

# REPORT ON MACHINERY.

538

No. 5384  
 Survey held at Hull Date, first Survey 2<sup>nd</sup> Feb<sup>r</sup> 83 Last Survey 7<sup>th</sup> Sept. 1883  
 Reg. Book. 127 on the iron screw steamer "Bassano" (Number of Visits 15)  
 Master H. Bull Built at Middlesbrough By whom built Backhouse & Dixon Tons 1187  
 Engines made at Hull By whom made C. D. Holmes & Co. When built 1872  
 Boilers made at Hull By whom made C. D. Holmes & Co. when made 1883  
 Registered Horse Power 260 Owners The Nelson Line & Co. Port belonging to Hull

## ENGINES, &c.—

Description of Engines 3 Cylinder Compound, Vertical inverted Surface condensing  
 Diameter of Cylinders 31, 21, 35 & 67" Length of Stroke 36" No. of Rev. per minute \_\_\_\_\_ Point of Cut off, High Pressure \_\_\_\_\_ Low Pressure \_\_\_\_\_  
 Diameter of Screw shaft 11 1/4" Diam. of Tunnel shaft 10 1/2" Diam. of Crank shaft journals 11 1/4" Diam. of Crank pin 12" size of Crank webs 13 1/2" x 7"  
 Diameter of screw \_\_\_\_\_ Pitch of screw 17'-0" No. of blades 4 state whether moveable no total surface \_\_\_\_\_  
 No. of Feed pumps 2 diameter of ditto 3 7/8" Stroke \_\_\_\_\_ Can one be overhauled while the other is at work yes  
 also two supplementary feed engines (see Donkey)  
 No. of Bilge pumps 2 diameter of ditto 7" & 7 1/4" Stroke 6" Can one be overhauled while the other is at work no  
 Where do they pump from Fore hold, after hold, engine room & after well  
 No. of Donkey Engines Two Size of Pumps Belg. donkey 4 1/2" x 8" Stroke 4" & 6" Where do they pump from the bilge donkey pumps pump from the sea, the hold & engine room; the feed engine only from the hot well tank with delivery to main boiler  
 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" dia. Are they connected to condenser, or to circulating pump to circulating pump  
 How are the pumps worked by rocking lever from air pump piston rod crosshead & the bilge pumps by pin in front of crankshaft  
 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 no Are the discharge pipes above or below the deep water line Main below Bilge & donkey above  
 Are they each fitted with a discharge valve always accessible on the plating of the vessel no Are the blow off cocks fitted with a spigot and brass covering plate yes  
 That pipes are carried through the bunkers discharge pipe of bilge pumps How are they protected iron casing  
 Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times yes in engine room  
 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 Aug 24<sup>th</sup>  
 Is the screw shaft tunnel watertight said to be and fitted with a sluice door yes worked from No 2 platform

## BOILERS, &c.—

Number of Boilers Two Description Circular, multitubular Whether Steel or Iron Steel  
 Working Pressure 150 lbs Tested by hydraulic pressure to 300 lbs Date of test 16 Aug 83  
 Description of superheating apparatus or steam chest none  
 Can each boiler be worked separately yes Can the superheater be shut off and the boiler worked separately yes  
 No. of square feet of fire grate surface in each boiler 4259 sq. ft. Description of safety valves Spring loaded No. to each boiler Two  
 Area of each valve 13.54 sq. inch Are they fitted with easing gear yes No. of safety valves to superheater yes area of each valve yes  
 Are they fitted with easing gear yes Smallest distance between boilers and bunkers or woodwork 11" Diameter of boilers 10' 3"  
 Length of boilers 14'-0" description of riveting of shell long. seams double butt straps circum. seams double rivet laps Thickness of shell plates 1"  
 Diameter of rivet holes 1 7/32" whether punched or drilled drilled pitch of rivets 4 1/4" Lap of plating 12 1/4" & 12 1/2" straps  
 Percentage of strength of longitudinal joint 72 working pressure of shell by rules 152 lbs size of manholes in shell 16" x 12"  
 Size of compensating rings 28" x 24" x 1" No. of Furnaces in each boiler 4  
 Outside diameter 39" length, top 5'-6" bottom 13'-5" thickness of plates 1/2" description of joint welded if rings are fitted corrugated  
 Greatest length between rings 13" working pressure of furnace by the rules 154 combustion chamber plating, thickness, sides 1/2" back no back top 5/8"  
 Pitch of stays to ditto, sides 7' 5" 7 1/4" back yes top 8 1/2" x 8" If stays are fitted with nuts or riveted heads nuts working pressure of plating by rules 156 lbs  
 Diameter of stays at smallest part 1 5/16" x 1 1/8" working pressure of ditto by rules 7200 lbs end plates in steam space, thickness 1"  
 Pitch of stays to ditto 15 1/2" x 15 1/2" to 15 3/4" how stays are secured double nut, washer working pressure by rules 150 lbs diameter of stays at smallest part 27/16" steel  
 Front plates at bottom, thickness 3/4" Back plates, thickness yes  
 Greatest pitch of stays yes working pressure by rules yes Diameter of tubes 3" pitch of tubes 4 3/8" x 4 3/8" thickness of tube plates, front 3/4" doubled between back 3/4" how stayed stay tubes pitch of stays 15 1/2" in min. width of water spaces 1 3/8"  
 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 \_\_\_\_\_

HVL396-0116



DONKEY BOILER— Description *Horizontal Cylinder, multitubular + double ended.* *not m*  
Made at *Hull* by whom made *Amos & Smith* when made *1879* where fixed *on deck*  
Working pressure *50 lb* tested by hydraulic pressure to *100 lb*. No. of Certificate *6/11.79* fire grate area *16.5 sq. ft.* description  
valves *spring loaded*. No. of safety valves *2* area of each *7.07* if fitted with easing gear *yes* if steam from main to  
enter the donkey boiler *no* diameter of donkey boiler *6' 1"* length *9' 0"* description of riveting *long/short lap*  
Thickness of shell plates *7/16"* diameter of rivet holes *3/4 inch* whether punched or drilled *punched* pitch of rivets *2 3/4 + 2 7/8* lap of plating  
per centage of strength of joint *70* thickness of *and* crown plates *7/16"* stayed by *4. 1 1/2" stays* *12 1/4" pitch + stay tubes*  
Diameter of furnace, top *2' 9"* bottom *—* length of furnace *3' 2 1/4"* thickness of plates *7/16"* description of joint *butt strap*  
Thickness of furnace crown plates *7/16"* stayed by *(Circular furnace)* working pressure of shell by rules  
Working pressure of furnace by rules *—* diameter of uptake *X* thickness of plates *front 7/16" back 1/2"* thickness of water tubes *X*  
SPARE GEAR. State the articles supplied:—

The foregoing is a correct description,

*Charles D. Holmes* Manufacturer of Marine Boilers.

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

*Now done. Two new main boilers, made to approved design. Fitted with all mountings, safety + stop valves, feed + blow valves. Steam + water gauges with all necessary connections complete.*

*The safety valves set under steam tiller at 150 lb. pressure.*

*A new first high pressure cylinder, with new piston, valves + cover complete.*

*new piston slide valve for same, new distance piece + new exhaust pipe between*

*first + second cylinders, new stop valve in engine room + hand connection to the platform, new main steam pipe, new escape valves for No. 2 cylinder,*

*Piston of No. 2 cylinder faced up + new metallic ring for same. Cylinder barrel chip*

*for clearance. Slide valve + face dressed up. Low pressure cylinder face + slide valve for*

*HP. Slide valve spindle turned up + rebushed. new brass in eye for same. Sp. piston + fitted*

*rod turned up + rebushed. Sp. slide valve shipped. crank shaft overhauled. new whitening*

*in main bearings. Link motion overhauled. new steam starting engine complete.*

*Air + circulating pumps overhauled + valves made good, spare air pump + shipped. —*

*guide rod + bracket fitted. Rocking link + links + trunnions refitted, 2 new motor valves*

*engine feed pumps. Feed escape valves overhauled. Surface condenser examined, Pump*

*arrangements overhauled. A new pair of auxiliary engines with plunger pumps fitted*

*to feed the main boilers, and a wrought iron hot well tank supplied with a water gauge +*

*connections. new telegraph + steam gauge in the engine room.*

*Donkey boiler overhauled + found in safe working order.*

*new coupling bolts in crank shaft. Sea connections, stern bush + outer end of shaft, propeller +*

*in dry dock. old blow off cocks taken off + new one fixed on skin of ship above platform in the*

*The machinery + boilers of this ship are now in our opinion in safe working condition. The*

*case is respectfully submitted as eligible for the notification L.M.C. 9.83 + N.B. 9.83 in*

The amount of Entry Fee .. £ .. : *20/-* received by me,

Special .. .. £ *19:10:* "

Donkey Boiler Fee .. .. £ .. : .. :

Certificate (if required) .. £ .. : .. : 18

To be sent as per margin.

(Travelling Expenses, if any, £ .. ..)

Committee's Minute

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

*L.M.C. 9.83 + N.B. 83*