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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 12" cylinders
Inverted, Vertical, Direct-acting Surface Condensing

ENGINES, maker of Broden Brothers
,, age of New
,, last time taken out New
,, present condition New
Diameter of Cylinder 12"
Length of stroke 14"
No. per minute of Engines 80
,, of Screw 80
Estimated power 15 H.P.
Effective power 40 H.P.
Diameter of Screw (or Paddle Wheel) 6 ft.
Pitch of Screw 8 ft.
No. of Blades (or Paddles) three
Description of Screw (or Paddle)
Holding down Bolts, size 1/4"
,, present condition New

Bilge Pumps, No. (1) and size 4"
Feed ,, No. (1) and size 4"
Spare gear, if usual quantity on board Vessel } none
Fuel, where stowed } bunkers each side of boilers -
,, space between Coal Bunkers and Boilers } 6 inches
,, for what quantity is space provided 12 tons
Donkey Engine and Boiler
,, if fitted in Engine Room or on Deck } donkey in engine room
,, can pump be worked by hand } no donkey boiler
,, size of pump () and stroke } yes
,, is hose of sufficient length to reach every part of the Vessel }
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.

Multitubular - one furnace - fired from aft.

BOILER, maker of Geo. Abbot & Co. Limited
,, age of New
,, when last taken out New
,, present condition New
,, working pressure 40 lbs.
No. of surface Blow off Cocks to each Boiler }
SCREW SHAFT length 12 ft. diameter 4 1/4" Tunnel thickness of plating 1/4 height 5 ft.
width side to side if water-tight door on Engine Bulkhead.

Can each Boiler be used separately
What clear space between top of Boiler and woodwork } 3 ft.
What clear space between Funnel and woodwork } 1'-6"
Are Engine and Boiler Keelsons well connected fore and aft } yes

Port Newcastle 14th day of March 1874.

We hereby certify, that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel "Welfare" belonging to TP Hall junr & Co whereof Capt Ingelby is Master, 53.54 Tons Register, and 15 H.P. have been carefully inspected and examined by us at Newcastle and we found the same, at this date, in good order and safe working condition.

Broden Brothers
Newcastle
Marine Engineers.
Lloyd's Register
Foundation
IRONS08-0186