

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S CERTIFICATE & REPORT.

ENGINES.

Description *Compound, Inverted Direct Acting*
Made by *Messrs A & L. Inglis & Co. Glasgow*
In the year *1895*
Present condition *New*
Diameter of cylinder *28 1/2" x 50"*
Length of stroke *30"*
No. of revolutions per minute *80*
Point of cut off *8" to 2 1/2"*
Paddle, or Screw *Screw*
Nominal Horse Power *110*
Diameter of screw, or of paddle wheel *11' 6"*
Pitch of screw *14' 9"*
No. of blades, *4* total surface *40 ft*
No. of bilge pumps *2* and sizes *one 3" x 30" stroke & one 5 1/4" x 7" "*
Do they pump from each compartment *Yes*
Is there provision made for pumping from the wings of the stoke hole *No. They pump from Engine Room*

Are all the bilge suction pipes fitted with roses *Yes*
What vacuum and steam gauges are there attached to the engines and boilers *one Vacuum, one Compound & one Steam Gauge in Engine Room & one Steam Gauge in stoke hole*
No. of feed pumps *2* and sizes *one 3" x 30" stroke one 5 1/4" x 7" "*
Description and size of Donkey Engine *Inverted double acting, 3 1/2" x 7 1/2"*
Will it feed the boilers, pump from the bilges, and pump on deck *Yes*
Can it be driven by steam from a separate boiler *Yes*
No. of bilge injections *1* and sizes *3 1/2" connected to Circulating Injection*
Are they fitted with non return valves *Yes*
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*

CONNECTIONS ON HULL.

Are all connections with the sea direct on the skin of the ship *No. The Kingston Valve is fitted on Copper Plating*
Are they Kingston valves or common cocks *Circulating Injection Valve is a Kingston Valve & Cock*
Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehole plates *All cocks & valves are in the Engine Room & fitted on top of Bilge*
Are the discharge pipes above or below the deep water line *Circulating & Bilge Discharge below the others are above*
Are they each fitted with a discharge valve on the plating of the vessel *Yes*

Are any pipes carried through the bunkers *Yes. Bilge Suction pipe Wood Casing before fitted*
If so state how protected *On Ship previous to launching*
When was the stern tube, propellor, screw shaft, and all connections examined in dry dock *Donkey, Sea & Bilge Suction Cock is open at bottom. The plug has single port inside*
How are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *No*
Have the bilge suction non-return valves fitted or not *No*

BOILERS.

Number *One Round Horizontal with*
Description *3 Surfaces fired from forward*
Made by *Messrs A & L. Inglis*
In the year *1895*
Present condition *New*
When last extensively repaired *—*
Working pressure *65 lbs*
When tested by Hydraulic pressure *130 lbs*
To what pressure tested *No*
Any super-heating apparatus *No*
Describe it *—*
Can each boiler be worked separately *—*
Is each boiler fitted with a separate steam gauge *2 Gauges*

Can the super-heater be shut off and the boilers worked separately *—*
No. of safety valves on each boiler *Two*
Description and area of each safety valve *Direct Spring loaded*
No. of square feet of fire-grate surface in each boiler *60 ft*
Is there a separate blow off and brine cock on each boiler, independent of those on the vessel's skin *Yes*
Is the screw shaft tunnel water tight and fitted with a sluice door on bulkhead *Yes*
Are all pipes, cocks, and roses in connection with these boilers accessible to the engineer at all times *Yes*

A & L Inglis
& Co. Glasgow Manufacturers

hereby certify that the whole of the above Machinery and Boilers of the Iron (or Wood) Screw (or Paddle) Steam Vessel *"Taiaroa"* owned by *J. Galbraith, Glasgow* of the Port of *Glasgow* of *228.32* Tons Register, and *110* Nominal Horse Power, have been carefully inspected and examined by *me* at *Glasgow* and found to be at this date, viz., *Sept. 13th* 18 *95* in good order and safe working condition.

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