

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound - Inverted - Surface Condensing*
 Made by *Messrs Thompson & Co.*
 When *May 1876* At *Newcastle on Tyne*
 Diameter of cylinder *32" & 60"* Length of stroke *36"*
 No. of revolutions per minute *About 63*
 Point of cut off *$\frac{2}{3}$ High pressure $\frac{1}{3}$ Low pressure*
 Diameter of screw shaft *10" Dia of lined shaft $9\frac{1}{4}"$*
 Diameter of crank shaft journals *10"*
 Diameter of screw, ~~or of paddle wheel~~ *13" 0"*
 Pitch of screw *from $14' 0"$ to $18' 6"$*
 No. of blades, *4* Total surface *67 sq feet*
 No. of bilge pumps *2* and sizes *$3\frac{1}{2}$ dia x 18 stroke Single Acting*
 Do they pump from each compartment *from after well and engine room*
 Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *$3\frac{1}{2}$ dia x 18 stroke Single acting*
 What gauges are there attached to the engines and boilers ... *3 Steam 1 Vacuum Double Acting*
 Description and size of Donkey Pumps ... *Pump $6\frac{1}{2}$ dia x 10" Stroke*
 Where do they pump from ... *Ballast tanks sea, & bilges*
 No. of bilge injections *1* and sizes *3" diameter*
 Are they connected to air, or circulating pumps *Art Pump*
 Is there a hand pump in the engine room *no Donkey can be used as such*
 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 *Two* Description *Round Horizontal Multitubular*
 Made by *Messrs Thompson & Co.*
 When *New 1876* At *Newcastle on Tyne*
 Working pressure *65 lbs*
 Tested by hydraulic pressure to *135 lbs*, Date *Feb 1876*
 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 *No Superheaters*
 Description and area of safety valves on each boiler *Adams Spring Two on each boiler*
 No. of square feet of fire-grate surface in each boiler *45 sq ft*
 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 *Suction pipes in holds not accessible when vessel is loaded*

DONKEY BOILER.

Description *Vertical Water tubes in furnace*
 Where fixed *In stoke hole*
 Working pressure *40 lbs*
 Tested by hydraulic pressure to *Reported to 85 lbs*, Date *Mar 1876*
 Description and area of safety valves *Direct weight 8.29" in*
 No. of square feet of fire grate *15.9 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 ... *Stop valves and Common cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *Yes. Portable ladders over cocks in engine room*
 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 *Suction pipe to fore hold*
 How are they protected *Wood casing*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *New 1876*
 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*

Thompson & 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 *Hedgeon* owned by *The General Steam Navigation Co*
 of the Port of *London* of *503.42* Tons Register, and *160* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Low Walker on Tyne*
 and found to be at this date, viz., *May 24th* 1876 in good order and safe working condition.

Survey fee *£3-3-0*
 Certificate *£5-0*
£3-8-0

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