

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 30/10/77

Description *Compound Inverted Surface Condensing*
 Made by *Messrs J. Richardson & Sons*
 When *Oct 18/77* At *Hartlepool*
 Diameter of cylinder *28 x 53* Length of stroke *33*
 No. of revolutions per minute *65 about*
 Point of cut off *1/2 stroke*
 Diameter of screw shaft *9"*
 Diameter of crank shaft journals *9"*
 Diameter of screw, ~~or of paddle wheel~~ *13" 0"*
 Pitch of screw *15 6*
 No. of blades, *4* Total surface *55 sq ft*
 No. of bilge pumps *2* and size *2 1/2 x 3 1/2" Single Acting*
 Do they pump from each compartment *from wings & Centre of engine room to reach to any part of the vessel after upll*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *3 x 2 1/2" Single Acting*
 What gauges are there attached to the engines and boilers ... *Two steam One vacuum*
 Description and size of Donkey Pumps ... *one pump 1 1/2 dia x 9" stroke Double Acting 2nd 2 1/2 x 1 1/2 " " " "*
 Where do they pump from ... *And sea, No 2 draws from wings & Centre of engine room, after well, sea & bilge*
 No. of bilge injections *1* and sizes *4 1/2 dia*
 Are they connected to air, or circulating pumps *Recirculating pump*
 Is there a hand pump in the engine room *Donkeys work by hand*
 Can it be worked by the main engines *No*
 Is there a deck hose of sufficient length } *Yes*
 attached to the engines and boilers ... }

MAIN BOILERS.

Number *One* Description *Cylindrical Multitubular*
 Made by *Messrs J. Richardson & Sons*
 When *Oct 18/77* At *Hartlepool*
 Working pressure *45 lbs*
 Tested by hydraulic pressure to *150 lbs*, Date *1 Sept 1877*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *Only one boiler in ship*

Can the super-heater be shut off and the boilers worked separately } *No Superheater*
 Description and area of safety valves on each boiler ... *Two Spring safety valves on boiler Area of two valves 35.4 sq in*
 No. of square feet of fire-grate surface in each boiler } *51 square 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. ... *All except suction pipes & roses in ballast tanks*

DONKEY BOILER.

Description *Vertical Water tubes in furnace*
 Where fixed *In stokehold*
 Working pressure *65 lbs*

Made by *Geo Dymon West Hartlepool*
 Tested by hydraulic pressure to *130 lbs*, Date *9 Sept 1877*
 Description and area of safety valves *One direct & one indirect & weight*
 No. of square feet of fire grate *14 sq feet* Total area *19*

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 ... } *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 *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*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead } *Sluice door not watertight. Sluice door fitted*

Richardson & Sons Manufacturer of Engines & Main Boilers only
M. Chubb

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 *"Amanda"* owned by *Otto Truckmann* of the Port of *Hartlepool* of *1260.95* Tons Register, and *110* Registered Horse Power, and that they have been carefully inspected and examined by me at *Hartlepool* and found to be at this date, viz., *27th October* 18*77* in good order and safe working condition.

Amount of Fee for Survey ... £ *5* : *10* : *0*
 (Travelling Expenses, any, £ *0* : *5* : *0*)

James I. Mann
 Engineer Surveyor to Lloyd's Register of Shipping.