

17709 Iron

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 29/1/77

Port: Sunderland, No. 11561

Description *Inverted, Compound Surface Condensing*
 Made by *Mr. John Dickinson*
 When *Jan 7* 18 *77* At *Sunderland*
 Diameter of cylinder $\text{\$ } 32 \times 60$ Length of stroke *36*
one of each
 No. of revolutions per minute *about 60*
 Point of cut off *1/2 stroke*
 Diameter of screw shaft *10 1/2*
 Diameter of crank shaft journals *10 1/4*
 Diameter of screw, or of paddle wheel *14.0*
 Pitch of screw *17.0*
 No. of blades, *4* Total surface *54 square feet*
 No. of bilge pumps *2* and sizes *4 1/2 dia x 19 stroke*
 Do they pump from each compartment *from engine room, aft well, & fore hold*

Are all the bilge suction pipes fitted with roses *yes*
 No. of feed pumps *2* and sizes *4 1/2 dia x 19 stroke*
 What gauges are there attached to the engines and boilers ... *1 steam gauge on each boiler in stokehole & 1 in engine room. Vacuum*
 Description and size of Donkey Pumps ... *2 inverted double acting 8 diam x 10 stroke & one single acting 4 1/2 x 6 stroke. The large one from the sea, tanks, Condenser, and bilges of aft well, engine room from ... & for hold. Small one from sea & hold*
 No. of bilge injections *one* and sizes *4 diameter*
 Are they connected to air, or circulating pumps *to circulating*
 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 & iron pipe to suit*

MAIN BOILERS.

Number *Two* Description *Cylindrical & Multitubular*
 Made by *Mr. John Dickinson*
 When *Jan 7* 18 *77* At *Sunderland*
 Working pressure *75 lbs per square inch*
 Tested by hydraulic pressure to *150 lbs*, Date *Nov 24/76*
I was present W.A.
 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
 Description and area of safety valves on each boiler ... *2 spring safety valves 3 1/2 dia = 19.2 sq inches*
 No. of square feet of fire-grate surface in each boiler *39*
 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 the bilge suction in fore hold when filled*

DONKEY BOILER.

Description *Upright Cyl: with 4 Cross tubes*
 Where fixed *in the stokehole*
 Working pressure *65 lbs per sq inch*
n.a.

Tested by hydraulic pressure to *150 lbs*, Date *Dec 1876*
 Description and area of safety valves *one loaded dia 3 1/4 = 8.2 area*
 No. of square feet of fire grate *16*

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 of 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 *stamped, caulked, and sluice door fitted*

John Dickinson

Manufacturer *Except of the Donkey Boiler*

I was present on Dec 10th when the steam was raised, the safety valves tested, and the engines worked. steam 75 lbs per sq inch revolved 80. all worked satisfactory - W.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 *"Rosend Castle"* owned by *A. J. Mawson*, of the Port of *Newcastle* of *1126.5* Tons Register, and *150* Registered Horse Power, and that they have been carefully inspected and examined by me at *Sunderland*, and found to be at this date, viz., *January 26th 1877* in good order and safe working condition.

Amount of Fee for Survey ... £ *4:10:*

(Travelling Expenses, if any, £ *Certificate 0:5*)

Received at Sunderland by W.A. 27/1/77

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

Iron 470-0094

