

# 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, Compound Engines with two cylinders*

ENGINES, maker of *John Elder & Co*  
 „ age of *New*  
 „ last time taken out *—*  
 „ present condition *New*  
 Diameter of Cylinder *H.P. 34 in. L.P. 62 in.*  
 Length of stroke *3 feet*  
 No. per minute of Engines *70 Revolutions*  
 „ of Screw *70 — do*  
 Estimated power *175 ~~H.P.~~ Indicated H.P.*  
 Effective power *900 Indicated H.P.*  
 Diameter of Screw (or Paddle Wheels) *12 feet*  
 Pitch of Screw *19 feet*  
 No. of Blades (or Floats) *Four*  
 Description of Screw (or Floats) *Common*  
 Holding down Bolts, size *1 1/2 inch*  
 „ present condition *New*

Bilge Pumps, No. ( *2* ) and size *4" dia X 2 1/2" stroke*  
 Feed „ No. ( *2* ) and size *4" dia X 2 1/2" do*  
 Spare gear, if usual quantity on board Vessel } *Yes*  
 Fuel, where stowed *Alongside of Boilers*  
 „ space between Coal Bunkers and Boilers } *Minimum 12 ins.*  
 „ for what quantity is space provided *130 tons*  
 Donkey Engine and Boiler *Yes*  
 „ if fitted in Engine Room or on Deck } *Boiler in Fore-Scotthole Engine in Engine Room*  
 „ can pump be worked by hand *Fitted with Hand Pump additional*  
 „ size of pump *4 1/2"* and stroke *8 in. double acting*  
 „ is hose of sufficient length to reach every part of the Vessel } *—*  
 No. ( ) and continuation of hand pumps, if 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.

*One Cylindrical Tubular Boiler, with six furnaces, fired at each end, fore and aft —*

BOILER, maker of *John Elder & Co*  
 „ age of *New*  
 „ when last taken out *—*  
 „ present condition *New*  
 „ working pressure *60 lbs.*  
 No. of surface Blow off Cocks to each Boiler } *one*  
 SCREW SHAFT length *79 ft.* diameter *9 3/4"* Tunnel thickness of plating *1/4"* height *6 ft. 6 in.*  
 width *4 ft.* if water-tight door on Engine Bulkhead. *Yes*

Can each Boiler be used separately *—*  
 What clear space between top of Boiler and woodwork } *18 ins.*  
 What clear space between Funnel and woodwork } *2 ft. 6 in.*  
 Are Engine and Boiler Keelsons well connected fore and aft } *Yes*

Port *Glasgow* *9<sup>th</sup>* day of *March* 18 *75*

*We* hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel "*Rajanattianukar*" belonging to *Hecla* whereof *Capt Hopkins* is Master, *130 1/4* Tons Register, and *175* H.P. have been carefully inspected and examined by *us* at *Glasgow* and *we* found the same, at this date, in good order and safe working condition.

*John Elder & Co*



Marine Engineers.

Lloyd's Register Foundation