

14796 Iron.

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE.

ENGINES.

Description *Compound Inverted Direct Acting*
 Made by *Hawthorn, Compounded by Victoria Works Engine Works*
 In the year *1863 - Compounded 1875*
 Present condition *Good*
 Diameter of cylinders *26" and 31"*
 Length of stroke *24-6*
 No. of revolutions per minute *About 65*
 Point of cut off *5/8th of stroke. Adjustable*
 Paddle, or Screw *Screw*
 Nominal Horse Power *99*
 Diameter of screw, or of paddle wheel *11/6"*
 Pitch of screw *15 5/16*
 No. of blades, *3* total surface *"*
 No. of bilge pumps *2* and size *4" dia 18" Stroke Single Acting*
 Do they pump from each compartment *From Engine room only*
 Is there provision made for pumping from the wings of the stoke hole } *From Centre only*

Are all the bilge suction pipes fitted with roses *Yes*
 What vacuum and steam gauges are there attached to the engines and boilers } *2 Pressure gauges in engine room 1 on Superheater. 1 Vacuum gauge*
 No. of feed pumps *2* and sizes *4" dia 18" Stroke Single acting*
 Description and size of } *1 Vertical Double acting Pump 4" dia 8" Stroke Donkey Engines. 1 Vertical Double acting Pump 7" dia 14" Stroke to pump from engine room and ballast tanks*
 Will it feed the boilers, pump from the bilges, and pump on deck } *Yes*
 Can it be driven by steam from a separate boiler } *No*
 No. of bilge injections *None* and sizes *"*
 Are they fitted with non return valves *"*
 Is there a hand pump in the engine room } *No. The donkey can be used as such*
 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*

CONNECTIONS ON HULL.

Are all connections with the sea direct on the skin of the ship } *Yes*
 Are they Kingston valves or common cocks } *Kingstons on Starboard side the others Common cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehole plates } *All except ash cock*
 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*

Are any pipes carried through the bunkers } *No*
 If so state how protected *"*
 When was the stern tube, propellor, screw shaft, and all connections examined in dry dock } *18/5. Saw screw shaft in 18/5*
 How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge } *By an efficient arrangement of cocks and non return valves*
 Have the bilge suctions non-return valves fitted or not } *Fitted on donkey bilge suction only*

BOILERS.

Number *Two*
 Description *Annular Multitubular*
 Made by *Victoria Works Engine Works*
 In the year *1875*
 Present condition *Good*
 When last extensively repaired *"*
 Working pressure *75 lbs*
 When tested by Hydraulic pressure *18/5*
 To what pressure tested *Reported to be 120 lbs*
 Any super-heating apparatus *Yes*
 Describe it *Annular*
 Can each boiler be worked separately } *Yes*
 Is each boiler fitted with a separate steam gauge } *Yes*

Can the super-heater be shut off and the boilers worked separately } *No*
 No. of safety valves on each boiler *2 and 1 on Superheater*
 Description and area of each safety valve } *See 7. weight 1/2 dia Area 9.6 Superheater valve 2 1/2 dia Area 3.98*
 No. of square feet of fire-grate surface in each boiler } *33.75 sq. feet*
 Is there a separate blow off and brine cock on each boiler, independent of those on the vessel's skin } *Yes*
 Is the screw shaft tunnel water tight and fitted with a sluice door on bulkhead } *No tunnel*
 Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times } *Yes*

Victoria Dock Engine Works
E. Fenwick

I hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *John McArthur* owned by *Messrs Cory & Son* of the Port of *London* of *984* Tons Register, and *99* Nominal Horse Power, have been carefully inspected and examined by *me* at *Victoria Dock, London* and found to be at this date, viz., *15th July 1875* in good order and safe working condition.

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