

Apr 10204

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.

The Engines are inverted directacting with two cylinders and now fitted with Surface condenser.

<p>ENGINES, maker of <u>R & W. Hawthorn Newcastle</u></p> <p>„ age of <u>built 1865</u></p> <p>„ last time taken out <u>most parts taken out & repaired</u></p> <p>„ present condition <u>in thorough repair in 1872</u></p> <p>Diameter of Cylinder <u>38 inches</u></p> <p>Length of stroke <u>30</u></p> <p>No. per minute of Engines <u>70 revolutions</u></p> <p>„ of Screw <u>70</u></p> <p>Estimated power <u>90 HP. nominal</u></p> <p>Effective power <u>400 HP indicated</u></p> <p>Diameter of Screw (or Paddle Wheels) <u>about 12 ft.</u></p> <p>Pitch of Screw <u>about 18 ft.</u></p> <p>No. of Blades (or Paddles) <u>3</u></p> <p>Description of Screw (or Paddles) <u>fixed blades</u></p> <p>Holding down Bolts, size <u>2 1/2 diam</u></p> <p>„ present condition <u>good</u></p>	<p>Bilge Pumps, No. (<u>2</u>) and size <u>3 1/4 diam 15 stroke</u></p> <p>Feed „ No. (<u>2</u>) and size <u>3 1/4 15</u></p> <p>Spare gear, if usual quantity on board Vessel <u>yes</u></p> <p>Fuel, where stowed <u>in six bunkers</u></p> <p>„ space between Coal Bunkers and Boilers <u>—</u></p> <p>„ for what quantity is space provided <u>about 100 tons</u></p> <p>Donkey Engine and Boiler <u>Donkey, no Boiler</u></p> <p>„ if fitted in Engine Room or on Deck <u>In Engine room</u></p> <p>„ can pump be worked by hand <u>yes</u> <u>A Ballast Donkey is also provided</u></p> <p>„ size of pump (<u>4</u>) and stroke <u>8</u> <u>and fitted in</u></p> <p>„ is hose of sufficient length to reach every part of the Vessel <u>yes</u> <u>Engine room</u></p> <p>No. () and continuation of hand pumps, if fitted in Engine Room <u>none</u></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.

One tubular dry bottom Boiler with semicircular top, four Furnaces, dry Uptake and an annular Superheater round base of Funnel. The Boiler is fired from forward end.

<p>BOILER, maker of <u>Palmer's Shipbuilding & Iron Co. Ltd.</u></p> <p>„ age of <u>new</u></p> <p>„ when last taken out <u>—</u></p> <p>„ present condition <u>—</u></p> <p>„ working pressure <u>35 lbs.</u></p> <p>No. of surface Blow off Cocks to each Boiler <u>one</u></p> <p>SCREW SHAFT length <u>The Engines are at diameter 8'.</u></p> <p>width <u>—</u> if water-tight door on Engine Bulkhead. <u>Stuffing box for shaft on Engine bulk head, which is watertight and a trap door in Cabin floor for getting to Stem tube.</u></p>	<p>Can each Boiler be used separately <u>—</u></p> <p>What clear space between top of Boiler and woodwork <u>4' 6"</u></p> <p>What clear space between Funnel and woodwork <u>1' 5"</u></p> <p>Are Engine and Boiler Keelsons well connected fore and aft <u>yes</u></p> <p>Tunnel, thickness of plating <u>—</u> height <u>—</u> <u>No Tunnel</u></p>
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Port Newcastle on Tyne 3rd day of May 1872.

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel James Southern belonging to London whereof — is Master, Tons Register, and 90 H.P. have been carefully inspected and examined by us at Farron on Tyne and we found the same, at this date, in good order and safe working condition.

for. Palmer's Shipbuilding & Iron Co. Ltd.
Thos. Fairclough
Marine Engineers.