

Port of *Glasgow.*

Received at London Office

JUL 23 AUG 1904

No. in Survey held at  
Reg. Book.Date, first Survey *28<sup>th</sup> March* Last Survey *4<sup>th</sup> Aug* 1904(Number of Visits *24*)

on the

Master *Peter McFarlane* Built at *Glasgow*. By whom built *W. Beardmore & Co. Ltd.* When built *1904*Engines made at *Glasgow* By whom made *Do.* when made *1904*Boilers made at *Do.* By whom made *Do.* when made *1904*Registered Horse Power *158* Owners *Glasgow Corporation* Port belonging to *Glasgow*.Nom. Horse Power as per Section 28 *158* Is Refrigerating Machinery fitted *No.* Is Electric Light fitted *No.*

ENGINES, &c.—Description of Engines *Twin Triple expansion* No. of Cylinders *6* No. of Cranks *6*  
 Dia. of Cylinders *2 (14" 22" 37")* Length of Stroke *24"* Revs. per minute *124* Dia. of Screw shaft *7.313* Material of *Iron*  
 as per rule *7.313* as fitted *7.313* screw shaft  
 Is the screw shaft fitted with a continuous liner the whole length of the stern tube *Yes* Is the after end of the liner made water tight  
 in the propeller boss *Yes* If the liner is in more than one length are the joints burned *—* If the liner does not fit tightly at the part  
 between the bearings in the stern tube, is the space charged with a plastic material insoluble in water and non-corrosive *no space* If two  
 liners are fitted, is the shaft lapped or protected between the liners *—* Length of stern bush *2.7"*  
 Dia. of Tunnel shaft *as per rule 6.88.98* Dia. of Crank shaft journals *as per rule 7.31.12* Dia. of Crank pin *7.4"* Size of Crank webs *13.5 x 5.4"* Dia. of thrust shaft under  
 collars *7.4"* Dia. of screw *8.6"* Pitch of screw *11.0"* No. of blades *4* State whether moveable *No* Total surface *28.8*  
 No. of Feed pumps *2* Diameter of ditto *2.7"* Stroke *13"* Can one be overhauled while the other is at work *Yes*  
 No. of Bilge pumps *2* Diameter of ditto *2.7"* Stroke *13"* Can one be overhauled while the other is at work *Yes*  
 No. of Donkey Engines *2* Sizes of Pumps *10" x 10" x 10"* No. and size of Suctions connected to both Bilge and Donkey pumps  
 In Engine Room *4 at 2.4"* *6" x 4.5" x 6"* In Holds, &c. *Aft hold 2 at 2" Fore hold 2 at 2"*  
*tunnel tunnel wells 2 at 2"*  
 No. of bilge injections *2* sizes *4* Connected to condenser, or to circulating pump *Yes* Is a separate donkey suction fitted in Engine room & size *Yes 3"*  
 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 *fire mains* How are they protected *wood casing*  
 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 *not docked* Is the screw shaft tunnel watertight *Yes*  
 Is it fitted with a watertight door *Yes* worked from *Main deck*

BOILERS, &c.—(Letter for record *(r)*) Total Heating Surface of Boilers *2604* Is forced draft fitted *No*  
 No. and Description of Boilers *two cyl. single ended* Working Pressure *180 lb.* Tested by hydraulic pressure to *360 lb.*  
 Date of test *29.5.04* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *49.5* No. and Description of safety valves to  
 each boiler *1 double spring loaded* Area of each valve *4.9* Pressure to which they are adjusted *185 lb.* Are they fitted with easing gear *Yes*  
 Smallest distance between boilers or uptakes and bunkers or woodwork *9"* Mean dia. of boilers *12.5"* Length *10.3"* Material of shell plates *Steel*  
 Thickness *1/2"* Range of tensile strength *29-32* Are they welded or flanged *No* Descrip. of riveting: cir. seams *OR lap* long. seams *T R butt*  
 Diameter of rivet holes in long. seams *1.3/16"* Pitch of rivets *8 1/2"* Lap of plates or width of butt straps *17 7/8"*  
 Per centages of strength of longitudinal joint *92.1* Working pressure of shell by rules *186 lb.* Size of manhole in shell *17" x 12 1/2"*  
 Size of compensating ring *McNeil* No. and Description of Furnaces in each boiler *3 Motion* Material *Steel* Outside diameter *3.4 1/2"*  
 Length of plain part *top 1/2"* Thickness of plates *bottom 1/2"* Description of longitudinal joint *welded* No. of strengthening rings *✓*  
 Working pressure of furnace by the rules *188 lb.* Combustion chamber plates: Material *Steel* Thickness: Sides *1/2"* Back *1/2"* Top *1/2"* Bottom *13/16"*  
 Pitch of stays to ditto: Sides *8" x 7 1/2"* Back *9" x 6"* Top *8" x 8"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *182 lb.*  
 Material of stays *Iron* Diameter at smallest part *1.99"* Area supported by each stay *58"* Working pressure by rules *257 lb.* End plates in steam space:  
 Material *Steel* Thickness *1/2"* Pitch of stays *16 1/2" x 15 1/2"* How are stays secured *8. nuts* Working pressure by rules *247 lb.* Material of stays *Steel*  
 Diameter at smallest part *5.41"* Area supported by each stay *255.75"* Working pressure by rules *213 lb.* Material of Front plates at bottom *Steel*  
 Thickness *3/4"* Material of Lower back plate *Steel* Thickness *13/16"* Greatest pitch of stays *12 1/2"* Working pressure of plate by rules *189 lb.*  
 Diameter of tubes *3 1/2"* Pitch of tubes *4 1/2" x 4 3/8"* Material of tube plates *Steel* Thickness: Front *3/8"* Back *3/4"* Mean pitch of stays *10.6"*  
 Pitch across wide water spaces *14 1/2" x 1/2"* Working pressures by rules *180 lb. 240 lb.* Girders to Chamber tops: Material *Steel* Depth and  
 thickness of girder at centre *2 (8 1/2" x 3 1/4")* Length as per rule *2.6"* Distance apart *8"* Number and pitch of Stays in each *2.7 1/2"*  
 Working pressure by rules *198 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 *—* 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—** No. \_\_\_\_\_ 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 \_\_\_\_\_

Dia. of donkey boiler \_\_\_\_\_ Length \_\_\_\_\_ Material of shell plates \_\_\_\_\_ Thickness \_\_\_\_\_ Range of tensile strength \_\_\_\_\_

Descrip. of riveting long. seams \_\_\_\_\_ Dia. of rivet holes \_\_\_\_\_ Whether punched or drilled \_\_\_\_\_ Pitch of rivets \_\_\_\_\_

Lap of plating \_\_\_\_\_ Per centage of strength of joint \_\_\_\_\_ 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:— *Two top end bolts & nuts, 2 bottom end bolts & nuts, 2 main bearing bolts, 1 set coupling bolts, 1 set feed valves, pump valves, Assorted bolts & nuts, etc. etc.*

The foregoing is a correct description,

Manufacturer.

**WILLIAM BEARDMORE & CO. LIMITED**

Dates of Survey while building

During progress of work in shops—	1904: Mar 28, Apr 4, 12, 15, 21, 26, May 9, 17, 23, 28, June 6, 8, 9.
During erection on board vessel—	16, 20, 25, 30, July 7, 12, 26, 29, Aug 2, 3, 4.
Total No. of visits	24

Is the approved plan of main boiler forwarded herewith *Yes*

" " " donkey " " "

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

*The engines & boilers have been built under Special Survey, the materials are of good description. When completed the boilers were tested by hydraulic pressure to double the working pressure & was found tight & sound in every respect. The engines were tried under working conditions & were found to work well.*

*In our opinion they are eligible for record*

❖ LMC 8.04

*It is submitted that this vessel is eligible for THE RECORD. — LMC 8.04*

*B.L.C.*  
23.8.04

23.8.04

Certificate (if required) to be sent to

The amount of Entry Fee	£ 2 :	When applied for,
Special	£ 23 : 14 :	22 AUG 1904
Donkey Boiler Fee	£ :	When received,
Travelling Expenses (if any)	£ :	1904

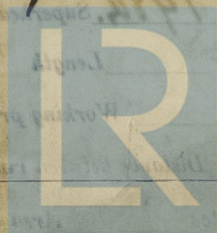
Committee's Minute

Glasgow 22 AUG 1904

Assigned

*L.M.C. 8.04*  
*When fee is paid*

*M. Buchanan & James Rollicion*  
Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.



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