

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rev 25/8/78

Description *S. D. to Comp. V. C.*  
 Made by *Marshall, Osborne & Co.*  
 When *August 1878* At *5th Shields*  
 Diameter of cylinder *20 3/8"* Length of stroke *24 ins.*  
 No. of revolutions per minute *about 40*  
 Point of cut off *16 ins*  
 Diameter of screw shaft *6 1/4 ins.*  
 Diameter of crank shaft journals *6 1/4 ins.*  
 Diameter of screw, or of paddle wheel *9 ft.*  
 Pitch of screw *"*  
 No. of blades, *11* Total surface *"*  
 No. of bilge pumps *1* and sizes *Diam = 4 ins Stroke 14 ins*  
 Do they pump from each compartment *yes.*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *1* and sizes *Diam 3 1/2" Stroke 14 ins*  
 What gauges are there attached to the engines and boilers ... *1 Steam & 1 Vacuum gauge*  
 Description and size of *S. D. to Steam Cyl. d = 4 ins stroke 8 ins*  
 Donkey Pumps ... *Pump d = 6 1/2" S. 8 ins*  
 Where do they pump from *Bilges, Fore & aft holds and sea. feed the boiler and pump on deck.*  
 No. of bilge injections *1* and sizes *3 ins*  
 Are they connected to air, or circulating pumps *to circulating pumps.*  
 Is there a hand pump in the engine room *No but donkey.*  
 Can it be worked by the main engines *"*  
 Is there a deck hose of sufficient length to reach to any part of the vessel *yes.*

### MAIN BOILERS.

Number *One* Description *Cylindrical tubular*  
 Made by *Marshall, Osborne & Co.*  
 When *August 1878* At *5th Shields*  
 Working pressure *40 Lb.*  
 Tested by hydraulic pressure to *140 Lb.* Date *21/3/78*  
 Description of super-heating apparatus *Cylindrical*  
 Can each boiler be worked separately *"*

Can the super-heater be shut off and the boilers worked separately *No.*  
 Description and area of safety valves on each boiler *2 Common valves with balance lever = 10 sq. ins.*  
 No. of square feet of fire-grate surface in each boiler *30 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 cylindrical with tubes*  
 Where fixed *On deck*  
 Working pressure *40 Lbs.*

Tested by hydraulic pressure to *140.* Date *21/3/78*  
 Description and area of safety valves *2 Common valves. One 5 sq. ins each.*  
 No. of square feet of fire grate *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 cocks.*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *No.*  
 Are the 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 *1 donkey delivery*  
 How are they protected *with strong iron casing*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *March 1878.*  
 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 *yes.*

Manufacturer.

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 *Rio Lima* owned by *Companhia Thetis* of the Port of *Oporto* of *180* Tons Register, and *56* Registered Horse Power, and that they have been carefully inspected and examined by me at *Haarlem* and found to be at this date, viz., *23rd March* 1878 in good order and safe working condition.

*E. G. Capelle*

Engineer Surveyor to Lloyd's Register of Shipping.

The Machine of this vessel has been  
repaired under Mr. Crefels inspection  
it is reported to be in good  
condition and fitted in accordance  
with the Committee's requirements.  
Submitted that she is  
eligible to have the  
notification Lloyd's  
M.C. and a  
Machine Certificate  
from 23 March  
1878

MD

26.3.78



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