

REPORT ON MACHINERY.

No. 11899

Port of *Glasgow*

MON. 21 NOV 1892

Received at London Office

18

No. in Survey held at
Reg. Book.

Glasgow

Date, first Survey *23rd May 1892* Last Survey *18th November 1892*
(Number of Visits *23*)

on the

S. S. Yourcoing

Master *J. H. Lindale* Built at

Glasgow

By whom built

Mackie & Thomson

Tons { Gross *548*
Net *299*
When built *1892*

Engines made at

Glasgow

By whom made

Muir & Houston

when made *1892*

Boilers made at

Do.

By whom made

Do.

when made *1892*

Registered Horse Power *70*

Owners

Weatherley Mead & Mussey

Port belonging to

London

Nom. Horse Power as per Section 28 *70*

ENGINES, &c.— Description of Engines *Inverted Direct Acting Triple Expansion* No. of Cylinders *Three*
Diameter of Cylinders *13 1/2", 22", 34"* Length of Stroke *24"* Revolutions per minute *102* Diameter of Screw shaft *as per rule 6.36*
Diameter of Tunnel shaft *as fitted 6 1/2"* Diameter of Crank shaft journals *6 1/2"* Diameter of Crank pin *6 3/4"* Size of Crank webs *4 1/4" x 7 3/4"*
Diameter of screw *10-0* Pitch of screw *10-6* No. of blades *Four* State whether moveable *No* Total surface *25 sq ft*
No. of Feed pumps *One* Diameter of ditto *2 3/4"* Stroke *12"* Can one be overhauled while the other is at work ☒
No. of Bilge pumps *One* Diameter of ditto *2 3/4"* Stroke *12"* Can one be overhauled while the other is at work ☒
No. of Donkey Engines *Two* Sizes of Pumps *Feed 5 1/2" x 2 1/2" pump & 4 strokes Ballast 6" x 8"* No. and size of Suctions connected to both Bilge and Donkey pumps
In Engine Room *Three 2 1/2"* In Holds, &c. *Aft hold one 2 1/2" dia. Fore hold two 2 1/2"*
Yarnal one 2" dia. Aft tank one 3" Aft Peak one 2" Fore Peak one 2 1/2"
No. of bilge injections *One* sizes *3 1/4" dia.* Connected to *condenser* circulating pump ☒ Is a separate donkey suction fitted in Engine room & size *Yes, 3" dia.*
Are all the bilge suction pipes fitted with roses *Yes* Are the roses in Engine room always accessible *Yes* Are the sluices in 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 launching* Is the screw shaft tunnel watertight *Yes*
Is it fitted with a watertight door *Yes* worked from *Engine room upper platform*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *1290 sq ft*
No. and Description of Boilers *One, Cylind. Mult.* Working Pressure *160 lb.* Tested by hydraulic pressure to *320 lb.*
Date of test *19-10-92* Can each boiler be worked separately ☒ Area of fire grate in each boiler *42 sq ft* No. and Description of safety valves to
each boiler *Two - Direct springs* Area of each valve *4.9 sq in* Pressure to which they are adjusted *160 lb.* Are they fitted
with easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or woodwork *10"* Mean diameter of boilers *11-7"*
Length *10-6"* Material of shell plates *Steel* Thickness *1"* Description of riveting: circum. seams *Lap-double* long. seams *Butt-threerows*
Diameter of rivet holes in long. seams *1 1/4"* Pitch of rivets *8 1/2"* Lap of plates or width of butt straps *16 1/2" butt strap*
Per centages of strength of longitudinal joint *86%* Working pressure of shell by rules *170 lb.* Size of manhole in *and 16 x 12*
Size of compensating ring *2-5 sq x 1 thick* No. and Description of Furnaces in each boiler *Two - ribbed* Material *Steel* Outside diameter *45"*
Length of plain part *top 7-6 inches bottom 7-6 inches* Thickness of plates *17/32"* Description of longitudinal joint *Weld* No. of strengthening rings *1*
Working pressure of furnace by the rules *168 lb.* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *11/16"*
Pitch of stays to ditto: Sides *7 3/4"* Back *7 3/4"* Top *8 x 7 3/4"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *182 lb.*
Material of stays *Steel* Diameter at smallest part *1 1/2"* Area supported by each stay *60 sq in* Working pressure by rules *164 lb.* End plates in steam space:
Material *Steel* Thickness *15/16"* Pitch of stays *16"* How are stays secured *Nuts* Working pressure by rules *200 lb.* Material of stays *Steel*
Diameter at smallest part *2 3/4"* Area supported by each stay *196 sq in* Working pressure by rules *245 lb.* Material of Front plates at bottom *Steel*
Thickness *13/16"* Material of Lower back plate *Steel* Thickness *13/16"* Greatest pitch of stays *12"* Working pressure of plate by rules *160 lb.*
Diameter of tubes *3"* Pitch of tubes *4 1/4"* Material of tube plates *Steel* Thickness: Front *15/16" with 9/16" doubling* Back *3/4"* Mean pitch of stays *8 1/2" x 8 1/2"*
Pitch across wide water spaces *14 1/4"* Working pressures by rules *250 lb.* Girders to Chamber tops: Material *Iron* Depth and
thickness of girder at centre *6 1/4" x 3/4" double* Length as per rule *25"* Distance apart *8"* Number and pitch of Stays in each *Two 7 3/4"*
Working pressure by rules *163 lb.* 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 ☒ Diameter 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 ☒

GLS166-0247

Lloyd's Register
Foundation

11899 gds.

DONKEY BOILER— Description *Steel Vertical. Gertus Patent.*
Made at *Gateshead.* By whom made *Clarke Chapman & Co.* When made *24-8-92* Where fixed *In Stokelhol.*
Working pressure *80lb.* tested by hydraulic pressure to *160lb.* No. of Certificate *3958* Fire grate area *16sqft* Description of safety valves *Direct spring.*
No. of safety valves *One.* Area of each *8.29sqft.* Pressure to which they are adjusted *80lb.* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No.* Diameter of donkey boiler *5-6* Length *10-6* Material of shell plates *Steel* Thickness *13/32*
Description of riveting long. seams *Lap, double angled.* Diameter of rivet holes *13/16* Whether punched or drilled *Drilled* Pitch of rivets *3*
Lap of plating *4 1/8* Per centage of strength of joint Rivets *72* Thickness of shell crown plates *17/32* Radius of do. *5-0* No. of Stays to do. *Four*
Dia. of stays. *1 5/8* Diameter of furnace Top *2-6* Bottom *4-9* Length of furnace *3-0* Thickness of furnace plates *1/2* Description of joint *Lap, single.* Thickness of furnace crown plates *1/2* Stayed by *As shell crown.* Working pressure of shell by rules *95lb.*
Working pressure of furnace by rules *90lb.* Diameter of uptake *10 1/4 13* Thickness of uptake plates *3/8* Thickness of water tubes *3/8*

SPARE GEAR. State the articles supplied:— *Two connecting rod top & bottom end bolts & nuts - Two main bearing bolts - One set of coupling bolts - Assorted bolts & nuts - Feed & bilge pump valves - Also one propeller shaft and propeller -*

The foregoing is a correct description,
Muir & Houston Manufacturer.

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

These engine & boiler were commenced at the Southampton Naval Works - Appended hereto is a Report N° 3225 by the Surveyors at that Port setting forth the amount the amount of work done there - The material was removed to Glasgow the works of Messrs Muir & Houston who have ordered new material where necessary and completed the work, they have therefore been returned on this Report as the makers - The various parts have been well put together, they have been well fitted on board and satisfactorily tested under steam and I am of opinion the machinery is eligible to be classed + L.M.C. 11-92 in the Register Book.

The approved tracing of main boiler is appended hereto also a new tracing showing the boiler as built - also a Report on forging

Certificate (if required) to be sent to

The amount of Entry Fee..	£	1	:	"	:	When applied for,
Special	£	10	:	13	:	18/11/92
Donkey Boiler Fee	£	"	:	"	:	When received,
Travelling Expenses (if any) £	"	:	"	:	18/11/92	

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

Committee's Minute TUES. 22 NOV 1892

Assigned + L.M.C. 11, 92

It is submitted that this vessel is eligible for the RECORD
+ L.M.C. 11-92
W. R. Robson
21.11.92