

13961 *Iron*

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, direct-acting, compound, with surface condenser & two Cylinders

ENGINES, maker of *Palmers & Co Ltd*
 „ age of *new*
 „ last time taken out _____
 „ present condition _____
 Diameter of Cylinder *31 1/2" & 61"*
 Length of stroke *36"*
 No. per minute of Engines *66*
 „ of Screw *66*
 Estimated power *150 HP nominal*
 Effective power *750 HP indicated*
 Diameter of Screw (~~or Paddle Wheel~~) *15" 0*
 Pitch of Screw *14" 6" increasing to 17" 0"*
 No. of Blades (~~or Flutes~~) *4*
 Description of Screw (~~or Flutes~~) *moveable blades*
 Holding down Bolts, size *1 1/4" & 2 1/2" dia*
 „ present condition *new*

Bilge Pumps, No. (*2*) and size *4 1/2" dia 18" stroke*
 Feed „ No. (*2*) and size *4 1/2" " 18" "*
 Spare gear, if usual quantity on board Vessel } *yes*
 Fuel, where stowed *in side & cross bunkers*
 „ space between Coal Bunkers } *17"*
 and Boilers }
 „ for what quantity is space provided *196 tons*
 Donkey Engine and Boiler *yes*
 „ if fitted in Engine Room or on Deck } *Donkey in Engine room, also a Boiler in Stokchale*
 „ can pump be worked by hand } *yes*
 „ size of pump (*4"*) and stroke *8"*
 „ 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*

Last Donkey fitted in 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.

Two cylindrical tubular Boilers with 6 circular furnaces, dry uptake & a vertical annular superheater on uptake round base of funnel. The boilers are fired from their forward ends.

BOILER, maker of *Palmers & Co Ltd*
 „ age of *new*
 „ when last taken out _____
 „ present condition _____
 „ working pressure *75 lbs per square inch*
 No. of surface Blow off Cocks to each Boiler } *one*

Can each Boiler be used separately *yes*
 What clear space between top of Boiler and woodwork } *8' 9"*
 What clear space between Funnel and woodwork } *2' 1 1/2"*
 Are Engine and Boiler Keelsons well connected fore and aft } *yes*

SCREW SHAFT length *111' 8"* diameter *10" & 10 1/2"* Tunnel thickness of plating *5/16" & 3/8"* height *4' 1" & 5' 6"*
 width *3' 9"* if water-tight door on Engine Bulkhead. *no* Funnel is watertight

Port *Newcastle on Tyne*. This *5th* day of *February* 18*75*

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel "*Caduceus*" belonging to *Louisa* whereof *J. J. Vatteler* is Master, *1179.77* Tons Register, and *150* H.P. have been carefully inspected and examined by *us* at *Parrow on Tyne* and *we* found the same, at this date, in good order and safe working condition.

For *Palmers Shipbuilding & Iron Co Ltd*.
Wm. G. Fish
 Marine Engineers.