

16082 Lm

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rev 27/3/76

Report (if any) on Hull of Vessel. Port Hartlepool No. 359

Description Inverted Compound Surface Condensing  
 Made by Messrs Blair & Co.  
 When Feb 1876 At Stockton  
 Diameter of cylinder 30 x 55 (one off each) Length of stroke 36 inches  
 No. of revolutions per minute (about) 65  
 Point of cut off 1/2 stroke  
 Diameter of screw shaft 9 3/4 x 9 1/4  
 Diameter of crank shaft journals 10  
 Diameter of screw, or of paddle wheel 15 0  
 Pitch of screw 16 feet  
 No. of blades 4 Total surface 54 sq. ft.  
 No. of bilge pumps 2 and sizes 3 1/2 dia. x 2 stroke single actg.  
 Do they pump from each compartment from engine room only.

Are all the bilge suction pipes fitted with roses yes  
 No. of feed pumps 2 and sizes 3 1/2 dia. x 2 stroke single actg.  
 What gauges are there attached to the engines and boilers ... 1 vacuum gauge, 1 steam gauge on each boiler in stokehole, 1 steam in engine room.  
 Description and size of Donkey Pumps ... One inverted double acting 1/2 diameter x 9 stroke.  
 Where do they pump from from ballast tanks, sea. hot-well, and bilges.  
 No. of bilge injections one and sizes 3 1/2 diameter.  
 Are they connected to air, or circulating pumps to circulating pumps.  
 Is there a hand pump in the engine room no. (donkey can be used).  
 Can it be worked by the main engines no.  
 Is there a deck hose of sufficient length to reach to any part of the vessel yes.

### MAIN BOILERS.

Number Two Description Cylindrical & Multitubular.  
 Made by Messrs Blair & Co.  
 When March 1876 At Stockton  
 Working pressure 75 lbs per square inch.  
 Tested by hydraulic pressure to 150 lbs, Date Jan 18 1876.  
 Description of super-heating apparatus none.  
 Can each boiler be worked separately yes.

Can the super-heater be shut off and the boilers worked separately no.  
 Description and area of safety valves on each boiler 2 spring valves 3 1/2 dia. = 16.5 area.  
 No. of square feet of fire-grate surface in each boiler 29 1/4.  
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin yes (both into 1 cock on ships side).  
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times yes.

### DONKEY BOILER.

Description Vertical, round, with 3 water tubes in flame box.  
 Where fixed in stokehole.  
 Working pressure 50 lbs per sq. inch.

Tested by hydraulic pressure to 85 lbs per sq. inch, Date Dec 1875  
 Description and area of safety valves one direct loaded - 2 1/2 dia. = 3.7 one lever & weight 2 1/2 = 5.4 area = 9.1  
 No. of square feet of fire grate 12.5 sq. ft.

### PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship yes.  
 Are they Kingston valves or common cocks ... Common stop valves & Cocks.  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates yes.  
 Are the discharge pipes above or below the deep water line below.  
 Are they each fitted with a discharge valve on the plating of the vessel yes.  
 Manufacturer. Rob Blair & Co. G. Blair

What pipes are carried through the bunkers 2 pipes to for ballast tank.  
 How are they protected encased with wood.  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock All new. March 1876.  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge Non return valve, and shell Cock with only 1 part in the plug  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead Tunnel not water-tight Sluice door fitted.  
 I was present when steam was raised and engines worked March 8<sup>th</sup>. Steam 75 lbs vacuum 27 in. revs 66 all worked satisfactory. W. A.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood)

Screw (or Paddle) Steam Vessel "Maud" owned by Messrs Marwood & Sons.  
 of the Port of Whitby of 843 Tons Register, and 120 Registered Horse Power,  
 and that they have been carefully inspected and examined by me at Stockton  
 and found to be at this date, viz., March 8<sup>th</sup> 1876 in good order and safe working condition.

Survey fee £3-3-0  
 Certificate 5-0  
£3-8-0  
 Expenses £1-1-0  
 Received at Hartlepool by J. P. G. ...

William Allison  
 Engineer Surveyor to Lloyd's Register of Shipping.