

17584 Iron

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rec 4/11/77

Report (if any) on Hull of Vessel. Port Aberdeen No. 203

Description *Inverted Compound surface Cont*  
 Made by *Messrs Hall Russell & Co*  
 When *Decr 1876* At *Aberdeen*  
 Diameter of cylinder *26 1/2" 48"* Length of stroke *2" 6"*  
 No. of revolutions per minute *65*  
 Point of cut off *9/16*  
 Diameter of screw shaft *9" about 65 feet long*  
 Diameter of crank shaft journals *10"*  
 Diameter of screw, or of paddle wheel *12" 4"*  
 Pitch of screw *15" 6"*  
 No. of blades, *Four* Total surface *about 41 sq feet*  
 No. of bilge pumps *one* and sizes *4 1/2" diam 2" 6" stroke*  
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *one* and sizes *4 1/2" diam 2" 6" stroke*  
 What gauges are there attached to the engines and boilers ... *Two Glass Water on Boiler one each Pressure & Vacuum in Engine Room*  
 Description and size of Donkey Pumps ... *Vertical Inverted Steam Cy 7" diam 8" stroke 3 1/2" dia S.A. Pump*  
 Where do they pump from ... *From Sea, Bilge, to Boiler and on Deck There is also one large donkey for Pumping Ballast Tanks 8" dia 10" stroke 4 1/2" diam Pump*  
 No. of bilge injections *one* and sizes *2 1/2" diam*  
 Are they connected to air, or circulating pumps *air Pump*  
 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 *One* Description *Circular Tubular*  
 Made by *Messrs Hall Russell & Co*  
 When *Decr 1876* At *Aberdeen*  
 Working pressure *70 lbs*  
 Tested by hydraulic pressure to *140 lbs*, Date *4 Decr 1876*  
 Description of super-heating apparatus *Vertical dumb*  
 Can each boiler be worked separately

Can the super-heater be shut off and the boilers worked separately  
 Description and area of safety valves on each boiler ... *Two Spring Safety by Hall Russell & Co 4 1/2" dia 15.9 in area each*  
 No. of square feet of fire-grate surface in each boiler *64 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 Circular*  
 Where fixed *Engine Room*  
 Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *4 Decr 1876*  
 Description and area of safety valves *Spring load 2 1/2" or 3.9 area*  
 No. of square feet of fire grate *8.2 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 ... *Cocks & Valves*  
 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 *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 *before launching*  
 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*

*Hall Russell & Co* Manufacturers

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 *"Petrel"* owned by *General Steam Navigation Co* of the Port of *London* of *540. <sup>36</sup>/<sub>100</sub>* Tons Register, and *99* Registered Horse Power, and that they have been carefully inspected and examined by me at *Aberdeen* and found to be at this date, viz., *27<sup>th</sup> Decr* 1876 in good order and safe working condition.

*tees - 4 x 19" 0*  
*Railway Exs 2" 10" 0*  
*Cab - " 2" 0*  
*Substance 1" 5" 0*  
 Total *28" 16" 0*

*John Sturrock*  
 Engineer Surveyor to Lloyd's Register of Shipping.

(10/1/76.)

*See 43<sup>rd</sup> Jan 1877, and forwarded to Dundee.*  
*J.H. White*

IRON 489-0485