

18013 Ln

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 22/9/77

No. 4042 Port Dundee Report (if any) on Hull of Vessel.

Description *Inverted Cyl. Compound. 4 Cyl. Com.*
 Made by *Messrs Gourlay Bros & Co*
 When *March 1877* At *Dundee*
 Diameter of cylinder *18" x 30" D.* 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" Dia 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" Dia 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*
 Description and size of Donkey Pumps ... *Vertical Det. Cyl 5" Dia 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 *Yes*

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 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 *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., *19th March 1877* in good order and safe working condition.

John Sturrock
 Fees £ 2 - 0 - 0

John Sturrock
 Engineer Surveyor to Lloyd's Register of Shipping.

Rec^d the above also 2/6 for Certificate of Machinery.

J. D. Donnetto 21-3-77