

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Description *Compound*  
 Made by *Messrs John Elder & Coys*  
 When *1878* At *Glasgow*  
 Diameter of cylinder *34 1/2 x 48 3/4* Length of stroke *60"*  
 No. of revolutions per minute *37*  
 Point of cut off *.6*  
 Diameter of ~~shaft~~ *Paddle* *16 1/2"*  
 Diameter of crank shaft journals *15"*  
 Diameter ~~of~~ of paddle wheel *14 ft*  
 Pitch of ~~blades~~ *Wheels*  
 No. of blades, *9* Total surface *256 1/2 ft*  
 No. of bilge pumps *Three* and sizes *6" dia x 20" stroke*  
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *Two* and sizes *6" dia x 20" stroke*  
 What gauges are there attached to the engines and boilers ... *Five Steam, One Vacuum & One Compound*  
 Description and size of Donkey Pumps ... *Double Acting*  
 Where do they pump from ... *From the sea, bilge and Hotwell*  
 No. of bilge injections *One* and sizes *6"*  
 Are they connected to air, or circulating pumps *Circulating*  
 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 *Four* Description *Round Horizontal*  
 Made by *John Elder & Coys*  
 When *1878* At *Glasgow*  
 Working pressure *80 lbs*  
 Tested by hydraulic pressure to *160 lbs*, Date *January 23<sup>rd</sup> 1878*  
 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  
 Description and area of safety valves on each boiler *Two Direct Spring, each 12.5" area & Two 10.32" area*  
 No. of square feet of fire-grate surface in each boiler *48 ft. in each of two boilers & 36 ft. in each of the other two*  
 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 *Round Vertical*  
 Where fixed *Between Forward Boilers*  
 Working pressure *80 lbs*

Tested by hydraulic pressure to *160 lbs*, Date *Jan'y 23<sup>rd</sup> 1878*  
 Description and area of safety valves *Direct Spring 7" area*  
 No. of square feet of fire grate *4.6 ft.*

### 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 ... *Screw down Valves & Cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *All fitted above the turn of the bilge*  
 Are the discharge pipes above or below the deep water line *Above*  
 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 pipes~~ *Cocks & Valves* examined in dry dock *On the previous being launched*  
 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*

By *John Elder & Coys* Manufacturer.  
*Archd. D. Ryrie*

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the *Steel* *Brighton* (or *Wood*)  
*Brighton* (or *Paddle*) Steam Vessel owned by *The London, Brighton & South Coast Railway Coys*  
 of the Port of *Newhaven* of *315.8* Tons Register, and *300* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Glasgow*  
 and found to be at this date, viz., *March 15<sup>th</sup> 1878* in good order and safe working condition.

Amount of Fee for Survey ... £15:-- paid  
 (Travelling Expenses, if any, £)

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