

REPORT ON BOILERS.

No. 95095

JUN -1 1937

Received at London Office

Date of writing Report

19

When handed in at Local Office

31/5/37

Port of

NEWCASTLE-ON-TYNE

No. in
g. Book.

Survey held at

South Shields

Date, First Survey

11 May 1936

Last Survey

17 May

1937

1515 on the

S.S. BALTISTAN

(Number of Visits

Tons

Gross 6803.46

Net 4194.01

Master H. V. Peck

Built at S. Shields

By whom built

J. Readhead & Sons Ltd

When built 1937

Engines made at

South Shields

By whom made

J. Readhead & Sons Ltd

Engine No. 508

When made 1937

Boilers made at

South Shields

By whom made

J. Readhead & Sons Ltd

Boiler No. 508

When made 1937

Principal Horse Power

Owners

Strick Line (1923) Ltd

Port belonging to

London

ULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record

S

Total Heating Surface of Boilers

9496 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Both

Number and Description of Boilers

3 Single ended multitubular

Working Pressure

220 lb/sq in

Tested by hydraulic pressure to

390

Date of test

5-11-36

No. of Certificate

692

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

63.3 sq ft

No. and Description of safety valves to each boiler

2 Double spring loaded (Hyants H.L.)

Area of each set of valves per boiler

per Rule 11.20

Pressure to which they are adjusted

220 lb/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

Smallest distance between boilers or uptakes and bunkers or woodwork

3'-0"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

2'-4"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-0"

Length

12'-0"

Shell plates: Material

S.M. Steel

Tensile strength

30-34 Tons/sq in

Thickness

1 1/2"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R.L.J.

Long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

1 1/2"

long. seams

1 1/2"

Pitch of rivets

4 1/4"

10"

Percentage of strength of circ. end seams

plate

64.8

rivets

42.5

Percentage of strength of circ. intermediate seam

plate

85.0

rivets

Percentage of strength of longitudinal joint

plate

85.0

rivets

84.67

Working pressure of shell by Rules

221.4 lb/sq in

Thickness of butt straps

outer

1 3/32"

inner

1 9/32"

No. and Description of Furnaces in each Boiler

4 Deighton Type

Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

Smallest outside diameter

2'-11 15/16"

Length of plain part

top

bottom

Thickness of plates

crowd

19"

bottom

32"

Description of longitudinal joint

Yes

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

Working pressure of furnace by Rules

240 lb/sq in

Stays in steam space: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

Thickness

1 1/32"

Pitch of stays

20 x 21"

Are stays secured

Double nut, washers outside (12 1/4 dia x 1 thick)

Working pressure by Rules

228 lb/sq in

Front plates: Material

front

S.M. Steel

Tensile strength

26-30 Tons/sq in

Thickness

15/16"

13/16"

Pitch of stay tubes in nests

9 5/8"

Pitch across wide water spaces

14"

Working pressure

front 229 lb/sq in

back 237 lb/sq in

Boilers to combustion chamber tops: Material

S.M. Steel

Tensile strength

29-33 Tons/sq in

Depth and thickness of girder

entre

8 3/4 x 1 3/4"

Length as per Rule

2'-9"

Distance apart

9 1/2"

No. and pitch of stays

each

20 9 1/4"

Working pressure by Rules

222 lb/sq in

Combustion chamber plates: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

Thickness: Sides

3/4"

Back

25/32"

Top

3/4"

Bottom

7/8"

Pitch of stays to ditto: Sides

8 3/4 x 9 1/8"

Back

9 x 10 5/16"

Top

9 1/2 x 9 1/4"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

225 lb/sq in

Front plate at bottom: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

Thickness

15/16"

Lower back plate: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

Pitch of stays at wide water space

14 x 9"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

226 lb/sq in

Main stays: Material

S.M. Steel

Tensile strength

28-32 Tons/sq in

At body of stay, or

Over threads

3 5/8"

No. of threads per inch

6

Area supported by each stay

456 sq in

Working pressure by Rules

223 lb/sq in

Screw stays: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

At turned off part, or

Over threads

1 7/8"

No. of threads per inch

9

Area supported by each stay

92.8 sq in

Shipping.

meter

At body of stay, or

Over threads

3 5/8"

No. of threads per inch

6

Area supported by each stay

456 sq in

Working pressure by Rules

223 lb/sq in

Screw stays: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

At turned off part, or

Over threads

1 7/8"

No. of threads per inch

9

Area supported by each stay

92.8 sq in

meter

At body of stay, or

Over threads

3 5/8"

No. of threads per inch

6

Area supported by each stay

456 sq in

Working pressure by Rules

223 lb/sq in

Screw stays: Material

S.M. Steel

Tensile strength

26-30 Tons/sq in

At turned off part, or

Working pressure by Rules $231 \frac{1}{2}$ " Are the stays drilled at the outer ends ☒ Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 2 \text{ " dia} \\ \text{Over threads, } \end{array} \right.$
No. of threads per inch 9 Area supported by each stay 109.6 " Working pressure by Rules $225 \frac{1}{2}$ "
Tubes: Material Iron External diameter $\left\{ \begin{array}{l} \text{Plain } 3 \text{ " dia} \\ \text{Stay } 3 \text{ " dia} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 8.1.5.9 \\ 3 \text{ " } 5 \text{ " } 16 \text{ "} \end{array} \right.$ No. of threads per inch 9
Pitch of tubes $11 \frac{1}{2} \times 8 \frac{1}{4}$ Working pressure by Rules $247 \frac{1}{2}$ " Manhole compensation: Size of opening in
shell plate 16×12 Section of compensating ring 8×12 No. of rivets and diameter of rivet holes $28 \text{ } 1 \frac{1}{2}$ " dia
Outer row rivet pitch at ends 10 " Depth of flange if manhole flanged ☒ Steam Dome: Material ☒
Tensile strength ☒ Thickness of shell ☒ Description of longitudinal joint ☒
Diameter of rivet holes ☒ Pitch of rivets ☒ Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate } \\ \text{Rivets } \end{array} \right.$ ☒
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 The Superheater B/S Manufacturers of Tubes ☒ Steel forgings ☒ Steel castings ☒
Number of elements 68 Material of tubes S.S. Steel Internal diameter and thickness of tubes $16 \frac{1}{4} \text{ " } - 22 \frac{1}{4} \text{ "}$
Material of headers Forged steel 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 3.54 " Are the safety valves fitted with easing gear ☒ Working pressure as per
Rules $220 \frac{1}{2}$ " Pressure to which the safety valves are adjusted $225 \frac{1}{2}$ " Hydraulic test pressure:
tubes $1000 \frac{1}{2}$ " forgings and castings $660 \frac{1}{2}$ " and after assembly in place $450 \frac{1}{2}$ " 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 ☒

The foregoing is a correct description,
FOR JOHN READHEAD & SONS, LTD. Manufacturer.

Dates of Survey ☒ During progress of work in shops - - ☒ See Indemnity Report
while building ☒ During erection on board vessel - - -
Are the approved plans of boiler and superheater forwarded herewith ☒ (If not state date of approval.)
Total No. of visits ☒ J. H. Matthews
CHAIRMAN & MANAGING DIRECTOR.

Is this Boiler a duplicate of a previous case ☒ Yes ☒ If so, state Vessel's name and Report No. ARMANISTAN. N^o 94636

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

The boilers have been built under special survey in accordance with rule requirements & approved plans. Materials & workmanship are good. Hydraulic test satisfactory. They have been efficiently installed & fixed in vessel, examined under steam & the safety valves adjusted under steam to the approved pressure.

Survey Fee ... £ ☒ See Indemnity Report
Travelling Expenses (if any) £ : : When applied for, 19
When received, 19

J. H. Matthews
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI 4 JUN 1937

Assigned

See Nov. J.E. 95095



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Foundation