

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Description *Compound Inverted Two Cylinders*  
 Made by *Palmer & Coys*  
 When *May* 18*84* At *Newcastle*  
 Diameter of cylinder *25" x 50"* Length of stroke *33"*  
 No. of revolutions per minute *65*  
 Point of cut off *1/2 stroke*  
 Diameter of screw shaft *8 1/2"*  
 Diameter of crank shaft journals *9"*  
 Diameter of screw, *and paddle wheel* *12 feet*  
 Pitch of screw *15 feet*  
 No. of blades, *(14)* Total surface *36 sq feet*  
 No. of bilge pumps *(2)* and sizes *6" dia 6" stroke*  
 Do they pump from each compartment *Engine room & stoke hold - only*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *(2)* and sizes *5" dia 10" stroke*  
 What gauges are there attached to the engines and boilers ... *1 Steam on Boilers, 1 Safety " Engine room, 1 Vacuum on Engines*  
 Description and size of Donkey Pumps ... *No 1 = 8" dia, 12" stroke D.A. No 2 = 4" dia 8" stroke D.A.*  
 Where do they pump from ... *No 1 from Sea, Bilge & Tanks, No 2 " Sea, Bilge & Stores*  
 No. of bilge injections *(1)* and sizes *5" dia*  
 Are they connected to air, or circulating pumps *circulating*  
 Is there a hand pump in the engine room *No No 2 donkey - used instead*  
 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*

### MAIN BOILERS.

Number *1* Description *Cylindrical tubular*  
 Made by *Palmer & Coys*  
 When *Dec* 18*86* At *Newcastle*  
 Working pressure *67 1/2 lbs per sq inch*  
 Tested by hydraulic pressure to *130*, Date *Nov 1886*  
 Description of super-heating apparatus *None*  
 Can each boiler be worked separately *one boiler only*

Can the super-heater be shut off and the boilers worked separately *None*  
 Description and area of safety valves on each boiler ... *Two spring safety valves 4 1/2" dia each, 31.8 sq inch area*  
 No. of square feet of fire-grate surface in each boiler *66*  
 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 *Tubular cylindrical, 2 cross W. tubes*  
 Where fixed *Upper Deck*  
 Working pressure *55 lbs per sq inch*

Tested by hydraulic pressure to *120 lbs*, Date *24 Dec 86*  
 Description and area of safety valves *Two 1 1/2" dia 3.9 sq inch area*  
 No. of square feet of fire grate *9.6 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 ... *one Stop Valve rest are common cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *all except Ballast cock & No 2 donkey sea cock*  
 Are the discharge pipes above or below the deep water line *All except Air pump - discharge pipes*  
 Are they each fitted with a discharge valve on the plating of the vessel *all except Air pump discharge valve, about 5 feet from ship's side*

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 *November 1886*  
 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. *of New-Main Boiler*

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 *"Lloyds"* owned by *Messrs Dixon & Harris* of the Port of *London* of *155 5/8* Tons Register, and *160* Registered Horse Power, and that they have been carefully inspected and examined by me at *London & Wallsend* and found to be at this date, viz., *December 16<sup>th</sup>* 18*86* in good order and safe working condition.

Amount of Fee for Survey ... £ *see*  
 (Travelling Expenses, if any, £ *see*)

*George W. Mansel*  
 Engineer Surveyor to Lloyd's Register of Shipping.  
*North Shields*