

17636 Iron

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 1/2/77

Report (if any) on Hull of Vessel. Port of Hartlepool, No. 5740

Description Inverted, Compound Surface Condensing.
 Made by Messrs J. Richardson & Sons.
 When Jan'y 1877 At Hartlepool.
 Diameter of cylinder 27 1/2 Length of stroke 30,
 No. of revolutions per minute one of each about 70.
 Point of cut off 1/2 stroke.
 Diameter of screw shaft 8 1/4.
 Diameter of crank shaft journals 8 1/4.
 Diameter of screw, or of paddle wheel 15 0"
 Pitch of screw 13 6.
 No. of blades, 4 Total surface 50 sq. ft.
 No. of bilge pumps 2 and sizes 2 3/8 dia. x 3 1/4 stroke.
 Do they pump from each compartment from engine room, aft well, & fore hold.

Are all the bilge suction pipes fitted with roses yes.
 No. of feed pumps 2 and sizes 3 1/4 dia. x 2 3/4 stroke.
 What gauges are there attached to the engines and boilers ... 1 steam gauge in stoke hole & 1 in the engine room, 1 vacuum gauge.
 Description and size of Donkey Pumps ... 2 imbricated double acting, large one 4 3/4 dia. x 9 stroke. Small one 3 1/2 x 7. Large one draws from sea and ballast tanks. Small one from hold.
 Where do they pump from ... hold, & bilges of engine room, aft well & fore hold.
 No. of bilge injections one and sizes 1 1/2.
 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 Jan'y 1877 At Hartlepool.
 Working pressure 65 lbs per sq. inch.
 Tested by hydraulic pressure to 130 lbs, Date Nov 7th /76
 Description of super-heating apparatus none.
 Can each boiler be worked separately only one boiler

Can the super-heater be shut off and the boilers worked separately yes.
 Description and area of safety valves on each boiler 2 spring safety valves 4 3/8 dia. = 30 sq. inches.
 No. of square feet of fire-grate surface in each boiler 58 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 bilge suction) in fore hold when cargo is in.

DONKEY BOILER.

Description Upright Cylindrical with 3 cross tubes.
 Where fixed in the stoke hole.
 Working pressure 35 lbs per sq. inch.

Tested by hydraulic pressure to _____, Date _____
 Description and area of safety valves 1 loaded direct 3 1/2 sq. ins 1 lever & weight 3 14.3 area
 No. of square feet of fire grate 16.

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 Jan'y 1877.
 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. Tunnel not watertight.

J. Richardson & Sons Manufacturers
the Old Mill

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 "Austin Friars" owned by E. Pembroke & Co. of the Port of London of 1015 Tons Register, and 99 Registered Horse Power, and that they have been carefully inspected and examined by me at Hartlepool. and found to be at this date, viz., January 23rd 1877. in good order and safe working condition.

Amount of Fee for Survey ... £ 4:19:
 (Travelling Expenses, if any, £ 2.5) £ 5.4 Received at Hartlepool
 by S. 104 30/1/77

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