

16132 Jan.

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Report (if any) on Hull of Vessel. Port Newcastle No. 13160

Description *Side Lever Jet Condenser*
 Made by *Messrs John Readhead & Co.*
 When *March 1876* At *South Shields*
 Diameter of cylinders *Two 40"* Length of stroke *5.6"*
 No. of revolutions per minute *About 40*
 Point of cut off *About 1/2 stroke*
 Diameter of ~~screw~~ ^{paddle} shaft *12 1/2"*
 Diameter of crank shaft journals *11 1/2"*
 Diameter of ~~screw~~, or of paddle wheel *21.0"*
~~Pitch of screw~~ *Patent floats 10 on each wheel 8.0" x 2.6"*
 No. of blades, Total surface
 No. of bilge pumps *2* and sizes *5 dia x 15 1/2 stroke Single acting*
 Do they pump from each compartment *From engine room only*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *2* and sizes *7 dia x 15 1/2 stroke Single acting*
 What gauges are there attached to the engines and boilers ...
 Description and size of Donkey Pumps ...
 Where do they pump from ...
 No. of bilge injections *2* and sizes *2 dia*
 Are they connected to air, or circulating pumps *to Condenser*
 Is there a hand pump in the engine room *Yes Double acting 4 1/2 x 10 stroke*
 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 *2* Description *Round Multitubular*
 Made by *Messrs John Readhead & Co*
 When *March 1876* At *South Shields*
 Working pressure *50 lbs*
 Tested by hydraulic pressure to *Reported to 100 lbs* Date *Feb. 1876*
 Description of ~~apparatus~~ ^{steam room} *Cylindrical, horizontal, receivers*
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *No superheater*
 Description and area of safety valves on each boiler ...
 No. of square feet of fire-grate surface in each boiler *52 sq feet*
 Are there separate blow off and brine cocks on each boiler, independent of those on the vessel's skin *Yes Brine pipe above water line no cocks on vessels skin*
 Are all pipes, cocks, roses, and pumps in connection with the machinery accessible at all times *Yes*

DONKEY BOILER.

Description *No donkey boiler on board*
 Where fixed
 Working pressure

Tested by hydraulic pressure to , Date
 Description and area of safety valves
 No. of square feet of fire grate

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 ... *Common valves and cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *No. Portable latches fitted in flooring plates*
 Are the discharge pipes above or below the deep water line *Above*
 Are they each fitted with a discharge valve on the plating of the vessel *Yes Donkey discharges through duct only, from bilge, not through Manufacturer. Ships Side*

What pipes are carried through the bunkers *one steam & two discharge.*
 How are they protected *Strong iron casing*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock
 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

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 *Flying Fish* owned by *Messrs Prothers & Co* of the Port of *Liverpool* *91.53* Tons Register, and *180* Registered Horse Power, and that they have been carefully inspected and examined by me at *South Shields* and found to be at this date, viz., *29th March 1876* in good order and safe working condition.

Survey fee *£3-3-0*
 Certificate *£3-8-0* Received at Shields by *T. Young* 15/4/76.

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