

REPORT ON MACHINERY.

Port of *Glasgow*

Received at London Office 11th JUL 1895

No. in Survey held at *Glasgow* Date, first Survey *31st Aug^r 1892* Last Survey *10th July 1895*
 Reg. Book. *62.* on the *S. S. Saint Jagoans* (Number of Visits *52*)
 Master *Mackay* Built at *Newcastle* By whom built *Thesinger, Davis & Co* When built *1878*
 Engines made at *Newcastle* By whom made *J. Clark & Co* when made *1878*
 Boilers made at *Glasgow* By whom made *Nutson & Son* when made *1895*
 Registered Horse Power *157* Owners *Donald & Taylor* Port belonging to *Cardiff*
 Nom. Horse Power as per Section 28

ENGINES, &c.— Description of Engines *Compound* No. of Cylinders *Two*
 Diameter of Cylinders *26" & 56"* Length of Stroke *36"* Revolutions per minute *as per rule 9.4*
 Diameter of Tunnel shaft *as per rule 8.92* Diameter of Crank shaft journals *10"* Diameter of Crank pin *10"* Size of Crank webs *built*
 Diameter of screw *as fitted 9"* Pitch of screw *as fitted 10"* No. of blades *as fitted 10"* State whether moveable *as fitted 10"* Total surface *as fitted 10"*
 No. of Feed pumps *as fitted 10"* Diameter of ditto *as fitted 10"* Stroke *as fitted 10"* Can one be overhauled while the other is at work *as fitted 10"*
 No. of Bilge pumps *as fitted 10"* Diameter of ditto *as fitted 10"* Stroke *as fitted 10"* Can one be overhauled while the other is at work *as fitted 10"*
 No. of Donkey Engines *as fitted 10"* Sizes of Pumps *as fitted 10"* No. and size of Suctions connected to both Bilge and Donkey pumps *as fitted 10"*
 In Engine Room *as fitted 10"* In Holds, &c. *as fitted 10"*
 No. of bilge injections *as fitted 10"* sizes *as fitted 10"* Connected to condenser, or to circulating pump *as fitted 10"* Is a separate donkey suction fitted in Engine room & size *as fitted 10"*
 Are all the bilge suction pipes fitted with roses *as fitted 10"* Are the roses in Engine room always accessible *as fitted 10"* Are the sluices on Engine room bulkheads always accessible *as fitted 10"*
 Are all connections with the sea direct on the skin of the ship *as fitted 10"* Are they Valves or Cocks *as fitted 10"*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates *as fitted 10"* Are the discharge pipes above or below the deep water line *as fitted 10"*
 Are they each fitted with a discharge valve always accessible on the plating of the vessel *as fitted 10"* Are the blow off cocks fitted with a spigot and brass covering plate *as fitted 10"*
 What pipes are carried through the bunkers *as fitted 10"* How are they protected *as fitted 10"*
 Are all pipes, cocks, valves, and pumps in connection with the machinery and all boiler mountings accessible at all times *as fitted 10"*
 Are the bilge suction pipes, cocks, and valves arranged so as to prevent any communication between the sea and the bilges *as fitted 10"*
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock *as fitted 10"* Is the screw shaft tunnel watertight *as fitted 10"*
 Is it fitted with a watertight door *as fitted 10"* worked from *as fitted 10"*

BOILERS, &c.— (Letter for record *(a.)*) Total Heating Surface of Boilers *2191 sq. ft.*
 No. and Description of Boilers *Two S. E. Multitubular* Working Pressure *90 lbs* Tested by hydraulic pressure to *180 lbs*
 Date of test *26.4.93* Can each boiler be worked separately *Yes* Area of fire grate in each boiler *36"* No. and Description of safety valves to *as fitted 10"*
 each boiler *Two direct spring* Area of each valve *12.5"* Pressure to which they are adjusted *90 lbs* Are they fitted *as fitted 10"*
 with easing gear *Yes* Smallest distance between boilers or uptakes and bunkers or *woodwork 12"* Mean diameter of boilers *11'-0"*
 Length *10'-0"* Material of shell plates *steel* Thickness *7/8"* Description of riveting: circum. seams *d. r. lap* long. seams *d. butt str.*
 Diameter of rivet holes in long. seams *7/8"* Pitch of rivets *3 1/2"* Lap of plates & width of butt straps *4 7/8" & 9 1/4"*
 Per centages of strength of longitudinal joint *as fitted 10"* Working pressure of shell by rules *90 lbs* Size of manhole in shell *12" x 16"*
 Size of compensating ring *7' x 3 1/4"* No. and Description of Furnaces in each boiler *2. plain* Material *steel* Outside diameter *39"*
 Length of plain part *57'-0"* Thickness of plates *as fitted 10"* Description of longitudinal joint *welded* No. of strengthening rings *1*
 Working pressure of furnace by the rules *90 lbs* Combustion chamber plates: Material *steel* Thickness: Sides *1/2"* Back *1/2"* Top *1/2"* Bottom *3/4"*
 Pitch of stays to ditto: Sides *8 1/2" x 9"* Back *9" x 9"* Top *9" x 8 1/2"* If stays are fitted with nuts or riveted heads *Nuts* Working pressure by rules *95 lbs*
 Material of stays *iron* Diameter at smallest part *1 3/8"* Area supported by each stay *576 sq. in.* Working pressure by rules *95 lbs* End plates in steam space: *as fitted 10"*
 Material *steel* Thickness *3/4"* Pitch of stays *17"* How are stays secured *d. nuts* Working pressure by rules *92 lbs* Material of stays *iron*
 Diameter at smallest part *2 1/2"* Area supported by each stay *289 sq. in.* Working pressure by rules *100 lbs* Material of Front plates at bottom *steel*
 Thickness *5/8"* Material of Lower back plate *steel* Thickness *7/8"* Greatest pitch of stays *10"* Working pressure of plate by rules *150 lbs*
 Diameter of tubes *3 1/4"* Pitch of tubes *4 1/2"* Material of tube plates *steel* Thickness: Front *3/4"* Back *3/4"* Mean pitch of stays *11 1/4"*
 Pitch across wide water spaces *14"* Working pressures by rules *103 lbs* Girders to Chamber tops: Material *iron* Depth and *as fitted 10"*
 thickness of girder at centre *6" x 7 1/2"* Length as per rule *27"* Distance apart *9"* Number and pitch of Stays in each *2. 8 1/2"*
 Working pressure by rules *102 lbs* Superheater or Steam chest; how connected to boiler *as fitted 10"* Can the superheater be shut off and the boiler worked *as fitted 10"*
 separately *as fitted 10"* Diameter *as fitted 10"* Length *as fitted 10"* Thickness of shell plates *as fitted 10"* Material *as fitted 10"* Description of longitudinal joint *as fitted 10"* Diam. of rivet *as fitted 10"*
 holes *as fitted 10"* Pitch of rivets *as fitted 10"* Working pressure of shell by rules *as fitted 10"* Diameter of flue *as fitted 10"* Material of flue plates *as fitted 10"* Thickness *as fitted 10"*
 If stiffened with rings *as fitted 10"* Distance between rings *as fitted 10"* Working pressure by rules *as fitted 10"* End plates: Thickness *as fitted 10"* How stayed *as fitted 10"*
 Working pressure of end plates *as fitted 10"* Area of safety valves to superheater *as fitted 10"* Are they fitted with easing gear *as fitted 10"*

13830 yls.

old

DONKEY BOILER—

Description

Vertical

Good for 55 lb w.p.

Made at

By whom made

When made 1886

Where fixed

Stockholm

Working pressure 55 lb

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

blowing at 50 lb

If fitted with easing 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

Plates

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:—

The foregoing is a correct description,

Hutson of the Power

Manufacturer.

General Remarks

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

The old boilers have been taken

out and new ones fitted; these boilers have been built under special survey and are of good workmanship and material, they have been well fitted on board and safety valves adjusted to 90 lb. w.p.

The donkey boiler has been overhauled & examined doubling plates fitted round budge doors and patches at landings of fire box. Safety valves blowing at 50 lb no more required. —

The vessel has been placed in dry dock when the tail shaft was drawn in for measurement & examination and found in good order, all sea cocks overhauled & put in order. —

A new liner has been fitted in the high press. cylinder of the diameter given on other side. All parts opened up and there were examined: Cylinders, pistons slides rods. Air feed bilge and circulating pumps, also bilge pipes and suction. Crank & thrust shaft examined & shafting partly renewed to make up for increased working pressure. —

This vessel's machinery is now in my opinion in good working order and eligible to the notation of: *L.M.C. 7.95. & T.N.B. 95* with alteration of size of H.P. Cylinder.

Appended Boiler print & report on shafting.

Certificate (if required) to be sent to

The amount of Entry Fee.. £

£

When applied for,

Special £

£

11/4/1895

Donkey Boiler Fee £

£

When received,

Travelling Expenses (if any) £

£

12/4/1895

J. M. Anderson

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

Committee's Minute

FRI 26 JUL 1895

Assigned

+ L.M.C. 7.95 + T.N.B. 95

TUES. 15 OCT 1895

Glasgow

Lloyd's Register Foundation