

SHIP'S NAME

"Rotomahana"

23904 Iron

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *Compound Inverted Direct Acting*
 Made by *Meph. Denny & Co*
 When 18 *79* At *Stambarton*
 Diameter of cylinder *34" x 82"* Length of stroke *48"*
 No. of revolutions per minute *about 65*
 Point of cut off *.7*
 Diameter of screw shaft *15 1/2"*
 Diameter of crank shaft journals *15 1/2"*
 Diameter of screw, *on paddle wheel* *14" x 6"*
 Pitch of screw *2 1/2"*
 No. of blades, *four* Total surface *26 ft² (est)*
 No. of bilge pumps *two* and sizes *14 3/4" dia x 24" stroke*
 Do they pump from each compartment *yes*

Are all the bilge suction pipes fitted with roses

No. of feed pumps *two* and sizes *4" x 2 1/4" stroke*What gauges are there attached to the engines and boilers ... *Seven Steam, one Vacuum Compound*Description and size of Donkey Pumps ... *Double acting 10" dia x 5 1/2" x 40" stroke*Where do they pump from ... *From the Sea & Bilge Hotwell and Ballast Tanks*No. of bilge injections *One* and sizes *7"*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 *Five* Description *Round Horizontal*
 Made by *Meph. Denny & Co*
 When 18 *79* At *Stambarton*
 Working pressure *70 lbs*
 Tested by hydraulic pressure to *140 lbs*, Date *June 4th 1879*
 Description of super-heating apparatus *Round vertical with single line*
 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 *Two Direct Spring each 125" area*No. of square feet of fire-grate surface in each boiler *52 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*

DONKEY BOILER.

Description *Round Vertical*
 Where fixed *on Main Deck*
 Working pressure *70 lbs*

Tested by hydraulic pressure to *140 lbs*, Date *June 4th 1879*Description and area of safety valves *Direct Spring 7 1/2" area*No. of square feet of fire grate *18 ft²*

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 ... *All fitted above the top of the Bilge*
 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 *Donkey Discharge*How are they protected *It is a cast iron pipe*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**Denny & Co* Manufacturers.

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 *"Rotomahana"* owned by *Union Steam Nav. Coy New Zealand* of the Port of *Sydney* of *864.574* Tons Register, and *400* Registered Horse Power, and that they have been carefully inspected and examined by me at *Stambarton* and found to be at this date, viz., *July 3rd 1879* in good order and safe working condition.

Amount of Fee for Survey ... *£20* ... *paid*
 (Travelling Expenses, if any, £1-11-6)

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

Clyde District

The Machinery of this vessel has been
 built and fitted in accordance with the
 rules submitted that site is situated
 to the Lloyd's W.P. and a machine
 certificate given 5th May 1879

7.7.79