

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.

Compound Engine with one high and one low pressure cylinder both inverted and direct acting

ENGINES, maker of *Blair & Co*
 „ age of *new*
 „ last time taken out
 „ present condition
 Diameter of Cylinder *one 30 1/2 & one 61*
 Length of stroke *39*
 No. per minute of Engines *about 60*
 „ of Screw
 Estimated power *140 H.P.*
 Effective power *about 560 „*
 Diameter of Screw (~~Paddle Wheels~~) *14-6*
 Pitch of Screw *about 14 ft*
 No. of Blades (~~or Floats~~) *4*
 Description of Screw (~~or Floats~~)
 Holding down Bolts, size *2 1/4*
 „ present condition *new*

Bilge Pumps, No. (*2*) and size *4 1/2 diam*
 Feed „ No. (*2*) and size *4 1/4*
 Spare gear, if usual quantity on board Vessel *yes*
 Fuel, where stowed *In bunkers*
 „ space between Coal Bunkers and Boilers *12*
 „ for what quantity is space provided
 Donkey Engine and Boiler *Situated on deck*
 Engine ~~is~~ fitted in Engine Room
 „ can pump be worked by hand *yes*
 „ size of pump (*7 1/2*) and stroke *9*
 „ is hose of sufficient length to reach every part of the Vessel *deck*
 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.

Two tubular boilers with three furnaces each
 Fired from forward

BOILER, maker of *Blair & Co Ltd*
 „ age of *new*
 „ when last taken out
 „ present condition
 „ working pressure *65 lbs*
 No. of surface Blow off Cocks to each Boiler *1 surface & 1 bottom*
 SCREW SHAFT length *20-4* diameter *10 3/4*
 width if water-tight door on Engine Bulkhead.

Can each Boiler be used separately *yes*
 What clear space between top of Boiler and woodwork *2-9*
 What clear space between Funnel and woodwork *2-3*
 Are Engine and Boiler Keelsons well connected fore and aft *yes*
 height

Port *West Newcastle* day of *May 10th* 1872

I hereby certify, that the whole of the above Machinery and Boilers of the Iron (~~or Wood~~) Screw (~~or Paddle~~) Steam Vessel *"Douglas"* belonging to *J. Pyman & Co* whereof *Luby* is Master, *872* Tons Register, and *140* H.P. have been carefully inspected and examined by *us* at *West Newcastle* and *we* found the same, at this date, in good order and safe working condition.

Robt Blair & Co Ltd

Marine Engineers.