

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.

*A pair of Compound Direct acting Inverted cylinders
surface condensing Engines with one high pressure
and one low pressure cylinder*

ENGINES, maker of *Hall Russell & Co.*
 „ age of *new*
 „ last time taken out
 „ present condition *Good*
 Diameter of Cylinders *24½ x 45 inches*
 Length of stroke *2 feet 6 in*
 No. per minute of Engines *70 to 75*
 „ of Screw *70 to 75*
 Estimated power *90 H.P.*
 Effective power
 Diameter of Screw (or Paddle Wheels) *12 feet*
 Pitch of Screw *14 feet 6 in*
 No. of Blades (or Floats) *Four*
 Description of Screw (or Floats) *Common*
 Holding down Bolts, size *Ample*
 „ present condition *Good*

Bilge Pumps, No. (*One*) and size *4 x 2 x 6"*
 Feed „ No. (*One*) and size *3½ x 2 x 6"*
 Spare gear, if usual quantity on board Vessel *Yes*
 Fuel, where stowed *In Bunkers*
 „ space between Coal Bunkers and Boilers *Ample*
 „ for what quantity is space provided *about 100 tons*
 Donkey Engine and Boiler *Yes*
 „ if fitted in Engine Room or on Deck *Engine Room*
 „ can pump be worked by hand *Yes*
 „ size of pump (*4½*) 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 *Yes*

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 cylindrical tubular boiler with 3 furnaces
and large steam dome—fired from after
end of boiler*

BOILER, maker of *Hall Russell & Co.*
 „ age of *new*
 „ when last taken out
 „ present condition *Good*
 „ working pressure *70 lbs*
 No. of surface Blow off Cocks to each Boiler *one*

Can each Boiler be used separately *only one boiler*
 What clear space between top of Boiler and woodwork *No wood work over*
 What clear space between Funnel and woodwork *Ample*
 Are Engine and Boiler Keelsons well connected fore and aft *Yes*

SCREW SHAFT length *about 60 feet* diameter *8 3/8* *Casing* thickness of plating *1/4 to 3/4* height
 width if water-tight door on Engine Bulkhead. *Stuffing box on Engine room B Head*

Port of *Aberdeen* *6* day of *March* 18 *76*

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood)
 Screw (or Paddle) Steam Vessel *"Ballater"* belonging to *Messrs J. & A. Davidson*
 whereof *Chas Davidson* is Master, *470.65* Tons Register, and *90* H.P. have been
 carefully inspected and examined by us at *Aberdeen* and we found the
 same, at this date, in good order and safe working condition.

Hall Russell & Co.

