

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

No. *20044. Iron.*

Port *Hull*

Report (if any) on Hull of Vessel.

Description *Compound Inverted*
 Made by *Barclay*
 When *1873* At *Hull*
 Diameter of cylinder *47" 1/2* Length of stroke *50"*
 No. of revolutions per minute *46*
 Point of cut off *30 inches*
 Diameter of screw shaft *1 1/2"*
 Diameter of crank shaft journals *1 1/2"*
 Diameter of screw, or of paddle wheel *18" 3*
 Pitch of screw *25 feet*
 No. of blades, *4* Total surface *—*
 No. of bilge pumps *2* and sizes *—*
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses *yes*
 No. of feed pumps *2* and sizes *—*
 What gauges are there attached to the engines and boilers ... *15 to each Boiler 15 & 14 to Engines*
 Description and size of Donkey Pumps ... *One Double Acting*
 Where do they pump from ... *Sea, Bilge from all compartments, feed boilers & pumps on deck & overboard*
 No. of bilge injections *One* and sizes *—*
 Are they connected to air, or circulating pumps *yes*
 Is there a hand pump in the engine room *yes*
 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 *Four* Description *Double ended Cyl.*
 Made by *Barclay*
 When *1873* At *Hull*
 Working pressure *65 lbs to remain 61 as in B.P.*
 Tested by hydraulic pressure to *not ascertained* Date *per J.M.*
 Description of super-heating apparatus *Cylindrical in uptake each two boilers.*
 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 *Seven two weight 2 to each boiler 4 1/2 dia*
 No. of square feet of fire-grate surface in each boiler *57 1/2 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 *One Double ended Air top, flat ends*
 Where fixed *On deck*
 Working pressure *40 lbs*

Tested by hydraulic pressure to *not* Date *—*
 Description and area of safety valves *ascertained*
 No. of square feet of fire grate *—*

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 ... *Screw down valves & common cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates *no*
 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 *—*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *at this date*
 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 *Sluice door fitted but tunnel not watertight*

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 *Eldorado* owned by *J. Wilson Sons & Co* of the Port of *Hull* of *2157* Tons Register, and *450* Registered Horse Power, and that they have been carefully inspected and examined by me at *London* and found to be at this date, viz., *June 26th* 18 *77* in good order and safe working condition.

Amount of Fee for Survey *27/6/77* £ *5:5:0*
 (Travelling Expenses, if any, £ *3/12/77*)

Recd. J.F.
26.7.77

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