

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Re 26/5/77

Description *Inverted, Compound, Surface Condensing,*
 Made by *Mr. J. Dickinson*
 When *June 1877* At *Sunderland,*
 Diameter of cylinder *28" & 53"* Length of stroke *33"*
 No. of revolutions per minute *about 60,*
 Point of cut off *1/2 stroke,*
 Diameter of screw shaft *9 1/4"*
 Diameter of crank shaft journals *9 1/4"*
 Diameter of screw, or of paddle wheel *12' 9"*
 Pitch of screw *16' 6"*
 No. of blades, *4* Total surface *44 sq. feet,*
 No. of bilge pumps *2* and sizes *3 1/2 dia x 16 1/2 stroke,*
 Do they pump from each compartment *Engine room, aft well, fore hold,*

Are all the bilge suction pipes fitted with roses *yes,*
 No. of feed pumps *2* and sizes *3 1/2 dia x 16 1/2 stroke,*
 What gauges are there attached to the engines and boilers ... *1 steam gauge on each boiler in stokehold, 2 in engine room, common to both boilers,*
 Description and size of Donkey Pumps ... *2 inverted, large one double acting, 8 dia x 10 stroke, small one 4 x 6 stroke single acting,*
 Where do they pump from ... *condenser & bilges of engine room, aft well, & fore hold. small one from sea & hot well*
 No. of bilge injections *one* and sizes *4 diameter,*
 Are they connected to air, or circulating pumps *to circulating pumps*
 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 (from iron pipe)*

MAIN BOILERS.

Number *Two* Description *Cylindrical & Multitubular*
 Made by *Mr. J. Dickinson*
 When *June 1877* At *Sunderland,*
 Working pressure *70 lbs per sq. inch,*
 Tested by hydraulic pressure to *140 lbs,* Date *April 25/77*
 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 *yes,*
 Description and area of safety valves on each boiler ... *2 spring safety valves on Mr Dickinson's patent, 13 1/2 dia = 16 1/2 sq. in area, see tracing*
 No. of square feet of fire-grate surface in each boiler *28 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 bilge suction pipes in fore hold when full)*

DONKEY BOILER.

Description *Upright Cylindrical with 3 cross tubes,*
 Where fixed *in the stokehold,*
 Working pressure *50 lbs per sq. inch,*

Tested by hydraulic pressure to *120 lbs (reported),* Date *June 20/76*
 Description and area of safety valves *1 loaded direct 2 1/2" 7.9 area, 1 lever & weight 2 1/2"*
 No. of square feet of fire grate *14*

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 & 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 *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 *new,*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *yes,*
 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,*

John Dickinson

Manufacturer. *Except of the Donkey Boiler I was present when steam was raised, the engine worked, and safety valves adjusted & tested, satisfactory. June 5th & 6th 77 M. 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 *"Annie"* owned by *Jennison, Taylor and others,* of the Port of *London* of *784.9* Tons Register, and *110* Registered Horse Power, and that they have been carefully inspected and examined by me at *Sunderland* and found to be at this date, viz., *June 18th 1877* in good order and safe working condition.

Amount of Fee for Survey ... £ *5: 10:*
 (Travelling Expenses, if any, £ *5. 15* Received 19/6/77 *AW*)

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