

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted*
 Made by *Palmer's Company*
 When *1872* At *Newcastle*
 Diameter of cylinder *30 & 53* Length of stroke *33*
 No. of revolutions per minute *40*
 Point of cut off *About half stroke.*
 Diameter of screw shaft *9 1/2 ins*
 Diameter of crank shaft journals *9 1/2 "*
 Diameter of screw, or of paddle wheel *13.6*
 Pitch of screw *15.0 to 17.0*
 No. of blades, *4* Total surface
 No. of bilge pumps *2* and sizes *6" x 7 1/2*
 Do they pump from each compartment *from Eng Room*

Are all the bilge suction pipes fitted with roses *yes*
 No. of feed pumps *2* and sizes *5" x 10*
 What gauges are there attached to the engines and boilers ... *2 steam to boilers 1 vac to comp & engine*
 Description and size of Donkey Pumps ... *one 4" x 8"*
 Where do they pump from ... *Sea & Bilge*
 No. of bilge injections and sizes
 Are they connected to air, or 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 *Two* Description *Circular*
 Made by *Palmer's Co*
 When *1872* At *Newcastle*
 Working pressure *75 lbs.*
 Tested by hydraulic pressure to *when next Date*
 Description of super-heating apparatus *Annular*
 Can each boiler be worked separately *yes*

Can the super-heater be shut off and the boilers worked separately *no*
 Description and area of safety valves on each boiler *Sever & weight valve*
 No. of square feet of fire-grate surface in each boiler *not ascertained*
 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 *On Deck*
 Working pressure *45 lbs.*

Tested by hydraulic pressure to *not known Date*
 Description and area of safety valves *Dead weight*
 No. of square feet of fire grate *not measured*

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 & valves*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *not all*
 Are the discharge pipes above or below the deep water line
 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 time shaft removed*
 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 *Vanessa* owned by *J. Leuwick Haas* of the Port of *London* of *876* Tons Register, and *190* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *August 19th 1878* in good order and safe working condition.

Amount of Fee for Survey ... *£5:5:0*
 (Travelling Expenses, if any, £)

James I. Millow
 Engineer Surveyor to Lloyd's Register of Shipping.