

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

* 21515 Iron

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 12/8/78

Port Sunderland No. 12071
Report (if any) on Hull of Vessel.

Description Inverted, Compound, Surface Condensing,
 Made by North Eastern Marine Engineering Co.
 When 1871 At Sunderland.
 Diameter of cylinder 29 1/2 x 58 1/2 Length of stroke 33
 No. of revolutions per minute 60
 Point of cut off 1/2 stroke.
 Diameter of screw shaft 9 1/2
 Diameter of crank shaft journals 9 1/2
 Diameter of screw, or of paddle wheel 13.6
 Pitch of screw 15 ft.
 No. of blades, 4 Total surface 60 sq. feet.
 No. of bilge pumps 2 and sizes 3 1/2 dia. x 3 3/4 stroke.
 Do they pump from each compartment yes.

Are all the bilge suction pipes fitted with roses yes.
 No. of feed pumps 2 and sizes 3 1/2 x 3 3/4 stroke.
 What gauges are there attached to the engines and boilers ... 1 steam gauge on each boiler & 1 common to both. 1 Compound & 1 vacuum.
 Description and size of Donkey Pumps ... Large inverted double acting 6 x 10 stroke & Small " " " 4 x 6 "
 Where do they pump from ... The large one from Tanks, Condenser & bilges of engine room, fore hold & aft well. Small one from same places & holdwell.
 No. of bilge injections one and sizes 4" diameter.
 Are they connected to air, or circulating pumps to circulating
 Is there a hand pump in the engine room none.
 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 (from iron pipe)

MAIN BOILERS.

Number Two. Description Cylindrical & Multi-tubular *fired from each end*
 Made by North Eastern Marine Engineering Co.
 When July 1878 At Sunderland.
 Working pressure 75 lbs per sq. inch
 Tested by hydraulic pressure to 150 lbs, Date Feb 2/78
 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 yes.
 Description and area of safety valves on each boiler ... Adams' spring safety valves 2 off. 4 dia. = 25 sq. in. Area
 No. of square feet of fire-grate surface in each boiler 42 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 rose in fore hold when full)

DONKEY BOILER. by Meath Quay Engine Co.

Description Upright Cylindrical, with Cross tubes.
 Where fixed in the stokehole.
 Working pressure 70 lbs.

Tested by hydraulic pressure to 146 lbs, Date May 5/78
 Description and area of safety valves 1 spring 3 dia. = 7 sq. in. 1 lever & weight 2" = 10.1 Area
 No. of square feet of fire grate 20.

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 none
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock July 1878.
 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 is not watertight.

Pro. N. E. M. Eng. Co. (Ld) Manufacturer. Wm. Allan Except of the Donkey Boiler.

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 "Kingston" owned by Commercial Steamship Co. Ltd. of the Port of London of 930 Tons Register, and 130 Registered Horse Power, and that they have been carefully inspected and examined by me at Sunderland and found to be at this date, viz., July 31st 1878 in good order and safe working condition.

Amount of Fee for Survey ... £
 (Travelling Expenses, if any, £)

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

