

19511 Iron

29<sup>th</sup> Dec 1877  
Dec 5<sup>th</sup> 11/77  
1095.23 tons

Port West Hartlepool

## Details of Main Boilers of the Steam Ship

"Opprey"

Diameter 13' 2" Length 9' 8"

Thickness of shell plates 1<sup>1</sup>/<sub>16</sub>

Description of riveting of longitudinal joints Welded of circumferential joints Double

Pitch of rivets ditto ~ ditto 3<sup>5</sup>/<sub>16</sub>Diameter of rivets ditto ~ ditto 1<sup>3</sup>/<sub>16</sub>Lap of plating ditto ~ ditto 5<sup>3</sup>/<sub>8</sub>Size of manholes in circular shell 13<sup>1</sup>/<sub>2</sub> x 11<sup>1</sup>/<sub>2</sub>How compensated for Rectangular plate 24 x 28 x 1<sup>1</sup>/<sub>16</sub>

Number of furnaces in boiler Four

Diameter of furnaces 2' 9<sup>1</sup>/<sub>2</sub>" Length of furnaces 4' 0" over tube platesThickness of furnace plates 1<sup>1</sup>/<sub>2</sub>" top 9<sup>1</sup>/<sub>16</sub>" bottom

Description of joint of furnaces Butt double straps single riveted

Whether strengthened with rings No Greatest length between rings ~

Thickness of combustion chamber plating 1<sup>1</sup>/<sub>2</sub>"Diameter of screw stays to ditto 1<sup>1</sup>/<sub>2</sub>" over thread pitch of stays 7" x 7"End plates, thickness 1<sup>1</sup>/<sub>8</sub>"Diameter of longitudinal stays to end plates 2<sup>3</sup>/<sub>4</sub>" over thread pitch of ditto 16" x 14<sup>1</sup>/<sub>2</sub>"

How stays are secured Nuts and washers

Diameter of tubes 3<sup>3</sup>/<sub>4</sub>" inside pitch of tubes 4<sup>3</sup>/<sub>4</sub>" x 4<sup>3</sup>/<sub>4</sub>"Thickness of tube plates 1<sup>1</sup>/<sub>8</sub>"Stayed by Stay tubes pitch of stays 13<sup>1</sup>/<sub>2</sub>" x 9<sup>1</sup>/<sub>2</sub>"

Description of steam receiver Steam dome Contracted at ruck

Diameter of ditto 3' 3" length of ditto 5' 1<sup>1</sup>/<sub>2</sub>"Thickness of plating of ditto 1<sup>1</sup>/<sub>16</sub>" ends 5<sup>3</sup>/<sub>8</sub>"Ends, how stayed Four stays 2<sup>1</sup>/<sub>2</sub>" dia over thread

All longitudinal seams in shell plates welded except two in

inner course of plating which are fitted with butt straps

Shell  $\frac{27520 \times 2\frac{1}{8} \times .40}{138 \times 6.5} = 46.4 \text{ lbs working pressure}$ Furnaces  $\frac{89600 \times \frac{1}{2}^2}{4 \times 33.5} = 95 \text{ lbs}$ 

James Sam

Engineer Surveyor to Lloyd's Register of Shipping.