

18 Q 3 3 Iron

LOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

Rec 24/4/77

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted Direct acting*
 Made by *Messrs Barclay Curle & Co*
 When *1877* At *Glasgow*
 Diameter of cylinder *36" & 63"* Length of stroke *39"*
 No. of revolutions per minute *about 45*
 Point of cut off *Variable*
 Diameter of screw shaft *11 3/4"*
 Diameter of crank shaft journals *11 1/2"*
 Diameter of screw, *or of propeller shaft* *16 3/4"*
 Pitch of screw *16" & 6"*
 No. of blades *Four* Total surface *66 ft²*
 No. of bilge pumps *One* and sizes *5 1/2" dia x 22" stroke*
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *One* and sizes *5 1/2" dia x 22" stroke*
 What gauges are there attached to the engines and boilers ... *Two Steam, One Vacuum & One Compound.*
 Description and size of Donkey Pumps ... *Double acting 1 3/4" x 10" stroke*
 Where do they pump from ... *From the sea, bilge & Hotwell.*
 No. of bilge injections *One* and sizes *4" dia Circulating*
 Are they connected to air, or circulating pumps *to Air pump*
 Is there a hand pump in the engine room *Yes*
 Can it be worked by the main engines *Yes*
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *One* Description *Round Horizontal fired from both ends.*
 Made by *Barclay Curle & Co*
 When *1877* At *Glasgow*
 Working pressure *60 lbs*
 Tested by hydraulic pressure to *120 lbs.* Date *Feb 1877*
 Description of super-heating apparatus *Round vertical with single slip*
 Can each boiler be worked separately

Can the super-heater be shut off and the boilers worked separately *No*
 Description and area of safety valves on each boiler ... *Two Direct Spring each 23.75" area*
 No. of square feet of fire-grate surface in each boiler *about 95 ft²*
 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.

Description *Flat Sided, Horizontal*
 Where fixed *on Upper Deck*
 Working pressure *35 lbs*

Tested by hydraulic pressure to *40 lbs*, Date *Feb 1877*
 Description and area of safety valves *Direct loaded 4"*
 No. of square feet of fire grate *12 ft²*

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 ... *Screw down valves & cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *All fitted above turn of bilge*
 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 *Main Steam pipes through afterwatertight bulkhead*
 How are they protected *fitted close up to deck*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *On Slip previous to being launched*
 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*

Barclay Curle & Co Manufacturer.
per J.G.

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 *Laymouth Castle* owned by *J. Currie & Co* of the Port of *London* of *1172* Tons Register, and *190* Registered Horse Power, and that they have been carefully inspected and examined by me at *Glasgow* and found to be at this date, viz., *April 18th* 18*77* in good order and safe working condition.

Amount of Fee for Survey ... £ *9:10:-*
 (Travelling Expenses, if any, £ ...)

James Morrison
 Engineer Surveyor to Lloyd's Register of Shipping.

