

18052 *Ln*

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

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

## ENGINES.

*Rev 26/3/77*

Description *compound direct acting, H.P. cyl. on top of L.P.* Are all the bilge suction pipes fitted with roses *yes*  
 Made by *Henderson Coulborne & Co.* No. of feed pumps *2* and sizes *6" dia. x 11" stroke*  
 When *1872* At *Renfrew* What gauges are there attached to the engines and boilers ... *Bourdon's patent*  
 Diameter of cylinders *30" x 60"* Length of stroke *4'-0" (4 cyls)* Description and size of Donkey Pumps ... *direct acting inner D. steam cyl 9" dia x 9" stroke; pump doubling 5" dia x 9" stroke*  
 No. of revolutions per minute *45* Where do they pump from *from each compartment*  
 Point of cut off *half stroke*  
 Diameter of screw shaft *11 1/2"*  
 Diameter of crank shaft journals *12 1/2"*  
 Diameter of screw, ~~or of paddle wheel~~ *17'-0"*  
 Pitch of screw *24'-0" mean*  
 No. of blades, *4* Total surface *—*  
 No. of bilge pumps *2* and sizes *6" dia. x 11" stroke*  
 Do they pump from each compartment *yes*

## MAIN BOILERS.

Number *2* Description *cyl. tubular, double ended.* Can the super-heater be shut off and the boilers worked separately? *no*  
 Made by *Henderson Coulborne & Co.* Description and area of safety valves on each boiler *2 lever loaded each 6" dia. 56.5 sq" total area*  
 When *1872* At *Renfrew* No. of square feet of fire-grate surface in each boiler *78 sq feet.*  
 Working pressure *60 lbs* Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin? *yes*  
 Tested by hydraulic pressure to *120 lbs*, Date *20th March 1876* Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times? *yes*  
 Description of super-heating apparatus *horizontal cylindrical steam chamber surrounded by uptake*  
 Can each boiler be worked separately *yes*

## DONKEY BOILER.

Description *vertical, cylindrical, uptake through steam space.* Tested by hydraulic pressure to *80 lbs*, Date *26th Sept. 76*  
 Where fixed *in fore stoke hole* Description and area of safety valves *one valve direct loaded 3" dia 7 sq" area*  
 Working pressure *40 lbs* No. of square feet of fire grate *14.7 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 ... *common cocks & screw valves for circ. pump*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *most of them*  
 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 *main & donkey steam pipes*  
 How are they protected *by 3" iron casing, strengthened by angle iron*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock? *10th & 12th March 1877*  
 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? *not water tight but fitted in water tight sluice door in bulkhead.*

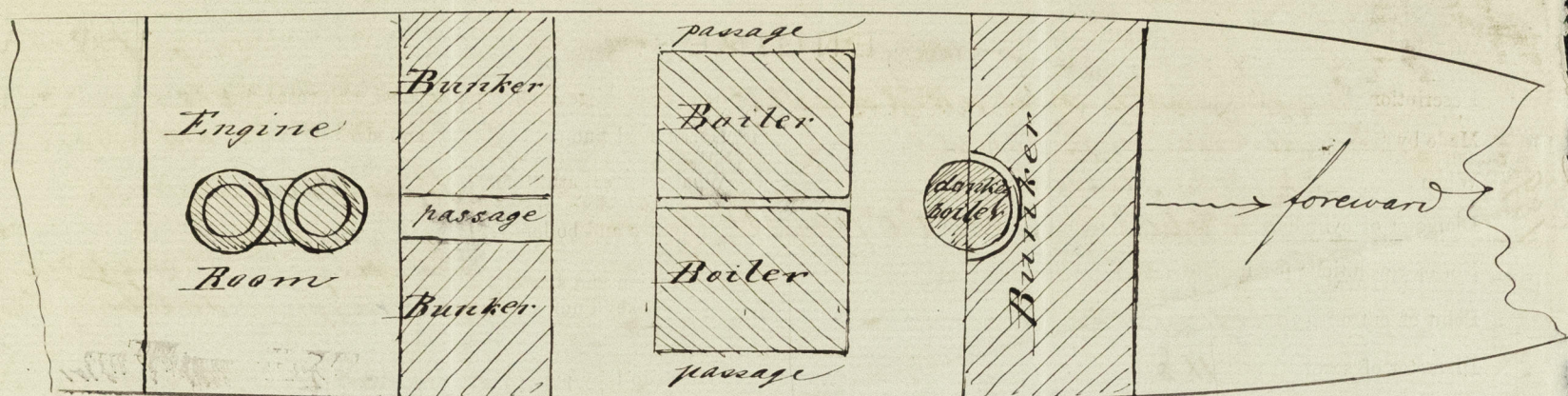
Manufacturer.

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 "*Galatea*" owned by *the Deutsche Dampfschiffs-Mederei*  
 of the Port of *Hamburg* of *1200* Tons Register, and *300* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Hamburg*  
 and found to be at this date, viz., *20th March* 18 *77*. in good order and safe working condition.

Amount of Fee for Survey ... £ *10 : 0 : 0*.(Travelling Expenses, if any, £ *—*)

Engineer Surveyor to Lloyd's Register of Shipping.





*Arrangement of Bunkers.*