

23079 Iron Ships

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES. *Now renewed (1849)*

Report (if any) on Hull of Vessel. Port Glasgow No. 4829

Description *Compound Inverted Direct Acting*  
 Made by *Messrs Hutson & Corbett*  
 When *18 49* At *Glasgow*  
 Diameter of cylinder *31 9/16" x 34"* Length of stroke *30"*  
 No. of revolutions per minute  
 Point of cut off  
 Diameter of screw shaft *6"*  
 Diameter of crank shaft journals *4 1/4"*  
 Diameter of screw, ~~or of paddle wheel~~ *9 ft 2 1/2"*  
 Pitch of screw *12 ft 6"*  
 No. of blades *four* Total surface  
 No. of bilge pumps *one* and sizes *3 1/4" dia x 16" stroke*  
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *one* and sizes *3 1/4" dia x 16" stroke*  
 What gauges are there attached to the engines and boilers ... *Two Steam One Vacuum & One Compound*  
 Description and size of Donkey Pumps ... *Double Acting 4" x 10" stroke 9" cylinder*  
 Where do they pump from ... *From the Sea & Bilge*  
 No. of bilge injections *one* and sizes *2 3/4"*  
 Are they connected to air, or circulating pumps *To Circulating*  
 Is there a hand pump in the engine room *yes*  
 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 *one* Description *Round Horizontal*  
 Made by *Messrs Hutson & Corbett*  
 When *18 49* At *Glasgow*  
 Working pressure *40 lbs*  
 Tested by hydraulic pressure to *140 lbs*, Date *July 21<sup>st</sup> 1849*  
 Description of super-heating apparatus *Longitudinal Receiver*  
 Can each boiler be worked separately

Can the super-heater be shut off and the boilers worked separately  
 Description and area of safety valves on each boiler ... *Two Direct Spring Lock 9.6" area*  
 No. of square feet of fire-grate surface in each boiler *18 1/2*  
 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 *Round Vertical*  
 Where fixed *In Storehold*  
 Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *July 21<sup>st</sup> 1849*  
 Description and area of safety valves *Two Direct Spring Lock 4" area*  
 No. of square feet of fire grate *2 1/2*

### 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 ... *Screw Down Valves and Cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *All Cocks now moved to the upper part of Bilge*  
 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*  
*Hutson & Corbett* Manufacturer.

What pipes are carried through the bunkers *none*  
 How are they protected  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *On Slip & Dry 25<sup>th</sup> 1849*  
 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 Tunnel the Engines are fitted close to the Stern.*

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 *Andalusia* owned by *W. S. Armstrong* of the Port of *Glasgow* of *160* Tons Register, and *60* Registered Horse Power, and that they have been carefully inspected and examined by me at *Glasgow* and found to be at this date, viz., *March 21<sup>st</sup> 1849* in good order and safe working condition.

Amount of Fee for Survey ... £ *5 : 0 : 0* Paid  
 (Travelling Expenses, if any, £ .....

*James Mollison*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
 Lloyd's Register of Shipping  
 Foundation

The Engine and Boiler of the vessel  
have been built and fitted in  
accordance with the rules  
submitted that she is eligible  
to have Lloyd's N.R.C. and  
a machinery certificate from  
21st March 1879

*M*  
4-4-79



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