

REPORT ON BOILERS.

Received at London Office

17 APR 1930

Date of writing Report

192

When handed in at Local Office

15/4/1930

Port of

NEWCASTLE-ON-TYNE

No. in Reg. Book

Survey held at

Wallsend-on-Tyne

Date, First Survey

22 Nov 29

Last Survey

14 April 30

on the

New Steel S.S. Simcolite

(Number of Visits)

Gross 4926
Tons Net 1776

Master

Built at

Middlesbro

By whom built

Gurness & Co Ltd

Yard No. 171

When built

1920

Engines made at

Wallsend

By whom made

North Eastern Mar & Co Ltd

Engine No. 2748

When made

1930

Boilers made at

Wallsend

By whom made

North Eastern Mar & Co Ltd

Boiler No. 2748

When made

1930

Nominal Horse Power

158

Owners

Imperial oil Ltd.

Port belonging to

✓

MULTITUBULAR BOILERS - MAIN, ~~AUXILIARY~~, OR ~~DONKEY~~.

Manufacturers of Steel

Steel Coy of Scotland & Raine & Co Ltd.

(Letter for Record)

(✓)

Total Heating Surface of Boilers

2718 sq ft

Is forced draught fitted

no

Coal or Oil fired

oil

No. and Description of Boilers

One single ended.

Working Pressure

180 lbs

Tested by hydraulic pressure to

320 lbs

Date of test

12-2-30

No. of Certificate

429

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

Oil fired only

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule 14.5 sq ft

as fitted 22.09 sq ft

Pressure to which they are adjusted

185 lbs

Are they fitted with easing gear

yes

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

✓

Smallest distance between boiler uptakes and bunkers

5'-0"

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

none.

Is the bottom of the boiler insulated

yes

Largest internal dia. of boilers

15'-9 1/16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

28 to 32 tons

Thickness

1 9/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

D.R.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams } 1 5/16"

long. seams }

Pitch of rivets

3 3/4"

9 5/16"

Percentage of strength of circ. end seams

plate

65.0

rivets

46.4

Percentage of strength of circ. intermediate seam

plate

85.9

rivets

Percentage of strength of longitudinal joint

plate

87.3

rivets

89.3

Working pressure of shell by Rules

180 lbs

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

4 corrugated (marison)

Material

Steel

Tensile strength

26 to 30 tons

Smallest outside diameter

3'-2 1/4"

Length of plain part

top

✓

bottom

Thickness of plates

crown

1/2"

bottom

Description of longitudinal joint

weld

Dimensions of stiffening rings on furnace or c.c. bottom

none

Working pressure of furnace by Rules

188 lbs

End plates in steam space: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1 1/16"

Pitch of stays

1-11" x 1-11"

How are stays secured

double nuts

Working pressure by Rules

183.5 lbs

Tube plates: Material

front

Steel

back

Tensile strength

26 to 30 tons

Thickness

15/16"

3/4"

Mean pitch of stay tubes in nests

8 7/8"

Pitch across wide water spaces

14 1/2" x 8 3/4"

Working pressure

front

184 lbs

back

255 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28 to 32 tons

Depth and thickness of girder

at centre

2 @ 8 x 3/4"

Length as per Rule

2'-3"

Distance apart

11 1/2"

No. and pitch of stays

in each

2 @ 8 3/4"

Working pressure by Rules

20 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

1"

Pitch of stays to ditto: Sides

9 x 1/5/8"

Back

9 x 1/5/8"

Top

8 3/4 x 11 1/2"

Are stays fitted with nuts or riveted over

riveted over

Working pressure by Rules

190 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26 to 30 tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26 to 30 tons

Thickness

1/8"

Pitch of stays at wide water space

14 1/2" x 1/5/8"

Are stays fitted with nuts or riveted over

riveted over

nuts & plates

Working Pressure

233 lbs.

Main stays: Material

Steel

Tensile strength

28 to 32 tons

Diameter

At body of stay, or

3 1/2"

Over threads

3 3/4"

No. of threads per inch

6

Area supported by each stay

529 sq in

Working pressure by Rules

20 lbs.

Screw stays: Material

W Iron

Tensile strength

2 1/2 tons (min)

Diameter

At turned off part, or

1 1/2"

Over threads

No. of threads per inch

9

Area supported by each stay

68.63 sq in

2021

Working pressure by Rules **183 lbs** Are the stays drilled at the outer ends **yes** Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part.} \\ \text{or} \\ \text{Over threads} \end{array} \right. \frac{1}{4}''$
 No. of threads per inch **9** Area supported by each stay **100.63''** Working pressure by Rules **180.5 lbs**
 Tubes: Material **W. Iron** External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \frac{3}{4}''$ Thickness $\left\{ \begin{array}{l} \text{9 L.S.G.} \\ \frac{1}{4}''; \frac{5}{16}''; \frac{3}{8}'' \end{array} \right.$ No. of threads per inch **9**
 Pitch of tubes $\frac{1}{2}'' \times \frac{3}{8}''$ Working pressure by Rules **180 lbs** Manhole compensation: Size of opening in shell plate **20³/₈'' x 16⁷/₈''** Section of compensating ring **13¹/₄'' x 1⁵/₁₆''** No. of rivets and diameter of rivet holes **34 @ 1¹/₂''**
 Outer row rivet pitch at ends **10³/₄''** Depth of flange if manhole flanged **4''** Steam Dome: Material **none**
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays
 Inner radius of crown Working pressure by Rules
 How connected to shell Size of doubling plate under dome Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater **none** Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$
 Number of elements Material of tubes Internal diameter and thickness of tubes
 Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately
 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
 Area of each safety valve Are the safety valves fitted with casing gear Working pressure as per Rules
 Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes, castings and after assembly in place Are drain cocks or valves fitted to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **yes.**
THE NORTH EASTERN MARINE ENGINEERING CO., LTD.
 The foregoing is a correct description,
W. H. Butler Manufacturer.
 SECRETARY

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{---} \\ \text{---} \end{array} \right.$ **See Indy Report** Are the approved plans of boiler and superheater forwarded herewith **sent with certificate.**
 (If not state date of approval.)
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 This boiler has been built under special survey. Materials & workmanship good. Hydraulic test satisfactory. It has been efficiently installed & fixed in the vessel examined, under steam & safety valves adjusted.

Survey Fee £ : ✓ : When applied for. 192
 Travelling Expenses (if any) £ : ✓ : When received. 192

William Butler
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 25 APR 1930**
 Assigned **See Ind. J.E. Rpt 14039**

