

LOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 4/10/77

Description *2 Cylindric Compound Inverted S.C*  
 Made by *North Eastern Marine Eng. Works Coy*  
 When *Sept 7<sup>th</sup> 1877* At *Sunderland*  
 Diameter of cylinder *27" x 50"* Length of stroke *33"*  
 No. of revolutions per minute *60*  
 Point of cut off *half stroke*  
 Diameter of screw shaft *9"*  
 Diameter of crank shaft journals *9 1/2"*  
 Diameter of screw, or of paddle wheel *12 ft. 0"*  
 Pitch of screw *14 ft. 0"*  
 No. of blades, *(14)* Total surface *47 sq. feet*  
 No. of bilge pumps *(12)* and sizes *3" dia 33" stroke*  
 Do they pump from each compartment *left hold. Well & -  
- Eng. mid room*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *(12)* and sizes *3" dia 33" stroke*  
 What gauges are there attached to the engines and boilers ... *1 Steam each Boiler, 1 Safety Valve, 1 Vacuum Gauge*  
 Description and size of Donkey Pumps ... *(Ballast) 6" dia 9" stroke D.A. (Boiler) 4" dia 6" stroke D.A.*  
 Where do they pump from ... *Tanks Sea, Engine room & aft Well*  
 No. of bilge injections *(1)* and sizes *3"*  
 Are they connected to air, or circulating pumps *Circulating*  
 Is there a hand pump in the engine room *No. Boiler working*  
 Can it be worked by the main engines - *can be used*  
 Is there a deck hose of sufficient length to reach to any part of the vessel? *Yes*

MAIN BOILERS.

Number *Two* Description *Cylindrical tubular*  
 Made by *North E. M. & Works Coy.*  
 When *Sept 7<sup>th</sup> 1877* At *Sunderland*  
 Working pressure *70 lbs per sq. inch*  
 Tested by hydraulic pressure to *140 lbs*, Date  
 Description of super-heating apparatus *None Steam Domes*  
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately? *No Superheaters*  
 Description and area of safety valves on each boiler ... *(2) on each Boiler with safety valve on each boiler 3" dia = 16.5 sq. in*  
 No. of square feet of fire-grate surface in each boiler *24 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 Cylindrical 3 cross tubes*  
 Where fixed *Stoke hold*  
 Working pressure *50 lbs per sq. inch*  
*made by Clarke Chapman & Burney Gateshead*

Tested by hydraulic pressure to *110 lbs repeated*, Date *14 June 77*  
 Description and area of safety valves *(1) dead weight 2 3/4" dia = 5.9 sq. in*  
 No. of square feet of fire grate *10.5 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 ... *2 Stop Valves rest on common Cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *all except firemans ash Cocks about level of stokehold plates*  
 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? *None*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock? *Aug 6<sup>th</sup> 77*  
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge? *Yes by non return Valves*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead? *Yes*

*Pro N.E. M. Eng. Co. (Ld)* 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 *"Lady Bertha"* owned by *Richard Power & Co*  
 of the Port of *Swansea* of *459.85* Tons Register, and *98* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Sunderland & Mallow on 4<sup>th</sup> Sept.*  
 and found to be at this date, viz., *Sept 2<sup>nd</sup> 1877* in good order and safe working condition.

Amount of Fee for Survey ... £ *4:10:0*  
 Travelling Expenses, if any, £ *0:5:0*  
 Recd by me *George W. Manuel*  
 29/9/77

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

Port of Swansea  
 Register of Vessels  
 Report (if any)

Date of survey

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