

# REPORT ON MACHINERY.

No. 13408  
86598

Port of *Glasgow*  
Date, first Survey *24<sup>th</sup> Oct. 1894* Last Survey *2<sup>nd</sup> Jan'y 1895*  
No. in Survey held at *Glasgow*  
Reg. Book. *on the Iron & Steel Steam Jug "Luetta"*  
Master *By whom built* *London* *By whom built* *H. W. Robertson & Co.*  
Engines made at *London* *By whom made* *H. W. Robertson & Co.* when made *1895*  
Boilers made at *Glasgow* *By whom made* *Hutson & Son* when made *1894*  
Registered Horse Power *24* Owners *H. W. Robertson* Port belonging to *London*  
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 cessal 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 *(a)*) Total Heating Surface of Boilers *562 sq. ft.*  
No. and Description of Boilers *One Mult. or S.E.* Working Pressure *120 lbs* Tested by hydraulic pressure to *240 lbs*  
Date of test *22.12.94* Can each boiler be worked separately — Area of fire grate in each boiler 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 *8'-6"*  
Length *9'-0"* Material of shell plates *Steel* Thickness *1/16* Description of riveting: circum. seams *d. riv. lap* long. seams *triv. riv. lap*  
Diameter of rivet holes in long. seams *1"* Pitch of rivets *3 7/8* Lap of plates or width of butt straps *5 1/8 & 7 1/8*  
Per centages of strength of longitudinal joint rivets *75* plate *74* Working pressure of shell by rules *120 lbs* Size of manhole in shell *12" x 16"*  
Size of compensating ring *7' x 3 1/4"* No. and Description of Furnaces in each boiler *2. plain* Material *Steel* Outside diameter *30 1/2"*  
Length of plain part *16' 3"* Thickness of plates *3 3/64* crown *1/16* bottom *1/16* Description of longitudinal joint *butt str.* No. of strengthening rings *1. Turn*  
Working pressure of furnace by the rules *120 lbs* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2* Back *1/2* Top *1/2* Bottom *9/16*  
Pitch of stays to ditto: Sides *8"* Back *8"* Top *8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *120 lbs*  
Material of stays *iron* Diameter at smallest part *1 1/2 x 1 7/8* Area supported by each stay *64"* Working pressure by rules *132 lbs* End plates in steam space:  
Material *Steel* Thickness *4 7/64* Pitch of stays *13"* Are stays secured *d. nuts* Working pressure by rules *151 lbs* Material of stays *iron*  
Diameter at smallest part *2 1/4* Area supported by each stay *169"* Working pressure by rules *133 lbs* Material of Front plates at bottom *Steel*  
Thickness *4 7/64* Material of Lower back plate *Steel* Thickness *4 7/64* Greatest pitch of stays *dbl.* Working pressure of plate by rules *120 lbs*  
Diameter of tubes *3"* Pitch of tubes *4"* Material of tube plates *Steel* Thickness: Front *4 7/64* Back *1/16* Mean pitch of stays *8"*  
Pitch across wide water spaces *13"* Working pressures by rules *120 lbs* Girders to Chamber tops: Material *iron* Depth and thickness of girder at centre *6 1/2 x 5/8 dbl.* Length as per rule *26"* Distance apart *8"* Number and pitch of Stays in each *2. 8"*  
Working pressure by rules *126 lbs* Superheater or Steam chest; how connected to boiler — 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 —



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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,

*Mason & Co* Manufacturer.

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

The boiler mentioned on other side has been built under special survey and is of good workmanship and material. It has been sent to London where the mountings will be fitted and the boiler placed on board the vessel.

This report along with the approved tracing of boiler sent to London Surveyors for completion. —

*John Sanderfer*  
Glasgow 9<sup>th</sup> Jan. 1895.

It is submitted that this report be handed to the London Surveyors for completion.

*WMA*  
10.1.95

Certificate (if required) to be sent to

The amount of Entry Fee. . . . .	£	:	:	When applied for,
Special .. .. .	£	2	: 13	14 7.6.95
Donkey Boiler Fee .. .. .	£	:	:	When received,
Travelling Expenses (if any) £	:	:	:	10/6/95

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

Committee's Minute

Assigned



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