

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE, & REPORT.

ENGINES.

Description *Inverted Compound surface Condensing.*
 Made by *Messrs. Thomson & Co. Newcastle*
 In the year *1875*
 Present condition *good*
 Diameter of cylinder *HP 33, LP 62,*
 Length of stroke *36,*
 No. of revolutions per minute *60, - 65*
 Point of cut off *5/8 of stroke,*
 Paddle, or Screw *Screw,*
 Nominal Horse Power *160,*
 Diameter of screw, or of paddle wheel *14.3,*
 Pitch of screw *17 to 18.6,*
 No. of blades, *4* total surface *74 sq. feet,*
 No. of bilge pumps *2* and size *4 1/2 x 20 stroke single acting,*
 Do they pump from each compartment *yes,*
 Is there provision made for pumping } *yes,*
 from the wings of the stoke hole }

Are all the bilge suction pipes fitted with roses *yes,*
 What vacuum and steam gauges are there attached to the engines and boilers } *1 vacuum gauge in engine room*
1 steam gauge on each boiler in stokehole,
 No. of feed pumps *2* and sizes *4 1/2 x 20 single acting*
 Description and size of } *Inverted cyl 6" dia x 5" stroke*
 Donkey Engine... } *Pump 4 " x 5 " double acting,*
 Will it feed the boilers, pump from the bilges, and pump on deck } *yes,*
 Can it be driven by steam from a separate boiler } *yes,*
 No. of bilge injections *one* and sizes *3 1/4 dia. (to Air pump)*
 Are they fitted with non return valves *It is a Cock. on eduction pipe*
 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,*

CONNECTIONS ON HULL.

Are all connections with the sea direct on the skin of the ship } *yes,*
 Are they Kingston valves or common cocks *Common valves & Cocks,*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehole plates } *No, next skin*
 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 } *new,*
 How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge } *Shell cocks with only 1 port in side of plug,*
 Have the bilge suction non-return valves fitted or not } *not fitted,*

BOILERS.

Number *Two,*
 Description *Cylindrical,*
 Made by *Messrs. Thomson & Co. Newcastle,*
 In the year *1875,*
 Present condition *good,*
 When last extensively repaired *new,*
 Working pressure *65 lbs. per sq. inch,*
 When tested by Hydraulic pressure *May 1875,*
 To what pressure tested *130 lbs. per sq. inch,*
 Any super-heating apparatus *None,*
 Describe it _____
 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. of safety valves on each boiler *2,*
 Description and area of each safety valve *Spring. 4" dia = 12.5 sq. in.*
 No. of square feet of fire-grate surface in each boiler } *49 1/2,*
 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. engines in aft end of ship, sluice door fitted,*
 Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times } *yes,*

Thompson & Co Manufacturer.

I hereby certify that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel *"Martin"* owned by *General Steam Navigation Co.,* of the Port of *London* of *160* Tons Register, and *160* Nominal Horse Power, have been carefully inspected and examined by *me* at *Northumberland Dock, n.s.* and found to be at this date, viz., *August 26th 1875* in good order and safe working condition.

William Allison,
 Engineer Surveyor to Lloyd's Register of Shipping.