

S. S. 'Mangerton' 24523 Jan

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Re 11/9/79

Description *Mixed Compound Surface Condensing*
 Made by *Miss. R. & W. Hawthorn*
 When *August 1879* At *Newcastle on Tyne*
 Diameter of cylinder *32" x 62* Length of stroke *42"*
 No. of revolutions per minute *from 65 to 70*
 Point of cut off *H.P. 6 L.P. 54 of stroke*
 Diameter of screw shaft *10 1/2*
 Diameter of crank shaft journals *10 3/4*
 Diameter of screw, or of paddle wheel *15" 6"*
 Pitch of screw *14 to 18*
 No. of blades, *4* Total surface *62 sq. feet*
 No. of bilge pumps *2* and sizes *3 1/2 dia x 20" stroke*
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *3 1/2 dia x 20" stroke*
 What gauges are there attached to the engines and boilers ... *Vac. Comp. & Press. one of each in C.R. one pressure to each boiler in stoke hold*
 Description and size of Donkey Pumps ... *1 Ballast 8" x 14 double Acting 1 Feed 3 1/2 x 8" " " " Ballast. Working from Tanks. Bilges and Condenser. Feed Working from same places. & Hotwell & Seco.*
 Where do they pump from ...
 No. of bilge injections *1* and sizes *4" dia*
 Are they connected to air, or circulating pumps *% Circulating*
 Is there a hand pump in the engine room *No. The Feed*
 Can it be worked by the main engines *Working can be used*
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes from Iron Pipe*

MAIN BOILERS.

Number *2* Description *Cyl. & Multitubular*
 Made by *Miss. R. & W. Hawthorn*
 When *August 1879* At *Newcastle on Tyne*
 Working pressure *80 lbs per sq. in.*
 Tested by hydraulic pressure to *160*, Date *10. 7. 79*
 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 *No super heater*
 Description and area of safety valves on each boiler ... *2 Spring Valves 4" dia Area = 25.12 sq. in.*
 No. of square feet of fire-grate surface in each boiler *43.5 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. *Yes. except one rose in the fore hold*

DONKEY BOILER.

Description *Circular Vertical*
 Where fixed *In. Stokehold*
 Working pressure *80 lbs per sq. inch*

Try. Miss. Wilson & Co Liverpool
 Tested by hydraulic pressure to *160 lbs*, Date *24.6.79*
 Description and area of safety valves *1 direct loaded 11" Area*
 No. of square feet of fire grate *20 sq. feet*

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 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 *Now*
 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 *Apparently water tight and sluice door fitted*

R. W. Hawthorn

Manufacturer. *Except of the Donkey Boilers*

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 *"Mangerton"* owned by *Messrs. J. D. Milburn* of the Port of *London* *1317.16* Tons Register, and *200* Registered Horse Power, and that they have been carefully inspected and examined by me at *Newcastle on Tyne* and found to be at this date, viz., *August 22nd 1879* in good order and safe working condition.

Amount of Fee for Survey ... *£16:0:0*
 (Travelling Expenses, if any, £ *0:5:0*)

Ruby *My. Chigor*
me. Young Engineer Surveyor to Lloyd's Register of Shipping.
10/9/79. *North Shields*

It is submitted that this
vessel is eligible to have
a machinery certificate
granted Folio 8.79
Recorded

Drummond

11/9/79



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