

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.

Compound Direct Acting Inverted Cylinders & Surface  
Condensing Engines, No. of Cylinders, Two,

ENGINES, maker of *M<sup>r</sup> Richardson & Sons*

„ ~~age of~~

„ ~~last time taken out~~

„ present condition *New*

Diameter of Cylinders *25" & 48"*

Length of stroke *30"*

No. per minute of Engines *70*

„ of Screw *70*

Estimated power *900*

Effective power *400*

Diameter of Screw (or Paddle Wheels) *12" 0"*

Pitch of Screw

No. of Blades (or Floats) *11*

Description of Screw (or Floats) *Ordinary*

Holding down Bolts, size *1 1/4" Diam<sup>r</sup>*

„ present condition *New*

Bilge Pumps, No. (*One*) and size *3 1/4" Diam<sup>r</sup> & 22 1/4" Stroke*

Feed „ No. (*1*) and size „ „ „ „

Spare gear, if usual quantity on board Vessel *Yes*

Fuel, where stowed *Side Bunkers*

„ space between Coal Bunkers and Boilers *12" & 21"*

„ for what quantity is space provided

Donkey Engine and Boiler *Yes*

„ if fitted in Engine Room or on Deck *In the engine room*

„ can pump be worked by hand *No. A Separate hand pump fitted*

*Two* „ size of pump (*4 1/2"*) and stroke *9 1/2"* *Double Acting*

„ 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 *Fitted in the 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.

Cylindrical Boiler, Tubular, Three Furnaces,  
No Superheater, & Fired at Fore End

BOILER, maker of *M<sup>r</sup> Richardson & Sons*

„ ~~age of~~

„ ~~when last taken out~~

„ present condition *New*

„ working pressure *65 lbs per sq. inch*

No. of surface Blow off Cocks to each Boiler *One Bottom & one Surface*

Can each Boiler be used separately *Single Boiler*

What clear space between top of Boiler and woodwork *24" in*

What clear space between Funnel and woodwork *24" in*

Are Engine and Boiler Keelsons well connected fore and aft *Yes*

SCREW SHAFT length *66" 3"* diameter *4 1/2" & 8"* Tunnel, thickness of plating *5/16"* height *4" 6"*  
width *3" 9"* if water-tight door on Engine Bulkhead *Yes*

Port *West Hartlepool* 26<sup>th</sup> day of *April* 1893

*We* hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) crew (or Paddle) Steam Vessel *"Isidora"* belonging to *London* whereof *Chas. Morris* is Master, *347 20* Tons Register, and *90* H.P. have been carefully inspected and examined by *Us* at *West Hartlepool* and *We* found the me, at this date, in good order and safe working condition.

*J. Richardson & Sons*  
*for Chas. Morris*  
Marine Engineers.