

16457 Iron

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

Rev 5/6/76

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

## ENGINES.

Description *Inverted Compound, Surface Condensing*  
 Made by *Messrs Blair & Co*  
 When *May* 1876 At *Stockton*  
 Diameter of cylinder *3 1/2 x 59* Length of stroke *36*  
 No. of revolutions per minute *65*  
 Point of cut off *1/2 stroke*  
 Diameter of screw shaft *10 1/4*  
 Diameter of crank shaft journals *10 1/4*  
 Diameter of screw, or of paddle wheel *13 6*  
 Pitch of screw *14 feet*  
 No. of blades, *4* Total surface *48 sq. feet*  
 No. of bilge pumps *2* and sizes *4 dia x 26 stroke single acting*  
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *2* and sizes *4 dia x 26 stroke single acting*  
 What gauges are there attached to the engines and boilers ... *1 vacuum gauge on Condenser & 1 steam on each boiler in stokehole & 1 in the engine room*  
 Description and size of Donkey Pumps ... *2 inverted double acting. Large one 7 1/2 dia x 9 stroke. Small one 4 dia x 8 stroke. The large one draws from the tanks & bilges. Small one from sea. Both*  
 Where do they pump from ... *and bilges*  
 No. of bilge injections *one* and sizes *4 1/2 dia*  
 Are they connected to air, or circulating pumps *to Circulating pumps*  
 Is there a hand pump in the engine room *No. (Donkey can be used)*  
 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 *2* Description *Cylindrical & Multitubular*  
 Made by *Messrs Blair & Co*  
 When *May* 1876 At *Stockton*  
 Working pressure *75 lbs per sq. inch*  
 Tested by hydraulic pressure to *150 lbs*, Date *April 20/76*  
 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 ... *2 spring valves 3 1/4 dia = 16 1/2 sq. ins area*  
 No. of square feet of fire-grate surface in each boiler *30 1/2*  
 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 (except the bilge suction of the fore hold when filled)*

## DONKEY BOILER.

Description *Upright Cyl. with 3 water tubes across flame box* Tested by hydraulic pressure to *150 lbs per sq. inch*, Date *April 7/76*  
 Where fixed *in the stokehole*  
 Working pressure *65 lbs per sq. inch*  
 Description and area of safety valves *2 loaded with 2 1/2 dia = 9.8 area*  
 No. of square feet of fire grate *15 3/4*

## 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 stop valves & cocks*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *yes*  
 Are the discharge pipes above or below the deep water line *at the deep load line*  
 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 *new*  
 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 & shell cock*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *yes*

*Robt Blair & Co*  
*J W Blair*

Manufacturer. *except the donkey boiler*

*I was present when the steam was raised and the Engines worked steam 75 lbs. vacuum 28 in. revs 68 all worked satisfactory. May 6<sup>th</sup> 76 W. A.*

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 *Teal* owned by *The General S. N. Co.*  
 of the Port of *London* of *538.28* Tons Register, and *135* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Stockton*  
 and found to be at this date, viz., *May 19<sup>th</sup>* 1876. in good order and safe working condition.

Survey fee *6.15.0*  
 Certificate *5.0*

*4.0.0*

Received at Hartlepool

Engineer Surveyor to Lloyd's Register of Shipping.