

## REPORT ON MACHINERY.

Port of *Bristol*

THURS. 27 OCT 1892

Received at London Office

13

No. in Survey held at  
Reg. Book.*Gloucester*Date, first Survey *28 June 1892* Last Survey *21<sup>st</sup> Oct 1892*(Number of Visits *12*)

on the

*Screw Lug "Bee"*Tons  $\left\{ \begin{array}{l} \text{Gross} \quad 54.69 \\ \text{Net} \quad 1.24 \end{array} \right.$ Master *Curse*

Built at

*Gloucester*

By whom built

*Messrs Summers & Scott*

When built

*1892*

Engines made at

*Gloucester*

By whom made

*Messrs Summers & Scott*

when made

*1892*

Boilers made at

*Newark*

By whom made

*Abbott & Co*

when made

*1892*

Registered Horse Power

*35*

Owners

*Mr. James Constant*

Port belonging to

*London*

Nom. Horse Power as per Section 28

## ENGINES, &amp;c.—

Description of Engines

*Inverted Compound*

No. of Cylinders

*2*

Diameter of Cylinders

*14" x 20"*

Length of Stroke

*22"*

Revolutions per minute

Diameter of Screw shaft

as per rule *5.4*

Diameter of Tunnel shaft

as per rule *5.12*

Diameter of Crank shaft journals

*5.2"*

Diameter of Crank pin

*5.2"*

Size of Crank webs

*7 x 3.2"*

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"*

Stroke

*11*

Can one be overhauled while the other is at work

*Yes*

No. of Bilge pumps

*one*

Diameter of ditto

*2.3"*

Stroke

*11*

Can one be overhauled while the other is at work

*Yes*

No. of Donkey Engines

*one*

Sizes of Pumps

*2.3" dia x 5" stroke donkey acting*

No. and size of Suctions connected to both Bilge and Donkey pumps

In Engine Room *one of 2" to each pump*In Holds, &c. *one of 2" to each pump in each hold*

No. of bilge injections

*one*

sizes

*2.1"*

Connected to condenser, or to circulating pump

Is 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

*Valves & cocks*

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

*Yes*

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

*Yes*

worked from

*Yes*

## BOILERS, &amp;c.—

(Letter for record *S*)

Total Heating Surface of Boilers

No. and Description of Boilers

*one Cylindrical Multitubular*

Working Pressure

*100*

Tested by hydraulic pressure to

*200*

Date of test

*24/8/92*

Can each boiler be worked separately

*Yes*

Area of fire grate in each boiler

*30 sq. ft.*

No. and Description of safety valves to

each boiler *2 Spring Valves*

Area of each valve

*7.07*

Pressure to which they are adjusted

*100*

Are they fitted

with easing gear

*Yes*

Smallest distance between boilers or uptakes and bunkers or woodwork

*9"*

Mean diameter of boilers

Length

Material of shell plates

Thickness

Description of riveting: circum. seams

long. seams

Diameter of rivet holes in long. seams

Pitch of rivets

Lap of plates or width of butt straps

Per centages of strength of longitudinal joint

rivets

Working pressure of shell by rules

Size of manhole in shell

Size of compensating ring

No. and Description of Furnaces in each boiler

Material

Outside diameter

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

No. of strengthening rings

Working pressure of furnace by the rules

Combustion chamber plates: Material

Thickness: Sides

Back

Top

Bottom

Pitch of stays to ditto: Sides

Back

Top

If stays are fitted with nuts or riveted heads

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

End plates in steam space:

Material

Thickness

Pitch of stays

How are stays secured

Working pressure by rules

Material of stays

Diameter at smallest part

Area supported by each stay

Working pressure by rules

Material of Front plates at bottom

Thickness

Material of Lower back plate

Thickness

Greatest pitch of stays

Working pressure of plate by rules

Diameter of tubes

Pitch of tubes

Material of tube plates

Thickness: Front

Back

Mean pitch of stays

Pitch across wide water spaces

Working pressures by rules

Girders to Chamber tops: Material

Depth and

thickness of girder at centre

Length as per rule

Distance apart

Number and pitch of Stays in each

Working pressure by rules

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

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 casing 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:— 4 Boiler Tubes, 10 Condenser Tubes, 20 screwed glands for Condenser Tubes, 1/2 set of Fire Bars, 2 Top end bolts, 2 Bottom end bolts, 2 Main bearing bolts, 1 set of coupling bolts, 1 set of feed & bilge pump valves, bolts & nuts assorted, & Iron of various sizes

The foregoing is a correct description,

Manufacturer.

Summers & Scott

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

The Machinery for this vessel has been constructed under special survey, the Boiler was built at Newark, and completed at Gloucester (see Hull Report No. 8328 attached)

The materials used and the workmanship are both of good quality

I am of opinion the Machinery of this vessel may be deemed worthy to be classed ~~as~~ L.M.C. 10.92

It is submitted that this vessel is eligible for THE RECORD.

+LMC 10-92

N.A.

27-10-92

Certificate (if required) to be sent to Bristol

The amount of Entry Fee..	£	:	:	When applied for,
Special .. .. .	£	5	: 0	24/10/18.92
Donkey Boiler Fee .. .. .	£	:	:	When received,
Travelling Expenses (if any)	£	1	: 3	25/10/18.92

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

Committee's Minute

Assigned

MACHINERY CERTIFICATE  
 WRITTEN.

+LMC 10.92



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