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IRON 477-0361

## LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

## ENGINES.

Description *Comp Inverted*  
 Made by *Seaward & Co*  
 When *Jan* 1878 At *London*  
 Diameter of cylinder *30 x 58* Length of stroke *30*  
 No. of revolutions per minute *54*  
 Point of cut off *5/8*  
 Diameter of screw shaft *8 1/2*  
 Diameter of crank shaft journals *8 1/2*  
 Diameter of screw, or of paddle wheel *11.6*  
 Pitch of screw *13.6*  
 No. of blades, *3* Total surface  
 No. of bilge pumps *2* and sizes *7" x 10"*  
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *2* and sizes *5 x 12*  
 What gauges are there attached to the engines and boilers ... *1 Steam to each Boiler*  
*1 Steam 1 Vac in Eng Room*  
 Description and size of Donkey Pumps ... *one in Eng Room*  
*14" x 8"*  
 Where do they pump from ... *All compartments*  
 No. of bilge injections *none* and sizes  
 Are they connected to air, or circulating pumps  
 Is there a hand pump in the engine room *yes*  
 Can it be worked by the main engines *from deck*  
 Is there a deck hose of sufficient length to reach to any part of the vessel *yes*.

## MAIN BOILERS.

Number *Two* Description *Cylindrical*  
 Made by *Seaward & Co*  
 When *18 78* At *London*  
 Working pressure *65 lbs per sq in*  
 Tested by hydraulic pressure to *130 lbs*, Date *20/1/77*  
 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 *none*  
 Description and area of safety valves on each boiler *Adams Spring*  
*19.2 sq in*  
 No. of square feet of fire-grate surface in each boiler *35.5 sq ft*  
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *yes*  
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times *yes*

## DONKEY BOILER.

Description *Vertical*  
 Where fixed *Stoke hold*  
 Working pressure *145 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *27/9/77*  
 Description and area of safety valves *3.54 area*  
 No. of square feet of fire grate *7 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 ... *Cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *not all, (trunkies & such)*  
 Are discharge pipes above or below the deep water line *Above*  
 Are they each fitted with a discharge valve on the plating of the vessel *yes*

What pipes are carried through the bunkers *2 Bilge disch.*  
 How are they protected *Wood Casing*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Dec 1877*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *yes*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *No*

*Seaward & Co* Manufacturer.

We 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 *Maria Pia* owned by *Benjamin Luffman & Co* of the Port of *Liston* of *393* Tons Register, and *130* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *January 7<sup>th</sup>* 1878 in good order and safe working condition.

Amount of Fee for Survey ... *6 : 10 : 0* (Travelling Expenses, if any, £)

*7.2.78* Engineer Surveyor to Lloyd's Register of Shipping  
*London*  
*Laid by the ...*  
*155 ...*