

21819 Iron
No. 7/10/71
LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted Direct Acting* Are all the bilge suction pipes fitted with roses *Yes*
Made by *Messrs R. Napier & Sons* No. of feed pumps *Two* and sizes *3 1/2" dia x 18" stroke*
When *1878* At *Glasgow* What gauges are there *Three Steam One Vacuum*
Diameter of cylinder *32" 55"* Length of stroke *36"* attached to the en- *One Compound*
No. of revolutions per minute *40* gines and boilers ...
Point of cut off *From .3 to .7* Description and size of } *Double Acting 5' x 10" Stroke*
Diameter of screw shaft *9 1/2"* Donkey Pumps ... }
Diameter of crank shaft journals *10 3/4"* Where do they pump *From the Sea, Bilge & Hotwell*
Diameter of screw, ~~or of paddle wheel~~ *12 ft* No. of bilge injections *Two* and sizes *4"*
Pitch of screw *15" 3"* Are they connected to air, or circulating pumps *2 Air & Circulating*
No. of blades *Four* Total surface *50 ft* Is there a hand pump in the engine room *Yes*
No. of bilge pumps *Two* and sizes *3 1/2" dia x 18"* Can it be worked by the main engines *No*
Do they pump from each compartment *Yes* Is there a deck hose of sufficient length } *Yes*
to reach to any part of the vessel }

MAIN BOILERS.

Number *One* Description *Round Horizontal* Can the super-heater be shut off and } *No*
the boilers worked separately }
Made by *R. Napier & Sons* Description and area of } *Two Direct Spring each*
safety valves on each } *21.64" area*
When *1878* At *Glasgow* boiler }
Working pressure *14 lbs. Valves loaded to - 16 1/2 lbs.* No. of square feet of fire-grate } *85 ft*
Tested by hydraulic pressure to *130 lbs.* Date *Aug 6th 1878* Are there separate blow off and } *Yes*
brine cocks on each boiler, } *Yes*
independent of those } *Yes*
on the vessel's skin }
Description of super-heating } *Round Vertical with Single tube* Are all pipes, cocks, roses, and pumps in } *Yes*
apparatus } connection with the machinery ac-
cessible at all times..... }

DONKEY BOILER.

Description *Round Horizontal Tubular* Tested by hydraulic pressure to *90 lbs.* Date *Aug 6th 1878*
Where fixed *on line of Main Deck* Description and area of safety valves *Ever & Wright 14" area*
Working pressure *45 lbs* No. of square feet of fire grate *10 ft*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea } *Yes*
direct on the skin of the ship }
Are they Kingston valves } *Screw down Valves &*
or common cocks ... } *Cocks*
Are they fixed sufficiently high on } *All fitted above the*
the ship's side to be seen } *turn of the Bilge*
without lifting the stoke hold } *Above*
plates }
Are the discharge pipes above or } *Yes*
below the deep water line }
Are they each fitted with a discharge } *Yes*
valve on the plating of the vessel }

What pipes are carried through the bunkers *None*
How are they protected
When were the stern tube, } *On Slip previous to being*
propeller, screw shaft, } *launched*
and all connections }
examined in dry dock }
Are the pipes, cocks, and valves } *Yes*
arranged so as to prevent } *Yes*
an unintentional connection }
between the sea and the bilge }

Is the screw shaft-tunnel water } *Yes*
tight and fitted with a }
sluice door on bulkhead }

R. Napier & Sons Manufacturers

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (and Wood)
Screw (or Paddle) Steam Vessel *"Dunkeld"* owned by *J. Currie & Co*
of the Port of *London* of *742* Tons Register, and *150* Registered Horse Power,
and that they have been carefully inspected and examined by me at *Glasgow*
and found to be at this date, viz., *Oct 2nd 1878* in good order and safe working condition.

Amount of Fee for Survey ... £ *4.10.0* Paid
(Travelling Expenses, if any, £)

James Morrison
Engineer Surveyor to Lloyd's Register of Shipping.

The Machinery of this vessel is
fitted according to the rules
submitted that she is
eligible to have Lloyd's

M.C. and a Certificate
given 2^d October 1878

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8-10-78



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