

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 cylinder direct acting compound screw Engines
Two cylinders,*

ENGINES, maker of *Palmer Shipbuilding Coy Limited*
 „ age of *6 years*
 „ last time taken out *Has not been taken out*
 „ present condition *Good*
 Diameter of Cylinder *38" inch*
 Length of stroke *30"*
 No. per minute of Engines *About 60*
 „ of Screw *Same*
 Estimated power *90*
 Effective power
 Diameter of Screw (~~or Paddle Wheel~~)
 Pitch of Screw
 No. of Blades (~~or Floats~~)
 Description of Screw (or Floats)
 Holding down Bolts, size *1 1/4"*
 „ present condition *Good condition*

Bilge Pumps, No. (*2*) and size *4" diam 14 stroke*
 Feed „ No. (*2*) and size *4" 14"*
 Spare gear, if usual quantity on board Vessel
 Fuel, where stowed *In side bunkers*
 „ space between Coal Bunkers and Boilers *4"*
 „ for what quantity is space provided
 Donkey Engine and Boiler
 „ if fitted in Engine Room or on Deck
 „ can pump be worked by hand
 „ size of pump () and stroke
 „ is hose of sufficient length to reach every part of the Vessel
 No. () and continuation of hand pumps, if 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.

One Dry bottom tubular Boiler with four furnaces and vertical Superheater Fired from fore end

BOILER, maker of *Palmer Shipbuilding Coy Limited*
 „ age of *6 years*
 „ 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 *3' 6"*
 What clear space between Funnel and woodwork *2' 0"*
 Are Engine and Boiler Keelsons well connected fore and aft *Well connected fore & aft*

SCREW SHAFT length diameter Tunnel thickness of plating height
 width if water-tight door on Engine Bulkhead.

Port *Newcastle on Tyne*, 4th day of *May* 1875

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel *"Hastings"* belonging to *London* whereof *R. Doxas* is Master, *443* Tons Register, and *90* H.P. have been carefully inspected and examined by us at *Newcastle* and we found the same, at this date, in good order and safe working condition.

FOR Palmer Shipbuilding & Iron Company Limited

Thos. Leitch
 Marine Engineers.