

Boilers REPORT ON MACHINERY

JULY 1888

No. 6668

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No. in Survey held at Hull Date, first Survey April 14/87 Last Survey 9th July 1888
 Reg. Book. 279 on the Iron Screw Steamer Albanian (Number of Visits 73) 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 8th 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 chop double circum. seams double circum. seams Thickness of shell plates 2 1/32"
 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 96.4 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 7' 0" bottom 7' 0" thickness of plates 1 9/32" 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 1/16" back 1/2" top 9 1/16"
 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 1 1/16"
 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 1/16"
 Greatest pitch of stays 8" working pressure by rules 95 lbs Diameter of tubes 3 1/2" pitch of tubes 14 7/8" x 9 1/2" thickness of tube plates, front 1 1/16" back 1 1/16" how stayed Stay tubes pitch of stays 4 7/8" x 4 7/8" 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 *70 lb* tested by hydraulic pressure to *140 lb* No. of Certificate *294* fire grate area *19.6 sq ft* description of safetyvalves *Spring loaded* No. of safety valves *One* area of each *7.0 sq in* if fitted with easing gear *Yes* if steam from main boilers *No*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 *4 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 *70 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,

Chas & Holmes & Co 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 Copper Smiths Shop to 250 lbs by hydraulic pressure satisfactorily.**New Main and Donkey Boilers of approved design tested and required by the Rules and placed in the ship. The Safety valves set to a working pressure of 95 & 70 lbs per square inch respectively. They are now in my opinion in safe working condition and respectfully submitted for the notification *N.B. 88 L.M.C. 7.88* in the Register Book.*

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

Special .. £ 8 : 17 : -

Donkey Boiler Fee .. £ 2 : 2 : -

Certificate (if required) .. £ .. : 17.7.1888

To be sent as per margin.

(Travelling Expenses, if any, £ .. ✓)

Committee's Minute TUES 17 JULY 1888

+ N.B. 88

Lmb 7/88

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