

18489 Iron

Port of Newcastle April 2nd 1877
"Hastings" 413 tons

Details of Main Boilers of the Steam Ship

Diameter 14' 0" Length 10' 1³/₄"
 Thickness of shell plates 5¹/₈"
 Description of riveting of longitudinal joints double riveted Chain of circumferential joints double riveted Chain
 Pitch of rivets ditto 3¹/₈" ditto 3¹/₈"
 Diameter of rivets ditto 15¹/₁₆" ditto 15¹/₁₆"
 Lap of plating ditto 5¹/₂" ditto 5"
 Size of manholes in end circular shell 15¹/₂" x 12"
 How compensated for
 Number of furnaces in boiler 131
 Diameter of furnaces 3' 4" Length of furnaces 4' 3"
 Thickness of furnace plates 7¹/₁₆"
 Description of joint of furnaces single riveted lap
 Whether strengthened with rings None Greatest length between rings
 Thickness of combustion chamber plating back 1¹/₂" sides 1¹/₁₆"
 Diameter of screw stays to ditto 1¹/₈" pitch of stays 10³/₄" x 10"
 End plates, thickness 7⁷/₈"
 Diameter of longitudinal stays to end plates 1³/₄" pitch of ditto 15" x 20"
 How stays are secured double nuts & washers
 Diameter of tubes 3¹/₂" pitch of tubes 4³/₄" x 4³/₄"
 Thickness of tube plates 11¹/₁₆"
 Stayed by tube stays pitch of stays 13¹/₂" x 13¹/₂"
 Description of steam receiver Dome with contracted neck 12" x 16" internal dia
 Diameter of ditto 3' 3" length of ditto 5'-0"
 Thickness of plating of ditto 3³/₈" ends 3³/₈"
 Ends, how stayed None Spherical end

Working pressure	Main Cyl & Shell	$\frac{51520 \times 1.25 \times 70}{168 \times 6.5} = 41.2 \text{ lbs}$
Ditto	Furnace Flue	$\frac{84600 \times 14}{40 \times 7.2} = 38.9 \text{ lbs}$
Ditto	Main Stays	$\frac{15 \times 20 \times 35}{2.4} = 43.75 \text{ lbs}$
Ditto	Combustion Chamber Stays	$\frac{10.75 \times 10 \times 35}{.99} = 3800 \text{ lbs}$
Ditto	Flat plates between Main Stays	$\frac{120 \times 100}{400} = 30 \text{ lbs}$
Ditto	Ditto combustion chamber	$\frac{100 \times 49}{115.5} = 42 \text{ lbs}$

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North Shields