\_\_\_\_ Bottom \_\_\_\_\_ Length of furnace \_\_\_\_\_ Thickness of furnace plates \_\_\_\_\_ Description of 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,

*Blackwood & Sons*

Manufacturer.

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

Certificate (if required) to be sent to *Glenoch*

The amount of Entry Fee..	£ 3 :	:	When applied for,
Special .. .. .	£ 37 : 7 :	:	27-6-94
Donkey Boiler Fee .. .. .	£ :	:	When received, <i>J. Byer</i>
Travelling Expenses (if any) £	:	:	28-6-94

*C. A. B. Heron*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.  
*Glenoch District*

Committee's Minute

Assigned

TUES. 10 JUL 1894

*+ Lm 6 6 94*



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Foundation