

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE, & REPORT.

ENGINES.

Description *Inverted Vertical Acting Compound*
 Made by *Clark & Co. Newcastle*
 In the year *1874*
 Present condition *Good*
 Diameter of cylinders *33" & 64"*
 Length of stroke *45"*
 No. of revolutions per minute *About 83*
 Point of cut off
 Paddle, or Screw *Screw*
 Nominal Horse Power *180*
 Diameter of screw, or of paddle wheel *15 ft*
 Pitch of screw *1 1/4"*
 No. of blades, *4* total surface
 No. of bilge pumps *2* and size *6" dia 22 1/2" 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*
 What vacuum and steam gauges are there attached to the engines and boilers *4 Steam 1 Vacuum*
 No. of feed pumps *2* and sizes *6" dia 22 1/2" Stroke*
 Description and size of Donkey Engine... *Double Acting Cyl 8" dia 12" Stroke Pump 4" dia 12" Stroke*
 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 *1* and sizes *4" dia*
 Are they fitted with non return valves *Yes*
 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*

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 Cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehole plates *No*
 Are the discharge pipes above or below the deep water line *Below*
 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 *1875*
 How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Efficient Arrangement*
 Have the bilge suction non-return valves fitted or not *Non return valves fitted*

BOILERS.

Number *Two*
 Description *Round Multitubular*
 Made by *Clark & Co.*
 In the year *1874*
 Present condition *Good*
 When last extensively repaired
 Working pressure *70 lbs*
 When tested by Hydraulic pressure *1874*
 To what pressure tested *100 lbs. Reported to be*
 Any super-heating apparatus *No*
 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. Low weight 4 3/4" dia*
 Description and area of each safety valve *Area 17 1/2*
 No. of square feet of fire-grate surface in each boiler *48 Sq. Ft.*
 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*

Manufacturer.

I hereby certify that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~)
 Steam Vessel *Ulrico* owned by *Nelson, Worskin & Co*
 of the Port of *London* of *1963* Tons Register, and *180* Nominal Horse Power,
 have been carefully inspected and examined by me at *Victoria Dock London* and found to be
 at this date, viz., *25th Aug - 1875* in good order and safe working condition.

Engineer Surveyor to Lloyd's Register of Shipping.