

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 directacting compound with Surface Condenser and two Cylinders.

ENGINES, maker of *Palmers Shipbuilding*
 „ age of *new* *Y. Iron Co. Ltd*
 „ last time taken out *—*
 „ present condition *—*
 Diameter of Cylinder *30 & 55.*
 Length of stroke *33.*
 No. per minute of Engines *70 revolution*
 „ of Screw *70*
 Estimated power *190 HP nominal*
 Effective power *675 HP indicated*
 Diameter of Screw (~~on Flange~~) *13. 6.*
 Pitch of Screw *15. 0 increasing to 17. 0.*
 No. of Blades (~~on Flange~~) *4.*
 Description of Screw (~~on Flange~~) *moveable blades*
 Holding down Bolts, size *2 1/2 diam*
 „ present condition *—*

Bilge Pumps, No. (*2*) and size *6 diam 7 1/2 stroke*
 Feed „ No. (*2*) and size *5 - 10*
 Spare gear, if usual quantity on board Vessel *yes.*
 Fuel, where stowed *In side bunkers*
 „ space between Coal Bunkers and Boilers *14.*
 „ for what quantity is space provided *129 tons*
 Donkey Engine and Boiler *are both provided*
 „ if fitted in Engine Room or on Deck *Donkey in Engine room*
 „ can pump be worked by hand *yes* *Boiler on Deck*
 „ size of pump (*4*) and stroke *8.* *A Ballast donkey*
 „ is hose of sufficient length to reach every part of the Vessel *yes* *is also provided*
 No. () and continuation of hand pumps, if fitted in Engine Room *none* *and placed 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 cylindrical tubular Boilers with four circular Furnaces, dry uptake and an annular vertical Superheater round base of Funnel. The boilers are fired from their forward Ends.

BOILER, maker of *Palmers Shipbuilding*
 „ age of *new* *Y. Iron Co. Ltd*
 „ when last taken out *—*
 „ present condition *—*
 „ working pressure *75 lbs*
 No. of surface Blow off Cocks to each Boiler *one*

Can each Boiler be used separately *yes*
 What clear space between top of Boiler and woodwork *10. 0.*
 What clear space between Funnel and woodwork *1. 9.*
 Are Engine and Boiler Keelsons well connected fore and aft *yes.*

SCREW SHAFT length *33. 7* diameter *9 & 9 1/2* Tunnel, thickness of plating height
 width if water-tight door on Engine Bulkhead. *No Tunnel; the space in which the shafting works forms part of Engine room as far aft as Stern tube bulkhead.*

Port *Newcastle on Tyne* *24th* day of *May* 1872

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (~~on Wood~~) Screw (~~on Raddle~~) Steam Vessel "*Mareppa*" belonging to *London* hereof *G. J. Martin* is Master, *922. 07* Tons Register, and *190* H.P. have been carefully inspected and examined by *us* at *Jarrow on Tyne* and we found the same, at this date, in good order and safe working condition.

for *Palmers Shipbuilding & Iron Co. Ltd*

Marine Engineers.