

Original Number

16132 Iron

Port *Sundeland 29th March 1876*

Details of Main Boilers of the Steam Ship *Flying Fish 91.53 tons*

Diameter *12' 6"* Length *11 1/2'*

Thickness of shell plates *3/4"*

Description of riveting of longitudinal joints *Triple zigzag* of circumferential joints *Double zigzag*

Pitch of rivets ditto *2 3/4"* ditto *3 1/8"*

Diameter of rivets ditto *7/8"* ditto *1"*

Lap of plating ditto *5 3/4"* ditto *8"*

Size of manholes in circular shell *17" x 12"*

How compensated for *Rings round holes 4" x 1/2"*

Number of furnaces in boiler *3*

Diameter of furnaces *3' 3" outside* Length of furnaces *8' 0"*

Thickness of furnace plates *7/16"*

Description of joint of furnaces *Butt joints. Double straps. Single chain riveted*

Whether strengthened with rings *No* Greatest length between rings *2'*

Thickness of combustion chamber plating *Sides 7/16" Back 1/2"*

Diameter of screw stays to ditto *1 1/4"* pitch of stays *10" x 9 3/4"*

End plates, thickness *1/2"*

Diameter of longitudinal stays to end plates *1 5/8"* pitch of ditto *13" x 15"*

How stays are secured *to angle iron 3 1/2 x 3 1/2 x 1/2 riveted to shell*

Diameter of tubes *3 1/2"* pitch of tubes *4 3/4" x 4 3/4"*

Thickness of tube plates *5/8"*

Stayed by *Stay tubes* pitch of stays *14" x 14"*

Description of steam receiver *Horizontal Cylindrical. Double riveted*

Diameter of ditto *4' 0"* length of ditto *9' 0"*

Thickness of plating of ditto *3/8"* ends *3/4"*

Ends, how stayed *3 Stays in receiver 2" dia.*

Shell - $\frac{51520 \times 1 1/2 \times .68}{150 \times 6.5} = 53.9 \text{ lbs working pressure}$

Furnaces to collapse $\frac{89600 \times .4375^2}{8 \times 39} = 55 \text{ lbs. working pressure}$

Flat plates between screwed stays $\frac{100 \times 1^2}{10 \times 9 3/4} = 50 \text{ lbs}$

Ames Bain
Engineer Surveyor to Lloyd's Register of Shipping.
Foundation