

REPORT ON MACHINERY.

No. 597
 Survey held at Bristol & Cardiff Date, first Survey 3rd July Last Survey 28th March 1883
 on the Iron Screw Tug "Galloper" Tons Net 1.5
 Master J. Ryan Built at Bristol When built 1883
 Engines made at Bristol By whom made G. K. Stephenson & Co when made 1883
 Boilers made at Bristol By whom made G. K. Stephenson & Co when made 1883
 Registered Horse Power 50 Owners Young & Christie Port belonging to Cardiff

(Received in London Office Rec'd 6th April 1883)
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 Gross 67.01
 Tons Net 1.5

ENGINES, &c.
 Description of Engines Compound Inverted Surface Condensing
 Diameter of Cylinders 15" x 28" Length of Stroke 20" No. of Rev. per minute 100 Point of Cut off, High Pressure 1/2 Low Pressure 1/2
 Diameter of Screw shaft 5" Diameter of Tunnel shaft 5" Diameter of Crank shaft journals 5 1/2" Diameter of Crank pin 5 1/2" size of Crank webs 4 x 7 1/8"
 Diameter of screw 7" 10" Pitch of screw 11" 0" No. of blades 3 state whether moveable No total surface 17 1/2"
 No. of Feed pumps 1 diameter of ditto 2 1/4" Stroke 10" Can one be overhauled while the other is at work —
 No. of Bilge pumps 1 diameter of ditto 2 1/4" Stroke 10" Can one be overhauled while the other is at work —
 Where do they pump from Engine Room
 No. of Donkey Engines 1 Size of Pumps 5" x 6" Where do they pump from Bilge, from sea to boiler, through condenser and on deck.
 Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes
 No. of bilge injections One and sizes 2 1/4" Are they connected to condenser, or to circulating pump Circulating pump.
 How are the pumps worked by lever
 Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks One valve and 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 —
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock 2nd November 1882
 Is the screw shaft tunnel watertight None and fitted with a sluice door — worked from —

BOILERS, &c.
 Number of Boilers One Description Circular tubular
 Working Pressure 85 lb Tested by hydraulic pressure to 170 lb Date of test 16th October 1882
 Description of superheating apparatus or steam chest Vertical, circular, connected to shell by a neck.
 Can each boiler be worked separately — Can the superheater be shut off and the boiler worked separately —
 No. of square feet of fire grate surface in each boiler 32 1/2" Description of safety valves Spring valves
 No. to each boiler Two area of each valve 8.3" Are they fitted with easing gear Yes
 No. of safety valves to superheater — area of each valve — are they fitted with easing gear —
 Smallest distance between boilers and bunkers or woodwork 2' 9"
 Diameter of boiler 9' 3" Length of boiler 9' 3/4" description of riveting of shell long. seams treble riv lap joint circum. seams double riveted
 Thickness of shell plates 3/4" diameter of rivet holes 1" whether punched or drilled drilled pitch of rivets 4 1/2"
 Lap of plating 5 1/8" per centage of strength of longitudinal joint 70% working pressure of shell by rules 85 lb.
 Size of manholes in shell 11" x 15" size of compensating rings 5 1/2" x 3/4"
 No. of Furnaces in each boiler 2 outside diameter 3" length, top 6' 4" bottom 8' 11"
 Thickness of plates 1/2" description of joint double riv. butt joints rings are fitted Yes greatest length between rings 6' 4"
 Working pressure of furnace by the rules 95 lb
 Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"
 Pitch of stays to ditto 9 1/4" x 9 1/4" sides back 9 1/4" x 8 1/2" top 8 1/4"
 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 90 lb.
 Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 103 lb.
 End plates in steam space, thickness 3/4" pitch of stays to ditto 15" x 15" how stays are secured double nuts & washers
 Working pressure by rules 103 lb diameter of stays at smallest part 2 1/8" working pressure by rules 97 lb.
 Front plates at bottom, thickness 3/4" Back plates, thickness 3/4" greatest pitch of stays 9 1/4" working pressure by rules 140 lb.

Report recd 28/3/83. sent to Gen

Diameter of tubes $3\frac{1}{4}$ " pitch of tubes $4\frac{5}{16}$ & $4\frac{5}{16}$ " thickness of tube plates, front $3\frac{1}{4}$ " back $3\frac{1}{4}$ "
 How stayed stay tubes pitch of stays $12\frac{1}{16}$ & $12\frac{1}{16}$ " width of water spaces 0
 Diameter of Superheater or Steam chest $2'-10"$ length $2'-10"$
 Thickness of plates $1\frac{1}{2}$ " description of longitudinal joint double r. l. j. diameter of rivet holes $3\frac{1}{4}$ " pitch of rivets $2\frac{3}{4}$ "
 Working pressure of shell by rules $158\frac{1}{2}$ 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 $5\frac{1}{8}$ How stayed Dished, radius $2'-4"$
 Superheater or steam chest; how connected to boiler by neck, $9\frac{1}{16}$ " thick

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,
C. H. Stothert Manufacturer.

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

The Machinery has been constructed and fitted on board under special survey and in accordance with the Rules of the Society. The safety valves are blowing off at $85\frac{1}{2}$ lbs per sq. inch. The material and workmanship are good and the vessel is in my opinion entitled to the Notification H.L.M.C. 3. 83 in the Registerbook.

*Submitted this 10th day of April 1883
 M. E. S. 83
 7. 24. 83*

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

The amount of Entry Fee .. £ 2 : - - received by me,
 Special .. £ 8 : - -
 Certificate (if required) .. £ - : - - 29/3 1883
 To be sent as per margin. £1. 5/4/83
 (Travelling Expenses, if any, £ 2. 7. 6)

Committee's Minute

Friday, 20th April 1883.

