

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted Direct Acting*
 Made by *The London & Glasgow Engine & Ship Building Co. Ltd.*
 When 18 *97* At *Glasgow*
 Diameter of cylinder *31 3/4 x 54* Length of stroke *36*
 No. of revolutions per minute *not ascertained*
 Point of cut off *Variable*
 Diameter of screw shaft *9 1/2*
 Diameter of crank shaft journals *9 1/2*
 Diameter of screw, ~~or~~ *paddle wheel* *13 1/4*
 Pitch of screw *15 1/2*
 No. of blades, *four* Total surface *43 ft*
 No. of bilge pumps *two* and sizes *3 1/2 x 24 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 1/2 x 24 stroke*
 What gauges are there attached to the engines and boilers ... *Two Steam One Compound*
 Description and size of Donkey Pumps ... *Double Acting*
 Where do they pump from ... *From the sea, bilge & stowage*
 No. of bilge injections *one* and sizes *4*
 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*

MAIN BOILERS.

Number *One* Description *Round Horizontal*
 Made by *The London & Glasgow Engine & Ship Building Co. Ltd.*
 When 18 *97* At *Glasgow*
 Working pressure *40 lbs*
 Tested by hydraulic pressure to *110 lbs*, Date *Mar 31/97*
 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 *Two Direct Spring each 21.6" area*
 No. of square feet of fire-grate surface in each boiler *80 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*

DONKEY BOILER.

Description *Round Vertical*
 Where fixed *On Upper Deck*
 Working pressure *50 lbs*
 Tested by hydraulic pressure to *100 lbs*, Date *Mar 31/97*
 Description and area of safety valves *Direct loaded 5.4 area*
 No. of square feet of fire grate *9.6 ft*

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 ... *The Ash cooling cocks under*
 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 *none*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *On ship 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*

Manufacturer.

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 *Carpin* owned by *Wm. Dixon Limited*
 of the Port of *Glasgow* of *766* Tons Register, and *150* 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 5th* 18 *97* in good order and safe working condition.

Amount of Fee for Survey ... £ *7 10 0*

(Travelling Expenses, if any, £ *none*)

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