

# REPORT ON MACHINERY.

No. 13092.

SAT. 1 JUL 1894

Port of *Glasgow*

Received at London Office

18

No. in Survey held at *Glasgow*  
Reg. Book.

Date, first Survey *13<sup>th</sup> April*

Last Survey *18<sup>th</sup> July* 18*94*

(Number of Visits *18*)

on the

*P. P. Scotsman*

Gross Tons *181*  
Net Tons *40*

Master *J. M. Nicolson*

Built at *Green*

By whom built *Gilman & Co*

When built *1894*

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 *35*

Owners *J. Kennedy & Sons*

Port belonging to *Glasgow*

Nom. Horse Power as per Section 28

## ENGINES, &c.—

Description of Engines *Compound surface condensing*

No. of Cylinders *Two*

Diameter of Cylinders *14" x 28"*

Length of Stroke *20"*

Revolutions per minute *130*

Diameter of Screw shaft *as per rule 5.4*

Diameter of Tunnel shaft *as per rule 5.4*

as fitted *none*

Diameter of Crank shaft journals *5 3/4"*

Diameter of Crank pin *5 3/4"*

Size of Crank webs *11" x 3 3/4"*

Pitch of screw *9"-6"*

No. of blades *four*

State whether moveable *no*

Total surface *17 sq ft*

Diameter of ditto *2 1/4"*

Stroke *10"*

Can one be overhauled while the other is at work *✓*

Diameter of ditto *2 3/4"*

Stroke *10"*

Can one be overhauled while the other is at work *✓*

Sizes of Pumps *2 1/2" Purins*

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *two 2"*

In Holds, &c. *two 2"*

No. of bilge injection *one*

sizes *2"*

Connected to condenser, or to circulating pump *pump*

Is a separate donkey suction fitted in Engine room *yes*

size *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 *yes*

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 *none*

How are they protected *✓*

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 launch*

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 *630 sq ft*

No. and Description of Boilers *one cylindrical return tube*

Working Pressure *120 lbs*

Tested by hydraulic pressure to *240 lbs*

Date of test *22/6/94*

Can each boiler be worked separately *✓*

Area of fire grate in each boiler *29 sq ft*

No. and Description of safety valves to each boiler *one plain direct spring*

Area of each valve *5.93 sq"*

Pressure to which they are adjusted *120 lbs*

Are they fitted with easing gear *yes*

Smallest distance between boilers or uptakes and bunkers or woodwork *9"*

Length *9-0"*

Material of shell plates *steel*

Thickness *7/16"*

Description of riveting: circum. seams *lap single*

long. seams *butt tubular*

Mean diameter of boilers *9'-6"*

Diameter of rivet holes in long. seams *1 1/16"*

Pitch of rivets *5"*

Lap of plates *16 1/2"*

width of butt straps *16 1/2"*

Per centages of strength of longitudinal joint *115.6*

Working pressure of shell by rules *124*

Size of manhole in shell *16 x 12"*

Size of compensating ring *8 1/2"*

No. and Description of Furnaces in each boiler *two plain*

Material *steel*

Outside diameter *36"*

Length of plain part *top 5'-6"*

Thickness of plates *bottom 3/32"*

Description of longitudinal joint *riveted*

No. of strengthening rings *none*

Working pressure of furnace by the rules *146*

Combustion chamber plates: Material *steel*

Thickness: Sides *1/2"*

Back *1/2"*

Top *1/2"*

Pitch of stays to ditto: Sides *8 x 8*

Back *8 x 8*

Top *8 x 6 1/2"*

If stays are fitted with nuts or riveted heads *nuts*

Working pressure by rules *120*

Material of stays *steel*

Diameter at smallest part *9/16"*

Area supported by each stay *64 sq"*

Material *steel*

Thickness *1 1/16"*

Pitch of stays *13 1/2"*

How are stays secured *double nuts*

Working pressure by rules *123 lbs*

Material of stays *steel*

Diameter at smallest part *2 1/2"*

Area supported by each stay *182 3/4 sq"*

Working pressure by rules *124*

Thickness *9/16"*

Material of Lower back plate *steel*

Thickness *7/16"*

Greatest pitch of stays *13 1/2" x 11 1/2"*

Working pressure of plate by rules *146 x 135*

Diameter of tubes *3 1/2"*

Pitch of tubes *4 1/2" x 4 5/8"*

Material of tube plates *steel*

Thickness: Front *9/16"*

Pitch across wide water spaces *18 1/2" x 11 1/2"*

Working pressures by rules *146 x 135*

Girders to Chamber tops: Material *iron*

Depth and thickness of girder at centre *6" x 3 1/4"*

Length as per rule *26"*

Distance apart *6 3/4"*

Number and pitch of Stays in each *two 8"*

Working pressure by rules *184*

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— Description *none*

13092 fls

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 \_\_\_\_\_  
enter the donkey boiler \_\_\_\_\_ Diameter of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_  
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:— *As required by the rules.*

The foregoing is a correct description,

*Wm Houston* Manufacturer.

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

*particulars of which are given on the other side have been constructed under special survey the materials & workmanship are of good description they have been well fitted on board steam has been raised on the boiler & the safety valves adjusted in steam & the engine tried.*

*In my opinion the measurement of this vessel is eligible & have notification LMC 7. 94*

It is submitted that  
this vessel is eligible for  
THE RECORD LMC 7, 94

21-7-94

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

The amount of Entry Fee.. £ *1* : " : When applied for,  
Special .. .. £ *8* : " : *19/4 94*  
Donkey Boiler Fee .. .. £ : : : When received, *4/25*  
Travelling Expenses (if any) £ : *6* 9 24 7 *18 94*

Committee's Minute TUES. 24 JUL 1894

Assigned *+ LMC 7 94*

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



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Foundation