

REPORT ON MACHINERY.

NO. 14464

Port of Glasgow

MON. JUN 8 1896

No. in Survey held at Glasgow Date, first Survey 12th Dec 1895 Last Survey 2nd June 1896
 Reg. Book. S. B. Countess (Number of Visits 33)
 on the S. B. Countess Master R. Hughes Built at Glasgow By whom built Mackie & Thomson When built 1896
 Engines made at Glasgow By whom made Muir & Houston, Leim^r when made 1896
 Boilers made at Glasgow By whom made Muir & Houston, Leim^r when made 1896
 Registered Horse Power _____ Owners Kellam Adam Port belonging to Glasgow
 Nom. Horse Power as per Section 28 111

ENGINES, &c.— Description of Engines Triple Expansion, Direct Acting of Cylinders Three
 Diameter of Cylinders 17"-27"-43" Length of Stroke 33" Revolutions per minute 98 Diameter of Screw shaft 9"
 Diameter of Salter's shaft as per rule 9" Diameter of Crank shaft journals 9" Diameter of Crank pin 9" Size of Crank webs 11" x 5"
 Diameter of screw 10-6" Pitch of screw 14 ft No. of blades Four State whether moveable Solid Total surface 44 sq ft
 No. of Feed pumps Two Diameter of ditto 2 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes
 No. of Bilge pumps Two Diameter of ditto 3 1/2" Stroke 16 1/2" Can one be overhauled while the other is at work Yes
 No. of Donkey Engines One & Reboiler Sizes of Pumps 4 1/2 x 2 1/2 x 4" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room Three - 2 1/2" 6" x 4" x 6" In Holds, &c. Two - 2"

No. of bilge injections One sizes 3 1/2" Connected to condenser, or to circulating pump Recess Is a separate donkey suction fitted in Engine room & size Yes
 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 None fitted
 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 Hold & tank suction 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 Before launching the screw shaft tunnel watertight No tunnel
 Is it fitted with a watertight door Yes worked from Yes

BOILERS, &c.— (Letter for record 3) Total Heating Surface of Boilers 1730 sq ft
 No. and Description of Boilers One - Single End Working Pressure 160 lbs Tested by hydraulic pressure to 320 lbs
 Date of test 18-4-96 Can each boiler be worked separately Yes Area of fire grate in each boiler 5 1/2 sq ft and Description of safety valves to
 each boiler Two - Direct Spring Area of each valve 5.94" Pressure to which they are adjusted 165 lbs Are they fitted
 with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork 12" Mean diameter of boilers 14-6"
 Length 10-6" Material of shell plates Steel Thickness 3/8" Description of riveting: circum. seams Lap, Butt, Ring seams Butt, Lap Riv?
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 7 1/4" Lap of plates or width of butt straps 18"
 Per centages of strength of longitudinal joint rivets 108% Working pressure of shell by rules 162 lbs Size of manhole in shell 16" x 12"
 Size of compensating ring McNeil's No. and Description of Furnaces in each boiler Three Monitors Material Steel Outside diameter 44 1/2"
 Length of plain part top Thickness of plates bottom 3 1/2" Description of longitudinal joint Weld No. of strengthening rings Yes
 Working pressure of furnace by the rules 170 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/8" Back 7/8" Top 7/8" Bottom 1 1/8"
 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 7 1/2" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 171 lbs
 Material of stays Steel Diameter at smallest part 1 1/2" x 1 1/2" Area supported by each stay 64 sq Working pressure by rules 181 lbs End plates in steam space:
 Material Steel Thickness 3/8" Pitch of stays 15" x 15" How are stays secured Nuts & Wash Working pressure by rules 161 lbs Material of stays Steel
 Diameter at smallest part 2 5/8" Area supported by each stay 225 lbs Working pressure by rules 168 lbs Material of Front plates at bottom Steel
 Thickness 7/8" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 13" Working pressure of plate by rules 218 lbs
 Diameter of tubes 3 1/4" Pitch of tubes 4 1/2" x 4 1/2" Material of tube plates Steel Thickness: Front 7/8" Back 7/8" Mean pitch of stays 9"
 Pitch across wide water spaces 15" Working pressures by rules 213 lbs Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 12" x (1 1/2") Length as per rule 22" Distance apart 7 1/2" Number and pitch of Stays in each Three - 8"
 Working pressure by rules 220 lbs Superheater or Steam chest; how connected to boiler Yes Can the superheater be shut off and the boiler worked
 separately Yes 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 _____



14467

DONKEY BOILER— Description *Vertical, Blake's Patent.*
 Made at *Stockton* By whom made *Capt. Turner & Co. Ltd.* When made *1896* Where fixed *Stockton*
 Working pressure *80 lbs* tested by hydraulic pressure to *100 lbs* No. of Certificate *1244* Fire grate area *12 1/2* Description of safety valves *Levers Spring*
 No. of safety valves *One* Area of each *2 1/4* Pressure to which they are adjusted *80 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *5'-0"* Length *10'-0"* Material of shell plates *Steel* Thickness *7/16"*
 Description of riveting long seams *Lap Double* Diameter of rivet holes *1 1/8"* Whether punched or drilled *Drilled* Pitch of rivets *2 1/8"*
 Lap of plating *4 1/2"* Per centage of strength of joint *97* Rivets *9* Thickness of shell crown plates *5/8"* Radius of do. *2'-9"* No. of Stays to do *None*
 Dia. of stays. *1 1/2"* Diameter of furnace Top *1'-8 1/2"* Bottom *1'-8"* Length of furnace *2'-9"* Thickness of furnace plates *5/8"* Description of joint *Lap Single* Thickness of furnace crown plates *5/8"* Stayed by *1 1/2" of stay pipe - 9 1/2"* Working pressure of shell by rules *108 lbs*
 Working pressure of furnace by rules *97 lbs* Diameter of *2'-9"* Thickness of *5/8"* Thickness of water tubes *1/4"*

SPARE GEAR. State the articles supplied:— *Two connecting rod top end bolts rivets: two bottom end do do two main bearing bolts: set coupling bolts: jack & bilge pump valves: bolts nuts, iron etc Spare pulleys.*

The foregoing is a correct description,
Wm. Sturston Manufacturer.

General Remarks (State quality of workmanship, opinions as to class, &c.)
The machinery of this vessel has been constructed under Special Survey. It has been securely fitted on board, and satisfactorily worked under steam. In my opinion it is eligible to have record in the Register Book + L.M.C. 6-96

Appended are two forging reports on shifting.

It is submitted that this vessel is eligible for THE RECORD

L.M.C. 6.96.

W.S.
8.6.96

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

The amount of Entry Fee..	£ 2 : "	When applied for,
Special	£ 16 : 13	2/6 18 96
Donkey Boiler Fee .. .	£ " : "	When received,
Travelling Expenses (if any) £	" : "	5/6 18 96

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

Committee's Minute

Assigned

TUES. JUN 9 1896
 + L.M.C. 6.96



The Surveys are requested not to write on or below the space for Committee's Minute.