

# REPORT ON MACHINERY.

No. 5396

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No. in Survey held at Greenwich Date, first Survey May 4<sup>th</sup> 80 Last Survey May 24<sup>th</sup> 1881  
 Reg. Book.

on the "S. S. Arammore" Tons 832.76  
418.81

Master John Hetherington Built at Greenwich When built 1881

Engines made at Greenwich By whom made W. Simons & Co. when made       

Boilers made at do By whom made do when made       

Registered Horse Power 170 Owners The Clyde Shipping Co. Port belonging to Glasgow

**ENGINES, &c.—**

Description of Engines Compound Inverted Surface Condensing.

Diameter of Cylinders 26" & 54" Length of Stroke 48" No. of Rev. per minute 65 Point of Cut off, High Pressure 2 1/4" Low Pressure 2 5/8"

Diameter of Screw shaft 11 3/8" Diameter of Tunnel shaft 10 1/2" Diameter of Crank shaft journals 11 1/2" Diameter of Crank pin 11 3/4" size of Crank webs 13 3/8" x 8 1/2"

Diameter of screw 14" x 6" Pitch of screw 21" 0" No. of blades 4 state whether moveable Yes total surface 41 sq. ft.

No. of Feed pumps 2 diameter of ditto 2 5/8" Stroke 48" Can one be overhauled while the other is at work Yes

No. of Bilge pumps 2 diameter of ditto 2 5/8" Stroke 48" Can one be overhauled while the other is at work Yes

Where do they pump from Bilges of Engine Room and all Compartments of Vessel.

No. of Donkey Engines 2 Size of Pumps 7' x 9" & 4' x 4" Where do they pump from Sea. Tanks. Condenser.

Hotwell. Bilges of Engine Room and all Compartments of Vessel

Are all the bilge suction pipes fitted with roses Yes Are the roses always accessible Yes Are the sluices on Engine room bulkheads always accessible Yes

No. of bilge injections 1 and sizes 4" Are they connected to condenser, or to circulating pump Circulating

How are the pumps worked From Crossheads of both Engines direct.

Are all connections with the sea direct on the skin of the ship Yes Are they Valves or Cocks Stop Valves & Cocks

Are they fixed sufficiently high on the ship's side to be seen without lifting the stokehold plates Yes Are the discharge pipes above or below the deep water line Above

Are they each fitted with a discharge valve always accessible on the plating of the vessel Yes Are the blow off cocks fitted with a spigot and brass covering plate Yes

What pipes are carried through the bunkers Sea hold & Tank suction. How are they protected by a wooden casing

Are all pipes, cocks, valves, and pumps in connection with the machinery accessible at all times Yes

Are the pipes, cocks, and valves arranged so as to prevent an unintentional connection between the sea and the bilges Yes

When were stern tube, propeller, screw shaft, and all connections examined in dry dock Not been in dry dock

Is the screw shaft tunnel watertight Yes and fitted with a sluice door Yes worked from Top platform of Engine

**BOILERS, &c.—**

Number of Boilers 2 Description Cylindrical & Multitubular

Working Pressure 95 lbs Tested by hydraulic pressure to 190 lbs Date of test March 11<sup>th</sup> 1881

Description of superheating apparatus or steam chest Vertical dome

Can each boiler be worked separately Yes Can the superheater be shut off and the boiler worked separately No superheater

No. of square feet of fire grate surface in each boiler 44 sq. ft. Description of safety valves Direct Spring Valves

No. to each boiler 2 area of each valve 11.04 sq. in. Are they fitted with easing gear Yes

No. of safety valves to superheater — area of each valve — are they fitted with easing gear —

Smallest distance between boilers and bunkers or woodwork 10 inches

Diameter of boilers 13" H Length of boilers 11' 2" description of riveting of shell long. seams Quad. Lap circum. seams Double Lap

Thickness of shell plates 7/8" diameter of rivet holes 1 1/8" whether punched or drilled drilled pitch of rivets 1 1/2"

Lap of plating 10 1/2" per centage of strength of longitudinal joint Plate 83% Per 90 working pressure of shell by rules 109 lbs

Size of manholes in shell 16" x 12" size of compensating rings Angle 5" x 4 1/2" x 5/8"

No. of Furnaces in each boiler 2 outside diameter 49" length, top 6' 2" bottom 10' 2"

Thickness of plates 1 1/32" description of joint Welded if rings are fitted Yes greatest length between rings 4' 9"

Working pressure of furnace by the rules 108 lbs

Combustion chamber plating, thickness, sides 1/2" back 1/2" top 1/2"

Pitch of stays to ditto sides 8" x 8" back 8" x 7 1/2" top 8" x 8"

If stays are fitted with nuts or riveted heads Nuts working pressure of plating by rules 120 lbs

Diameter of stays at smallest part 1 3/8" working pressure of ditto by rules 138 "

End plates in steam space, thickness 1 3/16" pitch of stays to ditto 16" x 16" how stays are secured Double Nuts

Working pressure by rules 92 lbs diameter of stays at smallest part 2 1/2" working pressure by rules 153 lbs

Front plates at bottom, thickness 1 1/16" Back plates, thickness 1 1/16" greatest pitch of stays 13 1/2" x 8" working pressure by rules 94 lbs



