

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

No. of revolutions per minute
Point of cut off
Diameter of screw shaft
Diameter of crank shaft journals
Diameter of screw, or of paddle wheel
Pitch of screw
No. of blades, Total surface
No. of bilge pumps and sizes
Do they pump from each compartment

Description *Compound Inverted*
 Made by *Palmer's Company*
 When *18 1870* At *Newcastle*
 Diameter of cylinder *25 1/2* Length of stroke *33*
 No. of revolutions per minute *59*
 Point of cut off *2 stroke*
 Diameter of screw shaft *9"*
 Diameter of crank shaft journals *9 1/2*
 Diameter of screw, or of paddle wheel *12 feet*
 Pitch of screw *15 feet mean,*
 No. of blades, *4* Total surface *—*
 No. of bilge pumps *2* and sizes *6" dia x 7 1/2*
 Do they pump from each compartment *Sea & Room only*

Are all the bilge suction pipes fitted with roses *yes*
 No. of feed pumps *2* and sizes *5" dia x 10" stroke*
 What gauges are there attached to the engines and boilers ... } *2 Steam 1 Vacuum*
 Description and size of Donkey Pumps ... } *(1) Large Ballast Donkey (2) 4" dia 8" stroke D.A. (3) Sea, Tanks, & R. Bilge*
 Where do they pump from } *(1) Sea, & Room Bilge.*
 No. of bilge injections *one* and sizes *8"*
 Are they connected to air, or circulating pumps *Circulating*
 Is there a hand pump in the engine room *yes no. but*
 Can it be worked by the main engines *Donkey can be used.*
 Is there a deck hose of sufficient length to reach to any part of the vessel } *yes*

MAIN BOILERS.

Number *Two* Description *Cylindrical*
 Made by *A. & J. Inglis*
 When *18* At *Glasgow*
Box. S. S. Leaton
 Working pressure *65 lbs*
 Tested by hydraulic pressure to *130 lbs.*, Date
 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 } *none*
 Description and area of safety valves on each boiler } *Spring valves, total area 19.24 inches*
 No. of square feet of fire-grate surface in each boiler } *32 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. } *yes.*

DONKEY BOILER.

Description *Vertical*
 Where fixed *Deck*
 Working pressure *30 lbs per sq inch*

Tested by hydraulic pressure to *not ascertained.*
 Description and area of safety valves *Lever & Spring Valves*
 No. of square feet of fire grate *5 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 ... } *Cocks & Screw down Valves.*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates } *all but one blow off which is easily accessible*
 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 *none*
 How are they protected *—*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock } *at this survey*
 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 } *no tunnel.*

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 *Mid Surrey* owned by *Wagon and Harris* of the Port of *London* of *566* Tons Register, and *99* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *March 13th* 18 *79* in good order and safe working condition.

Amount of Fee for Survey ... *17/3/79* £ *4 : 19 : .*

(Travelling Expenses, if any, £.....)

25 March 1879

James Mutton & Mouston
Engineer Surveyors to Lloyd's Register of Shipping.

London

