

17075 *Ln*

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 2/10/76

Description *Inverted, Compound, Surface Condensing.*
 Made by *Messrs Pattison & Atkinson.*
 When *Sept* 1876 At *Muchroom near Newcastle.*
 Diameter of cylinders *15 x 25* Length of stroke *18*
one of each
 No. of revolutions per minute *about 100.*
 Point of cut off *$\frac{5}{8}$ of stroke.*
 Diameter of screw shaft *5 $\frac{1}{4}$.*
 Diameter of crank shaft journals *5 $\frac{1}{4}$.*
 Diameter of screw, or of paddle wheel *7' 0"*
 Pitch of screw *8' 0"*
 No. of blades, *3* Total surface *143 sq. feet.*
 No. of bilge pumps *one* and sizes *2 $\frac{1}{2}$ dia. x 9 stroke.*
 Do they pump from each compartment *from Engine room.*

Are all the bilge suction pipes fitted with roses *yes.*
 No. of feed pumps *one* and sizes *2 $\frac{1}{2}$ dia. x 9 stroke.*
 What gauges are there attached to the engines and boilers ... *1 steam gauge on boiler*
1. Vacuum.
 Description and size of *one inverted double acting.*
 Donkey Pumps ... *3' dia. x 6" stroke.*
 Where do they pump *from the sea tanks & bilges*
 from *of engine room.*
 No. of bilge injections *1* and sizes *2 $\frac{1}{2}$ dia.*
 Are they connected to air, or circulating pumps *to circulating pump*
 Is there a hand pump in the engine room *No. (Donkey can be used)*
 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 *J. Eltingham.*
 When *Augt* 1876 At *South Shields.*
60 lbs per sq. inch
 Working pressure to *120 lbs*, Date *Augt 4th 76*
Mr. Bain was present.
 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 *Two spring safety valves*
3' dia. = 14 sq. ins. Area.
 No. of square feet of fire-grate surface in each boiler } *21 $\frac{1}{2}$.*
 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.*

DONKEY BOILER. *None*

Tested by hydraulic pressure to , Date
 Description and area of safety valves
 No. of square feet of fire grate

Tested by hydraulic pressure to , Date
 Description and area of safety valves
 No. of square feet of fire grate

PIPES, COCKS, AND CONNECTIONS.

Connections with the sea } *yes.*
 on the skin of the ship }
 Kingston valves } *Stop Valve & Cocks.*
 common cocks ... }
 fixed sufficiently high on ship's side to be seen without lifting the stoke hold } *yes.*
 Discharge pipes above or the deep water line } *above.*
 Each fitted with a discharge on the plating of the vessel } *all (except the Donkey discharge) which is well up*
Pattison & Atkinson Manufacturers.

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 } *No Tunnel. The Engines are in the after end of the vessel.*

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 *"William"* owned by *W. Rutter & Co.*
 of the Port of *Bristol* of *77.36* Tons Register, and *25* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Low Walker on 4th June*
 and found to be at this date, viz., *22nd Sept 1876* in good order and safe working condition.

Amount of Fee for Survey ... £ *1:5:6*
 Certificate
 (Travelling Expenses, £ *1-10*)

(1000/31/76.)

best written
 3.10.76.

Received at Shields
 1-7-6 by *P. Young*
29/8/76

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

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