

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

Recd 3/7/79

Two pairs of Engines with fore and aft screws
ENGINES.

No. 4909

Description *Compound Inverted Direct acting*
 Made by *Wheeler & Co. Glasgow & Co. Glasgow*
 When *1879* At *Renfrew*
 Diameter of cylinder *19" & 34"* Length of stroke *24"*
 No. of revolutions per minute *Two of each about 100*
 Point of cut off *5/8 of stroke*
 Diameter of screw shaft *5 1/2"*
 Diameter of crank shaft journals *4"*
 Diameter of screw, or of paddle wheel *6' 6"*
 Pitch of screw *14' 6"*
 No. of blades *Four* Total surface *1' 11" x 20 3/4" 1/4" thick*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *One* and sizes *3 1/2" dia x 20 3/4" stroke*
 What gauges are there attached to the engines and boilers ... *One Steam & One Vacuum to each pair of Engines*
 Description and size of Donkey Pumps ... *Double acting 3 1/2 x 6"*
 Where do they pump from ... *From the Sea Hotwell & Bilge*
 No. of bilge injections *One* and sizes *3" to each Engine*
 Are they connected to air, or circulating pumps *To Circulating*
 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*

Port *Glasgow*
 Ship's Name *Oxton*
 Report on Ship No. *4909* Sent *July 2/79*
 Report on Machinery No. *4909* Sent *July 2/79*

MAIN BOILERS.

Horizontal
 Can the super-heater be shut off and the boilers worked separately *Yes*
 Description and area of safety valves on each boiler ... *Two Direct Spring each 9.62" dia*
 No. of square feet of fire-grate surface in each boiler *40 ft²*
 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*

IRON 486-0009

DONKEY BOILER.

Description *No Donkey Boiler*
 Tested by hydraulic pressure to _____, Date _____
 Where fixed _____
 Description and area of safety valves _____
 Working pressure _____
 No. of square feet of fire grate _____

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 ... *Screw down 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 *Above*
 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 *On Ship previous to being launched*
 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*

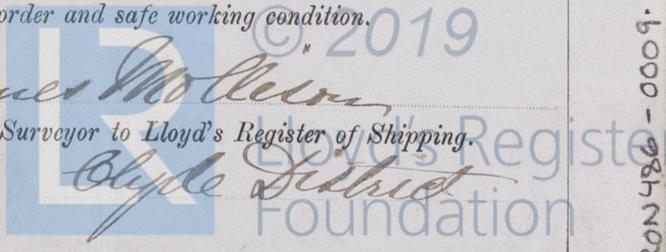
Wm Irons & Co Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (~~at Wood~~) *Screw (or Paddle)* Steam Vessel *Oxton* owned by *Birkenhead Ferry Commissioners* of the Port of *Liverpool* of *129* Tons Register, and *98* Registered Horse Power, and that they have been carefully inspected and examined by me at *Renfrew* and found to be at this date, viz., *June 25th 1879* in good order and safe working condition.

Amount of Fee for Survey ... £ *5* : : : *Quid*
 (Travelling Expenses, if any, £ *1 1/2 0*)

James McQueen
 Engineer Surveyor to Lloyd's Register of Shipping.

(Two) Drawings of Boiler appended



IRON 486-0009-1