

# REPORT ON MACHINERY.

No. 6092 (Received at London Office Rec'd 3rd May, 1883)  
 No. in Survey held at Glasgow Date, first Survey Jan 21<sup>st</sup> 1882 Last Survey April 28<sup>th</sup> 1883  
 Reg. Book. Glasgow " Kent (Number of Visits) 2414  
 on the Screw Steamer " Kent Tons 1620  
 Master Babbot Built at Glasgow When built 1882-3  
 Engines made at Glasgow By whom made London & Glasgow Co<sup>o</sup> when made 1882-3  
 Boilers made at do By whom made do when made 1882-3  
 Registered Horse Power 300 Owners Mess<sup>rs</sup> Money, Wigram & Co<sup>o</sup> Port belonging to Glasgow.

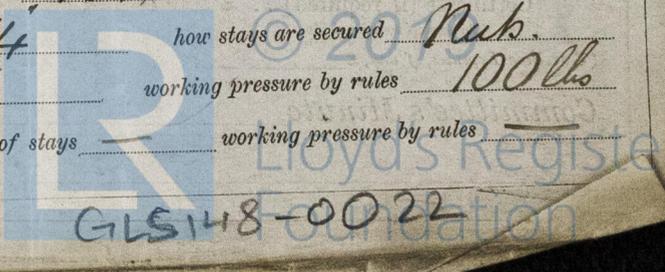
**ENGINES, &c.—**

Description of Engines Inverted Direct Acting Compound Surface Condensing  
 Diameter of Cylinders 38 & 68 Length of Stroke 48 No. of Rev. per minute 65 Point of Cut off, High Pressure 5/8 Low Pressure 5/8  
 Diameter of Screw shaft 12 3/4 Diameter of Tunnel shaft 11 3/4 Diameter of Crank shaft journals 12 3/4 Diameter of Crank pin 12 3/4 size of Crank webs 14 3/4 x 9  
 Diameter of screw 16-6 Pitch of screw 18-6 No. of blades Four state whether moveable yes total surface 76 sq ft  
 No. of Feed pumps Two diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work yes  
 No. of Bilge pumps Two diameter of ditto 4 Stroke 27 Can one be overhauled while the other is at work yes  
 Where do they pump from Fore & Aft Holds & Engine Room  
 No. of Donkey Engines One & hand Size of Pumps 8 1/2 hp 8 1/2 hp Where do they pump from Fore & Aft Holds & Engine Room  
also to swell & 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 One and sizes 5 Are they connected to condenser, or to circulating pump Circulating  
 How are the pumps worked By levers from crosshead of L. P. engine  
 Are all connections with the sea direct on the skin of the ship yes Are they Valves or Cocks Both  
 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 Below  
 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 Before launching  
 Is the screw shaft tunnel watertight yes and fitted with a sluice door yes worked from Engine Room at deck.

**BOILERS, &c.—**

Number of Boilers Two Description Cylindrical Multitubular All steel  
 Working Pressure 80 lbs Tested by hydraulic pressure to 160 lbs Date of test February 27<sup>th</sup> 1883  
 Description of ~~superheating apparatus~~ steam chest Cylindrical Horizontal  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately —  
 No. of square feet of fire grate surface in each boiler 92 sq ft Description of safety valves Direct acting springs  
 No. to each boiler Two area of each valve 23.76 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 12 "  
 Diameter of boilers 12-9 Length of boilers 16-6 description of riveting of shell long. seams Bull. double riveted circum. seams Lap Double  
 Thickness of shell plates 3/4 diameter of rivet holes 1/16 whether punched or drilled Drill pitch of rivets 4 3/8  
 Lap of plating 5 1/2 per centage of strength of longitudinal joint 75 working pressure of shell by rules 90  
 Size of manholes in shell 16 x 12 size of compensating rings Angle iron 14 x 3 1/2  
 No. of Furnaces in each boiler Two outside diameter 4-1 length, top 6-3 bottom 16-6  
 Thickness of plates 17/32 description of joint Bull. if rings are fitted yes greatest length between rings 6-3  
 Working pressure of furnace by the rules 82 lbs  
 Combustion chamber plating, thickness, sides 15/32 back — top 1/2  
 Pitch of stays to ditto, sides 8 1/2 back — top 8 1/2 x 7 7/8  
 If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 93 lbs  
 Diameter of stays at smallest part 1 3/8 screw working pressure of ditto by rules 100 lbs  
 End plates in steam space, thickness 3/4 pitch of stays to ditto 15 x 14 how stays are secured Nuts  
 Working pressure by rules 90 lbs diameter of stays at smallest part 2 1/4 working pressure by rules 100 lbs  
 Front plates at bottom, thickness 5/8 Back plates, thickness — greatest pitch of stays — working pressure by rules —

Form No. 8-21/521 1000. (State if Port is also sent on the Hull of the Ship)



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Diameter of tubes  $3\frac{1}{2}$ " pitch of tubes  $4\frac{3}{4}$ " thickness of tube plates, front  $\frac{11}{16}$ " back  $\frac{5}{8}$ "  
 How stayed *Stay tubes* pitch of stays  $14\frac{1}{2} \times 9\frac{1}{2}$ " width of water spaces 5"  
 Diameter of Superheater or Steam chest 3-6" length 16-6"  
 Thickness of plates  $\frac{1}{2}$ " description of longitudinal joint *Lap double* diameter of rivet holes  $\frac{13}{16}$ " pitch of rivets  $2\frac{5}{8}$ "  
 Working pressure of shell by rules 120 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  $\frac{9}{16}$ " How stayed *Ends dished*  
 Superheater or steam chest; how connected to boiler *Iron neck 16" dia  $\frac{3}{4}$ " thick.*

**DONKEY BOILER** — Description *Cylindrical - Multitubular*  
 Made at *Glasgow* By whom made *London & Glasgow 6<sup>o</sup> L<sup>d</sup>* when made 1883. Tested March 6<sup>th</sup>  
 Where fixed *On deck* working pressure 60 lbs Tested by hydraulic pressure to 120 lbs No. of Certificate 10214  
 Fire grate area  $16\frac{1}{2}$  sq ft Description of safety valves *Dried springs* No. of safety valves *One* area of each  $9.62$  sq in  
 If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*  
 Diameter of donkey boiler 7-6" length 7-2" description of riveting *Double - Lap*  
 thickness of shell plates  $\frac{1}{2}$ " iron diameter of rivet holes  $\frac{15}{16}$ " whether punched or drilled *Punched*  
 pitch of rivets  $3\frac{1}{8}$ " lap of plating  $4\frac{1}{2}$ " per centage of strength of joint 70  
 thickness of *comb cham* plates  $\frac{7}{16}$ " steel stayed by  $1\frac{1}{4}$ " stays  $8\frac{7}{8}$ " pitch  
 Diameter of furnace, top 3-7" bottom — length of furnace 4-9"  
 thickness of plates  $\frac{7}{16}$ " steel description of joint *Butt*  
 thickness of *End plates* plates  $\frac{5}{8}$ " steel stayed by 2" stays 16" pitch  
 Working pressure of shell by rules 60 lbs working pressure of furnace by rules 80 lbs  
 diameter of *tubes*  $3\frac{1}{2}$ " thickness of *tubes* plates  $\frac{5}{8}$ " thickness of water tubes  $4\frac{3}{4}$ "

The foregoing is a correct description,  
*Wm. G. & Co. Engineers*  
*10, Shipbuilders' Yard, Glasgow* Manufacturer.

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

*These Engines + Boilers have been constructed under special survey - they are of good material & workmanship. They have been well fitted on board & satisfactorily tested under steam. I am therefore of opinion that they are eligible to be classed "ALLOYD'S M.C." 4-83 in the Register Book.*

I submit that the vessel is eligible to be classed as a ship & is recorded as such.

3/5/83

The amount of Entry Fee £ 3: 0: 0 received by me,  
 Special .. £ 35: 0: 0  
 Certificate (if required) .. £ gratis 2/5/1883  
 (Travelling Expenses, if any, £ ..)

*Walter E. Polson*  
 Engineer Surveyor to Lloyd's Register of British & Foreign Shipping.

Committee's Minute Friday, 4th May, 1883.