

# 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.

*Inverted Direct Acting Surface Condensing 2 Cylinders*

ENGINES, maker of *R. M. Hawthorn*  
 „ age of *new*  
 „ last time taken out  
 „ present condition  
 Diameter of Cylinder *45 inches*  
 Length of stroke *30*  
 No. per minute of Engines *65 revs*  
 „ of Screw *do*  
 Estimated power *130 H.P.*  
 Effective power *500*  
 Diameter of Screw (or Paddle Wheels) *18 ft screw*  
 Pitch of Screw *16 ft*  
 No. of Blades (or Floats) *4 blades*  
 Description of Screw (or Floats) *ordinary*  
 Holding down Bolts, size *2 3/4 in dia*  
 „ present condition *new*

Bilge Pumps, No. ( *2* ) and size *4" dia 19" stroke*  
 Feed „ No. ( *2* ) and size *do do*  
 Spare gear, if usual quantity on board Vessel *yes*  
 Fuel, where stowed *side of Engine & Boiler*  
 „ space between Coal Bunkers and Boilers *6 inches*  
 „ for what quantity is space provided *200 tons*  
 Donkey Engine and Boiler *Donkey Engine*  
 „ if fitted in Engine Room or on Deck *in Engine Room*  
 „ can pump be worked by hand *yes*  
 „ size of pump *4"* and stroke *8 inches*  
 „ is hose of sufficient length to reach every part of the Vessel *yes*  
 No. ( ) and continuation of hand pumps, if fitted in Engine Room *One large double acting steam pump for water Ballast connected to bilges*

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.

*2. Tubular Boilers each with 2 Furnaces. Annular Super-heater. Fired fore and aft from forward end*

BOILER, maker of *R. M. Hawthorn*  
 „ age of *new*  
 „ when last taken out  
 „ present condition  
 „ working pressure *40 lbs p.s.f.*  
 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 *8 feet*  
 What clear space between Funnel and woodwork *1 foot*  
 Are Engine and Boiler Keelsons well connected fore and aft *yes*

SCREW SHAFT length *about 91 ft* diameter *9 3/4 in* Tunnel, thickness of plating *5/16* height *4' 6"*  
 width *3' 9"* if water-tight door on Engine Bulkhead *no*

Port *Newcastle on Tyne* 21 day of *July* 18*69*

*We* hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Brazilian"* belonging to *Newcastle* whereof *Strayen* is Master, *879.91* Tons Register, and *120* H.P. have been carefully inspected and examined by *us* at *Newcastle* and *we* found the same, at this date, in good order and safe working condition.

*for R. M. Hawthorn*  
*E. J. Danvers*  
 Marine Engineers.