

REPORT ON MACHINERY.

No. 13160

MON 3 SEP 1894

Port of Glasgow
 Received at London Office 13
 No. in Survey held at Glasgow Date, first Survey 19 June Last Survey 28 Aug 1894
 Reg. Book. Stel Se. St. "Amelia" (Number of Visits 13)
 on the Stel Se. St. "Amelia" Tons 354
 Master J. Bammut Built at Ayr By whom built S. McNaught & Co. When built 1894
 Engines made at Glasgow By whom made Muir & Houston when made 1894
 Boilers made at do. By whom made do. when made 1894
 Registered Horse Power 69 Owners Henry Newhouse Port belonging to Great Yarmouth
 Nom. Horse Power as per Section 28

ENGINES, &c.— Description of Engines Compound Inverted No. of Cylinders two
 Diameter of Cylinders 19" & 14 1/2" Length of Stroke 30" Revolutions per minute 105 Diameter of Screw shaft 8 1/8"
 Diameter of Tunnel shaft 7 7/8" Diameter of Crank shaft journals 8 1/4" Diameter of Crank pin 8 1/4" Size of Crank webs 1 1/4" x 5 1/2"
 Diameter of screw 9'-0" Pitch of screw 12'-6" No. of blades 4 State whether moveable No Total surface 26 sq. ft.
 No. of Feed pumps 1 Diameter of ditto 2 1/2" Stroke 14 1/2" Can one be overhauled while the other is at work ✓
 No. of Bilge pumps 1 Diameter of ditto 3" Stroke 14 1/2" Can one be overhauled while the other is at work ✓
 No. of Donkey Engines 1 Sizes of Pumps 6" x 4" x 6" No. and size of Suctions connected to both Bilge and Donkey pumps
 In Engine Room 4 to donkey 3 to bilge pump 2 1/2" In Holds, &c. 4 from fore tanks 2 1/2" one from peak 2"
1 from after peak 2" two hold suction 2"
 No. of bilge injections 1 sizes 3" Connected to condenser, or to circulating pump Pump Is a separate donkey suction fitted in Engine room & size Yes 2 1/2"
 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 All forward suction to hold tank How are they protected Wood ceiling
 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 in stocks Is the screw shaft tunnel watertight Yes
 Is it fitted with a watertight door Yes worked from deck

BOILERS, &c.— (Letter for record S) Total Heating Surface of Boilers 1220 sq. ft.
 No. and Description of Boilers One Cylindrical Multitubular Working Pressure 130 lbs Tested by hydraulic pressure to 260 lbs
 Date of test 30/7/94 Can each boiler be worked separately ✓ Area of fire grate in each boiler 51 1/2 sq. ft. No. and Description of safety valves to
 each boiler 2 direct spring (S. Paulburns) Area of each valve 70 sq. in. Pressure to which they are adjusted 130 lbs. Are they fitted
 with easing gear Yes Smallest distance between boilers or uptakes and bunkers or woodwork open to ship's side Mean diameter of boilers 12'-6"
 Length 10'-0" Material of shell plates Stel Thickness 1" Description of riveting: circum. seams lap. d. r. long. seams Butt 3 riv.
 Diameter of rivet holes in long. seams 1 1/8" Pitch of rivets 4" Lap of plates or width of butt straps 16 1/2"
 Per centages of strength of longitudinal joint 95.7% Working pressure of shell by rules 156 lbs. Size of manhole in shell 16" x 12"
 Size of compensating ring M. Mills No. and Description of Furnaces in each boiler 3 plain Material Steel Outside diameter 39"
 Length of plain part 3'-6" Thickness of plates 9/16" Description of longitudinal joint Welded No. of strengthening rings 1 Adams
 Working pressure of furnace by the rules 207 lbs Combustion chamber plates: Material Steel Thickness: Sides 7/32" Back 7/32" Top 7/32" Bottom 3/4"
 Pitch of stays to ditto: Sides 8" x 8" Back 8" x 8" Top 8" x 7" If stays are fitted with nuts or riveted heads Nuts Working pressure by rules 135 lbs.
 Material of stays Steel Area at smallest part 1.194 Area supported by each stay 64 sq. in. Working pressure by rules 149 lbs. End plates in steam space:
 Material Steel Thickness 27/32" Pitch of stays 14" x 14" How are stays secured d. nuts & washers Working pressure by rules 172 lbs. Material of stays Steel
 Area at smallest part 3.49 Area supported by each stay 196 sq. in. Working pressure by rules 160 lbs. Material of Front plates at bottom Steel
 Thickness 25/32" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 14" Working pressure of plate by rules 146 & 135 lbs
 Diameter of tubes 3 1/2" Pitch of tubes 4 3/4" x 4 7/8" Material of tube plates Steel Thickness: Front 25/32" Back 25/32" Mean pitch of stays 9 5/8"
 Pitch across wide water spaces 14" x 12 7/8" Working pressures by rules 146 lbs. Girders to Chamber tops: Material Iron Depth and
 thickness of girder at centre 7 1/4" x 1 1/2" Length as per rule 28" Distance apart 7" Number and pitch of Stays in each Three 8"
 Working pressure by rules 137 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

If not, state whether, and when, or Is a Report also sent on the Hull of the ship?

[142.—L.R.P.H.—5,000.—Form No. 8. 1-2-92.—Copyright, Inks.]

Lloyd's Register Foundation

GLS170-0264

001181

13160 lbs.

DONKEY BOILER— Description *Vertical, two Cross tubes.*
 Made at *Glasgow* By whom made *Marrriott & Graham* When made *1894* Where fixed *in St. Nicholas*
 Working pressure *120 lbs.* tested by hydraulic pressure to *260 lbs.* No. of Certificate *3670* Fire grate area *118 sq. ft.* Description of safety valves *direct spring*
 No. of safety valves *1* Area of each *707* Pressure to which they are adjusted _____ If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *No* Diameter of donkey boiler *4'-5"* Length *8'-8"* Material of shell plates *Steel* Thickness *29/64"*
 Description of riveting long seams *lap d. riveted* Diameter of rivet holes *13/16"* Whether punched or drilled *drilled* Pitch of rivets *2 3/4"*
 Lap of plating *4"* Per centage of strength of joint *73.7%* Thickness of shell crown plates *5/8"* Radius of do. *5'-0"* No. of Stays to do. *5*
 No. of stays *2.66 sq. in.* Diameter of furnace Top *40"* Bottom *45"* Length of furnace *4'-0"* Thickness of furnace plates *5/8"* Description of joint *lap. d. r.* Thickness of furnace crown plates *5/8"* Stayed by *5-2 vertical stays.* Working pressure of shell by rules *129 lbs.*
 Working pressure of furnace by rules *129 lbs.* Diameter of uptake *10"* Thickness of uptake plates *1/2"* Thickness of water tubes *3/8"*
 With *2 rows of 1 1/2" screw stays 10 x 10" pitch on fire box*

SPARE GEAR. State the articles supplied:— *Two top & bottom end connecting rod bolts, 2 main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, 1 set piston springs, nuts bolts & iron assorted.*

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

General Remarks (State quality of workmanship, opinions as to class, &c.) *The machinery & boilers of this vessel have been constructed under special survey. They have been well fitted on board, steam has been raised on the main boiler the safety valves adjusted to the correct working pressure & the engines tried under steam, the materials & workmanship throughout are of good description & in our opinion eligible to have notification to M.C. & G.*

A tracing of the boiler & 1 forging reports on appu...

* Subject to the Safety valve of Donkey Boiler being adjusted under steam at Hull whence the vessel has proceeded, & the Hull Surveyors have been advised

[Large blue ink signature]

Certificate (if required) to be sent to *Glasgow*
 The amount of Entry Fee... £ *1* : " : " When applied for, *31/8/94*
 Special £ *10* : *4* : " }
 Donkey Boiler Fee £ " : " : " }
 Travelling Expenses (if any) £ " : *10* : " }
 Alex^r Kidd & Co. M. & H. Engineers Surveyors to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *TUES. 4 SEP 1894* *FRIDAY 7 SEP 1894*
 Assigned *Deferred* *+ 2 me 894*



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