

# 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.

*a pair of compound inverted cylinder Engines direct acting—2 cylinders one high & one low pressure*

ENGINES, maker of *Messrs J. Jack, Rolfe & Co*  
 „ age of *New*  
 „ last time taken out  
 „ present condition *New*  
 Diameter of Cylinder *Low pressure 52, High pressure 28*  
 Length of stroke *30"*  
 No. per minute of Engines *70*  
 „ of Screw *70*  
 Estimated power *120*  
 Effective power *600*  
 Diameter of Screw (on Paddle Wheels) *13 ft. 0*  
 Pitch of Screw *15 6*  
 No. of Blades (on Paddle) *4*  
 Description of Screw (on Paddle) *Cast Iron*  
 Holding down Bolts, size *1 3/4*  
 „ present condition *New*

Bilge Pumps, No. ( ) and size *2 — 3 1/2 dia x 15 strokes*  
 Feed „ No. ( ) and size *2 — „ x „*  
 Spare gear, if usual quantity on board Vessel *Yes*  
 Fuel, where stowed *Bunkers*  
 „ space between Coal Bunkers and Boilers *12'*  
 „ for what quantity is space provided *136 Tons.*  
 Donkey Engine and Boiler *Yes*  
 „ if fitted in Engine Room or on Deck *Deck*  
 „ can pump be worked by hand *Yes*  
 „ size of pump ( ) and stroke *3 1/2 dia x 7 strokes*  
 „ is hose of sufficient length to reach every part of the Vessel *Yes*  
 No. ( ) and continuation of hand pumps, if fitted in Engine Room *2 — fitted in Engine Room*

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.

*circular*  
*One double ended, tubular Boiler, 4 furnaces, 2 fired forward and 2 aft — Circular Superheater on top.*

BOILER, maker of *Messrs J. Jack, Rolfe & Co*  
 „ age of *New*  
 „ when last taken out  
 „ present condition *New*  
 „ working pressure *80*  
 No. of surface Blow off Cocks to each Boiler *2*

Can each Boiler be used separately *Yes*  
 What clear space between top of Boiler and woodwork *3' 0*  
 What clear space between Funnel and woodwork *3' 0*  
 Are Engine and Boiler Keelsons well connected fore and aft *Yes*

SCREW SHAFT length *21' 9"* diameter *8 1/2"* Tunnel, thickness of plating *3/8* height *6' 0"*  
 width *3' 6"* if water-tight door on Engine Bulkhead. *yes.*

Port *Liverpool* 3<sup>rd</sup> day of *July* 18 *71*

*We* hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Astraleger"* belonging to *M. H. Dixon Esq* whereof *George Messay* is Master, *692.82* Tons Register, and *120* H.P. have been carefully inspected and examined by *us* at *Liverpool* and *we* found the same, at this date, in good order and safe working condition.

*James Jack, Rolfe & Co*  
*Victoria Engine Works*  
 Marine Engineers.

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