

REPORT ON MACHINERY.

Port of *Bristol*Received at London Office *THURS 22 DEC 1892*No. in Survey held at *Gloucester & Bristol* Date, first Survey *28th May* Last Survey *12 Dec* 1892

Book.

(Number of Visits *15*)on the *Screw Ship No 59.*Tons $\left\{ \begin{array}{l} \text{Gross } 574.48 \\ \text{Net } 3.62 \end{array} \right.$
When built *1892*Master *J. Nurse* Built at *Gloucester* By whom built *Summers & Scott*Engines made at *Gloucester* By whom made *Summers & Scott* when made *1892*Boilers made at *Bristol* By whom made *Bewell & Co. Lim^d* when made *1892*Registered Horse Power *50* Owners *James Constant* Port belonging to *London*Horse Power as per Section 28 *143*

GINES, &c.— Description of Engines *Inverted compound* No. of Cylinders *2*

Diameter of Cylinders *14" & 28"* Length of Stroke *22"* Revolutions per minute *140* Diameter of Screw shaft *as per rule 5.4"*

Diameter of Tunnel shaft *as per rule 5.13"* Diameter of Crank shaft journals *5.25"* Diameter of Crank pin *5.2"* Size of Crank webs *7x3.5"*

Diameter of screw *7.6"* Pitch of screw *10.9"* No. of blades *3* State whether moveable *no* Total surface *19.5 sq ft*

No. of Feed pumps *One* Diameter of ditto *2.3/8"* Stroke *11"* Can one be overhauled while the other is at work *✓*

No. of Bilge pumps *One* Diameter of ditto *2.3/8"* Stroke *11"* Can one be overhauled while the other is at work *✓*

No. of Donkey Engines *One* Sizes of Pumps *2.3/4 dia x 5.5 dia* and size of Suctions connected to both Bilge and Donkey pumps

Engine Room *Two each 2.4 dia* In Holds, &c. *One 2.4 dia in fore*

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*

Are that 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 *New* Is the screw shaft tunnel watertight *no tunnel*

Is it fitted with a watertight door *✓* worked from *✓*

ILERS, &c.— (Letter for record *S*) Total Heating Surface of Boilers *7352 sq ft*

No. and Description of Boilers *One cylindrical Multitubular* Working Pressure *100* Tested by hydraulic pressure to *200 lbs*

Date of test *26.10.92* Can each boiler be worked separately *✓* Area of fire grate in each boiler *20 sq ft* No. and Description of safety valves to *200 lbs*

Each boiler *Two Spring* Area of each valve *7.07 sq in* Pressure to which they are adjusted *100 lbs* Are they fitted *yes*

With easing gear *yes* Smallest distance between boilers or uptakes and bunkers or woodwork *9"* Mean diameter of boilers *10' 0"*

Length *9' 0"* Material of shell plates *steel* Thickness *2.1/32"* Description of riveting: circum. seams *double lap*, long. seams *treble lap*

Diameter of rivet holes in long. seams *1/16"* Pitch of rivets *4 1/2"* Lap of plates *or width of butt straps* *7 3/8"*

Percentage of strength of longitudinal joint *76.8* Working pressure of shell by rules *100* Size of manhole in shell *16x12"*

Size of compensating ring *6' x 57"* No. and Description of Furnaces in each boiler *2, plain* Material *steel* Outside diameter *3' 1 1/16"*

Length of plain part *top 6.6, bottom 6.6* Thickness of plates *crown 17/32, bottom 17/32* Description of longitudinal joint *double butt strap* No. of strengthening rings *1 ring*

Working pressure of furnace by the rules *108* Combustion chamber plates: Material *steel* Thickness: Sides *9/16"* Back *9/16"* Top *9/16"* Bottom *9/16"*

Pitch of stays to ditto: Sides *8 1/2"* Back *10"* Top *10"* If stays are fitted with nuts or riveted heads *nuts* Working pressure by rules *109.35*

Material of stays *steel* Diameter at smallest part *1.29"* Area supported by each stay *100* Working pressure by rules *103* End plates in steam space:

Material *Steel* Thickness *1"* Pitch of stays *21x14 1/4"* How are stays secured *double nut* Working pressure by rules *144* Material of stays *steel*

Diameter at smallest part *3.73* Area supported by each stay *309.75* Working pressure by rules *108* Material of Front plates at bottom *steel*

Thickness *1/16"* Material of Lower back plate *steel* Thickness *1/16"* Greatest pitch of stays *10"* Working pressure of plate by rules *163*

Diameter of tubes *3 1/2"* Pitch of tubes *4 3/4"* Material of tube plates *steel* Thickness: Front *11/16"* Back *11/16"* Mean pitch of stays *9 1/2"*

Pitch across wide water spaces *13"* Working pressures by rules *114.5* Girders to Chamber tops: Material *steel* Depth and

Thickness of girder at centre *5 1/4 x 3/4 (2)* Length as per rule *24* Distance apart *10* Number and pitch of Stays in each *2-8"*

Working pressure by rules *100* Superheater or Steam chest; how connected to boiler *✓* 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— 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 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 _____
Lap of plating _____ Per centage of strength of joint _____ Rivets _____ Thickness of shell crown plates _____ Radius of do. _____ No. of Stays _____ 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 Connecting Rod, top end bolts & nuts, Two ditto bottom end bolts & nuts, Two main bearing bolts, one set of coupling bolts, one set feed and bilge pump valves, a quantity of assorted bolts & nuts & pieces of iron*

The foregoing is a correct description,

Manufacturer.

Pummar & Scott

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

The Engines and Boilers of this vessel have been constructed under Special Survey. The material and workmanship is good and satisfactory.

The Machinery of this Steamer is now in good order and safe working condition and in our opinion eligible to be notified in the Register Book. + LMC 12 92

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

The amount of Entry Fee. . . £

Special £

Donkey Boiler Fee £

Travelling Expenses (if any) £

When applied for, *16/12/92*

When received, *4th Jan 26/1/93*

WRITTEN: *14*

Per Coumber & P. Ritchie

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

Committee's Minute

TUES. 27 DEC 1892

Assigned

+ LMC 12, 92



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Foundation