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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 feet screw*
 Pitch of Screw *16 feet*
 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 Superheater. 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 per sq in*
 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 the *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.