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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.

Direct Acting Compound inverted cylinders, (one high & one low pressure) with surface condenser

ENGINES, maker of	<i>Mucaria Donald & Co.</i>	Bilge Pumps, No. (<i>1</i>) and size	<i>3 1/2 ins</i>
„ age of	<i>New</i>	Feed „ No. (<i>1</i>) and size	<i>„</i>
„ last time taken out		Spare gear, if usual quantity on board Vessel	<i>Usual quantity</i>
„ present condition		Fuel, where stowed	<i>Sides of boiler space</i>
Diameter of Cylinder	<i>22" & 40"</i>	„ space between Coal Bunkers and Boilers	<i>12 inches</i>
Length of stroke	<i>27 ins</i>	„ for what quantity is space provided	<i>60 tons</i>
No. per minute of Engines	<i>75</i>	Donkey Engine and Boiler	<i>Both</i>
„ of Screw	<i>70</i>	„ if fitted in Engine Room or on Deck	<i>Engine Room</i>
Estimated power	<i>300</i>	„ can pump be worked by hand	<i>Separate Deck Pump</i>
Effective power	<i>300</i>	„ size of pump (<i>3"</i>) and stroke	<i>„</i>
Diameter of Screw (or Paddle Wheels)	<i>9.3"</i>	„ is hose of sufficient length to reach every part of the Vessel	<i>Yes.</i>
Pitch of Screw	<i>14.6"</i>	No. () and continuation of hand pumps, if fitted in Engine Room	
No. of Blades (or Floats)	<i>4</i>		
Description of Screw (or Floats)	<i>Common</i>		
Holding down Bolts, size	<i>1 1/8</i>		
„ present condition	<i>New</i>		

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.

One round horizontal tubular boiler with three furnaces, two safety valves, water & steam gauges surface & bottom blow off & all necessary mountings. fired from after end of boiler

BOILER, maker of	<i>Adrian Keumlin & Marie</i>	Can each Boiler be used separately	
„ age of	<i>New</i>	What clear space between top of Boiler and woodwork	<i>Iron deck.</i>
„ when last taken out		What clear space between Funnel and woodwork	
„ present condition		Are Engine and Boiler Keelsons well connected fore and aft	<i>Yes.</i>
„ working pressure	<i>65 lbs</i>		
No. of surface Blow off Cocks to each Boiler	<i>one</i>		
SCREW SHAFT length	<i>63 feet</i>	diameter	<i>7 ins</i>
width		Tunnel thickness of plating	
		height	
		if water-tight door on Engine Bulkhead.	

Port of *Greenock* 3rd day of *October* 1874

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel "*Bertha*" belonging to *H. P. Seligmann & Co.* whereof *John Campbell* is Master, *70* Tons Register, and *70* H.P. have been carefully inspected and examined by us at *Greenock* and we found the same, at this date, in good order and safe working condition.

Mucaria Donald & Co.
Marine Engineers.



Lloyd's Register
Foundation

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