

REPORT ON MACHINERY.

No. 13445

Port of *Glasgow*

No. in Survey held at *Glasgow* Date, first Survey *12 June 1894* Last Survey *22 Jan'y 1895*
 Reg. Book. on the *P.P. "Humbly" "Banshee"* (Number of Visits) Tons { Gross *159* Net *58*
 Master *✓* Built at *Glasgow* By whom built *MacArthur & Thomson* When built *1894-5*
 Engines made at *Glasgow* By whom made *Muir & Houston* when made *1894-5*
 Boilers made at *Glasgow* By whom made *Muir & Houston* when made *1894-5*
 Registered Horse Power *22* Owners *Banshee S. & Co. Ltd* 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 *13" x 28"* Length of Stroke *18"* Revolutions per minute *as per rule 5.02*
 Diameter of Tunnel shaft *as per rule 4.76* Diameter of Crank shaft journals *5 1/8"* Diameter of Crank pin *5 1/8"* Size of Crank webs *11" x 3 1/4"*
 Diameter of screw *5-6"* Pitch of screw *8'-0"* No. of blades *three* State whether moveable *no* Total surface *9.09 ft²*
 No. of Feed pumps *one* Diameter of ditto *1 3/4"* Stroke *9 5/8"* Can one be overhauled while the other is at work *✓*
 No. of Bilge pumps *one* Diameter of ditto *2 1/2"* Stroke *9 5/8"* Can one be overhauled while the other is at work *✓*
 No. of Donkey Engines *one* Sizes of Pumps *5 1/4" x 3 1/2" x 5"* 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 injections *one* sizes *2"* Connected to condenser, or to circulating pump *pumps a separate donkey suction fitted in Engine room & 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 *✓* *coaked from trunk fitted in after hatch for access to*

BOILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *535.09 ft²*
 No. and Description of Boilers *one cylindrical* Working Pressure *110 lbs* Tested by hydraulic pressure to *220 lbs*
 Date of test *30/6/94* Can each boiler be worked separately *✓* Area of fire grate in each boiler *24 1/2 ft²* No. and Description of safety valves to
 each boiler *one pair direct spring* Area of each valve *3.99* Pressure to which they are adjusted *110 lbs* Are they fitted
 with easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *11"* Mean diameter of boilers *9'-0"*
 Length *8'-6"* Material of shell plates *steel* Thickness *9/8"* Description of riveting: circum. seams *lap double* long. seams *both tubular*
 Diameter of rivet holes in long. seams *1 1/16"* Pitch of rivets *4 1/8"* Lap of plates *✓* width of butt straps *16"*
 Per centages of strength of longitudinal joint *108* Working pressure of shell by rules *114 lbs* Size of manhole in shell *16" x 12"*
 Size of compensating ring *8" x 10"* No. and Description of Furnaces in each boiler *two plain* Material *steel* Outside diameter *33"*
 Length of plain part *top 5'-0"* Thickness of plates *bottom 9/16"* Description of longitudinal joint *riveted* No. of strengthening rings *none*
 Working pressure of furnace by the rules *136.172* 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" x 8"* Top *8" x 6 1/2"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *120 lbs*
 Material of stays *steel* Diameter at smallest part *9/16" x 1 1/8"* Area supported by each stay *64.870* Working pressure by rules *120.121* End plates in steam space:
 Material *steel* Thickness *7/16"* Pitch of stays *13"* How are stays secured *double nuts & washers* Working pressure by rules *132 lbs* Material of stays *steel*
 Diameter at smallest part *2 7/16"* Area supported by each stay *169 ft²* Working pressure by rules *144 lbs* Material of Front plates at bottom *steel*
 Thickness *7/16"* 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 *185.123*
 Diameter of tubes *3"* Pitch of tubes *4 1/4" x 4 1/4"* Material of tube plates *steel* Thickness: Front *7/16"* Back *5/8"* Mean pitch of stays *9"*
 Pitch across wide water spaces *13 1/2" x 11 1/2"* Working pressures by rules *175, 175, 156* Girders to Chamber tops: Material *none* Depth and
 thickness of girder at centre *6" x 14"* Length as per rule *20 1/8"* Distance apart *6 1/2"* Number and pitch of Stays in each *two 8"*
 Working pressure by rules *133 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

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DONKEY BOILER— Description *None*

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:— *As required by the rules*

The foregoing is a correct description,

Mini Houston Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c. *Engine & boiler the 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 main boiler the safety valves adjusted & the engine tried under steam.*
In my opinion the machinery of this vessel is eligible & I have notified LMC 1.95
In tracing of the boiler the jacking reports are found open & closed

It is submitted that
 this vessel is eligible for
 THE RECORD + LMC 1-95

W.A.
4-2-95

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

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

The amount of Entry Fee. . . £ *1* : : : When applied for, *29/1/95*
 Special £ *8* : : :
 Donkey Boiler Fee £ : : : : When received, *30/1/95*
 Travelling Expenses (if any) £ : : : :

Committee's Minute

TUES. 5 FEB 1895

Assigned

+ LMC 1.95

MACHINERY CERTIFICATE
 WRITTEN.



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