

18121 Iron

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Port Sunderland, No. 11600  
(if any) on Hull of Vessel.

Description Inverted Compound Surface Condensing  
 Made by Mr. G. Clark  
 When March 1877 At Sunderland  
 Diameter of cylinders 27 x 50 Length of stroke 36  
(one of each)  
 No. of revolutions per minute about 65  
 Point of cut off 1/2 stroke  
 Diameter of screw shaft 9"  
 Diameter of crank shaft journals 9"  
 Diameter of screw, or of paddle wheel 12.6"  
 Pitch of screw 14.0"  
 No. of blades, 4 Total surface 37 sq. ft.  
 No. of bilge pumps 2 and sizes 4 1/2 x 18" stroke  
 Do they pump from each compartment from Engine room, aft well, and fore hold.

Are all the bilge suction pipes fitted with roses, yes  
 No. of feed pumps 2 and sizes 4 1/2 x 18" stroke  
 What gauges are there attached to the engines and boilers ... 1 Steam gauge on each boiler in stokehole, 1 in engine room, 1 vacuum gauge, 2 inverted double acting 8" x 10" stroke and 4" dia x 6" stroke, Large one from sea tanks, and  
 Description and size of Donkey Pumps ... bilges, of engine room, aft well & fore hold. Small one, from sea, hotwell tanks & bilges  
 Where do they pump from .....  
 No. of bilge injections one and sizes 3 1/2 dia  
 Are they connected to air, or circulating pumps to circulating pumps  
 Is there a hand pump in the engine room no (Donkey can be used)  
 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 (Steam pipe to stoke)

### MAIN BOILERS.

Number Two Description Cylindrical & Multitubular  
 Made by Mr. G. Clark  
 When March 1877 At Sunderland  
 Working pressure 70 lbs per sq. inch  
 Tested by hydraulic pressure to 140 lbs, Date July 8<sup>th</sup> 1877  
I was present, n.a.  
 Description of super-heating apparatus none  
 Can each boiler be worked separately yes

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 3 1/2 dia = 19.2 sq. ins, area  
 No. of square feet of fire-grate surface in each boiler } 33 1/2  
 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 (except the bilge machine of fore hold when full)

### DONKEY BOILER.

Description Upright, Cyl. with 3 Cross tubes  
 Where fixed in the stokehole  
 Working pressure 45 lbs

Tested by hydraulic pressure to 100 lbs, Date July 1877  
 Description and area of safety valves 1 loaded direct 3" = 4.7 sq. ins  
 No. of square feet of fire grate 12

### 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 } yes  
 Manufacturer Except of the Donkey Boiler I was present when the steam was raised, engine worked, and safety valves tested, March 2<sup>nd</sup> 1877 n.a.

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 "Walton" owned by R. B. Avery of the Port of London of 691.4 Tons Register, and 99 Registered Horse Power, and that they have been carefully inspected and examined by me at Sunderland and found to be at this date, viz., March 15<sup>th</sup> 1877 in good order and safe working condition.

Amount of Fee for Survey ... £ 4:19:  
 Certificate 0.5  
 Total £ 5.4  
 Received 21/3/77  
 W.A.

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

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