

19636 Jun

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Recd 13/11/77

Description *2 cyl^r Compound Inverted S.C*
 Made by *Messrs Palmers Coy Limited*
 When *Nov 9th 1877* At *Lanark on Tyne*
 Diameter of cylinder *33.764* Length of stroke *42"*
 No. of revolutions per minute *(36)*
 Point of cut off *1/2 stroke*
 Diameter of screw shaft *11 1/2"*
 Diameter of crank shaft journals *11 1/2"*
 Diameter of screw, or of paddle wheel *16.6"*
 Pitch of screw *18.6"*
 No. of blades, *(14)* Total surface *67 sq. feet*
 No. of bilge pumps *(2)* and sizes *4 1/2 dia 21 stroke*
 Do they pump from each compartment *Eng. Room, aft hold, aft hold, main hold, fore peak*

Are all the bilge suction pipes fitted with roses *Yes 17mm Brgs*
 No. of feed pumps *(2)* and sizes *4 1/2 dia, 21 stroke*
 What gauges are there attached to the engines and boilers ... *2 Steam, 2 Stroke hold, 2 Steam Eng. in Room, 1 Vacuum*
 Description and size of Donkey Pumps ... *(Ballast) 8" dia 12" stroke D.A. (Boiler) 4" x 8" D.A.*
 Where do they pump from ... *(Ballast) from Tanks & Engine Room (Boiler) from Sea & some as Bilge-pumps*
 No. of bilge injections *(1)* and sizes *6 1/4"*
 Are they connected to air, or circulating pumps *Circulating*
 Is there a hand pump in the engine room *Small one can be used*
 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 *Iron piping & hose*

Report (if any) on Hull of Vessel. Port Newcastle No. 13751

MAIN BOILERS.

Number *Two* Description *Cylindrical Tubular*
 Made by *Messrs Palmers Coy*
 When *Nov 9th 1877* At *Lanark on Tyne*
 Working pressure *80 lbs per sq. inch*
 Tested by hydraulic pressure to *160 lbs*, Date *Sept 2nd 77*
 Description of super-heating apparatus *None Steam Receiver*
 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 *(2) Spring Valves by Palmers Coy 4 1/2 dia = 31.8 sq. in*
 No. of square feet of fire-grate surface in each boiler *54 sq. feet*
 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. *All except roses in holds*

DONKEY BOILER.

Description *Vertical cylindrical cross tubes*
 Where fixed *Upper Deck*
 Working pressure *50 lbs per sq. inch*
by Messrs Palmers Coy Liverpool

Tested by hydraulic pressure to *100 lbs repaired*, Date *Sept 7th 77*
 Description and area of safety valves *1 dead weight 4 dia = 12.5*
 No. of square feet of fire grate *17 sq. feet*

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 ... *Stop Valves rest are Common Cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ... *Yes*
 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 *None*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *Nov 1st 1877*
 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*

For Patners Shipbuilding & Iron Co. Manufacturer.

McVee General Manager.

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 *Russa* owned by *James J. Stewart & Son*
 of the Port of *Lanark* of *1299 17* Tons Register, and *260* Registered Horse Power,
 and that they have been carefully inspected and examined by me at *Lanark on Tyne*
 and found to be at this date, viz., *Nov 9th 1877* in good order and safe working condition.

Amount of Fee for Survey ... £ *12:0:0*
 (Travelling Expenses, if any, £ *0:5:0*)
12/11/77

George W. Mansel
 Engineer Surveyor to Lloyd's Register of Shipping.

(1000/31/7/76.)

present when engines were tested, date of test except North Shields east from Bilge pipes which gave out through being choked and removed

IRON 474-0507