

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted*
 Made by *Palmer & Co*
 When *1870* At *Newcastle*
 Diameter of cylinder *30 1/2* Length of stroke *33*
 No. of revolutions per minute *65*
 Point of cut off *Not ascertained*
 Diameter of screw shaft *9 1/2*
 Diameter of crank shaft journals *9 1/2*
 Diameter of screw, ~~of paddle wheel~~ *13*
 Pitch of screw *16*
 No. of blades, *4* Total surface *43 ft.*
 No. of bilge pumps *2* and sizes *6 x 7 1/2*
 Do they pump from each compartment *8 Room*

Are all the bilge suction pipes fitted with roses *yes*
 No. of feed pumps *2* and sizes *5 x 10*
 What gauges are there attached to the engines and boilers ... *2 Steam to boilers*
1 Comp 1 Vacuum
 Description and size of Donkey Pumps ... *(1) S. A. 4 x 6*
(2) S. A. 8 x 12
 Where do they pump from ... *(1) Sea & bilge*
(2) Tank & bilge
 No. of bilge injections *one* and sizes *6 1/4*
 Are they connected to air, or circulating pumps *Air.*
 Is there a hand pump in the engine room *no*
 Can it be worked by the main engines *yes*
 Is there a deck hose of sufficient length to reach to any part of the vessel *yes*

MAIN BOILERS.

Number *Two* Description *Cylindrical*
 Made by *Victoria & E. W. Co*
 When *1878* At *London*
 Working pressure *75 lb*
 Tested by hydraulic pressure to *150 lb*, Date
 Description of super-heating apparatus *none*
 Can each boiler be worked separately *yes*

Can the super-heater be shut off and the boilers worked separately *none fitted*
 Description and area of safety valves on each boiler ... *2 Adams Spring*
3 1/2 dia
 No. of square feet of fire-grate surface in each boiler
 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. *yes*

DONKEY BOILER.

Description *Vertical*
 Where fixed *Deck*
 Working pressure *45 lb*

Tested by hydraulic pressure to *not known*
 Description and area of safety valves *Dead weight*
2 1/4 ins dia
 No. of square feet of fire grate

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *except circulating*
water
 Are they Kingston valves or common cocks ... *Values & Cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *yes*
 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*

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 *at this Survey*
 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 tunnel*

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 *Cornwall* owned by *J. Hurwich & Co* of the Port of *London* of *697* Tons Register, and *190* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *March 15* 18 *78* in good order and safe working condition.

Amount of Fee for Survey ... *See attached Report*
 (Travelling Expenses, if any, £)

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