

16303 Iron

## LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

## ENGINES.

Rec 11/5/76

No. 13192  
 Port Newcastle  
 Report (if any) on Hull of Vessel.

Description *Corn Compound. Inverted. Direct Acting*  
 Made by *Messrs Maudslays, Sons & Field*  
 When *1872* At *London*  
 Diameter of cylinder *1-38 1/4 x 1-70* Length of stroke *48"*  
 No. of revolutions per minute *About 53*  
 Point of cut off *High pressure 3/4 of stroke. Low pressure 1/4 of stroke*  
 Diameter of screw shaft *12 1/4"* Tunnel shaft *12"*  
 Diameter of crank shaft journals *12 1/4"*  
 Diameter of screw, or of paddle wheel *14" 0"*  
 Pitch of screw *20" 0"*  
 No. of blades, *4* Total surface *n*  
 No. of bilge pumps *2* and sizes *6 1/4 dia x 14" stroke. Single Acting*  
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*  
 No. of feed pumps *2* and sizes *5" dia x 20" stroke. Single Acting*  
 What gauges are there attached to the engines and boilers ... *5 Steam 1 Vacuum*  
 Description and size of Donkey Pumps ... *No. 1 - 5 1/2" dia x 10 1/2" stroke. Double Acting. No. 2 - 4 1/2" dia x 8" stroke. Double Acting*  
 Where do they pump from ... *No. 1 - From tanks and all compartments. No. 2 - From Sea*  
 No. of bilge injections *1* and sizes *6" dia*  
 Are they connected to air, or circulating pumps *Air Pump*  
 Is there a hand pump in the engine room *Yes. Donkey can be used as such*  
 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 *2* Description *Horizontal. Cylindrical. Double ended*  
 Made by *Messrs R & W. Hawthorn*  
 When *April 1876* At *Newcastle on Tyne*  
 Working pressure *70 lbs*  
 Tested by hydraulic pressure to *1140 lbs*, Date *9th March 1876*  
 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 *n*  
 Description and area of safety valves on each boiler *Adams Spring 31.8 sq inches*  
 No. of square feet of fire-grate surface in each boiler *64.59 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 in holds when the vessel is loaded*

## DONKEY BOILER.

Description *Vertical. Cylindrical. Water tubes in furnace*  
 Where fixed *In Stoket hole*  
 Working pressure *43 lbs*  
 Tested by hydraulic pressure to *not ascertained*, Date *1872*  
 Description and area of safety valves *Direct weight. 7.068 sq in*  
 No. of square feet of fire grate *12.56 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 ... *Kingston valves for circulating pump and main blow off, the others common 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 *Suction pipe to hand pump on deck*  
 How are they protected *Wood casing*  
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *April 1876*  
 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 *"Yankin"* owned by *Watts, Millburn & Co*  
 of the Port of *London* of *2423* Tons Register, and *300* Registered Horse Power,  
 and that they have been carefully inspected and examined by me at *Newcastle on Tyne & North Shields*  
 and found to be at this date, viz., *April 21st* 1876 in good order and safe working condition.

 James Bain  
 Engineer Surveyor to Lloyd's Register of Shipping.