

# S. S. "Mary" 22840 Iron.

## LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

### ENGINEER SURVEYOR'S REPORT ON MACHINERY.

#### ENGINES.

Description *Compound, Inverted, Surface Condensing*  
 Made by *J. Richardson & Sons*  
 When *April 18/91* At *Hartlepool*  
 Diameter of cylinder *25" - 48"* Length of stroke *33"*  
 No. of revolutions per minute *About 65*  
 Point of cut off *1/2 stroke*  
 Diameter of screw shaft *8 1/4"*  
 Diameter of crank shaft journals *8 1/4" Tunnel shaft 3 1/4" dia*  
 Diameter of screw, or of paddle wheel *11.6"*  
 Pitch of screw *15:0*  
 No. of blades, *4* Total surface *34 sq feet*  
 No. of bilge pumps *1* and sizes *3 3/4 x 33 1/2" Single Acting*  
 Do they pump from each compartment *From engine room only*  
 Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *1* and sizes *3 3/4 x 33 1/2" Single Acting*  
 What gauges are there attached to the engines and boilers... *Two steam*  
 Description and size of Donkey Pumps... *One double acting donkey Pump 6 1/2" dia x 10" stroke*  
 Where do they pump from... *From ballast tanks and engine room*  
 No. of bilge injections *1* and sizes *3 1/2"*  
 Are they connected to air, or circulating pump *Circulating Pump*  
 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*

#### MAIN BOILERS.

Number *One* Description *Cylindrical, Multitubular*  
 Made by *J. Richardson & Sons*  
 When *January 18/99* At *Hartlepool*  
 Working pressure *40 lbs per sq. inch*  
 Tested by hydraulic pressure to *140 lbs*, Date *23/12/98*  
 Description of super-heating apparatus *None*  
 Can each boiler be worked separately *Only one boiler in ship*  
 Can the super-heater be shut off and the boilers worked separately *No superheater*  
 Description and area of safety valves on each boiler... *Two spring valves. Combined area 30 sq in*  
 No. of square feet of fire-grate surface in each boiler *444 sq feet*  
 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, Water tubes in furnaces*  
 Where fixed *On deck*  
 Working pressure *66 lbs. Certified Pressure 40 lbs*  
 Made by *M. Porter, Stockton*  
 Tested by hydraulic pressure to *140 lbs per sq. inch*, Date *9/9/98*  
 Description and area of safety valves *Two - One - Combined area 9.25 sq in*  
 No. of square feet of fire grate *17.42 sq feet*

#### PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *Yes*  
 Are they Kingston valves or common cocks... *Stop valves and 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 *Yes*  
 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 *None*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *January 18/99*  
 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 *Tunnel not watertight Sluice door fitted*

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 *Mary* owned by *Johnston & Sons*  
 of the Port of *Montrose* of *248* Tons Register, and *96* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Hartlepool, West Hartlepool*  
 and found to be at this date, viz., *12th February 1899* in good order and safe working condition.

Amount of Fee for Survey ... £ ...

(Travelling Expenses, if any, £ ...)

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

West Hartlepool