

20617 Iron

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rev 25/3/78

Report (if any) on Hull of Vessel. Port of Havre. No. 109

Description *S. D. A. Comp. S. 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 Donkey Pumps ... *S. D. A. Steam Cyl. d = 4 ins Stroke 8 ins 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. feet.*  
 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. feet*

### 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 *Havre* and found to be at this date, viz., *23rd March 1878* in good order and safe working condition.

*E. Capelle*  
 Engineer Surveyor to Lloyd's Register of Shipping.



The Maching of this secret- has been-  
repaired under Mr. Cefels 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  
Maching Certificate  
from 23 March  
1878

MD

26.3.78



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