

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 31/3/76

Description *Inverted Compound Surface Condenser* Are all the bilge suction pipes fitted with roses *Yes*
 Made by *Messrs Gourlay Bros & Co*
 When *March* 1876 At *Dundee*
 Diameter of cylinder *34" x 56"* Length of stroke *2.6"*
 No. of revolutions per minute *80*
 Point of cut off *2/3*
 Diameter of screw shaft *9 3/4"*
 Diameter of crank shaft journals *10 1/2"*
 Diameter of screw, ~~or of paddle wheel~~ *11" x 6"*
 Pitch of screw *15 feet*
 No. of blades, *4* Total surface *41 sq feet*
 No. of bilge pumps *One* and sizes *6 1/2" dia 6" stroke*
 Do they pump from each compartment *Yes*

What gauges are there attached to the engines and boilers ... *One Pressure & two Glass Gauges to each boiler & one each. Steam Vacuum & Compound fixed or Saggies*
 Description and size of Donkey Pumps ... *Vertical D. 4 1/2" x 8" stroke*
 Where do they pump from ... *Bilge, Netwch. Sea and Ballast Tanks*
 No. of bilge injections *One* and sizes *3" inches*
 Are they connected to air, or circulating pumps *Circulating Pump*
 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 *No* Description *Round return Tubular* Can the super-heater be shut off and the boilers worked separately *— — —*
 Made by *Messrs Gourlay Bros & Co*
 When *March* 1876 At *Dundee*
 Working pressure *65 lbs*
 Tested by hydraulic pressure to *130*, Date *22 Feb*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *Yes*

Description and area of safety valves on each boiler ... *Adams Patent Spring 17.88 sq inches area*
 No. of square feet of fire-grate surface in each boiler *36 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*
 Where fixed *in Stokhole*
 Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *Feb*
 Description and area of safety valves *Direct Loaded Valve 7.94 in area*
 No. of square feet of fire grate *12.5 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 ... *Cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *Yes*
 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 *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 *"Hawk"* owned by *General Steam Nav. Co* of the Port of *London* of *375.26* Tons Register, and *140* Registered Horse Power, and that they have been carefully inspected and examined by me at *Dundee* and found to be at this date, viz., *24th March* 1876 in good order and safe working condition.

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