

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.

The Engines are inverted directacting, now altered to work on the compound principle, fitted with one high pressure and one low pressure cylinder and Surface Condenser.

<p>ENGINES, maker of <i>Palmers Shipbuilding & Iron Co. Ltd.</i></p> <p>„ age of <i>1861.</i></p> <p>„ last time taken out <i>-</i></p> <p>„ present condition <i>In thorough repair.</i></p> <p>Diameter of Cylinders <i>25 & 48.</i></p> <p>Length of stroke <i>30.</i></p> <p>No. per minute of Engines <i>70 revolutions</i></p> <p>„ of Screw <i>70</i></p> <p>Estimated power <i>90 H.p. nominal</i></p> <p>Effective power <i>400 H.p. indicated.</i></p> <p>Diameter of Screw (or Paddle Wheels) <i>10. 4.</i></p> <p>Pitch of Screw <i>17. 6.</i></p> <p>No. of Blades (or Floes) <i>3</i></p> <p>Description of Screw (or Floes) <i>fixed Blades.</i></p> <p>Holding down Bolts, size <i>2 1/2 diam</i></p> <p>„ present condition <i>good.</i></p>	<p>Bilge Pumps, No. (<i>2.</i>) and size <i>4 diam, 16 stroke</i></p> <p>Feed „ No. (<i>2</i>) and size <i>4 „ 16</i></p> <p>Spare gear, if usual quantity on board Vessel <i>yes.</i></p> <p>Fuel, where stowed <i>In Side bunkers.</i></p> <p>„ space between Coal Bunkers and Boilers <i>9.</i></p> <p>„ for what quantity is space provided <i>100 tons.</i></p> <p>Donkey Engine and Boiler <i>yes.</i></p> <p>„ if fitted in Engine Room or on Deck <i>Donkey in Engine room</i></p> <p>„ can pump be worked by hand <i>yes</i> <i>Boiler on Deck</i></p> <p>„ size of pump (or) and stroke <i>a Ballast Donkey is also</i></p> <p>„ is hose of sufficient length to reach every part of the Vessel <i>yes</i> <i>provided and</i></p> <p>No. () and continuation of hand pumps, if fitted in Engine Room <i>none</i> <i>placed in Engine room.</i></p>
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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.

Two cylindrical tubular Boilers with 4 circular Furnaces, dry Uptake and a vertical annular Superheater round Base of Funnel. The Boilers are fired from their forward end.

<p>BOILER, maker of <i>Palmers Shipbuilding & Iron Co. Limited</i></p> <p>„ age of <i>new</i></p> <p>„ when last taken out <i>-</i></p> <p>„ present condition <i>-</i></p> <p>„ working pressure <i>75 lbs.</i></p> <p>No. of surface Blow off Cocks to each Boiler <i>one.</i></p>	<p>Can each Boiler be used separately <i>yes.</i></p> <p>What clear space between top of Boiler and woodwork <i>10. 7.</i></p> <p>What clear space between Funnel and woodwork <i>1. 1 1/2.</i></p> <p>Are Engine and Boiler Keelsons well connected fore and aft <i>yes.</i></p>
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SCREW SHAFT length *25. 3* diameter *7 3/4* Tunnel, thickness of plating height *-*

width *-* if water-tight door on Engine Bulkhead. *No Tunnel but the space in which the shafting works forms part of Engine room as far aft as Stern tube Bulkhead.*

Port *Newcastle* day of *June* 18 *91.*

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel "*John Lawrie*" belonging to *London* whereof *G. Brown* is Master, *540. 46* Tons Register, and *90* H.P. have been carefully inspected and examined by us at *Larrow on Tyne* and we found the same, at this date, in good order and safe working condition.

Palmers Shipbuilding & Iron Co. Ltd.

John Lawrie
Marine Engineers.