

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 4/7/76

Description *Compound, Inverted, Isolating*
 Made by *Messrs Thomas Wigham & Sons*
 When *1876* At *Whiteinch, Glasgow*
 Diameter of cylinder *24" & 46"* Length of stroke *30"*
 No. of revolutions per minute *80 (intended)*
 Point of cut off *2/3 - the 105 at end of start*
 Diameter of screw shaft *8"*
 Diameter of crank shaft journals *8"*
 Diameter of screw, ~~or of paddle wheel~~ *9 ft*
 Pitch of screw *16 ft*
 No. of blades *three* Total surface *not ascertained*
 No. of bilge pumps *two* and sizes *3 1/2" 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 1/2" dia x 15" stroke*
 What gauges are there attached to the engines and boilers ... *one steam, one vacuum, one compound in engine room, one steam in stokehold*
 Description and size of Donkey Pumps ... *Double acting 3 1/2" dia x 9" stroke*
 Where do they pump from ... *from the sea, bilge & hot well*
 No. of bilge injections *one* and sizes *3"*
 Are they connected to air, or circulating pumps *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 *one* Description *Round Horizontal*
 Made by *Thomas Wigham & Sons*
 When *1876* At *Glasgow*
 Working pressure *40 lbs*
 Tested by hydraulic pressure to *140 lbs*, Date *25th May 76*
 Description of super-heating apparatus *Steam Receiver, enclosed in sheet iron at one end*
 Can each boiler be worked separately *one boiler*

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 15.9" area*
 No. of square feet of fire-grate surface in each boiler *62 ft*
 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*
 Where fixed *In space between engine room & stokehold*
 Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *—*
 Description and area of safety valves *two direct weighted each 3.14" area*
 No. of square feet of fire grate *11 ft*

PIPES, COCKS, AND CONNECTIONS.

Are all connections with the sea direct on the skin of the ship *yes they are fitted on stools*
 Are they Kingston valves or common cocks ... *screw down valves and 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 *—*
 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*

The Wigham & Sons

Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or ~~Steel~~) Screw (or ~~Paddle~~) Steam Vessel *"Wairatiki"* owned by *John Farling* of the Port of *Glasgow* of *228* Tons Register, and *90* Registered Horse Power, and that they have been carefully inspected and examined by me at *Whiteinch, Glasgow* and found to be at this date, viz., *26th June* 18 *76* in good order and safe working condition.

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