

REPORT ON BOILERS.

No. 29494

Date of writing Report

192

When handed in at Local Office

12 AUG. 1927

Received at London Office

Port of SunderlandNo. in
Reg. Book.

Survey held at

Sunderland

Date, First Survey

Last Survey

4 Aug

1927

on the

I. S. S. "URDANETA"

(Number of Visits)

Gross

Tons

Net

Master

Built at Newcastle

By whom built

Palmers Shipbuilding & Rep.

and No.

972

When built

1927

Engines made at

Sunderland

By whom made

MacColl & Pollock Ltd

Engine No.

357

When made

1907

Boilers made at

Sunderland

By whom made

MacColl & Pollock Ltd

Boiler No.

357

When made

1927

Nominal Horse Power

210

Owners

Venezuelan Gulf Oil Co

Port belonging to

Maracaibo.MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY, OR DONKEY.~~

Manufacturers of Steel

Messrs The Steel Company of Scotland Limited

(Letter for Record)

(S)

Total Heating Surface of Boilers

4009 sq ft

Is forced draught fitted

No

Coal or Oil fired

Oil

No. and Description of Boilers

Two - Single ended Marine type, Corrugated furnaces.

Working Pressure

180 lbs sq in

Tested by hydraulic pressure to

320 lbs sq in

Date of test

1-7-27

No. of Certificate

3944

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 - Direct Spring loaded.

Area of each set of valves per boiler

per Rule15.41 sq in

as fitted

16.59 sq in

Pressure to which they are adjusted

185 lbs sq in

Are they fitted with easing gear

Yes

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

Donkey Boilers not fitted.

Smallest distance between boiler uptakes and bunkers

6' 3"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2' 0"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

14' 0"

Length (mean)

11' 6"

Shell plates: Material

Steel

Tensile strength

28 to 32 tons sq in

Thickness

1 5/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.P. Lap

Long. seams

1. R. D. B. S.

Diameter of rivet holes in

circ. seams

1 1/4"

long. seams

1 1/4"

Pitch of rivets

4"8 9/16"

Percentage of strength of circ. end seams

plate

68.75

rivets

43.57

Percentage of strength of circ. intermediate seam

plate

85.4

rivets

95.5

Percentage of strength of longitudinal joint

plate

85.4

rivets

95.5

combined

84.9

Working pressure of shell by Rules

181 lbs sq in

Thickness of butt straps

outer

1"

inner

1 1/8"

Material

Steel

Length of plain part

top

✓

bottom

✓

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

End plates in steam space: Material

Steel

How are stays secured

Double Nuts and Washers.

End plates: Material

front

Steel

back

Steel

Can pitch of stay tubes in nests

9.56"

Pitch across wide water spaces

13 1/2"

Working pressure

front

189 lbs sq in (w.w. space)

back

183 lbs sq in (in nests)

Orders to combustion chamber tops: Material

Steel

Centre

2 @ 8 1/4" x 13/16"

Length as per Rule

34"

Tensile strength

26 to 30 tons sq in

Depth and thickness of girder

Each

2 x 10.66"

Working pressure by Rules

180.8 lbs sq in

Combustion chamber plates: Material

Steel

Tensile strength

26 to 30 tons sq in

Thickness: Sides

11/16"

Back

11/16"

Top

23/32"

Bottom

11/16"

Pitch of stays to ditto: Sides

10.66" x 8 1/4"

Back

9" x 10"

Top

10.66" x 8 1/4"

Are stays fitted with nuts or riveted over

Fitted with Nuts

Working pressure by Rules

195.5 lbs sq in

Thickness

13/16"

Lower back plate: Material

Steel

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

Fitted with Nuts

Working Pressure

181.5 lbs sq in

Pitch of stays

3 1/8"

At body of stay, or

✓

Over threads

✓

No. of threads per inch

6

Area supported by each stay

397.1 sq in

Working pressure by Rules

185 lbs sq in

At turned off part, or

1 5/8" & 1 3/4"

Over threads

✓

Screw stays: Material

Steel

Tensile strength

26 to 30 tons sq in

No. of threads per inch

9

Area supported by each stay

90 sq in

Back 190 lbs. \square "
 Working pressure by Rules $\frac{206}{115} \square$ Are the stays drilled at the outer ends *No* Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 1\frac{3}{8}" \\ \text{or} \\ \text{Over threads } \end{array} \right. \checkmark$
 No. of threads per inch $9 \checkmark$ Area supported by each stay $115 \square$ Working pressure by Rules $184 \frac{115}{115} \square$
 Tubes: Material *Wrought Iron* External diameter $\left\{ \begin{array}{l} \text{Plain } 2\frac{1}{2}" \\ \text{Stay } 2\frac{1}{2}" \end{array} \right. \checkmark$ Thickness $\left\{ \begin{array}{l} \text{Plain } 5\frac{1}{16} \text{ to } 3\frac{3}{8}" \\ \text{Stay } 230 \text{ lbs } \square \end{array} \right. \checkmark$ No. of threads per inch $9 \checkmark$
 Pitch of tubes $3\frac{3}{8}" \times 3\frac{3}{4}"$ Working pressure by Rules $\frac{206}{115} \square$ Manhole compensation: Size of opening in
 shell plate $16' \times 12' \checkmark$ Section of compensating ring $2 \times 6\frac{1}{2}" \times 1\frac{5}{32}" \checkmark$ No. of rivets and diameter of rivet holes $32 @ 1\frac{1}{4}" \checkmark$
 Outer row rivet pitch at ends $8\frac{9}{16}" \checkmark$ Depth of flange if manhole flanged \checkmark Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \checkmark$
 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
 Number of elements Material of tubes Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right. \checkmark$ 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 easing 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 23 inclusive for boilers been complied with *Yes.*

The foregoing is a correct description,

PER PRO MACGILL & POLLOCK LTD

Manufacturer.

J. H. Pellington

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops - -} \end{array} \right. \checkmark$ Please see Machinery Report Are the approved plans of boiler and superheater forwarded herewith
 while building $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel - - -} \end{array} \right. \checkmark$ (If not state date of approval.)
 Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good.
 The Boilers have been constructed under Special Survey, and satisfactorily fitted
 in the vessel. For notation see Machinery Report.

Survey Fee ... \pm Please see Machinery Report When applied for, 192
 Travelling Expenses (if any) \pm When received, 192

A. T. Griffith.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 19 AUG 1927

Assigned

See Sept. attached



© 2021

Lloyd's Register
Foundation