

REPORT ON BOILERS.

No. 31245

Date of writing Report

192

When handed in at Local Office

1 JULY 1933

Received at London Office

12 JUL 1933

Port of

No. in Survey held at

Reg. Book.

Sunderland

Date, First Survey

Last Survey

July 3 1933

on the

Screw Steamer "PARKWOOD"

(Number of Visits)

1049

Tons Gross 585.

Master

Built at Burntisland

By whom built

Burntisland S.B. Co

Yard No. 144

When built 1933

Engines made at

Sunderland

By whom made

North Eastern Mar. Eng. Co. Ltd.

Engine No. 2495

When made 1933

Boilers made at

Sunderland

By whom made

North Eastern Mar. Eng. Co. Ltd.

Boiler No. 2495

When made 1933

Nominal Horse Power 105

Owners Joseph Constantine & Co. Ltd.

Port belonging to

Middlesbrough.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland & Parkgate Iron Works Co.

Total Heating Surface of Boilers

1906 sq. ft. of 18 lb. plate

Is forced draught fitted

No.

(Letter for Record)

S

No. and Description of Boilers

One Single Ended

Coal or Oil fired

Coal

Tested by hydraulic pressure to

350

Date of test

12.5.33

No. of Certificate

4138

Can each boiler be worked separately

Area of Firegrate in each Boiler

40 sq. ft.

No. and Description of safety valves to each boiler

2 Direct Spring

Area of each set of valves per boiler

per Rule

11.08

as fitted

11.86

Pressure to which they are adjusted

200

Are they fitted with easing gear

Yes

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

No.

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-0"

Is oil fuel carried in the double bottom under boilers

None

Smallest distance between shell of boiler and tank top plating

open floors

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

14'-3 1/2"

Length

10'-6"

Thickness

1 1/4"

Are the shell plates welded or flanged

Flanged

Long. seams

T.R. D. Butt Seam

Diameter of rivet holes in

circ. seams

1 5/16"

long. seams

1 5/16"

Description of riveting: circ. seams

3/8"

end

Double

Percentage of strength of circ. end seams

plate

66.1

rivets

44.4

Percentage of strength of circ. intermediate seam

plate

85.6

rivets

88.1

combined

88.4

Percentage of strength of longitudinal joint

plate

31/32"

rivets

88.1

combined

88.4

Thickness of butt straps

outer

31/32"

inner

1 3/32"

Material

Steel

Length of plain part

top

bottom

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

Material

Steel

End plates in steam space: Material

Steel

How are stays secured

Double nuts

Tube plates: Material

front

Steel

back

Lean pitch of stay tubes in nests

10.45°

Girders to combustion chamber tops: Material

Steel

Centre

8 1/4" x 1 1/8"

Length as per Rule

34 13/32"

Working pressure by Rules

205

Tensile strength

26/30

Pitch of stays to ditto: Sides

9 1/8" x 10 3/4"

Back

10 3/4" x 9"

Top

10 3/4" x 9"

Working pressure by Rules

204

Thickness

29/32"

Lower back plate: Material

Steel

Pitch of stays at wide water space

1'-2 1/2"

Working Pressure

216

Main stays: Material

Steel

Tensile strength

28/32

Area supported by each stay

20.5 x 18.5"

Screw stays: Material

Steel

Tensile strength

26/30

Area supported by each stay

10.45 x 9.845"

No. of threads per inch

6

No. of threads per inch

9

At body of stay, or over threads

3 1/8"

Working pressure by Rules

225

At turned off part, or over threads

1 1/8"

Working pressure by Rules

225

At body of stay, or over threads

1 1/8"

Working pressure by Rules

225

At body of stay, or over threads

1 1/8"

Working pressure by Rules

225

At body of stay, or over threads

1 1/8"

Working pressure by Rules

225

At body of stay, or over threads

1 1/8"

Working pressure by Rules

225

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Working pressure by Rules **200.5** Are the stays drilled at the outer ends **no.** Margin stays: Diameter **2** At turned off part.
 No. of threads per inch **9.** Area supported by each stay **12.1875 x 10.125** Working pressure by Rules **200.4** Over threads
 Tubes: Material **Steel** External diameter **3 1/4** Thickness **3/8 5/16 1/4** No. of threads per inch **9.**
 Pitch of tubes **11.75 x 9.25 11.25 x 9.25 9.25 x 9** Working pressure by Rules **240, 204, 245.** Manhole compensation: Size of opening in
 shell plate **16" x 12"** Section of compensating ring **2-11 1/2 x 2-4 1/2 x 1 1/4** No. of rivets and diameter of rivet holes **32 1 1/16**
 Outer row rivet pitch at ends **10"** Depth of flange if manhole flanged **✓** 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 **✓** Plate
 Internal diameter **✓** Working pressure by Rules **✓** Thickness of crown **✓** Rivets
 stays **✓** Inner radius of crown **✓** Working pressure by Rules **✓** No. and diameter of
 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 **N. Eastern Smoke tube** Manufacturers of **Tubes L.D. Frodingham Steel Co.**
 Number of elements **50** Material of tubes **S.D. Steel** Internal diameter and thickness of tubes **15 mm - 2 1/2 mm**
 Material of headers **Forged Steel** Tensile strength **26/30** Thickness **1 1/8"** 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** **Yes.**
 Area of each safety valve **3.14 sq"** Are the safety valves fitted with easing gear **Yes.** Working pressure as per
 Rules **200 lbs/sq"** Pressure to which the safety valves are adjusted **600 lbs/sq"** Hydraulic test pressure:
 tubes **1500 lbs/sq"** castings **600 lbs/sq"** and after assembly in place **500 lbs/sq"** Are drain cocks or valves fitted
 to free the superheater from water where necessary **Yes.**
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **Yes.**

The foregoing is a correct description,

Dates of Survey **During progress of work in shops - - -** **Please see Machinery Report.** Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
 while building **During erection on board vessel - - -** Total No. of visits

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

This boiler has been Constructed under Special Survey in accordance with the approved plan & the Rules of the Society. The materials & workmanship are good.

On Completion the boiler has been satisfactorily tested by hydraulic pressure in accordance with the Rules & found tight & sound, Securely fixed on board the vessel. Examined under steam, safety valves adjusted to working pressure & accumulation test. Carried out Satisfactorily.

For recommendation please see Machinery Report.

Survey Fee ... **Charged on Machinery Report.** When applied for, 192
 Travelling Expenses (if any) **£** When received, 192

J. H. L. Rasm.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUE 18 JUL 1933

Assigned

See F.B. Rpt.



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Date of Survey

No. in Reg. Book.

Master

Boilers made at

Owners

VERTICAL

Made at

tested by hydraulic

No. of safety valves

enter the donkey

Range of tensile

drilled

rules 130

furnace—Top

pressure of furnace

crown plates

plates 1/2"

Diameter of tubes

External diameter

Working pressure

ring 6" x 4"

Dates of Survey while building
 During work on board
 Total

GENERAL

The
 The
 North

The

14/4

Survey Fee

Travelling

Committee's

Assigned