

# REPORT ON MACHINERY.

With 28727

No. 560 (Received in London Office 21/12/80)  
 No. in Survey held at Sunderland Date, first Survey 30<sup>th</sup> March 80 Last Survey Dec<sup>r</sup> 20<sup>th</sup> 1880  
 Reg. Book. \_\_\_\_\_  
 on the Screw Steamer "Canonbury" Tons 1676  
 Master Knutson Built at Sunderland When built Dec<sup>r</sup> 1880  
 Engines made at Sunderland By whom made G. Clark when made Dec<sup>r</sup> 80  
 Boilers made at D<sup>o</sup> By whom made D<sup>o</sup> when made D<sup>o</sup>  
 Registered Horse Power 150 Owners Watts Ward & Co Port belonging to Sunderland

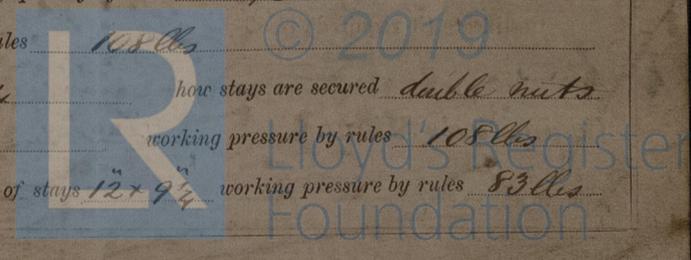
**ENGINES, &c.—**

Description of Engines Inverted Compound Surface Condensing  
 Diameter of Cylinders 32 x 60 Length of Stroke 39 No. of Rev. per minute 60 Point of Cut off, High Pressure 1/2 stroke Low Pressure 2/3 stroke  
 Diameter of Screw shaft 10 1/2 Diameter of Tunnel shaft 10 Diameter of Crank shaft journals 10 1/2 Diameter of Crank pin 11 1/2 size of Crank webs 13 1/2 x 6 1/2  
 Diameter of screw 14 1/2 Pitch of screw 16 0 No. of blades 4 state whether moveable yes total surface 50 sq ft  
 No. of Feed pumps Two diameter of ditto 4 1/4 Stroke 19 1/2 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two diameter of ditto 4 1/4 Stroke 19 1/2 Can one be overhauled while the other is at work yes  
 Where do they pump from The bilges of the Engine room, aft well, aft hold, & fore well.  
 No. of Donkey Engines Two Size of Pumps 8 dia x 10 stroke Where do they pump from The large one from Ballast tanks  
Bilges of Engine room, aft fore wells & aft hold in sea. Small one from same places, & from hold well by a hose  
 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 4 dia Are they connected to condenser, or to circulating pump to circulating pump  
 How are the pumps worked by levers attached to the piston rod crosshead of after engine.  
 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  
 How are the pipes carried through the bunkers How How are they protected —  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times except on tanks & hold  
 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  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Top. E. T. Platform

**BOILERS, &c.—**

Number of Boilers Two Description Cylindrical & Multitubular  
 Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test 10.7.80  
 Description of superheating apparatus or steam chest Horizontal dome  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately no superheater  
 Area of square feet of fire grate surface in each boiler 39 Description of safety valves Spring valves by Mr G. Clark  
 Number of safety valves to each boiler Two area of each valve 12 1/2 Are they fitted with easing gear yes  
 Area of safety valves to superheater \_\_\_\_\_ area of each valve \_\_\_\_\_ are they fitted with easing gear \_\_\_\_\_  
 Smallest distance between boilers and bunkers or woodwork 16  
 Diameter of boilers 12 3/4 Length of boilers 10 6 description of riveting of shell long. seams Table riv'd lap circum. seams double riv'd lap  
 Thickness of shell plates 7/8 diameter of rivet holes 1 3/16 whether punched or drilled drilled pitch of rivets 4 1/16  
 Percentage of plating 7 3/4 per centage of strength of longitudinal joint 72.9 working pressure of shell by rules 82 lbs  
 Diameter of manholes in shell 16 x 12 size of compensating rings 7 1/2 x 7 1/2  
 Number of Furnaces in each boiler 2 outside diameter 3 1/2 length, top 4 6 bottom 4 6  
 Thickness of plates 9/16 description of joint double butt & single riv'd rings are fitted none greatest length between rings \_\_\_\_\_  
 Working pressure of furnace by the rules 88 lbs  
 Combustion chamber plating, thickness, sides 1/2 back 1/2 top 1/2  
 Thickness of stays to ditto sides 9 x 9 back 9 1/2 x 9 top Circular 2 1/2 dia & 1 1/2 dia set 15 1/2 pitch  
 Are stays fitted with nuts or riveted heads nuts working pressure of plating by rules 90 lbs  
 Diameter of stays at smallest part 1 3/8 working pressure of ditto by rules 108 lbs  
 Thickness of end plates in steam space, thickness 3/4 pitch of stays to ditto 15 1/2 x 14 how stays are secured double nuts  
 Working pressure by rules 84 lbs diameter of stays at smallest part 2 1/4 working pressure by rules 108 lbs  
 Thickness of front plates at bottom, thickness 5/8 Back plates, thickness 5/8 greatest pitch of stays 12 x 9 1/4 working pressure by rules 83 lbs

IRON 497-0295



Diameter of tubes  $3\frac{3}{4}$  pitch of tubes  $5 \times 5$  thickness of tube plates, front  $\frac{3}{16}$  back  $\frac{7}{8}$   
 How stayed *stay tubes* pitch of stays  $10 \times 10$  width of water spaces  $1\frac{1}{4}$  28727 Iron  
 Diameter of ~~Superheater~~ Steam chest  $3 \cdot 6$  length  $10 \cdot 6$   
 Thickness of plates  $\frac{3}{8}$  description of longitudinal joint *double rivet lap* diameter of rivet holes  $\frac{3}{16}$  pitch of rivets  $2\frac{1}{2}$   
 Working pressure of shell by rules  $96 \text{ lbs}$  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  $\frac{3}{8}$  How stayed *spherical. no stays*  
 Superheater or steam chest; how connected to boiler *by an oval neck piece  $16 \times 13 \times 3\frac{1}{4}$*

**DONKEY BOILER**— Description *Vertical Water tubes in furnace*  
 Made at *Stockton* By whom made *Wiley Bros.* when made *1880* Tested *4-11-80*  
 Where fixed *M. Stokhold* working pressure *Certified 80 lbs* Tested by hydraulic pressure to *160 lbs* No. of Certificate *438*  
 Fire grate area *21 sq. ft.* Description of safety valves *Spring Valves* No. of safety valves *Two* area of each *6.2 sq. ins*  
 If fitted with casing gear *Yes* If steam from main boilers can enter the donkey boiler *No*  
 Diameter of donkey boiler  $6 \cdot 0$  length  $13 \cdot 6$  description of riveting *Long & seams lap double*  
 thickness of shell plates  $\frac{11}{32}$  diameter of rivet holes  $\frac{13}{16}$  whether punched or drilled *Punched*  
 pitch of rivets  $2\frac{3}{4}$  lap of plating  $4\frac{1}{2}$  per centage of strength of joint *70*  
 thickness of crown plates  $\frac{11}{32}$  stayed by *Six stays  $1\frac{1}{2}$  dia*  
 Diameter of furnace, top  $4 \cdot 11$  bottom  $5 \cdot 5$  length of furnace  $5 \cdot 2$   
 thickness of plates  $\frac{5}{8}$  description of joint *Lap Single riveted*  
 thickness of furnace crown plates  $\frac{11}{32}$  stayed by *Six stays  $1\frac{1}{2}$  dia*  
 Working pressure of shell by rules  $85 \text{ lbs}$  working pressure of furnace by rules  $80 \text{ lbs}$   
 diameter of uptake  $13$  thickness of plates  $\frac{1}{16}$  thickness of water tubes  $\frac{3}{8}$

The foregoing is a correct description,  
~~W. Stokhold~~ Manufacturer. *Except of the Donkey Boiler.*

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

The Engines and Boilers of this vessel have been constructed under special survey. The Material and Workmanship are good and efficient.  
 The Machinery has been tried under steam and found satisfactory, and in our opinion is in good order and safe working condition, and eligible for the distinguishing mark **LLOYD'S MC** in the Register Book.

*It is submitted that this vessel is eligible to have the notification & Lloyds MC recorded in the Register Book M 21/12/80*

The amount of Entry Fee £ 3 : - : - received by me,  
 Special .. £ 22 : 10 : 0  
 Certificate (if required) \* £ " : " : *15 Dec. 1880*  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ — )

*W. H. W.*  
 William Allison & J. M. Hegor  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute *Tuesday, December, 28th 1880.*

*Lloyd's Register*

Lloyd's Register Foundation