

19991 Iron

Port

Newcastle Jan 11<sup>th</sup> 1878

## Details of Main Boilers of the Steam Ship

"North Britania" 11829 tons

Diameter

12' 3"

Length

9' 4"<sup>5</sup>/<sub>8</sub>

Thickness of shell plates

1"

Description of riveting of longitudinal joints

double zigzag butt

of circumferential joints

double zigzag lap

Pitch of rivets

ditto

3<sup>5</sup>/<sub>8</sub>"

ditto

3"

Diameter of rivets

ditto

1<sup>1</sup>/<sub>16</sub>"

ditto

1<sup>3</sup>/<sub>16</sub>"

Lap of plating

ditto

Staps 10<sup>3</sup>/<sub>8</sub>" x <sup>1</sup>/<sub>16</sub>"

ditto

5<sup>5</sup>/<sub>8</sub>"

Size of manholes in circular shell

End

15" x 10"

How compensated for

Monght Iron ring 1' x 4"

Number of furnaces in boiler

(31)

Diameter of furnaces

3' 0"

Length of furnaces

6' 6" top 8' 7" bot-

Thickness of furnace plates

5" top, 9" Bottom,

Description of joint of furnaces

Single welded lap,

Whether strengthened with rings

0

Greatest length between rings

0

Thickness of combustion chamber plating

1<sup>1</sup>/<sub>2</sub>"

Diameter of screw stays to ditto

1<sup>3</sup>/<sub>8</sub>"

pitch of stays

8" x 9" x 10 x 9

End plates, thickness

1<sup>1</sup>/<sub>16</sub>"

Diameter of longitudinal stays to end plates

2<sup>1</sup>/<sub>4</sub>"

pitch of ditto

16" x 14" 1157 tubes

How stays are secured

by double nuts and washers

Diameter of tubes

3<sup>1</sup>/<sub>4</sub>"

pitch of tubes

4<sup>1</sup>/<sub>2</sub>" x 4<sup>1</sup>/<sub>2</sub>"

Thickness of tube plates

1<sup>1</sup>/<sub>16</sub>"

Stayed by

Tub Stays

pitch of stays

9' x 13<sup>1</sup>/<sub>2</sub>"

Description of steam receiver

Cylindrical horizontal

Diameter of ditto

4' 0"

length of ditto

5' 3"

Thickness of plating of ditto

1<sup>1</sup>/<sub>2</sub>"

ends

5<sup>5</sup>/<sub>8</sub>"

ends, how stayed

(41) Stays

2" dia- secured by double nuts Washers

Working pressure

Cylindrical Shell

51520 x 2 x 71 = 76.5 lbs.

Ditto

"

Furnace Flue

149 x 6.5 = 92 lbs.

Ditto

"

Main stays Steam Space

89600 x .31 = 4307 lbs.

Ditto

"

Corn-Chamber stays

16 x 14 x 45 = 5532 lbs.

Ditto

"

Flat plates Main stays

10 x 9 x 45 = 4050 lbs.

Ditto

"

do " Corn-Chamber

120 x 144 = 76 lbs.

Ditto

"

do " Corn-Chamber

100 x 64 = 79 lbs.

George W. Mannel,

Engineer Surveyor to Lloyd's Register of Shipping.

North Shields

Smallest space between Boilis & Bmeters 8"  
mm



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