

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rec 29/5/76

Description *Compound, Inverted, Direct Acting*
 Made by *Messrs Lees, Anderson & Co*
 When *1876* At *Glasgow*
 Diameter of cylinders *13 1/4" & 20"* Length of stroke *20"*
 No. of revolutions per minute *one of each*
 Point of cut off *9/16" in both cylinders*
 Diameter of screw shaft *4 1/4"*
 Diameter of crank shaft journals *4 1/4"*
 Diameter of screw, ~~and paddle shaft~~ *6" - 8" left handed*
 Pitch of screw *14 ft.*
 No. of blades, *4* Total surface *18.5 sq. ft.*
 No. of bilge pumps *One* and sizes *2 1/4" x 10" stroke*
 Do they pump from each compartment *from Engine Room only*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *One* and sizes *2 1/4" x 10" stroke*
 What gauges are there attached to the engines and boilers ... *One Steam and one Vacuum*
 Description and size of Donkey Pumps ... *Double acting 6" x 8" stroke*
 Where do they pump from ... *from the Sea & Bilge*
 No. of bilge injections *None* and sizes _____
 Are they connected to air, or circulating pumps _____
 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 *Lees, Anderson & Co*
 When *1876* At *Glasgow*
 Working pressure *70 lbs*
 Tested by hydraulic pressure to *140 lbs.*, Date *March 1876*
 Description of super-heating apparatus *None*
 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 *Fixed Spring (Two) each 4.9" area*
 No. of square feet of fire-grate surface in each boiler *About 18 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 *None*
 Where fixed _____
 Working pressure _____

Tested by hydraulic pressure to _____, Date _____
 Description and area of safety valves _____
 No. of square feet of fire grate _____

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 ship's side to be seen without lifting the stoke hold *Blow off Cock under stoke hold plates*
 Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilge *Above*
 Is the screw shaft-tunnel water tight and fitted with a sluice door on bulkhead *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 *April 25th 1876*
 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 *No Sluice*

Manufacturer.

Particulars of the Machinery and Boilers of the Iron (or ~~Steel~~)

owned by *Dynamite Co.*

Register, and *Twenty-five* Registered Horse Power,

Glasgow

in good order and safe working condition.

James Morrison

Surveyor to Lloyd's Register of Shipping.

Foundation

Report (if any) on Hull of Vessel. - Port *Glasgow* No. *4237*