

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.

ENGINES, maker of *James Jack & Co*
 „ age of *four years*
 „ last time taken out
 „ present condition *good*
 Diameter of Cylinder *62"*
 Length of stroke *48"*
 No. per minute of Engines *26*
 „ of Screw *65*
 Estimated power *280*
 Effective power *900*
 Diameter of Screw (or Paddle Wheels) *16 ft*
 Pitch of Screw *20 ft*
 No. of Blades (or Floats) *4*
 Description of Screw (or Floats) *Cast Iron*
 Holding down Bolts, size *1 1/2 in diam*
 „ present condition *good*

Bilge Pumps, No. (*4*) and size *6 inch*
 Feed „ No. (*2*) and size *6*
 Spare gear, if usual quantity on board Vessel *yes*
 Fuel, where stowed *in Bunkers*
 „ space between Coal Bunkers and Boilers *8 feet*
 „ for what quantity is space provided *917 tons*
 Donkey Engine and Boiler *two Donkeys & one Boiler*
 „ if Fitted in Engine Room or on Deck *one on Deck & one below*
 „ can pump be worked by hand *yes*
 „ size of pump (*5 1/2*) and stroke *12"*
 „ is hose of sufficient length to reach every part of the Vessel *yes*
 No. (*2*) and condition of hand pumps, if fitted in Engine Room *good worked by hand attached to engines*

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 fore, or after end of Boiler, &c.

BOILER, maker of *James Jack & Co*
 „ age of *four years*
 „ when last taken out
 „ present condition *good*
 working pressure *19 lb*
 „ surface Blow off Cocks to each Boiler *two on each Boiler*

Can each Boiler be used separately *yes*
 What clear space between top of Boiler and woodwork *7 ft*
 What clear space between Funnel and woodwork *Iron deck 6 ft clear*
 Are Engine and Boiler Keelsons well connected fore and aft *yes*

SCREW SHAFT length *150 ft.* diameter *10 1/2"* Tunnel, thickness of plating *1/2* height *5 ft.*
 width *4 ft.* if water-tight door on Engine Bulkhead *yes.*

Port of *Liverpool* *29th* day of *November* 18*69*

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *Delaware* belonging to *C & E Dixon Esq.* whereof *Fisher* is Master, *Tons Register*, and *280* H.P. have been carefully inspected and examined by us at *Liverpool* and have found the same, at this date, in good order and safe working condition.

James Jack & Co
Liverpool
 Marine Engineers.

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