

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY, ENGINES.

Rev 1/3/77

Report (if any) on Hull of Vessel. No. 3772 Port of Hartlepool.

Description *Inverted Compound Surface Condensing*
Made by *Messrs J. Richardson & Sons.*
When *Oct. 1876* At *Hartlepool.*
Diameter of cylinders *23 & 43* Length of stroke *24*
(one of each)
No. of revolutions per minute *about 80.*
Point of cut off *1/2 stroke.*
Diameter of screw shaft *7*
Diameter of crank shaft journals *7*
Diameter of screw, or of paddle wheel *11 feet*
Pitch of screw *12 feet*
No. of blades, *4* Total surface *40 sq. feet.*
No. of bilge pumps *1* and sizes *3 1/4 dia x 17 stroke.*
Do they pump from each compartment *from Engine room*

Are all the bilge suction pipes fitted with roses *yes.*
No. of feed pumps *1* and sizes *3 1/4 dia x 17 stroke.*
What gauges are there attached to the engines and boilers ... *1 steam gauge on boiler in stokehole forward, & 1 in the engine room*
Description and size of Donkey Pumps ... *1 inverted double acting 4 1/2 dia x 9 stroke.*
Where do they pump from ... *from the sea bilges of engine room and tanks.*
No. of bilge injections *1* and sizes *4 1/2 dia*
Are they connected to air, or circulating pumps *to Circulating pump.*
Is there a hand pump in the engine room *yes.*
Can it be worked by the main engines *no.*
Is there a deck hose of sufficient length to reach to any part of the vessel *yes.*

MAIN BOILERS.

Number *One* Description *Cylindrical & Multitubular*
Made by *Messrs J. Richardson & Sons.*
When *Oct. 1876* At *Hartlepool.*
Working pressure *70 lbs per sq. inch.*
Tested by hydraulic pressure to *140 lbs* Date *Sept 16th 1876*
I was present n.a.
Description of super-heating apparatus *none.*
Can each boiler be worked separately *only 1 boiler.*

Can the super-heater be shut off and the boilers worked separately
Description and area of safety valves on each boiler ... *2 spring safety valves 4 1/2 dia - 30 sq. in. Area.*
No. of square feet of fire-grate surface in each boiler *35 3/4.*
Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *yes*
Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times. *yes.*

DONKEY BOILER.

Description *Upright Cylindrical with 3 Cross tubes.*
Where fixed *in the stokehole.*
Working pressure *58 lbs per sq. inch.*

Tested by hydraulic pressure to *142 lbs* Date *Sept 24th 1876*
Description and area of safety valves *1 brass & weight 2 1/2 lbs loaded direct 2 1/2 - 7.5 Area.*
No. of square feet of fire grate *9 1/2.*

PIPES, COCKS, AND CONNECTIONS.

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

What pipes are carried through the bunkers *none.*
How are they protected
When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *new*
Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *yes.*
Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *sluice door fitted. The tunnel is open to the gutter ways of the Ballast tank.*

J. Richardson & Sons
McChes Smith

Manufacturer. *Except of the Donkey Boiler*

I was present when the steam was raised and the engines worked. Steam 70 lbs room 27 lbs Nov 6 90 all worked very satisfactory. Sept 30/76

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Wood)

Screw (or Paddle) Steam Vessel *Wightburn* owned by *Steel Young & Co.*
of the Port of *London* of *324 1/4* Tons Register, and *70* Registered Horse Power,
and that they have been carefully inspected and examined by me at *Hartlepool*
and found to be at this date, viz., *October 17th 1876.* in good order and safe working condition.

Amount of Fee for Survey *£ 3 : 10 :*

(Travelling Expenses, if any, £ 2-5)

£3-15 received at Hartlepool

William Allison.
Engineer Surveyor to Lloyd's Register of Shipping.