

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Comp^d Inverted Surface Condensing*
 Made by *Greenock Foundry Co*
 When *Dec* 18*71* At *Greenock*
 Diameter of cylinder *23" & 30 1/2"* Length of stroke *30"*
 No. of revolutions per minute *About 60*
 Point of cut off *3/4ths of stroke*
 Diameter of screw shaft *8 1/8"*
 Diameter of crank shaft journals *8 1/4"*
 Diameter of screw, or of paddle wheel *14' 4 1/2"*
 Pitch of screw *13' 6"*
 No. of blades, *2* Total surface *46 sq feet*
 No. of bilge pumps *1* and sizes *4 x 12 1/2*
 Do they pump from each compartment *from fore hold & engine room*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *1* and sizes *4 x 12 1/2*
 What gauges are there attached to the engines and boilers ... *3 steam & 1 vacuum*
 Description and size of Donkey Pumps ... *No 1 2 1/2 dia x 8 3/4 stroke Double Acting*
No 2 4 1/2 " x 9 1/2 "
 Where do they pump from ... *No 1 draws from engine room fore & after tanks & fore hold. No 2 from sea, fore hold, after tank & engine room*
 No. of bilge injections *1* and sizes *4 1/4 inches*
 Are they connected to air, or circulating pumps *Circulating pump*
 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 *Two* Description *Cyl^d Multitubular*
 Made by *Greenock Foundry Co.*
 When *Dec* 18*71* At *Greenock*
 Working pressure *64 lbs*
 Tested by hydraulic pressure to *140 lbs* Date *1871*
 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 *Area of two 39.2 sq in*
 No. of square feet of fire-grate surface in each boiler *38.5 sq feet*
 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. *Not accessible when ship is loaded*

DONKEY BOILER.

Description *Vertical Water tubes in furnace*
 Where fixed *On beam deck*
 Working pressure *40 lbs*

Tested by hydraulic pressure to *X*, Date *See Repair Report*
 Description and area of safety valves *X*
 No. of square feet of fire grate *X*

PIPES, COCKS, AND CONNECTIONS

Are all connections with the sea direct on the skin of the ship *Antony suction cock & cock for ballast tanks on cast iron pistons on stem of propeller*
 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 ... *No*
 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*

How are they protected *Wood Casings*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *April 1871*
 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 *Marfield* owned by *S. B. Crawhall*
 of the Port of *London* of *86 1/2* Tons Register, and *120* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *London*
 and found to be at this date, viz., *May 16th* 18*77* in good order and safe working condition.

Amount of Fee for Survey *24/5 77 £ 3 : 3 : 0 Recd.*

(Travelling Expenses, if any, £ *14/2 78*) *30 Sep 1878*

(1000/31/7/16.)

James Bannister James Milton
 Engineer Surveyor to Lloyd's Register of Shipping.