

10446 *Iron Windsor Castle*

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 inverted Compound Expansion Engines.
with one high pressure & one low pressure cylinder.*

ENGINES, maker of *R. Napier & Sons*
 „ age of *New 1872*
 „ last time taken out *—*
 „ present condition *Good*
 Diameter of Cylinder *44 ins and 72 ins*
 Length of stroke *3 ft. 6 ins.*
 No. per minute of Engines *—*
 „ of Screw *—*
 Estimated power *270 H.P. Nominal.*
 Effective power *—*
 Diameter of Screw (or Paddle Wheels) *17 ft.*
 Pitch of Screw *Varying from 18.3 to 21.5 mean 19.9*
 No. of Blades (or Floats) *Four*
 Description of Screw (or Floats) *Criffick's*
 Holding down Bolts, size *1 1/2" diam.*
 „ present condition *Good*

Bilge Pumps, No. (*2*) and size *4 1/2" diam. x 1 1/2" stroke*
 Feed „ No. (*2*) and size *4 1/2" x 1 1/2"*
 Spare gear, if usual quantity on board Vessel *Yes*
 Fuel, where stowed *at sides & forward of Engines & Boilers.*
 „ space between Coal Bunkers and Boilers *none*
 „ for what quantity is space provided *646 Tons @ 45 Cub. ft. per ton.*
 Donkey Engine and Boiler *Yes*
 „ if fitted in Engine Room or on Deck *Engine Room (Boilers on deck)*
 „ can pump be worked by hand *No.*
 „ size of pump (*6 1/2"*) and stroke *12 ins.*
 „ is hose of sufficient length to reach every part of the Vessel *Yes*
 No. (*One*) and continuation of hand pumps, if fitted in Engine Room *Engine Room*

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.

*Circular Boilers - 4 in no. Tubular - 12 Furnaces in all - one superheater.
Boilers fired from fore & aft ends of stokehole.*

BOILER, maker of *R. Napier & Sons*
 „ age of *New 1872*
 „ when last taken out *—*
 „ present condition *Good*
 „ working pressure *60 lbs.*
 No. of surface Blow off Cocks to each Boiler *1 to each Boiler*
 SCREW SHAFT length *110 ft. 6 1/2 ins.* diameter *Propeller shaft 13" & main 12" Tunnel*, thickness of plating *Bottom 5/16" Top sides 1/4"* height *5 ft. 6 ins.*
 width *4 ft. 3 ins.* if water-tight door on Engine Bulkhead. *Yes*

Can each Boiler be used separately *Yes*
 What clear space between top of Boiler and woodwork *1 ft. 10 ins.*
 What clear space between Funnel and woodwork *2 ft. 7 ins.*
 Are Engine and Boiler Keelsons well connected fore and aft *Yes*

Port *Glasgow* day of *7* Month *18* 72

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *Windsor Castle* belonging to *D. Currie & Co* whereof *—* is Master, *—* Tons Register, and *270* H.P. have been carefully inspected and examined by *us* at *Glasgow* and *we* found the same, at this date, in good order and safe working condition.

R. Napier & Sons
J. D. Bell
 Marine Engineers.

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