

# Boilers

## REPORT ON MACHINERY

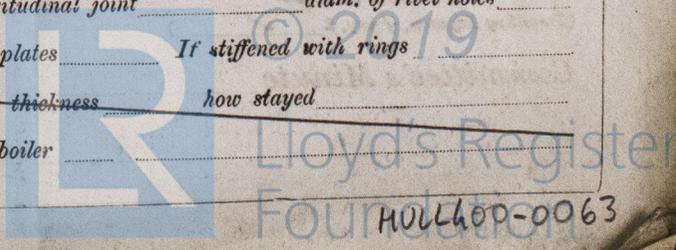
6668

JULY 1888

No. 6668 Received at London Office 18  
 No. in Survey held at Hull Date, first Survey April 14/87 Last Survey 9<sup>th</sup> July 1888  
 Reg. Book. 279 on the Iron Screw Steamer Albanian (Number of Visits 73) Tons 869  
 Master Steggings Built at Port Glasgow By whom built J Reid & Co When built 1855  
 Engines made at Hull By whom made Chas D Holmes & Co when made 1876  
 Boilers made at Hull By whom made Chas D Holmes & Co when made 1888  
 Registered Horse Power 118 Owners W Brown Atkinson & Co Port belonging to Hull

**ENGINES, &c.—**  
 Description of Engines Compound Inverted Direct Acting  
 Diameter of Cylinders \_\_\_\_\_ Length of Stroke \_\_\_\_\_ No. of 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 \_\_\_\_\_

**BOILERS, &c.—**  
 Number of Boilers One Description Cylindrical Built up Whether Steel or Iron Steel  
 Working Pressure 95 lbs Tested by hydraulic pressure to 190 lbs Date of test 8<sup>th</sup> May 1888  
 Description of superheating apparatus or steam chest None fitted  
 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 52.5 sq ft Description of safety valves Spring loaded No. to each boiler Two  
 Area of each valve 12.56 sq in 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 15" Diameter of boilers 15.6"  
 Length of boilers 10' 10" description of riveting of shell long. seams double strap double circum. seams double circum. seams Thickness of shell plates 27/32  
 Diameter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 6 7/16 Lap of plating 1 1/4"  
 Percentage of strength of longitudinal joint 82 1/2% working pressure of shell by rules 96.7 lbs size of manholes in shell 16 x 12"  
 Size of compensating rings 6" x 7 1/8" No. of Furnaces in each boiler Three  
 Outside diameter 43" length, top 4' 0" bottom 4' 0" thickness of plates 19/32" description of joint Welded if rings are fitted \_\_\_\_\_  
 Greatest length between rings \_\_\_\_\_ working pressure of furnace by the rules 108 lbs combustion chamber plating, thickness, sides 9/16" back 1/2" top 9/16"  
 Pitch of stays to ditto, sides 8" back 8" top 8 3/4" If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 120 lbs Diameter of stays at smallest part 1 1/8" working pressure of ditto by rules 123 lbs end plates in steam space, thickness 14/16"  
 Pitch of stays to ditto 16 3/4" how stays are secured double nuts working pressure by rules 97 lbs diameter of stays at smallest part 3 1/8" working pressure by rules 113 lbs Front plates at bottom, thickness 1 1/16" Back plates, thickness 9/16"  
 Greatest pitch of stays 8" working pressure by rules 95 lbs Diameter of tubes 3 1/2" pitch of tubes 14 3/8" x 9/16" thickness of tube plates, front 1 1/16" back 1 1/16" how stayed Wag tubes pitch of stays 4 7/8" x 4 3/4" width of water spaces 12"  
 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 \_\_\_\_\_



**DONKEY BOILER**

Description *Vertical Cylinder with internal furnace*

Made at *Bull* by whom made *Chas & Holmes & Co* when made *1888* where fixed *Main Deck*

Working pressure *40 lb* tested by hydraulic pressure to *140 lb* No. of Certificate *294* fire grate area *19.6 sq ft* description of safety

valves *Spring loaded* No. of safety valves *One* area of each *7.0 sq ft* if fitted with easing gear *Yes* if steam from main boilers

enter the donkey boiler *No* diameter of donkey boiler *6.0* length *14.6* description of riveting *Double lap*

Thickness of shell plates *1/2* diameter of rivet holes *7/8* whether punched or drilled *Drilled* pitch of rivets *2 3/16* lap of plating *1 1/2*

per centage of strength of joint *68.8%* thickness of crown plates *9/16* stayed by *Truly spherical*

Diameter of furnace, top *4.4* bottom *5.2* length of furnace *5.3* thickness of plates *9/16* description of joint *Single lap*

Thickness of furnace crown plates *9/16* stayed by *Truly spherical* working pressure of shell by rules *102 lb*

Working pressure of furnace by rules *40 lb* diameter of uptake *20* thickness of plates *1/2* thickness of water tubes *3/8*

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

The foregoing is a correct description,

*Wm Charles Holmes* Manufacturer.

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

*The main Boiler safety valves and stop valve overhauled and made good. Refitted on the new Boiler, remainder of Boiler mountings new.*

*The main Steam pipe altered to suit the new arrangement and tested at Coppus Smiths Shop to 250 lbs by hydraulic pressure satisfactorily.*

*New Main and Donkey Boilers of approved design tested as required by the Rules and placed in the ship. The Safety valves set to a working pressure of 95 & 40 lbs per square inch respectively. They are now in my opinion in safe working condition and respectfully submitted for the notification ~~N.B.~~ N.B. 88. L.M.C. 7.88. in the Register Book.*

*Ship submitted that this notice is eligible to have the notification + N.B. 88 records + N.B. 88*  
*R & J*  
*14/7/88*

The amount of Entry Fee .. £ .. : : received by me,  
Special .. £ 8 : 17 : -  
Donkey Boiler Fee .. £ 2 : 2 : -  
Certificate (if required) .. £ .. : : 17.7 18.8  
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 17 JULY 1888**

*+ N.B. 88*  
*Lumb 7/88*