

11071 Iron Reed 17/2/73

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER'S CERTIFICATE.

The following is a true Account of the Particulars of the Machinery and Boilers:—

ENGINES.—Here state description of Engines, whether Direct Acting or Geared, Inverted, Horizontal, Diagonal, or Oscillating Cylinders; No. of Cylinders, &c.

Two Inverted direct acting, Surface Condensing Engines with one Cylinder to each Engine

ENGINES, maker of *Hawthorns & altered by*
 „ age of *Victoria Dock Engine Works*
 „ last time taken out *to Surface condensing*
 „ present condition *good*
 Diameter of Cylinder *38"*
 Length of stroke *30"*
 No. per minute of Engines *65*
 „ of Screw *65*
 Estimated power *90*
 Effective power *400*
 Diameter of Screw (or Paddle Wheels) *11 feet*
 Pitch of Screw *15 feet*
 No. of Blades (or Floats) *4*
 Description of Screw (or Floats) *Common*
 Holding down Bolts, size *2 1/4 in*
 „ present condition *good*

Bilge Pumps, No. (*2*) and size *4 ins*
 Feed „ No. (*2*) and size *4 "*
 Spare gear, if usual quantity on board Vessel *Yes*
 Fuel, where stowed *side Bunkers*
 space between Coal Bunkers and Boilers *6 ins*
 „ for what quantity is space provided *100 Tons*
 Donkey Engine *and Boiler* *Yes*
 „ if fitted in Engine Room or on Deck *Engine Room*
 „ can pump be worked by hand *Yes*
 „ size of pump (*4 1/2*) and stroke *10 ins*
 „ is hose of sufficient length to reach every part of the Vessel *Yes*
 No. () and continuation of hand pumps, if fitted in Engine Room *None*

BOILER.—Here state description of Boiler, and No.; if Tubular, or Flues; No. of Furnaces; if fitted with superheating apparatus; if Fired athwartships, or from force, or after end of Boiler, &c.

Two Cylindrical & multitubular Boilers: each having two furnaces fitted with one Annular Superheater and fired from forward.

BOILER, maker of *Victoria Dock Engine Works*
 „ age of *New*
 „ when last taken out
 „ present condition *New*
 „ working pressure *35 lbs*
 No. of surface Blow off Cocks to each Boiler *one*

Can each Boiler be used separately *Yes*
 What clear space between top of Boiler and woodwork *6 feet*
 What clear space between Funnel and woodwork *2 feet*
 Are Engine and Boiler Keelsons well connected fore and aft *Yes*

SCREW SHAFT length *13 feet* diameter *8"* Tunnel, thickness of plating *None* height
 width if water-tight door or Bulkhead *None*

Port *London* 5th day of *Febry* 1873

I hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *James Joyce* belonging to *Messrs Penwick & Son* whereof *— Morrell* is Master, *90* Tons Register, and *90* H.P. have been carefully inspected and examined by me at *Victoria Docks* and I found the same, at this date, in good order and safe working condition.

pp. Victoria Dock Engine Works Ltd
C. Franch
 Marine Engineers.