

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

17886 Iron

ENGINES.

Description *Compound Inverted Surface Condensing*
 Made by *Messrs Albion, Rogers & Co*
 When *1870* At *Northfleet*
 Diameter of cylinder *2-12" & 2-34"* Length of stroke *24"*
 No. of revolutions per minute *About 70*
 Point of cut off *High Pressure 1/8 of stroke. Low Pressure 7/8 of stroke*
 Diameter of screw shaft *4"*
 Diameter of crank shaft journals *1 1/4"*
 Diameter of screw, ~~or of paddle wheel~~ *10.6"*
 Pitch of screw *14.0"*
 No. of blades, *3* Total surface *30 sq feet*
 No. of bilge pumps *2* and sizes *2 1/2 dia x 12 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 *2 1/2 dia x 12 stroke Single Acting*
 What gauges are there attached to the engines and boilers ... *1 Steam 1 Vacuum*
 Description and size of Donkey Pumps ... *2 1/2" dia x 9" stroke. Double Acting 2 1/2" " 3" x 8" Single Acting*
 Where do they pump from ... *hold, engine room & sea. No 2 has connection to sea only but is fitted with cock to which portable suction hose can be attached.*
 No. of bilge injections *1* and sizes *1 1/2" dia*
 Are they connected to air, or circulating pumps *Circulating pump*
 Is there a hand pump in the engine room *Donkey works by hand*
 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 *Hose about 50 ft long*

MAIN BOILERS.

Number *One* Description *Cyl. Multitubular*
 Made by *Blair & Co*
 When *1872* At *Stockton on Tees*
 Working pressure *87 lbs*
 Tested by hydraulic pressure to *Not Ascertained* Date *—*
 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 *Yes*
 Description and area of safety valves on each boiler *Levee and weight one on boiler Area 17 1/2 sq in*
 No. of square feet of fire-grate surface in each boiler *39 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. *All except suction pipes & roses in hold when ship is loaded*

DONKEY BOILER.

Description *Flat sided. Semicircular top & bottom. Multitubular*
 Where fixed *On deck*
 Working pressure *34 lbs*

Tested by hydraulic pressure to *Not Ascertained* Date *—*
 Description and area of safety valves *Safety Spring 2 1/2 dia. 11 lb net weight 3 dia. total area 12 sq in.*
 No. of square feet of fire grate *13.75 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 *No*
 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 *January 1874*
 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 *Kirkcaldy* owned by *London & Edinburgh Steam Ship Co* of the Port of *London* of *298* Tons Register, and *40* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *15th January 1874* in good order and safe working condition.

Amount of Fee for Survey ... £ : :
 (Travelling Expenses, if any, £ : :)

Engineer Surveyor to Lloyd's Register of Shipping.