

## REPORT ON MACHINERY.

MON. 26 FEB 1894

Port of *Middlesboro-on-Tees*

Received at London Office

No. in Survey held at *Stockton-on-Tees*  
Reg. Book.Date, first Survey *26<sup>th</sup> Oct. 1893* Last Survey *29<sup>th</sup> Jan'y 1894*  
(Number of Visits *18*)on the *Screw Steamer "Wolf"*Tons { Gross *2443*  
Net *1548*When built *1894*Master *J. P. Gator*. Built at *Stockton*By whom built *Richardson, Dock 1601*Engines made at *Stockton-on-Tees*. By whom made *Blair & Co. Ltd.*when made *1894*Boilers made at *Stockton-on-Tees*. By whom made *Blair & Co. Ltd.*when made *1894*Registered Horse Power *200* Owners *Farrer, Groves & Co.*Port belonging to *London*Nom. Horse Power as per Section 28 *219*  
*Manufacturers HP 175*ENGINES, &c.— Description of Engines *Triple Expansion*No. of Cylinders *Three*Diameter of Cylinders *22" - 36" - 59"* Length of Stroke *39"* Revolutions per minute *65* Diameter of Screw shaft *as per rule 10.4"*  
*as fitted 12"*Diameter of Tunnel shaft *as per rule 9.9"* Diameter of Crank shaft journals *11.25"* Diameter of Crank pin *12"* Size of Crank webs *19" x 7.5" built*  
*as fitted 11.25"*Diameter of screw *15.5"* Pitch of screw *16' 0"* No. of blades *4* State whether moveable *No* Total surface *62.5 sq. ft.*No. of Feed pumps *2* Diameter of ditto *2.5"* Stroke *28"* Can one be overhauled while the other is at work *Yes*No. of Bilge pumps *2* Diameter of ditto *4"* Stroke *28"* Can one be overhauled while the other is at work *Yes*No. of Donkey Engines *Two* Sizes of Pumps *(4x8")* *Feed Ballast* *(7.5x9")* No. and size of Suctions connected to both Bilge and Donkey pumpsIn Engine Room *Four*: *2.5" dia.* In Holds, &c. *Fore Hold: Two - 2.5" dia. Main**Hold: Two - 2.5" dia. after Hold: Two - 2.5" dia. after Well: one - 2.5" dia.*No. of bilge injections *2* sizes *4.5"* Connected to condenser, or to circulating pump *cp.* Is a separate donkey suction fitted in Engine room & size *Yes: 4" dia.?*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 *Away*.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 *At vessel*. Is the screw shaft tunnel watertight *Yes*.Is it fitted with a watertight door *Yes*. worked from *Top platform in engine room*.BOILERS, &c.— (Letter for record *S*.)Total Heating Surface of Boilers *3300 sq. ft.*No. and Description of Boilers *Two: bylo<sup>10</sup> Multitubular* Working Pressure *160 lbs.* Tested by hydraulic pressure to *320 lbs.*Date of test *14/12/93*. Can each boiler be worked separately *Yes*. Area of fire grate in each boiler *51 sq. ft.* No. and Description of safety valves toeach boiler *Two: Direct Spring*. Area of each valve *7.06"* Pressure to which they are adjusted *167 lbs.* Are they fittedwith easing gear *Yes*. Smallest distance between boilers or uptakes and bunkers or woodwork *About 24"*. Mean diameter of boilers *13' 6" 8"*Length *10' 0"* Material of shell plates *Steel* Thickness *1.52"* Description of riveting: circum. seams *Lap double* long. seams *D. Butt Straps*Diameter of rivet holes in long. seams *1.76"* Pitch of rivets *7.5"* *3.4"* Lap of plates or width of butt straps *1.52" x 1" thick*Per centages of strength of longitudinal joint *92.7* Working pressure of shell by rules *140 lbs.* Size of manhole in shell *16" x 12"*Size of compensating ring *28" x 24" x 1.52"* No. and Description of Furnaces in each boiler *3: Corrugated* Material *Steel* Outside diameter *3' 3"*Length of plain part *top 6.3"* Thickness of plates *bottom 1.5"* Description of longitudinal joint *welded* No. of strengthening rings *—*Working pressure of furnace by the rules *193 lbs.* Combustion chamber plates: Material *Steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *13/16"*Pitch of stays to ditto: Sides *7/8" x 7/8"* Back *7/8" x 7/8"* Top *7/8" x 7/8"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *182 lbs.*Material of stays *Iron*. Diameter at smallest part *1.76" Iron*. Area supported by each stay *56.1"* Working pressure by rules *143 lbs.* End plates in steam space:Material *Steel* Thickness *3/32"* Pitch of stays *16" x 15.5"* How are stays secured *Nuts & washers* Working pressure by rules *143 lbs.* Material of stays *Steel*Diameter at smallest part *2.5"* Area supported by each stay *252"* Working pressure by rules *143 lbs.* Material of Front plates at bottom *Steel*Thickness *1"* Material of Lower back plate *Steel* Thickness *1"* Greatest pitch of stays *12"* Working pressure of plate by rules *144 lbs.*Diameter of tubes *3.4"* Pitch of tubes *4.5" x 4.5"* Material of tube plates *Steel* Thickness: Front *1"* Back *13/16"* Mean pitch of stays *9.8"*Pitch across wide water spaces *14.4"* Working pressures by rules *189 lbs.* *284 lbs.* Rinders to Chamber tops: Material *Steel* Depth andthickness of girder at centre *7.4" x 1.8"* Length as per rule *27.5"* Distance apart *7.4"* Number and pitch of Stays in each *3: 7.4"*Working pressure by rules *165 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

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

MPB 749-0065



**DONKEY BOILER**— Description *bylined - mult<sup>l</sup> with 2 plain furnaces.*  
 Made at *Stockton* By whom made *Riley Bros.* When made *23/1/93* Where fixed *In Stockton.*  
 Working pressure *90 lbs* tested by hydraulic pressure to *180 lbs*. No. of Certificate *747*. Fire grate area *22 sq. ft.* Description of safety valves *Direct Spring*.  
 No. of safety valves *2* Area of each *5.94* Pressure to which they are adjusted *90 lbs* If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No.* Diameter of donkey boiler *8'6"* Length *8'0"* Material of shell plates *Steel* Thickness *1/32"*  
 Description of riveting long. seams *Lap Treble riveted* Diameter of rivet holes *5/16"* Whether punched or drilled *punched* Pitch of rivets *3 3/4"*  
 Lap of plating *6 1/2"* Per centage of strength of joint Rivets *48.7* Thickness of shell *plates* *5/8"* Radius of do. *pitch* No. of Stays to do. *13 x 13"*  
 Dia. of stays. *1 1/2" iron* Diameter of furnace *Top 30"* Bottom — Length of furnace *5'6"* Thickness of furnace plates *7/16" & 1/2"* Description of joint *Lap Single* Thickness of *plates* *1/2"* *9/16"* Stayed by *1 1/2" steel stays rivet 8 x 8 pitch* Working pressure of shell by rules *102 lbs*.  
 Working pressure of furnace by rules *103 lbs* Diameter of *tubes* *3"* Thickness of *tube* *5/8"* *B 9/16"* Thickness of water tubes —

**SPARE GEAR.** State the articles supplied:— *3 Crank shaft; Screw shaft; Propeller; 2 main Bearing Bolts; 2 crank pin Bolts; 2 cross head Bolts; 1 set Coupling Bolts; 1 set Feed & Bilge pump valves; 1 set piston Springs. Bolts, nuts and iron of various sizes.*

The foregoing is a correct description,

FOR BLAIR & CO., LIMITED

*St. Blain*

Manufacturers of main Engines & Boilers.

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

*The Engines and Boilers have been built under special Survey and the workmanship is good. When fitted in place, they were examined under steam and worked satisfactorily.*

*The Machinery of this vessel is now in good and efficient condition, and eligible in my opinion to have*  
 ✠ **L.M.C. 2,94** *recorded in the Society's Register Book.*

*It is submitted that*  
*this vessel is eligible for*  
**THE RECORD** ✠ **L.M.C. 1,94**

*It is submitted that the surveyor be asked to state his reason for adjusting the safety valves of the main boilers to 167 lbs. when the maximum allowed by the rules is 165 lbs.*

*R.B.*  
*26/2/94*

Certificate (if required) to be sent to **MACHINERY CERTIFICATE**  
 WRITTEN.

The amount of Entry Fee..	£ 2 : : : "	When applied for,
Special .. .. .	£ 30 : 19 : "	22.2.1894
Donkey Boiler Fee .. .. .	£ : : : "	When received,
Travelling Expenses (if any) £	: : : "	22.2.1894

*Wm R. Austin*  
 Engineer Surveyor to Lloyd's Register of British & Foreign

Committee's Minute

**TUES. 27 FEB 1894**

Assigned

*+ L.M.C. 1,94*



© 2021

Lloyd's Register  
 Foundation