

REPORT ON MACHINERY.

15807

No. 690

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No. in Reg. Book. Survey held at Newcastle & Sotonwood Date, first Survey 7th Sept Last Survey 3rd June 1882

on the SS "Bonnie" Tons 349

Master S. Ginnant Built at Sotonwood When built 1881

Engines made at Newcastle By whom made J. Clark & Co when made 1882

Boilers made at do By whom made do when made 1882

Registered Horse Power 100 Owners Jasper Young Port belonging to London

ENGINES, &c.—

Description of Engines Inverted Compound Surface Condensing
 Diameter of Cylinders 25 1/2 x 48 Length of Stroke 33 No. of Rev. per minute 97 Point of Cut off, High Pressure half Low Pressure half
 Diameter of Screw shaft 8 3/4 Diameter of Tunnel shaft 8 1/4 Diameter of Crank shaft journals 8 3/4 Diameter of Crank pin 5 3/4 size of Crank webs 12 x 5
 Diameter of screw 11-0 Pitch of screw 15-0 No. of blades 4 state whether moveable yes total surface 33
 No. of Feed pumps 2 diameter of ditto 3 1/2 Stroke 16 1/2 Can one be overhauled while the other is at work yes
 No. of Bilge pumps 2 diameter of ditto 3 1/2 Stroke 16 1/2 Can one be overhauled while the other is at work yes
 Where do they pump from Fore hold, 1. Fore hold, 3. Engine space, 3. aft hold, 3. Sea
 No. of Donkey Engines one Size of Pumps 4 x 10 Where do they pump from Fore holds. Engine space
off holds. Sea.

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 1 and sizes 4" Are they connected to condenser, or to circulating pump ci
 How are the pumps worked Lever over condenser
 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 — 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 new

BOILERS, &c.—

Number of Boilers one Description Steel, cylindrical return tubes
 Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 14th December 1881
 Description of superheating apparatus or steam chest Cylinder across boiler contracted 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 57 Sq ft Description of safety valves Spring
 No. to each boiler 2 area of each valve 12 1/2 sq" 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 16 inches
 Diameter of boilers 14-0 Length of boilers 10-6 description of riveting of shell long. seams Both double strap circum. seams Double Lap
 Thickness of shell plates 3/4" diameter of rivet holes 1" whether punched or drilled — pitch of rivets 4"
 Lap of plating 10" per centage of strength of longitudinal joint 75 working pressure of shell by rules 84 lbs
 Size of manholes in shell 15 x 12 size of compensating rings 6 x 3
 No. of Furnaces in each boiler 3 outside diameter 21 1/2 length, top 7-6 bottom 9-9
 Thickness of plates 1/2" description of joint Double butt strap if rings are fitted Half greatest length between rings 6-9
 Working pressure of furnace by the rules 80 lbs
 Combustion chamber plating, thickness, sides 1/2" back 9/16" top 9/16"
 Pitch of stays to ditto — sides 9 x 9 back 9 3/4 x 9 1/4 top curved
 If stays are fitted with nuts or riveted heads rivets working pressure of plating by rules 79 lbs
 Diameter of stays at smallest part 1 3/8 working pressure of ditto by rules 90
 End plates in steam space, thickness 1/16" pitch of stays to ditto 15 x 15 how stays are secured by nuts & large washers
 Working pressure by rules 80 lbs diameter of stays at smallest part 2" working pressure by rules 80 lbs
 Front plates at bottom, thickness 1/16" Back plates, thickness 1/16" greatest pitch of stays 14 1/2 working pressure by rules 80 lbs

Boiler & machinery & shafts of steel work not furnished

Diameter of tubes $3\frac{1}{2}$ " pitch of tubes 5×5 thickness of tube plates, front $\frac{25}{32}$ back $\frac{3}{4}$
 How stayed *Tubes* pitch of stays 15×15 width of water spaces 6 in
 Diameter of ~~Superheater~~ Steam chest $4-0$ length $6-0$
 Thickness of plates $\frac{1}{2}$ " description of longitudinal joint *Lap* diameter of rivet holes $\frac{3}{4}$ " pitch of rivets $2\frac{1}{2}$
 Working pressure of shell by rules 113 lbs 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 $\frac{3}{4}$ " How stayed *4 Stays* $2\frac{1}{2}$ " diameter. pitch 16×16
 Superheater or steam chest; how connected to boiler *centrally neck*

DONKEY BOILER— Description *Cochran's Patent.*
 Made at *Gateshead* By whom made *C. C. & Queney* when made *Tested 7th November 1881*
 Where fixed *on deck* working pressure 60 lbs Tested by hydraulic pressure to 120 No. of Certificate 724
 Fire grate area 11 Sq ft Description of safety valves *Spring* No. of safety valves *one* area of each 7 sq in
 If fitted with easing gear *yes* If steam from main boilers can enter the donkey boiler *no*
 Diameter of donkey boiler $4-3$ length $9-6$ description of riveting *Double Lap. Long seam*
 thickness of shell plates $\frac{3}{8}$ " diameter of rivet holes $\frac{3}{4}$ " whether punched or drilled *punched*
 pitch of rivets 3 lap of plating $4\frac{1}{4}$ per centage of strength of joint 75
 thickness of crown plates $\frac{1}{2}$ stayed by *3 Sunset Stays & disked to 8 1/2" radius*
~~Radius~~ of furnace, top 21 inches bottom diameter $3-8$ length of furnace $-$
 thickness of plates $\frac{3}{8}$ " description of joint *Single Lap*
 thickness of furnace crown plates $\frac{7}{16}$ " stayed by $-$
 Working pressure of shell by rules 85 lbs working pressure of furnace by rules 63 lbs
 diameter of uptake $1\frac{1}{2} \times 11$ thickness of plates $-$ thickness of water tubes $-$

The foregoing is a correct description,

W. C. C. & Q. Manufacturer.

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

The machinery of this vessel has been specially surveyed during construction, the materials and workmanship are sound and satisfactory and eligible in my opinion to have the attestation of Lloyd's M. C. 2-82 in the Society's Register Books.

The engine & boilers in accordance with the Rules submitted with the notification that the notification & L. C. & Q. D.P.

The amount of Entry Fee £ 2 : - : - received by me,

Special *W.C.C.* .. £ 15 : - : -

* Certificate (if required) *free* - : - : - 8th Feb 1882
 To be sent as per margin.

(Travelling Expenses, if any, £ - : - : -)

Committee's Minute

Friday, February 10th 1882.

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

North Shields