

19401 *Len*

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Description *2 cyl. compound inverted S.C.*
Made by *Mason & Palmer Coy. Limited*
When *March 1874* At *Lancaster on 12th*
Diameter of cylinder *30" & 60"* Length of stroke *33"*
No. of revolutions per minute *56*
Point of cut off *1/2 stroke*
Diameter of screw shaft *9 1/2"*
Diameter of crank shaft journals *9 1/2"*
Diameter of screw, ~~and~~ paddle wheel *15 ft.*
Pitch of screw *13 ft to 15 ft 6"*
No. of blades, *(4)* Total surface *62 sq. ft.*
No. of bilge pumps *(2)* and sizes *4" dia 16 1/2" stroke*
Do they pump from each compartment *Ex. Eng. room, aft hold & fore hold*

Are all the bilge suction pipes fitted with roses *Yes*
No. of feed pumps *(2)* and sizes *4" dia, 16 1/2" stroke*
What gauges are there attached to the engines and boilers ... *1 steam each Boiler, 1 for both, 1 vacuum, 1 compound, 1 ballast, 1 side, 12 stroke D.A.*
Description and size of Donkey Pumps ... *Boiler 4" 8" D.A.*
Where do they pump from ... *"Ballast" from Tanks, Sea, "Engine room Bilge" from Sea, Hot well, fore hold,*
No. of bilge injections *(1)* and sizes *4" dia*
Are they connected to air, or circulating pumps *circulating*
Is there a hand pump in the engine room *No, small donkey*
Can be worked by the main engines *can be used*
Is there a deck hose of sufficient length to reach to any part of the vessel *Yes.*

MAIN BOILERS.

Number *Two* Description *Cylindrical Tubular*
Made by *Palmers Coy. Limited*
When *March 1874* At *Lancaster on 12th*
Working pressure *70 lbs per sq. inch*
Tested by hydraulic pressure to *not ascertained* Date *—*
Description of super-heating apparatus *Annular*
Can each boiler be worked separately *yes, through Superheaters*

Can the super-heater be shut off and the boilers worked separately *No*
Description and area of safety valves on each boiler ... *Two opening valves 3 9/16 dia = 19.9 sq. inches*
No. of square feet of fire-grate surface in each boiler *45 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 rose in fore hold*

DONKEY BOILER.

Description *Vertical Cylindrical 2 cross tubes*
Where fixed *Stokehold*
Working pressure *32 lbs per sq. inch*

Tested by hydraulic pressure to *not ascertained*, Date *—*
Description and area of safety valves *1 dia 11/16 dia = 8.80"*
No. of square feet of fire grate *18 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 ... *2 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 *at load line*
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 *Oct - 77*
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 *Water tight but with no sluice door*

Manufacturer.

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 *8 1/2 hp. m. stone* owned by *Mason Hutchinson & Co. Ltd.* of the Port of *Newcastle* of *1146* Tons Register, and *140* Registered Horse Power, and that they have been carefully inspected and examined by me at *Lancaster on 12th* and found to be at this date, viz., *12th Nov 1877* in good order and safe working condition.

Amount of Fee for Survey ... £

(Travelling Expenses, if any, £)

Engineer Surveyor to Lloyd's Register of Shipping.

George W. Marshall

Lloyd's Register Foundation
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