

# REPORT ON MACHINERY.

5005

in Survey held at *Middlesbro* Date, first Survey *2<sup>nd</sup> Feb 82* Last Survey *5<sup>th</sup> Mar 83*  
 on the *S. Godiva* (Received at London Office *11th Jan 83*)  
 Tons *1302*  
 Built at *Middlesbro* When built *1882*  
 By whom made *Westgarth & Co* 1882  
 By whom made *Do* when made *Do*  
 Horse Power *115* Owners *A. & N. Lambrough & Co* Port belonging to *London*

**Engines, &c.—**  
 Compound, Inverted, Surface Condensing  
 No. of Cylinders *28* Length of Stroke *36* No. of Rev. per min *110* Point of Cut off, High Pressure *1/2 stroke* Low Pressure *1/2 stroke*  
 Diameter of Tunnel shaft *9"* Diameter of Crank shaft journals *9 3/4"* Diameter of Crank pin *9 3/4"* size of Crank webs *11 1/2 x 11 1/2"*  
 Pitch of screw *13.6 to 15.0* No. of blades *four* state whether moveable *No* total surface *46 sq ft*  
 Can one be overhauled while the other is at work *Yes*  
 Where do they pump from *Large donkey from bilge*  
 Are the roses always accessible *Yes* Are the sluices on Engine room bulkheads always accessible *Yes*  
 Are they connected to condenser, or to circulating pump *Circulating pump*  
 By how connected to crosshead on low pressure piston rod *By how connected to crosshead on low pressure piston rod*  
 Are they Valves or Cocks *Stop valves & cocks*  
 Are the discharge pipes above or below the deep water line *Above*  
 Are the blow off cocks fitted with a spigot and brass covering plate *Yes*  
 How are they protected *Yes*  
 Are pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges *Yes*  
 Are stern tube, propeller, screw shaft, and all connections examined in dry dock *New*

**Boilers, &c.—**  
 One Description *Cylindrical Horizontal Multitubular*  
 Tested by hydraulic pressure to *160 lbs* Date of test *21.11.82* Certificate No *841*  
 Can the superheater be shut off and the boiler worked separately *Yes*  
 Description of safety valves *Spring loaded by B. Bailey & Co*  
 Are they fitted with casing gear *Yes*  
 Are they fitted with casing gear *Yes*  
 Distance between boilers and bunkers or woodwork *about 10" between boiler shell & bunker casing*  
 Length of boilers *10.3* description of riveting of shell long. seams *All straps double*  
 diameter of rivet holes *1 1/8* whether punched or drilled *Drilled* pitch of rivets *4 1/8*  
 centage of strength of longitudinal joint *1/2.7* working pressure of shell by rules *83.5 lbs*  
 size of compensating rings *6 x 1"*  
 outside diameter *3.4* length, top *6.4* bottom *9.2*  
 description of joint *All butt straps* if rings are fitted *Bottom straps* length between rings *6.4*  
 working pressure of furnace by the rules *99.9 lbs*  
 thickness, sides *1/2* back *1/2* top *1/2*  
 sides *9 x 9* back *9 x 9* top *Curved top*  
 working pressure of plating by rules *95 lbs*  
 working pressure of ditto by rules *82.2 lbs*  
 pitch of stays to ditto *15 1/2 x 15 1/2* how stays are secured *Nuts & washers*  
 diameter of stays at smallest part *2 1/8* working pressure by rules *88 lbs*  
 greatest pitch of stays *12 x 1 1/4* working pressure by rules *88 lbs*  
 thickness *5/8* Back plates, thickness *5/8*



Diameter of tubes  $3\frac{1}{2}$  pitch of tubes  $4\frac{3}{4} \times 4\frac{3}{4}$  thickness of tube plates, front  $\frac{5}{8}$  back  $\frac{5}{8}$   
How stayed *Stay tubes* pitch of stays  $12 \times 9$  width of water spaces  $1\frac{1}{4}$  between tubes  
Diameter of Superheater or Steam chest ☒ length ☒  
Thickness of plates ☒ description of longitudinal joint ☒ diameter of rivet holes ☒ pitch of rivets ☒  
Working pressure of shell by rules ☒ 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 ☒ How stayed ☒  
Superheater or steam chest; how connected to boiler ☒

DONKEY BOILER— Description *Vertical water tubes in furnace*  
Made at *Stockton* By whom made *Wiley Bros* when made *4.11.82*  
Where fixed *In stockpile* working pressure *65 lbs* Tested by hydraulic pressure to *130 lbs* No. of Certificate *830*  
Fire grate area *21.64* Description of safety valves *Direct loaded* No. of safety valves *One* area of each *11.04*  
If fitted with easing gear *Yes* If steam from main boilers can enter the donkey boiler *No*  
Diameter of donkey boiler *6.0* length *11.0* description of riveting *Single seams, lap, dble pointed*  
thickness of shell plates  *$\frac{1}{16}$*  diameter of rivet holes  *$\frac{13}{16}$*  whether punched or drilled *Punched*  
pitch of rivets  *$2\frac{3}{4}$*  lap of plating  *$4\frac{1}{4}$*  per centage of strength of joint *70.4*  
thickness of crown plates  *$\frac{1}{16}$*  stayed by *Six stays  $1\frac{1}{2}$  dia*  
Diameter of furnace, top *5.0* bottom *5.5* length of furnace *4.5*  
thickness of plates  *$\frac{1}{2}$*  description of joint *Lap Single pointed*  
thickness of furnace crown plates  *$\frac{1}{16}$*  stayed by *Six stays  $1\frac{1}{2}$  dia*  
Working pressure of shell by rules *66 lbs* working pressure of furnace by rules *64 lbs by 8000 rule*  
diameter of uptake *15"* thickness of plates  *$\frac{1}{16}$*  thickness of water tubes  *$\frac{3}{8}$*

The foregoing is a correct description,

*Wm. M. English & Co.* Manufacturers of Engines & Iron Boilers only

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

*Materials & workmanship good.*  
*The furnace crown plates, back tube plates & combustion chamber plating of main boiler are of steel manufactured by the Steel Co. of Scotland.*  
*The Machinery & Boilers are in good order & safe working condition & in my opinion eligible for the notification *L.M.C. 1.83* in the Register Book.*

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

Special .. £ 17 : 5 : :

Certificate (if required) .. £ : : : 9.1.1883.

To be sent as per margin.

(Travelling Expenses, if any, £ )

Committee's Minute

Friday, 12th January, 1883.

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