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# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

*Rev 28/2/78*

Report (if any) on Hull of Vessel. Port *Hamburg*. No. *222*.

Description *Compound inverted direct acting*  
 Made by *Humphrey & Pearson*  
 When *18 72* At *Hull*  
 Diameter of cylinder *27" x 52"* Length of stroke *33"*  
 No. of revolutions per minute *65 to 68*  
 Point of cut off *halfstroke*  
 Diameter of screw shaft *7"*  
 Diameter of crank shaft journals *8 3/4"*  
 Diameter of screw, or of paddle wheel *9" - 8"*  
 Pitch of screw *—*  
 No. of blades, *4* Total surface *—*  
 No. of bilge pumps *2* and sizes *5 1/4" diam 9" stroke*  
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *2* and sizes *diam 5 1/4" 9" stroke*  
 What gauges are there attached to the engines and boilers ... *Gablers Piston*  
 Description and size of Donkey Pumps ... *2 Cylinder stroke Pump 14" x 10" 10" diam 8" x 8" 6" diam*  
 Where do they pump from ... *from Bilge Sea and Tanks to Boiler on deck and overboard*  
 No. of bilge injections *1* and sizes *3/4"*  
 Are they connected to air, or circulating pumps *yes*  
 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 *2* Description *horizontal tubular*  
 Made by *Humphrey & Pearson*  
 When *18 72* At *Hull*  
 Working pressure *65 lbs.*  
 Tested by hydraulic pressure to *130 lbs.*, 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 *no*  
 Description and area of safety valves on each boiler ... *2 lever loaded 3/4" each*  
 No. of square feet of fire-grate surface in each boiler *41,20 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 with 4 galloway tubes*  
 Where fixed *on deck*  
 Working pressure *45 lbs.*

Tested by hydraulic pressure to *90 lbs.*, Date *18 74*  
 Description and area of safety valves *2 lever loaded diam 2 1/2" and 3 1/8"*  
 No. of square feet of fire grate *7,40 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 ... *cocks and common valves*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *The valves are the cocks not*  
 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 stern tube, propeller, screw shaft, and all connections examined in dry dock *15<sup>th</sup> Febr 18 78*  
 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 *yes*

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 *"Germania"* owned by *H. V. Perlbach & Co* of the Port of *Hamburg* of *530, 12* Tons Register, and *110* H.P. Registered Horse Power, and that they have been carefully inspected and examined by me at *Hamburg* and found to be at this date, viz., *16<sup>th</sup> Febr* 18 *78* in good order and safe working condition.

Amount of Fee for Survey ... £ *3 : 3 : 0*

(Travelling Expenses, if any, £ *—*)

*H. V. Perlbach*  
Engineer Surveyor to Lloyd's Register of Shipping.