

## REPORT ON BOILERS.

No. 100727

Received at London Office

24 SEP 1942

22 SEP 1942

Date of writing Report

19

When handed in at Local Office

19

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
eg. Book.

Newcastle on Tyne

Date, First Survey 10<sup>th</sup> Oct 1941Last Survey 9<sup>th</sup> Sept. 1942

1942

on the

S/S "EMPIRE REYNOLDS."

(Number of Visits

Tons

Gross 812<sup>5</sup>/<sub>8</sub>

Net 4634

Master

✓

Built at

Newcastle

By whom built

Swan, Hunter &  
Wigham Richardson & Co.

Yard No. 1712

When built 1942-

Engines made at

Newcastle

By whom made

ditto

Engine No. 1712

When made 1942-

Boilers made at

ditto

By whom made

ditto

Boiler No. 1712

When made 1942-

Nominal Horse Power

Owners

Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland &amp; Colvilles Ld

(Letter for Record S.)

Total Heating Surface of Boilers 9,555 sq ft.

Is forced draught fitted Yes

Coal or Oil fired Oil fired

No. and Description of Boilers

3. Single Ended.

Working Pressure 220 lbs

Tested by hydraulic pressure to 380 lb

Date of test 30/6/42

20/7/42

No. of Certificate 988.

989.

990.

Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler

oil fired

No. and Description of safety valves to each boiler

Two of 2<sup>1</sup>/<sub>2</sub> dia Cockburn & Co. H.L. Type.

Area of each set of valves per boiler

{ per Rule 8.47 sq in

{ as fitted 9.8

Pressure to which they are adjusted 220 lb

Are they fitted with easing gear Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

None

Smallest distance between boilers or uptakes and bunkers or woodwork 12"

Is oil fuel carried in the double bottom under boilers Yes

Smallest distance between shell of boiler and tank top plating 2'-2"

Is the bottom of the boiler insulated Yes.

Largest internal dia. of boilers 16'-2<sup>3</sup>/<sub>32</sub>"

Length 11'-9' mean

Shell plates: Material Stl.

Tensile strength 30 to 34 tons

Thickness 1<sup>3</sup>/<sub>64</sub>"

Are the shell plates welded or flanged No

Description of riveting: circ. seams { end D.R. overlap

{ inter. none

Long. seams T.R. Dbl Butt Straps

Diameter of rivet holes in { circ. seams 1<sup>9</sup>/<sub>16</sub>"

{ long. seams

Pitch of rivets { 4'-60

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

Percentage of strength of circ. end seams { plate 66.03

{ rivets 42.17

Percentage of strength of circ. intermediate seam { plate none

{ rivets

Percentage of strength of longitudinal joint { plate 85.11

{ rivets 86.60

Working pressure of shell by Rules 221 lbs.

Percentage of strength of longitudinal joint { combined 87.55

{

Thickness of butt straps { outer 1<sup>5</sup>/<sub>32</sub>"{ inner 1<sup>9</sup>/<sub>32</sub>"

No. and Description of Furnaces in each Boiler

Three "Deighton" Corrugated

Material Steel

Tensile strength 26 to 30 tons

Smallest outside diameter 4'-1<sup>1</sup>/<sub>8</sub>"Length of plain part { top 2'-7<sup>1</sup>/<sub>2</sub>"

{ bottom c.c. bottom

Thickness of plates { crown 3/4"

{ bottom

Description of longitudinal joint fire welded.

Dimensions of stiffening rings on furnace or c.c. bottom none

Working pressure of furnace by Rules 224 lbs

End plates in steam space: Material Stl

Tensile strength 26 to 30 tons

Thickness 1<sup>7</sup>/<sub>32</sub>"Pitch of stays 15" x 19<sup>1</sup>/<sub>2</sub>"

How are stays secured Nuts inside &amp; outside

Working pressure by Rules 228 lbs.

Tube plates: Material { front Stl.

{ back

Tensile strength 26 to 30 tons

Thickness 1<sup>1</sup>/<sub>32</sub>"Mean pitch of stay tubes in nests 10<sup>7</sup>/<sub>8</sub>"

Pitch across wide water spaces 14"

Working pressure { front 257 lbs

{ back 226 lbs

Girders to combustion chamber tops: Material S.

Tensile strength 28 to 32 tons

Depth and thickness of girder

at centre 9<sup>7</sup>/<sub>8</sub>" x 3/4" x twoLength as per Rule 2'-9<sup>15</sup>/<sub>16</sub>" (33' 9 1/2")Distance apart 8<sup>3</sup>/<sub>4</sub>"

No. and pitch of stays

in each 3 @ 8"

Working pressure by Rules 225 lbs

Combustion chamber plates: Material S.

Tensile strength 26 to 30 tons

Thickness: Sides 2<sup>3</sup>/<sub>32</sub>"Back 2<sup>3</sup>/<sub>32</sub>"Top 2<sup>3</sup>/<sub>32</sub>"

Bottom 7/8"

Pitch of stays to ditto: Sides 10" x 8"

Back 9<sup>1</sup>/<sub>4</sub>" x 8<sup>1</sup>/<sub>2</sub>"Top 8<sup>3</sup>/<sub>4</sub>" x 8"

Are stays fitted with nuts or riveted over with nuts

Working pressure by Rules 221 lbs min.

Front plate at bottom: Material S.

Tensile strength 26 to 30 tons

Thickness 1"

Lower back plate: Material S.

Tensile strength 26 to 30 tons

Thickness 1<sup>1</sup>/<sub>6</sub>"Pitch of stays at wide water space 17<sup>1</sup>/<sub>4</sub>" x 8<sup>1</sup>/<sub>2</sub>" max.14" x 9<sup>1</sup>/<sub>4</sub>" bet C.C.s.

Are stays fitted with nuts or riveted over with nuts

Working Pressure 256 lbs min.

Main stays: Material S.

Tensile strength 28 to 32 tons

Diameter { At body of stay, 3"

{ Over threads

No. of threads per inch 6

Area supported by each stay 286.5 sq in

Working pressure by Rules 234 lbs.

Screw stays: Material S.

Tensile strength 26 to 30 tons

Diameter { At end of part, 1<sup>3</sup>/<sub>4</sub>" + 1<sup>5</sup>/<sub>8</sub>"

{ Over threads

No. of threads per inch 9.

Area supported by each stay 78 sq in for 1<sup>3</sup>/<sub>4</sub> dia68 " 1<sup>5</sup>/<sub>8</sub> dia

Conts P.T.O.

Lloyd's Register  
Foundation