

19890 Ln

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 31/12/77

Report (if any) on Hull of Vessel. No. 13804 Port Newcastle

Description Compound Inverted.
 Made by Black Hawthorn & Co
 When Dec 18 77 At Newcastle
 Diameter of cylinder 32 & 62 Length of stroke 36
 No. of revolutions per minute 60
 Point of cut off 5/8ths stroke
 Diameter of screw shaft 10
 Diameter of crank shaft journals 10 1/2
 Diameter of screw, ~~or of paddle wheel~~ 14.9
 Pitch of screw 15.6
 No. of blades, 4 Total surface 52 sq feet
 No. of bilge pumps 2 and sizes 3 5/8 x 18 stroke
 Do they pump from each compartment Eng room bilge, aft well & fore peak

Are all the bilge suction pipes fitted with roses yes
 No. of feed pumps 2 and sizes 3 5/8 dia x 18 str
 What gauges are there attached to the engines and boilers ... 1 Steam each boiler Stokato 15. 17 in Eng Room.
 Description and size of Donkey Pumps (1) Ballast, 8" x 12" 2A (2) Boiler 4" x 10" 2A
 Where do they pump from (1) From Tanks, Eng Room, Bilge, & Sea (2) Sea, Holdwell, & Room bilge aft well & fore peak.
 No. of bilge injections (1) and sizes 4 1/2 dia.
 Are they connected to air, or circulating pumps circulating
 Is there a hand pump in the engine room No, Boiler Donkey
 Can it be worked by the main engines Can be used as such
 Is there a deck hose of sufficient length to reach to any part of the vessel yes

MAIN BOILERS.

Number Two Description Cylindrical
 Made by Black Hawthorn & Co
 When Dec. 18 77 At Newcastle
 Working pressure 65 lbs per sq inch
 Tested by hydraulic pressure to 130 lbs., Date Oct 17 77
 Description of super-heating apparatus None. Hor. Steam chest attached to each boiler
 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 2 Spring valves 4" dia = 25.2 sq"
 No. of square feet of fire-grate surface in each boiler 48 sq feet
 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..... except roses in fore peak.

DONKEY BOILER.

Description Vertical cylindrical 2 constr tubes
 Where fixed Stokehold
 Working pressure 50 lbs.

Tested by hydraulic pressure to 130 lbs, Date 22 Oct/77
 Description and area of safety valves 18 in. 2 3/8 dia. 8.44
 No. of square feet of fire grate 16.9 sq feet

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship yes, only one valve enclosed in Spence's patent chest to which all other connections are made.
 Are they Kingston valves or common cocks ... yes
 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 yes
 Are they each fitted with a discharge valve on the plating of the vessel yes
Black Hawthorn & Co Manufacturer.

What pipes are carried through the bunkers none
 How are they protected new
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock yes, except small cock on valve chest which has been fitted to clear the chest in the event of its becoming choked with sand etc. Cock is fitted with a screwed cap over the end.
 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
 Safety valves ease 65 lift 66 1/2 close 65
 No accumulation.

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 "Indus" owned by The Mercantile S. S. Co Ltd of the Port of London of 1236.24 Tons Register, and 200 Registered Horse Power, and that they have been carefully inspected and examined by me at Gateshead & Wallsend on Tyne and found to be at this date, viz., 15 December 1877 in good order and safe working condition.

Amount of Fee for Survey ... £ 10: 0: 0 paid by
 (Travelling Expenses, if any, £ 0: 5: 0 we)

James Milton
 Engineer Surveyor to Lloyd's Register of Shipping.
North Shields
 27/12/77