

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.

one pair of direct acting horizontal compound surface condensing Engines

ENGINES, maker of *John Roach & Co*
 „ age of *new*
 „ last time taken out *4*
 „ present condition *good*
 Diameter of Cylinder *20 & 39*
 Length of stroke *30 & 30*
 No. per minute of Engines *seventy*
 „ of Screw *seventy*
 Estimated power *300*
 Effective power *300*
 Diameter of Screw (or Paddle Wheels) *7 ft*
 Pitch of Screw *15 ft*
 No. of Blades (or Floats) *four*
 Description of Screw (or Floats) *ordinary*
 Holding down Bolts, size *1 1/4*
 „ present condition *good*

Bilge Pumps, No. (*2*) and size *3"*
 Feed „ No. (*2*) and size *3"*
 Spare gear, if usual quantity on board Vessel *yes*
 Fuel, where stowed *aboard of Boiler*
 „ space between Coal Bunkers and Boilers *9 inches*
 „ for what quantity is space provided *sixty tons*
 Donkey Engine and Boiler *yes*
 „ if fitted in Engine Room or on Deck *Engine in Room*
 „ can pump be worked by hand *yes*
 „ size of pump (*6"*) and stroke *10 in*
 „ 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 *fit in Engine Room*
worked from Deck

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.

Horizontal one with three furnaces fired from aft no superheating apparatus

BOILER, maker of *John Roach & Co*
 „ age of *new*
 „ when last taken out *good*
 „ present condition *good*
 „ working pressure *65 lb*
 No. of surface Blow off Cocks to each Boiler *two*

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

Screw Shaft length *40 ft* diameter *4"* Tunnel, thickness of plating *5/16* height *3 ft*
 width *3 ft* if water-tight door on Engine Bulkhead. *yes*

Port *South Shields* *Saturday* day of *May* 18*93*

hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood)

Screw (or Paddle) Steam Vessel *Alcaga* belonging to *Alcaga Robinson*
 whereof *Alcaga Robinson* is Master, *295* Tons Register, and *65* H.P. have been
 carefully inspected and examined by *us* at *South Shields* and *us* found the
 same, at this date, in good order and safe working condition.

John Roach & Co
South Shields
 Marine Engineers.