

19390 Iron.  
**LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.**

**ENGINEER SURVEYOR'S REPORT ON MACHINERY.**

**ENGINES.**

*Rec 11/10/77*

Description *Inverted diagonal.*  
 Made by *C. & W. Earle*  
 When *1856* At *Hull*  
 Diameter of cylinder *37 1/4"* Length of stroke *30"*  
 No. of revolutions per minute *68*  
 Point of cut off *1/2 of stroke.*  
 Diameter of screw shaft *7 1/2"*  
 Diameter of crank shaft journals *9"*  
 Diameter of screw, ~~of paddle wheel~~ *10" 0"*  
 Pitch of screw *19" 0"*  
 No. of blades, *4* Total surface \_\_\_\_\_  
 No. of bilge pumps *2* and sizes *4" dia. 1 1/2" 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 *4" dia. 1 1/2" stroke.*  
 What gauges are there attached to the engines and boilers ... *One Steam gauge } Engine Room*  
*One Vacuum gauge }  
 Description and size of Donkey Pumps ... *2 Steam gauges in Boiler Room.*  
*Vertical, 7" dia, 8" stroke.*  
 Where do they pump from ... *From Bilge and from Sea.*  
 No. of bilge injections *2* and sizes *2 1/4" valves*  
 Are they connected to air, or circulating pumps *ster pump.*  
 Is there a hand pump in the engine room *Yes*  
 Can it be worked by the main engines *No, from deck.*  
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes.**

**MAIN BOILERS.**

Number *2* Description *Circular tubular*  
 Made by *Earle & Co*  
 When *1873* At *Hull*  
 Working pressure *25 lb p. sq. inch, reduced from 30 lb.*  
 Tested by hydraulic pressure to *60 lb p. sq. inch* Date *When new.*  
 Description of super-heating apparatus *Circular horizontal chest*  
 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 valves*  
*22" 0"*  
 No. of square feet of fire-grate surface in each boiler *42" 0"*  
 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*  
 Where fixed *On deck*  
 Working pressure *50 lb p. sq. inch.*

Tested by hydraulic pressure to *100 lb p. sq. inch*, Date *When new.*  
 Description and area of safety valves *One direct loaded, 3, 9 1/2" 0"*  
 No. of square feet of fire grate *9, 5" 0"*

**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 with guards*  
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *No*  
 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 *Scump pipes leading into the discharge pipes of loudspeaker*  
 How are they protected *By an iron casing.*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *25<sup>th</sup> & 30<sup>th</sup> May 77*  
 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.*

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 *Albert* owned by *J. Lawson* of the Port of *Hull* of *287* Tons Register, and *90* Registered Horse Power, and that they have been carefully inspected and examined by me at *Hull* and found to be at this date, viz., *October 9<sup>th</sup>* 1877 in good order and safe working condition.

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

*A. Heydell*  
 Engineer Surveyor to Lloyd's Register of Shipping.