

S. S. "South Western" 23614 Iron

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

Lohe sent to London with letter

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Run 17/5/79

Description *Compound Inverted Direct Acting*
 Made by *Messrs Blackwood & Gordon*
 When *1870* At *Port Glasgow*
 Diameter of cylinder *28" x 50"* Length of stroke *30"*
 No. of revolutions per minute *✓*
 Point of cut off *✓*
 Diameter of screw shaft *8 1/4"*
 Diameter of crank shaft journals *8 3/4"*
 Diameter of screw, ~~or of paddle wheel~~ *11 ft 2"*
 Pitch of screw *19 ft 2"*
 No. of blades, *four* Total surface *✓*
 No. of bilge pumps *two* and sizes *3" dia x 15" stroke*
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *two* and sizes *3" dia x 15" stroke*
 What gauges are there attached to the engines and boilers ... *Three Steam pressure One Compound*
 Description and size of Donkey Pumps ... *Double acting 5" x 10" stroke*
 Where do they pump from ... *From the sea & bilge*
 No. of bilge injections *One* and sizes *3"*
 Are they connected to air, or circulating pumps *No 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*

MAIN BOILERS.

Number *Two* Description *Round Horizontal*
 Made by *Messrs Blackwood & Gordon*
 When *1870* At *Port Glasgow*
 Working pressure *55 lbs*
 Tested by hydraulic pressure to *100 lbs*, Date *1876*
 Description of super-heating apparatus *None. A Receiver is fitted on each boiler*
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *✓*
 Description and area of safety valves on each boiler *One Lever & Weight 20.96" area*
 No. of square feet of fire-grate surface in each boiler *38 ft 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*

DONKEY BOILER.

Description *Round Vertical 8" dia x 4' 3"*
 Where fixed *In Storehold*
 Working pressure *32 lbs*

Tested by hydraulic pressure *When new*, Date *✓*
 Description and area of safety valves *Direct loaded*
 No. of square feet of fire grate *12 ft 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 ... *Screw down valves & cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *They are all under the Engine Room platform*
 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 *Pipes to Storehold*
 How are they protected *By wood casing*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *By 16th May 79*
 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 *A sluice door is fitted on Bulkhead*

Manufacturer.

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 *"South Western"* owned by *Adrossan Shipping Coy* of the Port of *Adrossan* of *260* Tons Register, and *120* Registered Horse Power, and that they have been carefully inspected and examined by me at *Belfast* and found to be at this date, viz., *April 30th 1879* in good order and safe working condition.

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

See accompanying Repair Letter

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

Clyde District