

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Re 8/5/19

Description *Inverted Compound Surface Condensing* Are all the bilge suction pipes fitted with roses *Yes*
 Made by *Messrs Hawks Crawshaw & Sons* No. of feed pumps *2* and sizes *4" x 1 1/4" stroke*
 When *18/2* At *Cathead on Tyne* What gauges are there attached to the engines and boilers ... *1 Press. and 1 Vac. in Engine room*
 Diameter of cylinder *26" x 48"* Length of stroke *30"* *1" in blockhead*
 (one of each) No. of revolutions per minute *65* Description and size of Donkey Pumps ... *1 Inverted double acting 6 1/2" x 10" stroke draws from sea tanks.*
 Point of cut off *1/2 stroke* Where do they pump from ... *Holds. Engine room bilges. after fuel & through Condenser*
 Diameter of screw shaft *8 1/2"* No. of bilge injections *1* and sizes *6" dia*
 Diameter of crank shaft journals *8 1/2"* Are they connected to air, or circulating pumps *to Circulating*
 Diameter of screw, or of paddle wheel *11" 9"* Is there a hand pump in the engine room *No*
 Pitch of screw *15" 9"* Can it be worked by the main engines *Yes*
 No. of blades, *4* Total surface *38 1/2 sq. feet* Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*
 No. of bilge pumps *2* and sizes *4" x 1 1/4" stroke*
 Do they pump from each compartment *Yes*

MAIN BOILERS.

Number *1* Description *Cyl. & Multitubular* Can the super-heater be shut off and the boilers worked separately *No Superheater*
 Made by *Messrs George Clarke* Description and area of safety valves on each boiler ... *2 Spring valves 4" dia Area 25.12 sq. in*
 When *1* *18/8* At *Sunderland* No. of square feet of fire-grate surface in each boiler *48 sq. feet*
 Working pressure *45 lbs* Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes*
 Tested by hydraulic pressure to *150 lbs*, Date *None* Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times ... *Yes except roses in holds when loaded*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *one boiler*

DONKEY BOILER.

Description *Circular-Vertical 2 Cross Tubes* Tested by hydraulic pressure to *one 2 1/4 inch loaded & one 2 1/2 Lever*
 Where fixed *In Storehold* Description and area of safety valves *Area = 7.9 sq. inches*
 Working pressure *3 1/2 lbs per sq. in* No. of square feet of fire grate *12 sq. feet*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *Yes* What pipes are carried through the bunkers *None*
 Are they Kingston valves or common cocks ... *Stop Valves & Cocks* How are they protected *None*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *Yes* When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *March 18/9*
 Are the discharge pipes above or below the deep water line *at the deep load line* Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Yes*
 Are they each fitted with a discharge valve on the plating of the vessel *Yes* Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Yes*

For Geo. Clark, Esq. Clark Manufacturer of Main 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 *"Bentoni"* owned by *Chapman & Miller*
 of the Port of *London* of *584* Tons Register, and *90* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Sunderland*
 and found to be at this date, viz., *April 25th 18/9* in good order and safe working condition.

Amount of Fee for Survey ... £ : :

(Travelling Expenses, if any, £ —)

(1000/31/7/76.)

See annexed report for fees. *HT*

McGregor Engineer Surveyor to Lloyd's Register of Shipping.

Sunderland

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