

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 19/10/76

Description *Compound, Inverted, Direct acting.*
 Made by *James Denny & Coys.*
 When *1876* At *Dumbarton*
 Diameter of cylinder *34" x 60"* Length of stroke *39"*
 No. of revolutions per minute *From 80 to 90 -*
 Point of cut off *Variable -*
 Diameter of screw shaft *11"*
 Diameter of crank shaft journals *11"*
 Diameter of screw, *on diameter 12 1/4"*
 Pitch of screw *1 1/2" x 3"*
 No. of blades, *Four* Total surface *on flat 37 sq. ft.*
 No. of bilge pumps *Two* and sizes *3 1/2" x 19 1/2" 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" x 19 1/2" Stroke*
 What gauges are there attached to the engines and boilers ... *One Steam One Vacuum One Compound in Engine Room & Two in Stokhold.*
 Description and size of Donkey Pumps ... *Double acting*
 Where do they pump from *From the Sea Bilge & Stokhold*
 No. of bilge injections *One* and sizes *5"*
 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, with three furnaces in each end*
 Made by *Denny & Coys.*
 When *1876* At *Dumbarton*
 Working pressure *75 lbs*
 Tested by hydraulic pressure to *150 lbs* Date
 Description of super-heating apparatus *None increased in smokebox*
 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 Spring, each 30.6" area*
 No. of square feet of fire-grate surface in each boiler *120 sq. 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 & Stokhold*
 Working pressure *40 lbs*
 Made by *M. Paul & Coys Dumbarton*

Tested by hydraulic pressure to *80 lbs*, Date
 Description and area of safety valves *One Direct Spring 7" area*
 No. of square feet of fire grate *14 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 *The tops of the cocks & valves are above the turn of the bilge except cock for Donkey Boiler & Ash Cooling cock in Stokhold*
 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 *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*

Denny & Coys Manufacturer *S*

I hereby certify that the whole of the above are correct particulars of the Machinery and Boilers of the Iron (or Steel) Screw (or Diesel) Steam Vessel *"Notoria"* owned by *Union Steam Ship Coys. (Limited)*
 of the Port of *Dunedin* of *576* Tons Register, and *172* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Dumbarton*
 and found to be at this date, viz., *October 16th 1876* in good order and safe working condition.

Lee paid £80 -

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