

# REPORT ON MACHINERY.

No. 13008

Port of *Glasgow*

MON. 11 JUN 1904

Received at London Office

18

No. in Survey held at *Glasgow*

Date, first Survey *28th July 1902*

Last Survey *31st May 1894*

Reg. Book.

(Number of Visits *14*)

*644* on the *P. P. Progun*

Tons { Gross *414*  
Net *231*

Master *Not appointed* Built at *Port Glasgow* By whom built *Murdoch & Munro*

When built *1883*

Engines made at *Glasgow* By whom made *Muir & Houston*

when made *1883*

Boilers made at *Glasgow* By whom made *Muir & Houston*

when made *1894*

Registered Horse Power *65* Owners *P. B. Ballantyne & Co*

Port belonging to *Glasgow*

Nom. Horse Power as per Section 28

## ENGINES, &c.—

Description of Engines

No. of Cylinders *Two*

Diameter of Cylinders *20" x 40* Length of Stroke *27"* Revolutions per minute \_\_\_\_\_ Diameter of Screw shaft \_\_\_\_\_ as per rule.

Diameter of Tunnel shaft \_\_\_\_\_ as per rule. Diameter of Crank shaft journals *7 3/4"* Diameter of Crank pin *7 3/4"* Size of Crank webs \_\_\_\_\_ as fitted.

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 *986 1/2*

No. and Description of Boilers *One cylindrical return tube* Working Pressure *110 lbs* Tested by hydraulic pressure to *49 1/2*

Date of test *5/2/94* Can each boiler be worked separately *✓* Area of fire grate in each boiler *49 1/2* No. and Description of safety valves to \_\_\_\_\_

each boiler *one pair direct spring* Area of each valve *8 1/2"* Pressure to which they are adjusted *100 lbs* Are they fitted \_\_\_\_\_

with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *6"* Mean diameter of boilers *12'-0"*

Length *9'-6"* Material of shell plates *steel* Thickness *3/4"* Description of riveting: circum. seams *lap single pin long* seams *butt tube in*

Diameter of rivet holes in long. seams *1 1/8"* Pitch of rivets *5 3/4"* Lap of plates or width of butt straps *17"*

Per centages of strength of longitudinal joint \_\_\_\_\_ rivets. *102.0* plate *78.6* Working pressure of shell by rules *123 lbs* Size of manhole in shell *18 x 12"*

Size of compensating ring *8 1/2" x 1 1/2"* No. and Description of Furnaces in each boiler *three plain* Material *steel* Outside diameter *37"*

Length of plain part \_\_\_\_\_ top *6'-0"* Thickness of plates \_\_\_\_\_ crown *17/32* Description of longitudinal joint *butt butt* No. of strengthening rings *none*

bottom *8'-0"* bottom *17/32* Working pressure of furnace by the rules *124 1/2* Combustion chamber plates: Material *steel* Thickness: Sides *1/2"* Back *1/2"* Top *1/2"* Bottom *5/8"*

Pitch of stays to ditto: Sides *8 x 8"* Back *8 1/4 x 8 1/4"* Top *8 x 7 1/4"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *120 x 115*

Material of stays *steel* Diameter at smallest part *1.964* Area supported by each stay *68 1/2* Working pressure by rules *113 lbs* End plates in steam space: \_\_\_\_\_

Material *steel* Thickness *1/16"* Pitch of stays *14 x 14"* How are stays secured *double nuts & washers* Working pressure by rules *114 lbs* Material of stays *steel*

Diameter at smallest part *2.71* Area supported by each stay *196 1/2* Working pressure by rules *124 1/2* Material of Front plates at bottom *steel*

Thickness *5/8"* Material of Lower back plate *steel* Thickness *5/8"* Greatest pitch of stays *14"* Working pressure of plate by rules *150 lbs*

Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4 x 4 3/4"* Material of tube plates *steel* Thickness: Front *5/8"* Back *5/8"* Mean pitch of stays *9 1/2"*

Pitch across wide water spaces *14" x 12"* Working pressures by rules *197 x 150* Girders to Chamber tops: Material *iron* Depth and \_\_\_\_\_

thickness of girder at centre *7" x 1"* Length as per rule *27 1/2"* Distance apart *7 1/2"* Number and pitch of Stays in each *Two 8"*

Working pressure by rules *110 lbs* 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 \_\_\_\_\_

GLS170-0070



**DONKEY BOILER—** Description Upright  
 Made at Glasgow By whom made Muir & Houston When made 1894 Where fixed in Stothole  
 Working pressure 70 lbs tested by hydraulic pressure to 140 lbs No. of Certificate 3591 Fire grate area 12½ Description of safety valves Single Spring  
 No. of safety valves 1 Area of each 7 in Pressure to which they are adjusted 70 lbs If fitted with easing gear yes If steam from main boilers can enter the donkey boiler no Diameter of donkey boiler 4'-7½" Length 9'-6" Material of shell plates Steel Thickness ¾"  
 Description of riveting long. seams Double lap Diameter of rivet holes 15/16" Whether punched or drilled drilled Pitch of rivets 3¼"  
 Lap of plating 5" Per centage of strength of joint 96 Rivets 71 Thickness of shell crown plates ½" Radius of do. 4'-6" No. of Stays to do. 3  
 Dia. of stays 1½" Diameter of furnace Top 3'-5½" Bottom 4'-3" Length of furnace 3'-9" Thickness of furnace plates 7/16" Description of joint Single lap Thickness of furnace crown plates ½" Stayed by 3 - 1½" Stays Working pressure of shell by rules 95 lbs  
 Working pressure of furnace by rules 74 lbs Diameter of uptake 10" Thickness of uptake plates 7/16" Thickness of water tubes ¾"

SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

Manufacturer.

Muir & Houston

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

boilers (the particulars of which are given on the other side) have been constructed under special supervision. The materials & workmanship are of good description. Steam has been raised on these boilers & the safety valves adjusted.

The cylinders pistons, slide valves, pumps & shafting were opened up & examined. A new H.P. piston & packing ring & also new bottom end connecting rod cross head now have fitted.

As far as seen the machinery of this vessel is in good order. In my opinion is capable to remain as classed & have notification NB. 5-94 & LMC 5-94 and also that a working pressure of 100 lbs per square inch <sup>be allowed</sup> provided the propeller shaft & sea cocks were satisfactory when examined in London in August last, as stated by the owners.

A tracing of the boiler is herewith appended.

It is submitted that this vessel is eligible for

LMC RECORD + LMC 5,94 & NB 5,94.

The vessel's name to be deleted from the Permit List for Main Boilers.

New Main & Donkey Boilers now fitted. Steam pressure in Main Boiler when recorded as 100 lbs A.P.R.

Certificate (if required) to be sent to

The amount of Entry Fee..	£	:	:	When applied for,
Special ..	£	4	4	4/6/94
Donkey Boiler Fee ..	£	3	:	When received,
Travelling Expenses (if any) £	:	:	:	4/6/94

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

Committee's Minute TUES. 12 JUN 1894

Assigned

+ LMC 5,94 + NB 5,94

Note non limit



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