

# REPORT ON MACHINERY.

12466

Port of Glasgow

Received at London Office 18

No. in Survey held at Glasgow Date, first Survey 25<sup>th</sup> July Last Survey 18<sup>th</sup> Sept 1893

Reg. Book. 733 on the Iron S.S. "Burslem" (Number of Visits 10) Tons } Gross 405 Net 225

Master J. Dingle Built at Port Glasgow By whom built Russell & Co When built 1883-7

Engines made at Glasgow By whom made Atley & McBlellan when made 1883-7

Boilers made at Glasgow By whom made Lindsay, Burnett & Co when made 1893

Registered Horse Power 567P Owners Scotsplate J.A. Walker Port belonging to London

Nom. Horse Power as per Section 28 35 9/2-92 + 100 A1.5-92 + L.M.C. 5-92

**ENGINES, &c.** — Description of Engines Compound Surface Condensing No. of Cylinders 2

Diameter of Cylinders 18 in and 36 in Length of Stroke 24 in Revolutions per minute 90 Diameter of Screw shaft 6 1/4

Diameter of Tunnel shaft 6 1/4 Diameter of Crank shaft journals 6 Diameter of Crank pin 7 Size of Crank webs 8 x 4 3/4

Diameter of screw 9 ft Pitch of screw 11 feet No. of blades 4 State whether moveable no Total surface 24.75 ft

No. of Feed pumps one Diameter of ditto 3 1/4 Stroke 16 3/8 Can one be overhauled while the other is at work yes

No. of Bilge pumps one Diameter of ditto 3 1/4 Stroke 10 3/4 Can one be overhauled while the other is at work yes

No. of Donkey Engines one Sizes of Pumps 3 3/4 x 9 stroke No. and size of Suctions connected to both Bilge and Donkey pumps in Engine Room 2 2 1/4 dia In Holds, &c. 4

No. of bilge injections 1 sizes 3 1/4 Connected condenser to circulating pump yes Is a separate donkey suction fitted in Engine room & size 3 1/4

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 yes

Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Valves

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 at water line

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 none

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 Feb 1894 Is the screw shaft tunnel watertight yes

Is it fitted with a watertight door yes worked from Deck

**BOILERS, &c.** — (Letter for record) Total Heating Surface of Boilers 946.5 sq ft

No. and Description of Boilers One Multitubular Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs

Date of test 18/9/93 Can each boiler be worked separately yes Area of fire grate in each boiler 32.5 ft No. and Description of safety valves to each boiler — Area of each valve — Pressure to which they are adjusted — Are they fitted with easing gear — Smallest distance between boilers or uptakes and bunkers or woodwork — Mean diameter of boilers 11'-0"

Length 9'-0" Material of shell plates Steel Thickness 5/8" Description of riveting: circum. seams lap double riv long. seams lap treble riv

Diameter of rivet holes in long. seams 15/16 Pitch of rivets 3 3/4" Lap of plates or width of butt straps 6 1/2"

Per centages of strength of longitudinal joint rivets 75% Working pressure of shell by rules 84.2 lbs Size of manhole in shell 16" x 12"

Size of compensating ring 6" x 5/8" No. and Description of Furnaces in each boiler 2 plain Material Steel Outside diameter 40"

Length of plain part top 5'-10" bottom 8'-0" Thickness of plates crown 7/16" bottom 5/16" Description of longitudinal joint welded No. of strengthening rings (1) 3x3x 1/2 L

Working pressure of furnace by the rules 90.9 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/16" Back 7/16" Top 7/16" Bottom 7/16"

Pitch of stays to ditto: Sides 8" x 8" Back 8 1/2" x 7 1/2" Top 8" x 8" If stays are fitted with nuts or riveted heads nuts Working pressure by rules 89 lbs

Material of stays Steel Area at smallest part 767.96 sq in Area supported by each stay 637.80 sq in Working pressure by rules 96.98 lbs End plates in steam space: Material Steel Thickness 7/16" Pitch of stays 16" How are stays secured D. nuts Working pressure by rules 83 lbs Material of stays Steel

Area at smallest part 2.36 sq in Area supported by each stay 2.56 sq in Working pressure by rules 83 lbs Material of Front plates at bottom Steel Thickness 5/8" Material of Lower back plate Steel Thickness 7/8" Greatest pitch of stays 12 3/4" Working pressure of plate by rules 83 lbs

Diameter of tubes 3 1/2" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 1/16" Back 5/8" Mean pitch of stays 12.4"

Pitch across wide water spaces 13 1/2" Working pressures by rules 86.9 lbs Girders to Chamber tops: Material iron Depth and thickness of girder at centre 6" x 1/2" Length as per rule 26" Distance apart 8" Number and pitch of Stays in each two 8"

Working pressure by rules 82 lbs Superheater or Steam chest; how connected to boiler yes Can the superheater be shut off and the boiler worked separately yes 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 of the hull of the ship? Form No. 8. - 4292. - Copyrighted Inc.

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GLS168-0101

**DONKEY BOILER**— Description *12466 lbs.*

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. \_\_\_\_\_

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, (Sgd.) For Lindsay Burnett & Co  
 Manufacturer. *H. Cameron*

**General Remarks** (State quality of workmanship, opinions as to class, &c.) *A steel main boiler of the dimensions given on the other side has been constructed under special survey by Messrs Lindsay Burnett & Co. Moor Park Boiler Works. The materials and workmanship are of good description and an hydraulic test of 160 lbs per square inch has been applied at which pressure it was found tight and satisfactory.*

*This boiler is intended for the classed vessel S.S. Burslem and is to be shipped to Buenos Ayres.*

*A photo print of the boiler is appended.*

Certificate (if required) to be sent to \_\_\_\_\_

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	:	:	.....18.....
Donkey Boiler Fee .. .. .	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	.....18.....

(Sgd.) *A McKend*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute

**TUES. 13 MAR 1894**

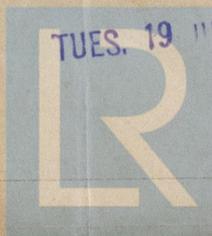
**FRI 18 MAY 1894**

**TUES. 19 JUN 1894**

Assigned

*Deferred for completion*

The Surveyors are requested not to write on or below the space for Committee's Minute.



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