

16780 Iron

Rec 10.8.76

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Report (if any) on Hull of Vessel. Port Newcastle No. 10283

Description *Compound Inverted Surface Condensing*
 Made by *Messrs John Shaw & Co.*
 When *July 18/76* At *Law Walker Newcastle*
 Diameter of cylinder *26" x 46"* Length of stroke *30"*
 No. of revolutions per minute *About 65*
 Point of cut off *3/4 of stroke*
 Diameter of screw shaft *8 1/2" Tunnel shaft 8 1/4"*
 Diameter of crank shaft journals *8 1/2"*
 Diameter of screw, or of paddle wheel *10.8"*
 Pitch of screw *1.0 x 20.0"*
 No. of blades, *4* Total surface *34 sq feet*
 No. of bilge pumps *2* and sizes *3 1/2 dia x 15" stroke Single Acting*
 Do they pump from each compartment *From engine room only*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *3 1/2 dia x 15" stroke Single Acting*
 What gauges are there attached to the engines and boilers ... *One steam gauge in engine room and one in stokehole. One vacuum gauge*
 Description and size of Donkey Pumps ... *Double Acting 4" dia x 9" stroke*
 Where do they pump from ... *From engine room, sea, tanks after well and after compartment*
 No. of bilge injections *1* and sizes *2 1/2 dia*
 Are they connected to air, or circulating pumps *To Condenser*
 Is there a hand pump in the engine room *Yes Worked from deck*
 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 Multitubular*
 Made by *Messrs J. Shaw & Co.*
 When *July 18/76* At *Law Walker Newcastle*
 Working pressure *65 lbs*
 Tested by hydraulic pressure to *130 lbs*, Date *10 June 1876*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *Only one boiler in ship*

Can the super-heater be shut off and the boilers worked separately *No*
 Description and area of safety valves on each boiler ... *Two Spring Safety valves each 4" dia. Total area 28.4 sq in*
 No. of square feet of fire-grate surface in each boiler *60 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 Water tubes in furnace*
 Where fixed *In Stokehole*
 Working pressure *36 1/2 lbs*

Tested by hydraulic pressure to *90 lbs*, Date *June 1876*
 Description and area of safety valves *Vertical weight 4.9 sq in*
 No. of square feet of fire grate *9 sq feet*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *All, except sea cock for filling after compartment*
 Are they Kingston valves or common cocks ... *Kingston valves for circulation Pump. Sea cock*
 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 *About level*
 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 *No*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Now*
 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*

John Shaw & 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 *Claf Lyngvæn* owned by *Nordenfjeldske Steam Nav Co* of the Port of *Trondhjem* of *404.16* Tons Register, and *190* Registered Horse Power, and that they have been carefully inspected and examined by me at *Law Walker* and found to be at this date, viz., *August 8th 1876* in good order and safe working condition.

Survey fee *4-10-0*
 Certificate *5-0*
 Received at *Shields*
 by *R Young*
5/8/76

James Blair
 Engineer Surveyor to Lloyd's Register of Shipping.



IRON 467-0390