

IRON 480-0054 (112)

21643 Iron

Port

Belfast 20<sup>th</sup> August 1878.  
"Hecla" 1875.45 tons

## Details of Main Boilers of the Steam Ship

meter 11' 6" Length 17' 6"

Thickness of shell plates  $\frac{15}{16}$ "

Description of riveting of longitudinal joints Double butt straps riveted of circumferential joints Double riveted laps.

Pitch of rivets ditto 5" ditto  $3\frac{3}{4}$ "

Diameter of rivets ditto  $1\frac{1}{4}$ " ditto  $1\frac{1}{4}$ "

Breadth of butt strap ditto 14" ditto 6"

Size of manholes in circular shell 16" x 12"

How compensated for plate ring

Number of furnaces in boiler 6 Double ended

Diameter of furnaces 2' 10" Length of furnaces 6' 6"

Thickness of furnace plates  $\frac{15}{32}$  bottom  $\frac{1}{2}$ "

Description of joint of furnaces Welded

Whether strengthened with rings Yes Greatest length between rings 4' 0"

Thickness of combustion chamber plating  $\frac{7}{16}$ "

Diameter of screw stays to ditto  $1\frac{1}{2}$ " x  $1\frac{1}{4}$ " pitch of stays  $8\frac{1}{4}$ " nuts.

End plates, thickness  $\frac{3}{4}$ "

Diameter of longitudinal stays to end plates  $2\frac{1}{8}$ " pitch of ditto  $16\frac{1}{2}$ " x 13"

How stays are secured Double nuts & washers

Diameter of tubes  $3\frac{1}{4}$ " O.D. pitch of tubes  $4\frac{1}{4}$ " x  $4\frac{1}{2}$ "

Thickness of tube plates  $1\frac{1}{8}$ " &  $\frac{11}{16}$ "

Stayed by Tube stays pitch of stays  $14\frac{1}{4}$ " x  $13\frac{1}{2}$ "

Description of steam receiver Cylindrical horizontal

Diameter of ditto 3' 6" length of ditto 17' 6"

Thickness of plating of ditto  $\frac{5}{16}$ " ends  $\frac{10}{16}$ "

Ends, how stayed 1 Girth plate at each end.

Rivet holes in shell plating drilled after bending



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S.S. "Hecla"

21643 Lb.

Shell plating,

$$\frac{515.20 \times 1.87 \times .75}{138 \times 6.0} \} = 87 \text{ lbs.}$$

Perctge in Rivets,

$$\frac{(1.22 \times 4) \times 100}{5 \times .937} \} = 104\%.$$

Perctge in joints,

$$\frac{(5 - 1.25) \times 100}{5} \} = 75\%.$$

Furnace plates,

$$\frac{89600 \times .219}{4.0 \times 34} \} = 144 \text{ lbs.}$$

Flat plates,

$$\frac{120 \times 49}{68} \} = 86 \text{ lbs.}$$

Steam chests,

$$\frac{515.20 \times 1 \times .60}{42 \times 6.5} \} = 113 \text{ lbs.}$$

J. G. Wigham



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100480-0054 (212)