

12645 Len

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 one high & one low pressure cylinder and surface condenser.

ENGINES, maker of *Palmer's Shipbuilding & Iron Co. Ltd.*

age of *new*

last time taken out *—*

present condition *new*

diameter of Cylinder *30" & 60"*

length of stroke *33"*

revolutions per minute of Engines *70*

pitch of Screw *70*

estimated power *140 H.P. nominal*

effective power *70.0 H.P. indic*

diameter of Screw (on ~~Paddle~~ *Wheels*) *15.0*

pitch of Screw *13.0 increasing to 15.0*

number of Blades (on ~~Flutes~~ *Plates*) *4*

description of Screw (on ~~Flutes~~ *Plates*) *movable blades*

holding down Bolts, size *2 1/2" diam*

present condition *new*

Bilge Pumps, No. (*2*) and size *4" diam 16" stroke*

Feed " No. (*2*) and size *4" " 16"*

Spare gear, if usual quantity on board Vessel *yes*

Fuel, where stowed *In side bunkers and cross bunker forward of boiler*

" space between Coal Bunkers and Boilers *12"*

" for what quantity is space provided *259 Tons*

Donkey Engine and Boiler *yes*

" if fitted in Engine Room or on Deck *Donkey in engine room boiler in stoke hole*

" 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*

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 force, or after end of Boiler, &c.

2 cylindrical tubular single ended boilers with 4 circular furnaces dry uptake with a vertical annular super heater on top. The boilers are fired from their forward ends.

BOILER, maker of *Palmer's Shipbuilding & Iron Co. Ltd.*

age of *new*

when last taken out *—*

present condition *new*

working pressure *75 lbs*

number of surface Blow off Cocks to each Boiler *one*

length of shaft *109' 8"* diameter *9 1/2" & 9"* Tunnel thickness of plating *3/8"* height *4' 13" & 5' 3"*

width *3' 7"* if water-tight door on Engine Bulkhead *no, the tunnel is water tight*

Can each Boiler be used separately *yes*

What clear space between top of Boiler and woodwork *10' 2"*

What clear space between Funnel and woodwork *2' 3"*

Are Engine and Boiler Keelsons well connected fore and aft *yes*

Port *Newcastle on Tyne* 27th day of *April* 1874.

we hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) (or Paddle) Steam Vessel "*Elphinstone*" belonging to *Newcastle* of *W. Cassop* is Master, *1140.77* Tons Register, and *140* H.P. have been fully inspected and examined by *us* at *Farrow on Tyne* and we found the *same*, at this date, in good order and safe working condition.

Palmer's Shipbuilding & Iron Co. Ltd.

Thos. St. John

Machine Engineers.

Lloyd's Register Foundation