

LLOYD'S REGISTER OF BRITISH AND FOREIGN SHIPPING.

Iron 19480

ENGINEER SURVEYOR'S REPORT ON MACHINERY.

ENGINES.

Rev 29/10/77

No. 1095 Hull of Vessel.

Description *Inverted Cy Compound Surface Condensing*
 Made by *Messrs Taylor Bos*
 When *1877* At *Birkenhead*
 Diameter of cylinders *23" & 40"* Length of stroke *30"*
 No. of revolutions per minute *80*
 Point of cut off *7 2/3 & 7 3/4*
 Diameter of screw shaft *7 1/2"*
 Diameter of crank shaft journals *8"*
 Diameter of screw, ~~or of paddle wheel~~ *11" 6"*
 Pitch of screw *13 feet*
 No. of blades *Four* Total surface *40 feet*
 No. of bilge pumps *one* and sizes *3 1/2" diam 12" stroke*
 Do they pump from each compartment *Engine room only*

Are all the bilge suction pipes fitted with roses *yes*
 No. of feed pumps *one* and sizes *3 1/2" diam 12" stroke*
 What gauges are there attached to the engines and boilers ... *one water & three test cocks on boiler two pressure stoke hold, one each Valve and Compound on Engines*
 Description and size of Donkey Pumps ... *one horizontal 10" Cy 10" stroke 8" diam D.A. Pump for ballast tanks one 8" Cy 8" stroke 4" dia S.A. pump for boiler feed*
 Where do they pump from *Large size from fore & after tanks Small size from Sea hold well bilge to boiler and on deck*
 No. of bilge injections *one* and sizes *2 3/4" bore*
 Are they connected to air, or circulating pumps *Condenser*
 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 *Circular Tubular*
 Made by *Messrs John Key & Sons*
 When *Oct 1877* At *Kirkcaldy*
 Working pressure *70 lbs*
 Tested by hydraulic pressure to *140 lbs*, Date *28/8/77*
 Description of super-heating apparatus *horizontal dumb*
 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 Adams Spring safety 4 1/4" diam = 29.8 area accumulation 2 per cent*
 No. of square feet of fire-grate surface in each boiler *48 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. *yes*

DONKEY BOILER.

Description *Round Vertical 4' dia 8' high*
 Where fixed *Stoke hold*
 Working pressure *50 lbs*

Tested by hydraulic pressure to *100 lbs*, Date *28/8/77*
 Description and area of safety valves *Two Lever & Weights*
 No. of square feet of fire grate *8.29 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 ... *Cocks & Valves*
 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 *— — — —*
 When were the stern tube, propeller, screw shaft, and all connections examined in dry dock *before launch*
 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*

John Key & Sons Manufacturers

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 *"Stura"* owned by *Messrs Gamman Sons & Carter* of the Port of *London* of *683.96* Tons Register, and *80* Registered Horse Power, and that they have been carefully inspected and examined by me at *Kirkcaldy* and found to be at this date, viz., *15th October* 1877 in good order and safe working condition.

Amount of Fee for Survey ... £ *4:0:0*
 (Travelling Expenses, if any, £ *4.10.6*.....)

John Sturrock
 Engineer Surveyor to Lloyd's Register of Shipping.
John Key & Sons

