

18013 *Ln*

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

*Rec 22/9/77*

Description *Inverted Cyl. Compound. Stry. Cyl.*  
Made by *Messrs Gourlay Bros & Co*  
When *March 1877* At *Dundee*  
Diameter of cylinder *18" x 30"* Length of stroke *18"*  
No. of revolutions per minute *100*  
Point of cut off *2/16*  
Diameter of screw shaft *5 1/2"*  
Diameter of crank shaft journals *5 3/4"*  
Diameter of screw, ~~or of paddle wheel~~ *7 1/6"*  
Pitch of screw *8" 0"*  
No. of blades *Four* Total surface *20 feet*  
No. of bilge pumps *one* and sizes *4 1/2" diam 6 3/4" 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 1/2" diam 6 3/4" stroke*  
What gauges are there attached to the engines and boilers ... *Two Water on Boiler one each Pressure Compound and Vacuum fitted on Engines as*  
Description and size of Donkey Pumps ... *Vertical Stry. Cyl 5" diam 2 3/4" D.A. Pump*  
Where do they pump from ... *Fore and after ballast tanks fore & after holds from sea bilge to Boiler over board and on deck*  
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 *no*  
Is there a deck hose of sufficient length to reach to any part of the vessel *yes*

### MAIN BOILERS.

Number *One* Description *Circular Tubular*  
Made by *Messrs Gourlay Bros & Co*  
When *March 1877* At *Dundee*  
Working pressure *65 lbs*  
Tested by hydraulic pressure to *135 lbs*, Date *2/3/77*  
Description of super-heating apparatus *none*  
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 Valves by Lever and heights 11.8 inches area*  
No. of square feet of fire-grate surface in each boiler *15 1/4 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 *One Round Vertical 6" 0" x 3" 6"*  
Where fixed *On Deck*  
Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *2/3/77*  
Description and area of safety valves *direct load 3.9 area*  
No. of square feet of fire grate *5.9 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 ... *Valves & Cocks*  
Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *yes with the exception of blow off cocks which are below stoke hold plates but are fitted with proper guards*  
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 *none*  
How are they protected — — —  
When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *before launch*  
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 *Bulkhead fitted with sluice door*

*Gourlay Bros & Co* Manufacturers

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 *Bonnie Dundee* owned by *Messrs Gourlay Bros & Co* of the Port of *Dundee* of *121.24* Tons Register, and *40* Registered Horse Power, and that they have been carefully inspected and examined by me at *Dundee*, and found to be at this date, viz., *19<sup>th</sup> March 1877* in good order and safe working condition.

*John Sturrock*  
Fees *£2.0.0*

*Rec 2 the above also 2/6 for 2 Certificate of machinery.*

*Dr Donnet 21.3.77*