

# REPORT ON MACHINERY.

No. 11435

Port of *Glasgow*

Received at London Office MON. 5 SEP 1892

No. in Survey held at Reg. Book.

*Glasgow*

Date, first Survey *6<sup>th</sup> June 1892* Last Survey *Sept 1<sup>st</sup> 1892*

(Number of Vents)

*17* on the

*S S Queen Victoria*

Tons { Gross *2312*  
Net *1506*

Master *W. Erskine* Built at *Glasgow* By whom built *A. Stephen & Sons.*

When built *1887*

Engines made at *Glasgow* By whom made *A. Stephen & Sons.*

when made *1887*

Boilers made at *Do* By whom made *Do*

when made *1887*

Registered Horse Power *240* Owners *J. Dunlop & Sons.*

Port belonging to *Glasgow*

Nom. Horse Power as per Section 28

**ENGINES, &c.—** Description of Engines No. of Cylinders

Diameter of Cylinders Length of Stroke Revolutions per minute Diameter of Screw shaft as per rule as fitted

Diameter of Tunnel shaft as per rule as fitted Diameter of Crank shaft journals Diameter of Crank pin Size of Crank webs

Diameter 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 *S*) Total Heating Surface of Boilers

No. and Description of Boilers *One cylindrical. Multi-Double ended.* Working Pressure *160 lb.* Tested by hydraulic pressure to *320 lb.*

Date of test *12-7-92* Can each boiler be worked separately ☒ Area of fire grate in each boiler *77 sq ft* No. and Description of safety valves to each boiler *Two, Direct spring* Area of each valve *9.6 sq in* Pressure to which they are adjusted *163 lb.* Are they fitted with easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *15* Mean diameter of boilers *12'-0"*

Length *17'-4 3/8"* Material of shell plates *Steel* Thickness *1 3/32"* Description of riveting: circum. seams *Lap-Ends double* long. seams *Butt. Three rows*

Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *7 3/8" x 3 1/2"* Lap of plates or width of butt straps *17 1/2" butt.*

Per centages of strength of longitudinal joint rivets *91* plate *84.7* Working pressure of shell by rules *180 lb.* Size of manhole in shell *16" x 12"*

Size of compensating ring *MC Nickel* No. and Description of Furnaces in each boiler *Four, ribbed* Material *Steel* Outside diameter *14 1/4"*

Length of plain part top *6'-11 1/2"* bottom *6'-11 1/2"* Thickness of plates crown *1 1/2"* bottom *1 1/2"* Description of longitudinal joint *Weld* No. of strengthening rings *4*

Working pressure of furnace by the rules *160 lb.* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"* Back *1/2"* Top *9/16"* Bottom *7/8"*

Pitch of stays to ditto: Sides *6 7/8"* Back ☒ Top *8 x 7 1/8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *161 lb. 171 lb.*

Material of stays *Steel* Diameter at smallest part *1 1/4"* Area supported by each stay *47 sq in* Working pressure by rules *200 "* End plates in steam space:

Material *Steel* Thickness *1 1/16"* Pitch of stays *16 x 16"* How are stays secured *Nuts* Working pressure by rules *190 lb.* Material of stays *Steel*

Diameter at smallest part *2 3/4"* Area supported by each stay *256 sq in* Working pressure by rules *180 lb.* Material of Front plates at bottom *Steel*

Thickness *7/8"* Material of Lower back plate ☒ Thickness ☒ Greatest pitch of stays ☒ Working pressure of plate by rules ☒

Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4" x 4 8"* Material of tube plates *Steel* Thickness: Front *7/8"* Back *15/16"* Mean pitch of stays *9 1/2" x 9 1/4"*

Pitch across wide water spaces *15 1/2"* with double plate *5" thick* Working pressure by rules *210 lb.* Girders to Chamber tops: Material *Iron* Depth and thickness of girder at centre *10 1/2" x 1 1/2"* Length as per rule *38"* Distance apart *8"* Number and pitch of Stays in each *Four 7 1/8"*

Working pressure by rules *207 lb.* Superheater or Steam chest; how connected to boiler *Riveted* Can the superheater be shut off and the boiler worked separately ☒

Diameter *36"* Length *4'-6"* Thickness of shell plates *7/16"* Material *Steel* Description of longitudinal joint *Lap* Diam. of rivet holes *15/16"* Pitch of rivets *3"* Working pressure of shell by rules *176 lb.* Diameter of flue ☒ Material of flue plates ☒ Thickness ☒

If stiffened with rings ☒ Distance between rings ☒ Working pressure by rules ☒ End plates: Thickness *9/16"* How stayed *Plated ribbed 3-braced and one stay in centre 2 3/4" dia*

Working pressure of end plates *300 lb.* Area of safety valves to superheater ☒ Are they fitted with easing gear ☒



11735 gls

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. \_\_\_\_\_  
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,

Manufacturer.

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

This main boiler has been constructed under special survey - It is of good material & workmanship - it has been satisfactorily fitted on board - and the safety valves adjusted to the working pressure -  
All the old fittings & connections have been used again after being overhauled - The donkey boiler was examined & found in good condition - Safety valves overhauled - Engines all opened out and there were examined the cylinders, pistons, slide valves, pumps, crankshaft and working parts -  
The new half brass fitted with white metal fitted to each I.P. & L.P. bottom ends. Each crank pin & eccentric strap new of wrought iron with brass liners - New patent metal liners fitted to thrust block - New valves & seats in feed pumps, Ridge pumps new valves & seats - New packing rings in H.P. piston. Condenser opened out - all tubes removed, cleaned & replaced - H.P. & I.P. valve spindle removed & readjusted - Reversing all disconnected & readjusted. Donkey sea suction pipe repaired. When the vessel was in Dry Dock the sea connection, propeller & fastenings were all examined -  
Appended hereto is the approved tracing of boiler.

I am of opinion the machinery of this vessel is now good & safe working condition and eligible to be noted in the Reporter Book + L.M.C. 9-92 with the additional notification + N.B. 9-92 on account of new main boiler

Certificate (if required) to be sent to

The amount of Entry Fee.. £ : : When applied for, 1/9/92  
Special .. £ 10 : 10 : :  
Donkey Boiler Fee .. £ : : :  
Travelling Expenses (if any) £ : : : When received, 3/9/92

J. E. Robson.

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

Committee's Minute

TUES. 6 SEP 1892

Assigned

+ L.M.C. 9.92 + N.B. 9.92



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