

# LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

## ENGINEER SURVEYOR'S REPORT ON MACHINERY.

### ENGINES.

Rec 23/10/76

Description *Inverted Compound Surface Condensing*  
 Made by *Messrs J. Richardson & Sons*  
 When *Oct 1876* At *Hartlepool*  
 Diameter of cylinders *30" x 5"* Length of stroke *33"*  
 No. of revolutions per minute *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 *14 ft*  
 Pitch of screw *16"*  
 No. of blades *4* Total surface *50 sq ft*  
 No. of bilge pumps *2* and sizes *6" dia x 6" stroke*  
 Do they pump from each compartment *Engine room, fore hold, & aft well*

Are all the bilge suction pipes fitted with roses *yes*  
 No. of feed pumps *2* and sizes *3 1/2" dia x 2 3/4" stroke*  
 What gauges are there attached to the engines and boilers ... *1 steam on each end of boiler*  
 Description and size of Donkey Pumps ... *Two inverted double acting. Large one 7 1/2" dia x 9" stroke, small one 3 1/2" x 7"*  
 Where do they pump from ... *Large one from tanks, sea and bilges of engine room. Small one from sea. hotwell.*  
 No. of bilge injections *1* and sizes *4 3/4"*  
 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 & fired from each end*  
 Made by *Messrs J. Richardson & Sons*  
 When *Sept 1876* At *Hartlepool*  
 Working pressure *65 lbs per sq inch*  
 Tested by hydraulic pressure to *130 lbs*, Date *Aug 18/76*  
 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 valves 4 3/4" dia = 35.4 sq inches*  
 No. of square feet of fire-grate surface in each boiler *61 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 Cyl. with 4 cross tubes*  
 Where fixed *in the stokehole*  
 Working pressure *60 lbs per sq inch*

Tested by hydraulic pressure to *150 lbs*, Date *July 76*  
 Description and area of safety valves *2 loaded direct 2 1/2" = 10.8 sq in*  
 No. of square feet of fire grate *19 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 caulked*

*Richardson & Sons*  
*A. Chas Smith*

Manufacturer *Except of the Donkey boiler I was present when steam was raised and the engines worked. Steam 65 lbs. 9 a.m. 28th Nov 70. all worked very satisfactory Sept 16/76 R.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 *"Winston"* owned by *Webster & Son* of the Port of *West Hartlepool* of *902.70* Tons Register, and *130* 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 5<sup>th</sup>* 1876. in good order and safe working condition.

Amount of Fee for Survey ... £ 6 : 10 : Received at Hartlepool

Travelling Expenses, if any, £ 2-5

Engineer Surveyor to Lloyd's Register of Shipping.

IRON 468-0637