

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, Mounted, 3 Cylinders

11650 H.P.

ENGINES, maker of	<i>Wingate Glasgow</i>	Bilge Pumps, No. (<i>2</i>) and size	<i>3 3/4</i>
„ age of	<i>1864 - 9 Years</i>	Feed „ No. (<i>2</i>) and size	<i>3 3/4</i>
„ last time taken out		Spare gear, if usual quantity on board Vessel	
„ present condition	<i>Good</i>	Fuel, where stowed	<i>Fore & Aft</i>
Diameter of Cylinder	<i>35</i>	„ space between Coal Bunkers and Boilers	<i>4"</i>
Length of stroke	<i>27</i>	„ for what quantity is space provided	<i>90 Tons</i>
No. per minute of Engines	<i>40</i>	Donkey Engine and Boiler	<i>Yes</i>
„ of Screw	<i>70</i>	„ if fitted in Engine Room or on Deck	<i>Engine Room</i>
Estimated power	<i>90</i>	„ can pump be worked by hand	
Effective power		„ size of pump (<i>3"</i>) and stroke	<i>10"</i>
Diameter of Screw (or Paddle Wheels)	<i>9 feet</i>	„ is hose of sufficient length to reach every part of the Vessel	<i>Yes</i>
Pitch of Screw	<i>17 1/2 feet</i>	No. (<i>1</i>) and continuation of hand pumps, if fitted in Engine Room	<i>Engine Room</i>
No. of Blades (or Floats)	<i>Three</i>		
Description of Screw (or Floats)	<i>Ordinary</i>		
Holding down Bolts, size	<i>1"</i>		
„ present condition	<i>Good</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.

Tubular Boiler, 3 Furnaces

BOILER, maker of	<i>Wingate Glasgow</i>	Can each Boiler be used separately	
„ age of	<i>1864 - 9 years</i>	What clear space between top of Boiler and woodwork	<i>2 feet</i>
„ when last taken out	<i>Has not been out</i>	What clear space between Funnel and woodwork	<i>No wood</i>
„ present condition	<i>Good</i>	Are Engine and Boiler Keelsons well connected fore and aft	<i>Yes</i>
„ working pressure	<i>16 lbs</i>		
No. of surface Blow off Cocks to each Boiler	<i>One</i>		
Screw Shaft length	<i>54 feet</i>	diameter	<i>4"</i>
width	<i>2.5</i>	Tunnel thickness of plating	<i>5/16</i>
		height	<i>4 feet</i>
		if water-tight door on Engine Bulkhead.	<i>Yes</i>

Port *Leith* *9th* day of *July* 18*73*

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. L. Seligmann* whereof *Frederick Campbell* is Master, *257* Tons Register, and *90* H.P. have been carefully inspected and examined by *us* at *Leith* and *we* found the same, at this date, in good order and safe working condition.

W. & A. R. Thompson & Co.
Marine Engineers.

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Foundation