

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

19678 Iron

ENGINEER SURVEYOR'S REPORT ON MACHINERY. ENGINES.

Dec 10/1877

Report (if any) on Hull of Vessel. Report on Engines No. 36
 Port of Newcastle No. 3914

Description *Compound, Inverted, Direct Acting*
 Made by *Messrs J. Richardson & Sons*
 When *November 1877* At *Newcastle*
 Diameter of cylinder *24* Length of stroke *33*
 No. of revolutions per minute *About 65*
 Point of cut off *1/2 stroke*
 Diameter of screw shaft *8 1/2*
 Diameter of crank shaft journals *8 1/2*
 Diameter of screw, or of paddle wheel *13.0*
 Pitch of screw *15 1/2*
 No. of blades, *4* Total surface *50 sq feet*
 No. of bilge pumps *2* and sizes *2 7/8 x 3 1/4* *Single Acting*
 Do they pump from each compartment *From wings & centre of engine room fore hold & after hold*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *3 x 2 1/2* *Single Acting*
 What gauges are there attached to the engines and boilers ... *New Steam One vacuum*
 Description and size of Donkey Pumps ... *2 x 1 Pump 1 1/2 dia x 9 stroke Double Acting*
 Where do they pump from ... *2 x 1 Pumps from wings & centre of ballast tanks and from engine room 2 x 2 pumps from fore hold & after hold*
 No. of bilge injections *1* and sizes *4*
 Are they connected to air, or circulating pumps *Circulating Pump*
 Is there a hand pump in the engine room *Hand pump worked by hand*
 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 *Cyl. Tubular fired at both ends*
 Made by *Messrs J. Richardson & Sons*
 When *Nov 1877* At *Newcastle*
 Working pressure *65 lbs*
 Tested by hydraulic pressure to *130*, Date *20th Oct. 1877*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *Only one boiler in ship*

Can the super-heater be shut off and the boilers worked separately *No superheater*
 Description and area of safety valves on each boiler ... *Two spring valves on boiler Total area 30.59 in*
 No. of square feet of fire-grate surface in each boiler *52 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 ... *All except suction pipes and pumps in holds when ship is loaded*

DONKEY BOILER

Description *Vertical. Water tubes in furnace*
 Where fixed *In stokehold*
 Working pressure *60 lbs*

Made by *Messrs Geo Duncan, West Hartlepool*
 Tested by hydraulic pressure to *130 lbs*, Date *22nd Oct. 1877*
 Description and area of safety valves *Direct & Lever & weight. Total area 8.86*
 No. of square feet of fire grate *14.8 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 *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 *None*
 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*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *Summit and watertight. Sluice door fitted*

J. Richardson & Sons Manufacturers of Engines & Main Boilers only
M. C. Bell

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 *"Blenheim"* owned by *Steel, Young & Co* of the Port of *London* of *734.67* Tons Register, and *99* Registered Horse Power, and that they have been carefully inspected and examined by me at *Newcastle* and found to be at this date, viz., *27th Nov. 1877* in good order and safe working condition

Amount of Fee for Survey ... £ *4:19:0*
 (Travelling Expenses, if any, £ *0:5:0*)
M. C. Bell 4/12/77

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