

17254 Iron

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rec 26/10/76

Description *Inverted, direct acting, Surface Condensing.*  
 Made by *G. Clarke.*  
 When *1871* At *Sunderland.*  
 Diameter of cylinders *34 1/2 (2 off)* Length of stroke *28.*  
 No. of revolutions per minute *70.*  
 Point of cut off *5/8<sup>th</sup> of stroke.*  
 Diameter of screw shaft *6 1/2.*  
 Diameter of crank shaft journals *7.*  
 Diameter of screw, or of paddle wheel *9' 6.*  
 Pitch of screw *12' 6 to 15' 6.*  
 No. of blades, *4* Total surface *30 sq. feet.*  
 No. of bilge pumps *2* and sizes *3 1/2 dia x 18 stroke.*  
 Do they pump from each compartment *Engine room & aft well.*

Are all the bilge suction pipes fitted with roses *yes.*  
 No. of feed pumps *2* and sizes *3 1/2 dia x 18 stroke.*  
 What gauges are there attached to the engines and boilers ... } *1 steam gauge on boiler*  
 } *1 vacuum on Condenser.*  
 Description and size of Donkey Pumps ... } *one inverted double acting*  
 } *4 1/2 dia x 6 stroke.*  
 Where do they pump from ..... } *sea, ballast tanks, & bilges*  
 } *of the engine room, aft well*  
 } *& fore hold.*  
 No. of bilge injections *one* and sizes *3 dia.*  
 Are they connected to air, or circulating pumps *to Circulating 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 *Cylindrical & Multitubular*  
 Made by *The North Eastern Marine Engineering Co. Ltd.*  
 When *Sept 1876* At *Sunderland.*  
 Working pressure *35 lbs per sq. inch.*  
 Tested by hydraulic pressure to *70 lbs*, Date *July/76*  
 Description of super-heating apparatus ..... } *none*  
 Can each boiler be worked separately *only 1 boiler*

Can the super-heater be shut off and the boilers worked separately }  
 Description and area of safety valves on each boiler ..... } *2 spring safety valves*  
 } *4 1/2 dia = 33.6 sq. ins*  
 No. of square feet of fire-grate surface in each boiler } *53.*  
 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 ..... } *blow off cock and donkey*  
 } *bilge discharge in Coal bunker*

### DONKEY BOILER.

Description *Upright cylindrical with 2 cross tubes.*  
 Where fixed *on the deck.*  
 Working pressure *40 lbs per sq. inch.*

Tested by hydraulic pressure to \_\_\_\_\_, Date \_\_\_\_\_  
 Description and area of safety valves *blow off & weight 2 dia = 3.1*  
 (a small donkey valve)  
 No. of square feet of fire grate *5.*

### PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship } *The donkey sea cock & the injection*  
 } *valves have cast iron pieces.*  
 Are they Kingston valves or common cocks ... } *stop valves and 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 } *below.*  
 Are they each fitted with a discharge valve on the plating of the vessel } *yes.*

What pipes are carried through the bunkers *donkey bilge discharge & boiler blow off*  
 How are they protected *by wood casings.*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock } *Sept. 1876*  
 } *new propeller & shaft.*  
 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.*  
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead } *sluice door fitted*  
 } *tunnel not watertight*

*P. H. E. M. Co. (Ld)* Manufacturer of the main Boiler.

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 *"Hartlepool"* owned by *E. J. Gourley* of the Port of *Sunderland* of *415* Tons Register, and *70* Registered Horse Power, and that they have been carefully inspected and examined by me at *Sunderland & Tyne Dock.* and found to be at this date, viz., *October 24<sup>th</sup>* 1876. in good order and safe working condition.

Amount of Fee for Survey £ *3 : 10 :* Received at *Sunderland*  
 (Travelling Expenses, if any, £ *0 : 5 :*) *3 : 15* by *W. H. 16/10/76.*

*William Allison*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Report (if any) on Hull of Vessel. Port *Sunderland.* No. *11511.*

7000-69749-0007

