

10840 Iron

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.

Direct Acting. Inverted Cylinders Two in number

ENGINES, maker of *Marshall & Borne & Co.*
 „ age of *new*
 „ last time taken out *never*
 „ present condition *good*
 Diameter of Cylinder *20" & 36" inches*
 Length of stroke *24" inches*
 No. per minute of Engines *85*
 „ of Screw *85*
 Estimated power *Nominal 56*
 Effective power *200*
 Diameter of Screw (or Paddle Wheels) *9 ft*
 Pitch of Screw *14 ft*
 No. of Blades (or Floats) *from*
 Description of Screw (or Floats) *Amma*
 Holding down Bolts, size *12 in*
 „ present condition *good*

Bilge Pumps, No. (*one*) and size *4 in* an
 Feed „ No. (*one*) and size *4 in*
 Spare gear, if usual quantity on board Vessel *used*
 Fuel, where stowed *from coal bunkers*
 „ space between Coal Bunkers and Boilers *3 in each side*
 „ for what quantity is space provided *60 Tons*
 Donkey Engine and Boiler *yes*
 „ if fitted in Engine Room or on Deck *Engine below*
 „ can pump be worked by hand *yes*
 „ size of pump (*4*) and stroke *9 in*
 „ 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.

Tubular. 2 furnaces. Partial superheating
Fired from aft end of vessel

BOILER, maker of *Marshall & Borne & Co.*
 „ age of *new*
 „ when last taken out *never*
 „ present condition *good*
 „ working pressure *70 lbs*
 No. of surface Blow off Cocks to each Boiler *one*
 SCREW SHAFT length *11' 5"* diameter *6 1/4"*
 width *3 1/2 ft* if water-tight door on Engine Bulkhead. *yes*

Can each Boiler be used separately *yes*
 What clear space between top of Boiler and woodwork *20 in*
 What clear space between Funnel and woodwork *18 in*
 Are Engine and Boiler Keelsons well connected fore and aft *yes*
 height *5 ft 9 in*

Port *South Shields* 8th day of *November* 1872

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or ~~Wood~~)
 Screw (or ~~Paddle~~) Steam Vessel *'Rio Lima'* belonging to *London*
 whereof *Mitchell* is Master, *180.36* Tons Register, and *56* H.P. have been
 carefully inspected and examined by us at *Bell Quay in Tyne* and we found the
 same, at this date, in good order and safe working condition.

Marshall & Borne & Co.
Tyne Engineering Works
 Marine Engineers. *South Shields*