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LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE.

ENGINES.

Description *Inverted Compound Surface Condensing*
 Made by *G. Clark*
 In the year *1875*
 Present condition *new*
 Diameter of cylinders *H.P. 32", L.P. 62"*
 Length of stroke *36"*
 No. of revolutions per minute *66 (about)*
 Point of cut off *9th 21" (expansion valve fitted)*
 Paddle, or Screw *screw*
 Nominal Horse Power *160*
 Diameter of screw, or of paddle wheel *13 ft.*
 Pitch of screw *12 to 18 feet*
 No. of blades, *4* total surface *51 sq. ft.*
 No. of bilge pumps *2* and size *5 1/2 x 18 stroke single acting*
 Do they pump from each compartment *yes*
 Is there provision made for pumping from the wings of the stoke hole *yes*

Are all the bilge suction pipes fitted with roses *yes pipes perforated*
 What vacuum and steam gauges are there attached to the engines and boilers *1 vacuum & 1 steam in engine room, 1 steam to each boiler in stoke hole*
 No. of feed pumps *2* and sizes *5 1/2 dia x 18 stroke single acting*
 Description and size of Donkey Engine... *Cyl 8" dia x 6" stroke Pump 4" dia x 6" 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 by Donkey boiler*
 No. of bilge injections *1* and sizes *3 1/2" Circulating pump*
 Are they fitted with non return valves *yes*
 Is there a hand pump in the engine room *yes*
 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 from the stokehole plates *no*
 Are the discharge pipes above or below the deep water line *Just under main deck at deep load line*
 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 *yes*
 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 *Water can be run into ship by opening sea cock to Donkey or bilge pumps, whilst the valves to bilge suction are open. (see sketch)*
 Have the bilge suction non-return valves fitted or not *none*

BOILERS.

Number *2*
 Description *Cylindrical*
 Made by *G. Clark*
 In the year *1875*
 Present condition *good*
 When last extensively repaired *new*
 Working pressure *70 lbs per sq. inch*
 When tested by Hydraulic pressure *1874*
 To what pressure tested *140 lbs per sq. inch*
 Any super-heating apparatus *none*
 Describe it *yes*
 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 *yes*
 No. of safety valves on each boiler *1 low weight*
 Description and area of each safety valve *low weight 5 1/2 dia = 23.8 sq. inches*
 No. of square feet of fire-grate surface in each boiler *4.5 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 *yes*
 Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times *yes*

G. Clark Manufacturer.
G. Clark

I hereby certify that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel *"Bermuda"* owned by *Quebec & Gulf Ports Steam Shipping Co.* of the Port of *Quebec* of *746* Tons Register, and *160* Nominal Horse Power, have been carefully inspected and examined by *me* at *Sunderland* and found to be at this date, viz., *May 12th 1875* in good order and safe working condition.

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