

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Common Condensing*
 Made by *Richardson*
 When *1863* At *Glasgow*
 Diameter of cylinder *38"* Length of stroke *24"*
 No. of revolutions per minute *60*
 Point of cut off _____
 Diameter of screw shaft *4 1/2"*
 Diameter of crank shaft journals *4 1/2"*
 Diameter of screw, *on the paddle wheels*
 Pitch of screw *not ascertained*
 No. of blades, *Three* Total surface _____
 No. of bilge pumps *Two* and sizes *3 3/8" x 12" stroke*
 Do they pump from each compartment *Yes*
 Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *Two* and sizes *3 3/8" x 12" stroke*
 What gauges are there attached to the engines and boilers ... *One Steam and one Vacuum*
 Description and size of Donkey Pumps ... *Single acting*
 Where do they pump from ... *From the Sea & Bilge*
 No. of bilge injections *One* and sizes *2 3/4"*
 Are they connected to air, or circulating pumps *to Air pumps*
 Is there a hand pump in the engine room *Yes*
 Can it be worked by the main engines *No. It is worked from Deck.*
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *One* Description *Iron Bottomed Flat sided & rached top with dome*
 Made by *Walsby, Webb & Bealey*
 When *1871* At *Dublin*
 Working pressure *15 lbs*
 Tested by hydraulic pressure to _____, Date _____
 Description of super-heating apparatus *None*
 Can each boiler be worked separately _____
 Can the super-heater be shut off and the boilers worked separately _____
 Description and area of safety valves on each boiler *Direct weighted (Two) each 29 1/4" area*
 No. of square feet of fire-grate surface in each boiler *46 ft*
 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. They are under Engine Room platform*

DONKEY BOILER.

Description *Round Vertical*
 Where fixed *On Main Deck*
 Working pressure *35 lbs*
 Tested by hydraulic pressure to *not ascertained* Date _____
 Description and area of safety valves *Two. One Direct Weighted & one Lever Weighted. Each 4 1/2" area*
 No. of square feet of fire grate *One Direct weighted 7 1/2" area 15 ft*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *They are fitted on Cast Iron Stools*
 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 ... *No. the Ash cooking cock is under plates. The others are under E. R. Platform*
 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 *July 3rd 1876*
 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 *It is not watertight but has door fitted on Bulkhead*

Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (~~on Wood~~) Screw (~~on Paddle~~) Steam Vessel *"Alexandra"* owned by *Palgrave & Murphy*
 of the Port of *Dublin* of *363* Tons Register, and *90* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Glasgow*
 and found to be at this date, viz., *July 14th 1876* in good order and safe working condition.

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