

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 18/6/96

Report (if any) on Hull of Vessel. Port Glasgow No. 4367

Description *Compound, Inverted, Direct Acting*
 Made by *Jenny & Coy*
 When *18 7/6* At *Dumbarton*
 Diameter of cylinder *41" 4/10* Length of stroke *42"*
 No. of revolutions per minute *about 70*
 Point of cut off *Variable*
 Diameter of screw shaft *12 1/2*
 Diameter of crank shaft journals *12 1/2*
 Diameter of screw, *and paddle wheel* *15 ft*
 Pitch of screw *19 ft*
 No. of blades, *Four* Total surface *68 ft*
 No. of bilge pumps *Two* and sizes *4 1/4" dia x 21" 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 21" stroke*
 What gauges are there attached to the engines and boilers ... *One Steam, One Vacuum, & One Comp in Engine Room & one to each boiler in stokehold*
 Description and size of Donkey Pumps ... *One double acting 4 1/2 x 9" stroke*
 Where do they pump from ... *One " 10" x 10" from the sea, bilge & hot well the large one from water ballast tanks*
 No. of bilge injections *One* and sizes *6"*
 Are they connected to air, or circulating pumps *to Circulating*
 Is there a hand pump in the engine room *Yes*
 Can it be worked by the main engines *it is worked from Deck*
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *Four* Description *Round, Horizontal*
 Made by *Jenny & Coy*
 When *18 7/6* At *Dumbarton*
 Working pressure *60 lbs*
 Tested by hydraulic pressure to *120 lbs*, Date
 Description of super-heating apparatus *Round, Annular, with single tube*
 Can each boiler be worked separately *Yes*

Can the super-heater be shut off and the boilers worked separately *No*
 Description and area of safety valves on each boiler *Two Direct Spring, each 8.3" area*
 No. of square feet of fire-grate surface in each boiler *32.5 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 *Flat Sided Horizontal*
 Where fixed *on Upper Deck*
 Working pressure *40 lbs*
 Made by *Mathew Paul & Coy Dumbarton*

Tested by hydraulic pressure to *8 lbs*, Date *20th April 96*
 Description and area of safety valves *Direct loaded 7 1/2" area*
 No. of square feet of fire grate *13 ft*

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 fitted above the turn 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 *Bilge Discharge pipes*
 How are they protected *They are Cast Iron*
 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*

Jenny & Coy Manufacturer.

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (~~and Wood~~) Screw (~~and Paddle~~) Steam Vessel *Wakatipu* owned by *John Darling & Others* of the Port of *Glasgow* of *115 1/4* Tons Register, and *206* Registered Horse Power, and that they have been carefully inspected and examined by me at *Dumbarton* and found to be at this date, viz., *10th June* 18 *96* in good order and safe working condition.

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