

# REPORT ON MACHINERY.

Donkey Boiler

4405

No. 7405 Port of Hull  
 No. in Survey held at Hull Date, first Survey May 1 Last Survey Aug. 21  
 Reg. Book. 33 on the Iron S.S. "Taurus" (Number of Visits Six)  
 Master Goselow Built at Aberdeen By whom built A. Hall & Co. Tons { Gross 305  
 Engines made at Glasgow By whom made Smith Bros & Co. Net 179  
 Boilers made at " By whom made " When built 1873-9  
 Registered Horse Power 45 Owners G. R. Haller when made 1873  
 Port belonging to Hull when made 1879

## ENGINES, &c.—

Description of Engines  
 Diam. of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ Rev. per minute \_\_\_\_\_ Point of Cut off, High Pressure \_\_\_\_\_ Low Pressure  
 Diameter of Screw shaft \_\_\_\_\_ Diam. of Tunnel shaft \_\_\_\_\_ Diam. of Crank shaft journals \_\_\_\_\_ Diam. of Crank pin \_\_\_\_\_ size of Crank webs  
 Diameter of screw \_\_\_\_\_ Pitch of screw \_\_\_\_\_ No. of blades \_\_\_\_\_ state whether moveable \_\_\_\_\_ total surface  
 No. of Feed pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work  
 No. of Bilge pumps \_\_\_\_\_ diameter of ditto \_\_\_\_\_ Stroke \_\_\_\_\_ Can one be overhauled while the other is at work  
 Where do they pump from \_\_\_\_\_  
 No. of Donkey Engines \_\_\_\_\_ Size of Pumps \_\_\_\_\_ Where do they pump from \_\_\_\_\_  
 Are all the bilge suction pipes fitted with roses \_\_\_\_\_ Are the roses always accessible \_\_\_\_\_ Are the sluices on Engine room bulkheads always accessible  
 No. of bilge injections \_\_\_\_\_ and sizes \_\_\_\_\_ Are they connected to condenser, or to circulating pump \_\_\_\_\_  
 How are the pumps worked \_\_\_\_\_  
 Are all connections with the sea direct on the skin of the ship \_\_\_\_\_ Are they Valves or Cocks \_\_\_\_\_  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates \_\_\_\_\_ Are the discharge pipes above or below the deep water line  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel \_\_\_\_\_ Are the blow off cocks fitted with a spigot and brass covering plate  
 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 \_\_\_\_\_  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges \_\_\_\_\_  
 When were stern tube, propeller, screw shaft, and all connections examined in dry dock \_\_\_\_\_  
 Is the screw shaft tunnel watertight \_\_\_\_\_ and fitted with a sluice door \_\_\_\_\_ worked from \_\_\_\_\_

## OILERS, &c.—

No. of Boilers \_\_\_\_\_ Description \_\_\_\_\_ Material \_\_\_\_\_ Letter (for record) \_\_\_\_\_  
 Working Pressure \_\_\_\_\_ Tested by hydraulic pressure to \_\_\_\_\_ Date of test \_\_\_\_\_  
 Description of superheating apparatus or steam chest \_\_\_\_\_  
 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 \_\_\_\_\_ Description of safety valves \_\_\_\_\_ No. to each boiler \_\_\_\_\_  
 Area of each valve \_\_\_\_\_ Are they fitted with easing gear \_\_\_\_\_ No. of safety valves to superheater \_\_\_\_\_ area of each valve \_\_\_\_\_  
 Are they fitted with easing gear \_\_\_\_\_ Smallest distance between boilers and bunkers or woodwork \_\_\_\_\_ Diameter of boilers \_\_\_\_\_  
 Length of boilers \_\_\_\_\_ description of riveting of shell long. seams \_\_\_\_\_ circum. seams \_\_\_\_\_ Thickness of shell plates \_\_\_\_\_  
 Diameter of rivet holes \_\_\_\_\_ whether punched or drilled \_\_\_\_\_ pitch of rivets \_\_\_\_\_ Lap of plating \_\_\_\_\_  
 Percentage of strength of longitudinal joint \_\_\_\_\_ working pressure of shell by rules \_\_\_\_\_ size of manholes in shell \_\_\_\_\_  
 Size of compensating rings \_\_\_\_\_ No. of Furnaces in each boiler \_\_\_\_\_ Description of Furnaces \_\_\_\_\_  
 Outside diameter \_\_\_\_\_ length \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of joint \_\_\_\_\_ if rings are fitted \_\_\_\_\_  
 Greatest length between rings \_\_\_\_\_ working pressure of furnace by the rules \_\_\_\_\_ combustion chamber plating, thickness, sides \_\_\_\_\_ back \_\_\_\_\_ top \_\_\_\_\_  
 Pitch of stays to ditto, sides \_\_\_\_\_ back \_\_\_\_\_ top \_\_\_\_\_ If stays are fitted with nuts or riveted heads \_\_\_\_\_ working pressure of plating by \_\_\_\_\_  
 rules \_\_\_\_\_ Diameter of stays at smallest part \_\_\_\_\_ working pressure of ditto by rules \_\_\_\_\_ end plates in steam space, thickness \_\_\_\_\_  
 Pitch of stays to ditto \_\_\_\_\_ how stays are secured \_\_\_\_\_ working pressure by rules \_\_\_\_\_ diameter of stays at \_\_\_\_\_  
 smallest part \_\_\_\_\_ working pressure by rules \_\_\_\_\_ Front plates at bottom, thickness \_\_\_\_\_ Back plates, thickness \_\_\_\_\_  
 Greatest pitch of stays \_\_\_\_\_ working pressure by rules \_\_\_\_\_ Diameter of tubes \_\_\_\_\_ pitch of tubes \_\_\_\_\_ thickness of tube \_\_\_\_\_  
 plates, front \_\_\_\_\_ back \_\_\_\_\_ how stayed \_\_\_\_\_ pitch of stays \_\_\_\_\_ width of water spaces \_\_\_\_\_  
 Diameter of Superheater or Steam chest \_\_\_\_\_ length \_\_\_\_\_ thickness of plates \_\_\_\_\_ description of longitudinal joint \_\_\_\_\_ diam. 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 \_\_\_\_\_

HUL403-0003



**DONKEY BOILER—** Description *Vertical Cylinder with internal Furnace*  
 Made at *Hull* by whom made *Charles D Holmes & Co* when made *1890* where fixed *Bob Beck*  
 Working pressure *75 lb* tested by hydraulic pressure to *160 lb* No. of Certificate *419* fire grate area *8.29 sq ft* description of safety  
 valves *Spring loaded* No. of safety valves *one* area of each *7.07* if fitted with easing gear *yes* if steam from main boilers can  
 enter the donkey boiler *no* diameter of donkey boiler *4.0* length *8.6* description of riveting *Double air lap*  
 Thickness of shell plates *5/16* diameter of rivet holes *13/16* whether punched or drilled *drilled* pitch of rivets *3* lap of plating *4 1/2*  
 per centage of strength of joint *73%* thickness of crown plates *9/16* stayed by *6 direct stays 19/16*  
 Diameter of furnace, top *3.0* bottom *3.4* length of furnace *3.6* thickness of plates *7/16* description of joint *single air lap*  
 Thickness of furnace crown plates *1/2* stayed by *6 direct stays 19/16* working pressure of shell by rules *116 lb*  
 Working pressure of furnace by rules *95 lb* diameter of uptake *1 1/2* thickness of plates *7/16* thickness of water tubes *5/16*

**SPARE GEAR.** State the articles supplied :—  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

The foregoing is a correct description,  
 \_\_\_\_\_  
 Manufacturer.

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

*New Safety valves and Boiler Mountings*  
*The Safety valve loaded to 75 lb per square inch.*  
*Is eligible in my opinion to remain as classed.*

*It is submitted that this vessel*  
*is eligible to remain as classed*  
*W.A.*  
*23. 8-90*

The amount of Entry Fee .. £ *✓* : : received by me,  
 Special .. £ *✓* : :  
 Donkey Boiler Fee .. £ *2 : 2 : 0*  
 Certificate (if required) .. £ *✓* : : *26/8/1890*  
 To be sent as per margin.  
 (Travelling Expenses, if any, £ *✓*)

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

Committee's Minute **TUES 26 AUGUST 1890**

*Not for Committee*

