

19423. Iron.

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Inverted compound. Surface cond.*
Made by *Thompson, Bayly & Co.*
When *1869* At *Newcastle*
Diameter of cylinder *36" x 64 1/2"* Length of stroke *36"*
No. of revolutions per minute *about 48.*
Point of cut off *5/8 of stroke*
Diameter of screw shaft *13"*
Diameter of crank shaft journals *13"*
Diameter of screw, ~~or of paddle wheel~~ *14 1/2"*
Pitch of screw *21"*
No. of blades, *4* Total surface *855 1/2"*
No. of bilge pumps *2* and sizes *6 3/4" dia. 18" 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 *4" dia. 18" stroke.*
What gauges are there attached to the engines and boilers ... *2 Steam gauges } Engine Room
1 Vacuum gauge }
2 Steam gauges in Boiler Room.*
Description and size of Donkey Pumps ... *1 Vertical 8" dia. 8" stroke
1 Ballast pump 11" dia. 10" stroke*
Where do they pump from ... *From sea to the boilers and on deck
From sea Bilge and tanks.*
No. of bilge injections *One* and sizes *4 1/2" pipe.*
Are they connected to air, or circulating pumps *Circulating*
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 *Two* Description *Circular tubular*
Made by *Bailey & Leatham*
When *1877* At *Hull*
Working pressure *70 lb p. square inch.*
Tested by hydraulic pressure to *140 lb p. square inch.* Date *30. July 77.*
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
Description and area of safety valves on each boiler ... *2 Spring safety valves -
34, 26 and 54 sq. in.*
No. of square feet of fire-grate surface in each boiler
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 *Vertical circular*
Where fixed *On Main deck*
Working pressure *45 lb p. square inch.*

Tested by hydraulic pressure to *100 lb p. square inch.* Date *20 July 77*
Description and area of safety valves *One direct loaded: 7 1/2 sq. in.
One Lever valve: 4.9 sq. in.*
No. of square feet of fire grate *19.02*

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 ... *Common cocks with guards*
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 *Main steam pipe and donkey exhaust pipe*
How are they protected *By iron casing*
When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *30. July 1877.*
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 *China* owned by *William Bailey & Leatham* of the Port of *Hull* of *1173* Tons Register, and *185* Registered Horse Power, and that they have been carefully inspected and examined by me at *Hull* and found to be at this date, viz., *October 5th* 18 *77* in good order and safe working condition.

Amount of Fee for Survey ... £ : :

(Travelling Expenses, if any, £)

Engineer Surveyor to Lloyd's Register of Shipping.