

REPORT ON BOILERS.

No. 102876

Received at London Office

29 MAY 1945

Date of writing Report

19

When handed in at Local Office

26/5/45 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

South Shields

Date, First Survey

(1944) May 28th

Last Survey

April 30th 1945

(Number of Visits 111)

Gross 7309.41

Tons Net 5138.77

964 on the

S. S. SHAHRISTAN

Built at

S. Shields

By whom built

J. Readhead & Sons Ltd

Yard No. 544

When built 1945

Engines made at

South Shields

By whom made

J. Readhead & Sons Ltd

Engine No. 544

When made 1945

Boilers made at

South Shields

By whom made

J. Readhead & Sons Ltd

Boiler No. 544

When made 1945

Nominal Horse Power

Owners

Strick Line (1923) Ltd

Port belonging to

London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland Ltd

(Letter for Record)

S

Total Heating Surface of Boilers

7248 sq ft

Is forced draught fitted

Yes

Coal or Oil fired

Both

No. and Description of Boilers

3 Single Ended Multitubular

Working Pressure 220 lb sq in

Tested by hydraulic pressure to

380 lb sq in

Date of test

S-14-11-44
P-28-11-44
C-14-12-44

No. of Certificate

S-1134
P-1135
C-1136

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

54.67 sq ft

No. and Description of safety valves to each boiler

2 Double Spring loaded improved H.L.

Area of each set of valves per boiler

per Rule 6.425 sq in

as fitted 7.94 sq in

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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-6"

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

15'-0 1/16"

Length

11'-6"

Shell plates: Material

S.W. Steel

Tensile strength

29-30 Tons sq in

Thickness

1 1/32"

Are the shell plates welded or flanged

Yes

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

4.87"

10 3/8"

Percentage of strength of circ. and seams

plate 63.1

rivets 46.8

Percentage of strength of circ. intermediate seam

plate 85.5

rivets 86.0

Percentage of strength of longitudinal joint

plate 85.5

rivets 86.0

Thickness of butt straps

outer 1 1/8"

inner 1 1/4"

No. and Description of Furnaces in each Boiler

3 Drighthon Type

Material

S.W. Steel

Tensile strength

26-30 Tons sq in

Smallest outside diameter

45 1/8"

Length of plain part

top 1 1/2"

bottom 1 1/2"

Thickness of plates

crown 1 1/16"

bottom 1 1/16"

Description of longitudinal joint

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

End plates in steam space: Material

S.W. Steel

Tensile strength

26-30 Tons sq in

Thickness

1 1/32"

Pitch of stays

20" x 21"

How are stays secured

Double nuts

Tube plates: Material

front S.W. Steel

back S.W. Steel

Tensile strength

26-30 Tons sq in

Thickness

15 1/16"

25 1/32"

Lean pitch of stay tubes in nests

9 3/4"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

S.W. Steel

Tensile strength

28-32 Tons sq in

Depth and thickness of girder

centre

10 1/2" x 1 3/8"

Length as per Rule

2'-9 1/2"

Distance apart

9 1/4"

No. and pitch of stays

each

320

Combustion chamber plates: Material

S.W. Steel

Tensile strength

26-30 Tons sq in

Thickness: Sides

1 1/16"

Back

1 1/16"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

9 1/4" x 8"

Back

9 1/4" x 8"

Top

9 1/4" x 8"

Are stays fitted with nuts or riveted over

Nuts

Front plate at bottom: Material

S.W. Steel

Tensile strength

26-30 Tons sq in

Thickness

15 1/16"

Lower back plate: Material

S.W. Steel

Tensile strength

26-30 Tons sq in

Thickness

27 1/32"

Pitch of stays at wide water space

14" x 8"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

S.W. Steel

Tensile strength

28-32 Tons sq in

Diameter

At body of stay, or Over threads

3 1/2"

No. of threads per inch

6

New stays: Material

S.W. Steel

Tensile strength

26-30 Tons sq in

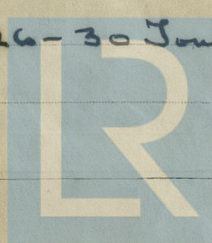
Diameter

At turned off part, or Over threads

1 3/4"

No. of threads per inch

9



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Are the stays drilled at the outer ends

No

Margin stays: Diameter { At turned off part, or Over threads } 1 7/8"

No. of threads per inch

9

Tubes: Material

Steel

External diameter

3"

Stay

3"

Thickness

5/16" - 3/8"

No. of threads per inch

9

Pitch of tubes

4 1/4 x 4 1/2

Manhole compensation: Size of opening in

shell plate

16 x 12

Section of compensating ring

No. of rivets and diameter of rivet holes

Outer row rivet pitch at ends

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

Plate

Rivets

Internal diameter

Thickness of crown

No. and diameter of

stays

Inner radius of crown

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 Co. Ltd. Manufacturers of

Tubes

See approved plans

Steel forgings

certificates for tests

Steel castings

Number of elements

53

Material of tubes

S. P. Steel

Internal diameter and thickness of tubes

1 7/8" - 2.5%.

Material of headers

Forged Steel

Tensile strength

Thickness

Can the superheater be shut off and

the boiler be worked separately

Yes

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

1.76 sq

Are the safety valves fitted with easing gear

Yes

Pressure to which the safety valves are adjusted

225 lbs

Hydraulic test pressure

tubes

1000 lbs

forgings and castings

660 lbs

and after assembly in place

450 lbs

Are drain cocks of

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,

H. M. Coatsworth

Manufacturer

Director

Dates of Survey { During progress of work in shops - - } while building { During erection on board vessel - - }

See Machinery report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) 11-7-44

Total No. of visits

Is this Boiler a duplicate of a previous case

Yes

If so, state Vessel's name and Report No. EMPIRE CURZON. 101930

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 and steam & the safety valves adjusted to the approved pressure.

Survey Fee £

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. 22 JUN 1945

Assigned

See F.E. Machy. sph.



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