

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 1/10/77

Comp. Description *Inverted, compound. Surface condensing*
 Made by *Baltic Engine Works*
 When *1877* At *Hull*
 Diameter of cylinder *17" x 34"* Length of stroke *26"*
 No. of revolutions per minute *82*
 Point of cut off *1/2 of stroke*
 Diameter of screw shaft *5 5/8"*
 Diameter of crank shaft journals *5 5/8"*
 Diameter of screw, or of paddle wheel *7 1/2"*
 Pitch of screw *11 1/6"*
 No. of blades, *4* Total surface
 No. of bilge pumps *One* and sizes *2 1/4" dia. 28" 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 *2 3/4" dia. 28" stroke*
 What gauges are there attached to the engines and boilers ... *One Steam gauge*
One Vacuum gauge
 Description and size of Donkey Pumps ... *Vertical; 5" dia. 6" stroke*
 Where do they pump from ... *From Bilge, and from Sea*
 No. of bilge injections *One* and sizes *3" valve*
 Are they connected to air, or circulating pumps *Circulating*
 Is there a hand pump in the engine room *No*
 Can it be worked by the main engines
 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 *Charles D. Halliday & Co*
 When *1877* At *Hull*
 Working pressure *70 lb p. squ. inch*
 Tested by hydraulic pressure to *140 lb*, Date *2. March 77*
 Description of super-heating apparatus *Vertical steam dome*
 Can each boiler be worked separately

Can the super-heater be shut off and the boilers worked separately
 Description and area of safety valves on each boiler *2 Luer Spring valves*
10, 59 sq. in.
 No. of square feet of fire-grate surface in each boiler *31, 5 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 *Yes*

DONKEY BOILER.

Description *Vertical*
 Where fixed *On deck*
 Working pressure *40 lb p. squ. inch*

Tested by hydraulic pressure to *80 lb*, Date *When new*
 Description and area of safety valves *Direct loaded; 4, 9 sq. in.*
 No. of square feet of fire grate *7 sq. ft.*

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 ... *Common cocks with guards*
 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 *None*
 Are they each fitted with a discharge valve on the plating of the vessel *Yes*

What pipes are carried through the bunkers *Donkey discharge*
 How are they protected *By casing*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *2nd, 12th & 16th of March 77*
 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 *No*

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 *Laimis* owned by *Rawson & Robinson*
 of the Port of *Hull* of *226* Tons Register, and *60* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Hull & Gable*
 and found to be at this date, viz., *September 28th 1877* in good order and safe working condition.

Amount of Fee for Survey ... £ : :

(Travelling Expenses, if any, £)

Engineer Surveyor to Lloyd's Register of Shipping.