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LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Recd 6/9/77

No. 4506
Port Glasgow

Description *Compound Inverted Direct Acting*
 Made by *Muir & Houston*
 When 18 *77* At *Glasgow*
 Diameter of cylinder *15 1/2" x 28"* Length of stroke *24"*
 No. of revolutions per minute *85*
 Point of cut off *5/8ths*
 Diameter of screw shaft *5 1/2"*
 Diameter of crank shaft journals *5 1/2"*
 Diameter of screw, ~~and pitch~~ *8 ft.*
 Pitch of screw *12 ft.*
 No. of blades *Three* Total surface
 No. of bilge pumps *One* and sizes *2 1/4" dia. x 12" stroke*
 Do they pump from each compartment *Yes*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *One* and sizes *2 1/4" x 12" stroke*
 What gauges are there attached to the engines and boilers... *One Steam, One Vacuum, One Compound.*
 Description and size of Donkey Pumps... *Double Acting 3" x 6" stroke*
 Where do they pump from... *From the sea, bilge & tank*
 No. of bilge injections *None* and sizes
 Are they connected to air, or circulating pumps
 Is there a hand pump in the engine room *Donkey Pump worked*
 Can it be worked by the main engines *By hand from Deck*
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *One* Description *Round Horizontal*
 Made by *Muir & Houston*
 When 18 *77* At *Glasgow*
 Working pressure *45 lbs*
 Tested by hydraulic pressure to *140 lbs*, Date *July 3rd 1877*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately

Can the super-heater be shut off and the boilers worked separately
 Description and area of safety valves on each boiler... *Two Direct Acting 4" area (each)*
 No. of square feet of fire-grate surface in each boiler *38 ft. intended for burning wood*
 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 *No Donkey Boiler*
 Where fixed
 Working pressure

Tested by hydraulic pressure to _____, Date _____
 Description and area of safety valves
 No. of square feet of fire grate

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *Main Injection Valve fitted in stoke*
 Are they Kingston valves or common cocks... *Screw down Valve & Cock*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates... *All fitted above the turn of the bilge & above*
 Are the discharge pipes above or below the deep water line
 Are they each fitted with a discharge valve on the plating of the vessel *Yes*
Muir & Houston Manufacturer.

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 Slip 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*

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron ~~(or Wood)~~ Screw ~~(or Engine)~~ Steam Vessel *Queen of the South* owned by *George Prain Johnston* of the Port of *Adelaide* of *121* Tons Register, and *40* Registered Horse Power, and that they have been carefully inspected and examined by me at *Glasgow* and found to be at this date, viz., *August 22nd 1877* in good order and safe working condition.

Amount of Fee for Survey ... £ *2 : - : -* *Grind*
 (Travelling Expenses, if any, £ *17 : - : 0*)

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

