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LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Recd 4/1/77

Report (if any) on ... vessel. Port Newcastle No. 2

Description *Compound Inverted Two Cylinders*
 Made by *Palmer & Coys*
 When *May* 18*64* At *Newcastle*
 Diameter of cylinder *23" x 50"* Length of stroke *33"*
 No. of revolutions per minute *65*
 Point of cut off *1/2 stroke*
 Diameter of screw shaft *8 1/2"*
 Diameter of crank shaft journals *9"*
 Diameter of screw, ~~and paddle wheel~~ *12 feet*
 Pitch of screw *15 feet*
 No. of blades, *(14)* Total surface *36 sq feet*
 No. of bilge pumps *(2)* and sizes *6" dia 6" stroke*
 Do they pump from each compartment *Engin room & stoke hold - only*

Are all the bilge suction pipes fitted with roses *Yes*
 No. of feed pumps *(2)* and sizes *5" dia 10" stroke*
 What gauges are there attached to the engines and boilers ...
 1 *Steam on Boilers*
 1 *Water " Engin room*
 1 *Tacuum on Engines*
 Description and size of Donkey Pumps ...
No 1 = 8" dia, 12" stroke D.A
No 2 = 4" dia 8" stroke D.A
 Where do they pump from ...
No 1 from Sea, Bilge & Tanks
No 2 " Sea, Bilge & Stowage
 No. of bilge injections *(1)* and sizes *5" dia*
 Are they connected to air, or circulating pumps *circulating*
 Is there a hand pump in the engine room *No No 2 donkey - used instead*
 Can it be worked by the main engines
 Is there a deck hose of sufficient length to reach to any part of the vessel *Yes*

MAIN BOILERS.

Number *1* Description *Cylindrical tubular*
 Made by *Palmer & Coys*
 When *Dec* 18*76* At *Newcastle*
 Working pressure *67 1/2 lbs per sq inch*
 Tested by hydraulic pressure to *130*, Date *Nov 1876*
 Description of super-heating apparatus *None*
 Can each boiler be worked separately *one boiler only*

Can the super-heater be shut off and the boilers worked separately *None*
 Description and area of safety valves on each boiler ...
Two spring safety valves
1 1/2" dia each
31.8 sq inch area
 No. of square feet of fire-grate surface in each boiler *66*
 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 *Tubular cylindrical, 2 cross water*
 Where fixed *Upper Deck*
 Working pressure *55 lbs per sq inch*

Tested by hydraulic pressure to *120 lbs*, Date *27 Dec 76*
 Description and area of safety valves *Two Weight 3.9 sq in area*
 No. of square feet of fire grate *9.6 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 ... *one stop valve rest are common cocks*
 Are they fixed sufficiently high on the ship's side to be seen without lifting the stoke hold plates ...
all except Ballast cock
+ No 2 donkey sea cock
 Are the discharge pipes above or below the deep water line *All except Air pump - discharge pipes*
 Are they each fitted with a discharge valve on the plating of the vessel *all except Air pump discharge valve about 5 feet from ship - side*

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 *November 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 tunnel*

Manufacturer. *of New-Mani Boiler*

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 *"Lloyds"* owned by *Messrs Dixon & Harris* of the Port of *London* of *155 564* Tons Register, and *160* Registered Horse Power, and that they have been carefully inspected and examined by me at *Swansea & Wallsend* and found to be at this date, viz., *December 16th* 18*76* in good order and safe working condition.

Amount of Fee for Survey ... £ : :
 (Travelling Expenses, if any, £)

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

North Shields

for amount of fee see Report p. 11

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