

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 22/1/76

Report (if any) on Hull of Vessel. Port of Liverpool. No. 3628

Description *Inverted Compound, Surface Condensing.*
 Made by *Messrs Blair & Co.*
 When *new*, 1876, At *Stockton.*
 Diameter of cylinders *22" x 41"* Length of stroke *26"*
one of each
 No. of revolutions per minute *about 70.*
 Point of cut off *1/2 stroke.*
 Diameter of screw shaft *7"*
 Diameter of crank shaft journals *6 3/4"*
 Diameter of screw, or of paddle wheel *10 feet.*
 Pitch of screw *12 feet.*
 No. of blades, *4* Total surface *24 sq. feet.*
 No. of bilge pumps *1* and sizes *3 dia x 19 stroke single acting.*
 Do they pump from each compartment *yes.*

Are all the bilge suction pipes fitted with roses *yes.*
 No. of feed pumps *1* and sizes *3 dia x 19 stroke single acting.*
 What gauges are there attached to the engines and boilers ... *1 vacuum. 1 steam on boiler in the stokehole + 1 in the engine room.*
 Description and size of Donkey Pumps ... *Inverted double acting, 7 1/2 dia x 9 stroke.*
 Where do they pump from ... *sea, Tanks, & bilges.*
 No. of bilge injections *one* and sizes *3 1/2 diameter.*
 Are they connected to air, or circulating pumps *to circulating pumps.*
 Is there a hand pump in the engine room *no.*
 Can it be worked by the main engines
 Is there a deck hose of sufficient length to reach to any part of the vessel *yes.*

MAIN BOILERS.

Number *one*, Description *Cylindrical & Multitubular*
 Made by *Messrs Blair & Co.*
 When *new*, 1876, At *Stockton.*
 Working pressure *80 lbs per sq. inch.*
 Tested by hydraulic pressure to *160 lbs per sq. in.*, Date *Feb 10th /76*
 Description of super-heating apparatus *none.*
 Can each boiler be worked separately *only one boiler.*

Can the super-heater be shut off and the boilers worked separately
 Description and area of safety valves on each boiler ... *2 spring, 3 1/4 diameter, = 16 1/2 sq. ins area.*
 No. of square feet of fire-grate surface in each boiler *29 3/4.*
 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 *Upright Cyl. with 2 water tubes.*
 Where fixed *in the stokehole.*
 Working pressure *50 lbs per sq. inch.*

Tested by hydraulic pressure to *100 lbs per sq. inch.*, Date *March /76*
 Description and area of safety valves *one loaded direct 2 3/8 dia 4 1/2 ins one lever weight 2 3/8 dia 5 1/2 4*
 No. of square feet of fire grate *9.6.*

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 *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 *new.*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *yes. by non return valves & cocks with only 1 port in side of Plug.*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *yes.*

Rob Blair & Co. Ltd. Manufacturer. *except of the donkey boiler.*
GB Blair.

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 "*Oscklam*" owned by *Messrs Rayner & Murray* of the Port of *Middlesbro'* of *316* Tons Register, and *65* Registered Horse Power, and that they have been carefully inspected and examined by me at *Middlesbrough* and found to be at this date, viz., *April 11th* 1876. in good order and safe working condition.

Survey fee *£3-5-0*
 Certificate *- 5-0*
 Travelling expenses *£1-12-0*
 Total *£3-10-0*
 Received at Liverpool by *S.P.O.*
 William Allison. Engineer Surveyor to Lloyd's Register of Shipping.

