

13408 *L*

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.

Inverted Cylinders, Compound, Surface Condensing.

ENGINES, maker of *Jr & Tho. Dale, Warkhead*
 „ age of *new*
 „ last time taken out
 „ present condition
 Diameter of Cylinder *12 1/2" & 21"*
 Length of stroke *18 inches*
 No. per minute of Engines *100 Rev. per Min.*
 „ of Screw *Same*
 Estimated power
 Effective power *90 horse power*
 Diameter of Screw (~~or Paddle Wheel~~) *7 feet*
 Pitch of Screw *8 ft 6 in*
 No. of Blades (or Floats) *Three*
 Description of Screw (~~or Floats~~) *Griffiths*
 Holding down Bolts, size *1 1/4"*
 „ present condition

Bilge Pumps, No. (*one*) and size *2 inches dia.*
 Feed „ No. (*one*) and size *8 in.*
 Spare gear, if usual quantity on board Vessel } *yes*
 Fuel, where stowed *In fore & aft side bunkers*
 „ space between Coal Bunkers and Boilers } *6 inches*
 „ for what quantity is space provided *90 Tons*
 Donkey Engine and Boiler
 „ if fitted in Engine Room or on Deck } *Engine Room*
 „ can pump be worked by hand *no*
 „ size of pump (*3 1/2"*) and stroke *6 inches*
 „ is hose of sufficient length to reach every part of the Vessel } *yes*
 No. () and continuation of hand pumps, if fitted in Engine Room } *none*

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 Cylindrical Multitubular Boiler with Single Furnace (no super heater) & fired from after end.

BOILER, maker of *Jr S. Dale Warkhead*
 „ age of *new*
 „ when last taken out
 „ present condition
 „ working pressure *45 lbs per sq inch.*
 No. of surface Blow off Cocks to each Boiler } *one*

Can each Boiler be used separately
 What clear space between top of Boiler and woodwork } *No wood work above Boiler.*
 What clear space between Funnel and woodwork }
 Are Engine and Boiler Keelsons well connected fore and aft } *yes*

SCREW SHAFT length *40 ft* diameter *4 3/4 in* Tunnel thickness of plating *1/4 in* height *5 ft*
 width *2 ft 10 in* if water-tight door on Engine Bulkhead. *yes*

Port *Warkhead* 26th day of *Oct* 1874

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel "*Black Watch*" belonging to *Mr. Robert Thomson* whereof *Capt Wm Scott* is Master, *1379³* Tons Register, and *20* H.P. have been carefully inspected and examined by us at *Warkhead* and we found the same, at this date, in good order and safe working condition.

Jr S. Dale Warkhead
 Marine Engineers.



Lloyd's Register Foundation

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