

16832 Iron

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

No. *Two Inverted Cyl-Compound*
 Description *Hawthorn Compound by Palmer*
 Made by *1872 At Sarrow*
 When *26" x 31" Length of stroke 30"*
 Diameter of cylinder
 No. of revolutions per minute *60*
 Point of cut off *5/8 to 3/4 of stroke*
 Diameter of screw shaft *8 5/8*
 Diameter of crank shaft journals *all 8"*
 Diameter of screw, *or of paddle wheel 12 feet*
 Pitch of screw *14 inches rising to 18 ft*
 No. of blades, *4* Total surface *40 sq. feet*
 No. of bilge pumps *2* and sizes *4" dia, 18" stroke*
 Do they pump from each compartment *Engine Room only*

Are all the bilge suction pipes fitted with roses *Yes!*
 No. of feed pumps *2* and sizes *4" dia, 18" stroke*
 What gauges are there attached to the engines and boilers ... *1 on each Boiler - "Steam"*
1 in Engine Room "Vacuum"
1 in Stroke hole "Steam"
 Description and size of Donkey Pumps ... *Vertical double action 4 1/2" dia 8" stroke*
 Where do they pump from ... *Sea Engine room Belts & Tanks*
 No. of bilge injections *1* and sizes *6 1/2"*
 Are they connected to air, or circulating pumps *Circulating*
 Is there a hand pump in the engine room *No! donkey pump - 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!*

Report (if any) on Hull of Vessel.

MAIN BOILERS.

Number *Two* Description *Cylindrical horizontal*
 Made by *Palmer*
 When *1872 At Sarrow*
 Working pressure *75 lbs per sq. inch*
 + reported
 Tested by hydraulic pressure to *120 lbs*, Date *1872*
 Description of super-heating apparatus *Annular & vertical*
 Can each boiler be worked separately *Yes!*

Can the super-heater be shut off and the boilers worked separately *No!*
 Description and area of safety valves on each boiler ... *Two / Seven & Weight 19.2 sq. inch area*
 No. of square feet of fire-grate surface in each boiler *30.9 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 *Cylindrical, vertical*
 Where fixed *Main Deck*
 Working pressure *45 lbs per sq. inch*

Tested by hydraulic pressure to *70 lbs*, Date *1872*
 Description and area of safety valves *Seven & Weight 3.97 sq. inches*
 No. of square feet of fire grate *7.0 sq. feet*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *All except donkey sea tank & ash cock*
 Are they Kingston valves or common cocks ... *1 stop valve rest common - Cocks*
 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 *Yes!*
 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 *Sub. 29th 1876 now ruled Brass bushes fitted*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *all but Bilge suction which is secured by guard & padlock*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *No Tunnel*

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 *"Aurora"* owned by *London Steam Shipping Co Ltd* of the Port of *London* of *446* Tons Register, and *160* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *11th August 1876* in good order and safe working condition.

G. W. Mann
 Engineer Surveyor to Lloyd's Register of Shipping.

110/176.
 Cent written
 Feb.
 1.9.76.

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