

REPORT ON MACHINERY.

No. 5903.

No. in Survey held at
Reg. Book.

Glasgow

Date, first Survey 18th Novem 1881 Last Survey Oct 4th 1882

on the

S. S. "Fire Queen"

Tons 797
1172

Master

Built at

"Hartlepool"

When built

1864

Engines made at

Liverpool

By whom made

S. Jones & Co

when made

1872

Boilers made at

Glasgow

By whom made

Hutton & Co

when made

1882

Registered Horse Power

80

Owners

W. Hawks

Port belonging to

Liverpool

ENGINES, &c.—

Description of Engines

Diameter of Cylinders Length of Stroke No. of Rev. per minute Point of Cut off, High Pressure Low Pressure

Diameter of Screw shaft Diameter of Tunnel shaft Diameter of Crank shaft journals Diameter of Crank pin size of Crank webs

Diameter of screw Pitch of screw No. of blades state whether moveable total surface

No. of Feed pumps diameter of ditto Stroke Can one be overhauled while the other is at work

No. of Bilge pumps diameter of ditto Stroke Can one be overhauled while the other is at work

Where do they pump from

No. of Donkey Engines Size of Pumps Where do they pump from

Are all the bilge suction pipes fitted with roses Are the roses always accessible Are the sluices on Engine room bulkheads always accessible

No. of bilge injections and sizes Are they connected to condenser, or to circulating pump

How are the pumps worked

Are all connections with the sea direct on the skin of the ship Are they Valves or Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Are the discharge pipes above or below the deep water line

Are they each fitted with a discharge valve always accessible on the plating of the vessel Are the blow off cocks fitted with a spigot and brass covering plate

What pipes are carried through the bunkers How are they protected

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges

When were stern tube, propeller, screw shaft, and all connections examined in dry dock

Is the screw shaft tunnel watertight and fitted with a sluice door worked from

BOILERS, &c.—

Number of Boilers one Description Cylindrical Multitubular (Steel)

Working Pressure 80 lb Tested by hydraulic pressure to 160 lb Date of test Oct-16th 1882

Description of ~~superheating apparatus~~ or steam chest Vertical dome with neck

Can each boiler be worked separately one Can the superheater be shut off and the boiler worked separately No superheater

No. of square feet of fire grate surface in each boiler Description of safety valves

No. to each boiler area of each valve Are they fitted with easing gear

No. of safety valves to superheater area of each valve are they fitted with easing gear

Smallest distance between boilers and bunkers or woodwork

Diameter of boilers 14' 0" Length of boilers 10' 3" description of riveting of shell long. seams Quad. Riv Lap circum. seams Double Riv Lap

Thickness of shell plates 3/4" diameter of rivet holes 1 3/16" whether punched or drilled drilled pitch of rivets 5 1/2

Lap of plating 10 1/2 per centage of strength of longitudinal joint 77 1/2 working pressure of shell by rules 80 lb

Size of manholes in shell 15" x 12" size of compensating rings Flat ring 5 1/2" x 3/8"

No. of Furnaces in each boiler 3 outside diameter 8' 3" length, top 4' 0" bottom 9' 8"

Thickness of plates 3/16 description of joint Corrugated if rings are fitted in greatest length between rings

Working pressure of furnace by the rules 80 lb

Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"

Pitch of stays to ditto sides 9" x 9" back 9" x 9" top 9" x 9"

If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 95 lb

Diameter of stays at smallest part 1 1/4" working pressure of ditto by rules 91 lb

End plates in steam space, thickness 1 1/16" pitch of stays to ditto 14 1/2 x 14 1/2 how stays are secured Nuts

Working pressure by rules 80 lb diameter of stays at smallest part 2 1/8" working pressure by rules 101 lb

Front plates at bottom, thickness 9/16" Back plates, thickness 9/16" greatest pitch of stays 11 x 9 working pressure by rules 80 lb

5903 gls

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{1}{2} \times 4\frac{1}{2}$ " thickness of tube plates, front $\frac{1}{16}$ " back $\frac{5}{16}$ "
 How stayed *Sub stays* pitch of stays $13\frac{1}{2} \times 9$ " width of water spaces 6 "
 Diameter of Superheater or Steam chest $4' \times 6'$ length $6' \times 0$
 Thickness of plates $\frac{1}{2}$ " description of longitudinal joint *Lap Single* diameter of rivet holes $\frac{7}{8}$ " pitch of rivets $2\frac{1}{4}$ "
 Working pressure of shell by rules $85 lb$ Diameter of flue *---* thickness of plates *---*
 If stiffened with rings *---* distance between rings *---* Working pressure by rules *---*
 End plates of superheater, or steam chest; thickness $\frac{1}{16}$ " How stayed *Dished to 3'0 Radius & Cursets & Angle*
 Superheater or steam chest; how connected to boiler *by a neck 16" dia $\frac{5}{8}$ " thick. (How $3 \times 3 \times \frac{1}{2}$)*

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 *---*
 If fitted with easing gear *---* If steam from main boilers can enter the donkey boiler *---*
 Diameter of donkey boiler *---* length *---* description of riveting *---*
 thickness of shell plates *---* diameter of rivet holes *---* whether punched or drilled *---*
 pitch of rivets *---* lap of plating *---* per centage of strength of joint *---*
 thickness of crown plates *---* stayed by *---*
 Diameter of furnace, top *---* bottom *---* length of furnace *---*
 thickness of 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 plates *---* thickness of water tubes *---*

The foregoing is a correct description,

Manufacturer.

Wm A. Son & Co. Hobart

General Remarks (State quality of workmanship, opinions as to class, &c. *A new Main Boiler fitted*)

on board. Constructed under special survey and to approved drawing attached. The material and workmanship are of good description.

The following parts of the Machinery have been examined and found in good order. Viz. Cylinders. Pistons. Slides. Air & Circulating pumps with their rods and connections. Crank shaft examined and found in good order. excepting the after main bearing which is apparently out of line, being too low. Recommended the shaft to be lifted, brasses lined up, and shaft refitted in place. But owing to the Classification of the hull of the vessel having been abandoned no further action has been taken. the survey on Machinery now discontinued subject to the necessary repairs being done to the Hull.

The amount of Entry Fee £ *---* received by me, *---*

Special Survey of New Boiler £ *3:3:0* 22/11/82
 Certificate (if required) .. £ *5:5:0* 24/11/82

To be sent as per margin.
 (Travelling Expenses, if any, £ *---*)

Committee's Minute

Tuesday, 5th December, 1882.

+ H. B. 003

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

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