



LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER'S CERTIFICATE.

Rev 30/11/76

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.

Two Cylinders. Grasshopper-disconnecting by clutches on main shaft

ENGINES, maker of Marshall. South Shields
" age of 25 years
" last time taken out Nov 1876
" present condition In thorough repair
Diameter of Cylinder 30 3/4"
Length of stroke 3 ft 8"
No. per minute of Engines 38
" of ~~Screw~~
Estimated power 60 horse
Effective power 180 horse
Diameter of ~~Screw~~ (or Paddle Wheels) 13 ft 4" outer rings
Pitch of ~~Screw~~
No. of ~~Blades~~ (or Floats) 9 on each wheel
Description of ~~Screw~~ (or Floats) Feathering
Holding down Bolts, size 1 1/4" dia
" present condition New

Bilge Pumps, No. (1) and size 5 1/4" dia both chaupaths
Feed " No. (1) and size 5 1/4" " from feed to bilge
Spare gear, if usual quantity on } for wheels
board Vessel
Fuel, where stowed Wing Bunkers
" space between Coal Bunkers } 15"
and Boilers
" for what quantity is space provided 15 Tons
Donkey Engine and ~~Boiler~~ yes
" if fitted in Engine Room } Engine Room
~~on Deck~~
" can pump be worked by hand no
" size of pump (3 3/8) and stroke 7 1/2"
" is hose of sufficient length to }
reach every part of the Vessel }
No. (1) and continuation of hand } dia 3 3/4 x 10" stroke
pumps, if fitted in Engine Room } doubt acting 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 force, or at end of Boiler, &c.

dry bottomed - Wagon Shaped - Multitubular - No of Tubes 150
dia 3 1/2" - No of furnaces 4 fired from forward
No superheating apparatus

BOILER, maker of Samuel Perry. Dumbrie
" age of 11 years
" when last taken out 1876
" present condition (very good) through overhaul
" working pressure 21 1/2 pounds per sq inch
No. of surface Blow off Cocks to } One
each Boiler }

Can each Boiler be used separately One Boiler
What clear space between top of } 10" to decks
Boiler and woodwork }
What clear space between Funnel } Iron casing
and woodwork }
Are Engine and Boiler Keelsons } all New. Built on
well connected fore and aft } dup flooring plate 1/2"
thick and connected by angle iron

Screw Shaft length diameter Funnel thickness of plating
width if water-tight door on Engine Bulkhead. No - sluice Cocks

Port of Dumbrie this 22nd day of August 1876

We hereby certify, that the whole of the above Machinery and Boilers of the Iron
(~~or Wood~~) ~~Screw~~ (or Paddle) Steam Vessel Lionel belonging to
Melbourn whereof James Nolan is Master, 26 1/2 Tons
Register, and 60 H.P. have been carefully inspected and examined by us at
Dumbrie and two found the same, at this date, in good order and
safe working condition.

A. M. Prosser
Alexander G. Auld
Marine Engineers. Super of Machinery