

REPORT ON BOILERS.

No. 119768.

Received at London Office

Date of writing Report 17-7

1943 When handed in at Local Office

Port of Liverpool

No. in Survey held at

Sydney + Preston

Date, First Survey

3/11/41

Last Survey

5/7/1943

of Book.

(Number of Visits 54)

Tons

on the

Steel Screw. "FRESHPOOL."

Gross 248.14

Net 98.69

Built at Sydney

By whom built

The Sydney S.P. & C. Co. Ltd.

Yard No. 842

When built 1943

Engines made at Sydney

By whom made

- do -

Engine No. 551

When made - do -

Boilers made at Sydney

By whom made

- do -

Boiler No. 550

When made - do -

Nominal Horse Power 90.

Owners

The Admiralty.

Port belonging to

London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

SHELL-Steel Co of Scotland, ENDS:- Colvilles St, INTER-Connell Iron Co (Letter for Record S.B. S)

Total Heating Surface of Boilers

1600 sq ft

Is forced draught fitted

yes.

Coal or Oil fired

Coal.

No. and Description of Boilers

One Single Endless multitubular cylindrical (Shell) Type

Working Pressure 180 lb/sq in

Tested by hydraulic pressure to

320 lb/sq in

Date of test

25-3-43.

No. of Certificate

2596.

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

46.5 sq ft

No. and Description of safety valves to each boiler

Two 2 1/2" Spring loaded.

Area of each set of valves per boiler

(per Rule 10.25 sq in)

(as fitted 11.87 sq in)

Pressure to which they are adjusted

180 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 on uptakes and bunkers or woodwork

8 1/2"

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

✓

Is the bottom of the boiler insulated

✓

Largest internal dia. of boilers

12' 9 1/2"

Length 10' 6"

Shell plates: Material

Steel

Tensile strength 29.33 Tons/sq in

Thickness

1 1/2"

Are the shell plates welded or flanged

Lo.

Description of riveting: circ. seams

end

Double.

long. seams

T.R. D.B.S.

Diameter of rivet holes in

(circ. seams 1 3/32")

(long. seams 1 3/32")

Pitch of rivets

3 3/8"

7 3/4"

Percentage of strength of circ. end seams

(plate 64%)

(rivets 42.8%)

Percentage of strength of circ. intermediate seam

(plate 85.8%)

(rivets 84.3%)

Percentage of strength of longitudinal joint

(plate 85.8%)

(rivets 84.3%)

(combined 89.1%)

Thickness of butt straps

(outer 25/32")

(inner 29/32")

No. and Description of Furnaces in each Boiler

3 Single type, Stationary, Back-Ends

Material

Steel.

Tensile strength

26-30 Tons.

Smallest outside diameter

33 3/8"

Length of plain part

(top 4 1/2")

(bottom 4 1/2")

Thickness of plates

(crown 7/16")

(bottom 7/16")

Description of longitudinal joint

Welded.

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

End plates in steam space: Material

Steel.

Tensile strength

26-30 Tons/sq in

Thickness

1 3/32"

Pitch of stays 1 1/4" x 1 1/4"

How are stays secured

Double luts.

Tube plates: Material

(front Steel.)

(back ")

Tensile strength

26-30 Tons

Thickness

7/8"

25/32"

Mean pitch of stay tubes in nests

9 x 11 3/32"

Pitch across wide water spaces

14 1/2"

Girders to combustion chamber tops: Material

Steel.

Tensile strength

28-32 Tons/sq in

Depth and thickness of girder

at centre 8 3/8" x 5 1/2" (Double Flat) length as per Rule

3 1/2"

Distance apart

11"

No. and pitch of stays

in each Two @ 9 7/8"

Combustion chamber plates: Material

Steel

Tensile strength

26-30 Tons/sq in

Thickness: Sides

3/4"

Back

3/4"

Top

3/4"

Bottom

3/4"

Pitch of stays to ditto: Sides

10 3/4" x 9 7/8"

Back

10 x 9 7/8"

Top

11 x 9 7/8"

Are stays fitted with nuts or riveted over

luts.

Front plate at bottom: Material

Steel.

Tensile strength

26-30 Tons/sq in

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 Tons/sq in

Thickness

7/8"

Pitch of stays at wide water space

14 3/4" x 10"

Are stays fitted with nuts or riveted over

luts.

Main stays: Material

Steel.

Tensile strength

28-32 Tons/sq in

Diameter

(At body of stay, 2 5/8")

(Over threads, 3")

No. of threads per inch

6.

Screw stays: Material

Steel.

Tensile strength

26-30 Tons/sq in

Diameter

(At turned off part, 1 1/4")

(Over threads, 1 1/8")

No. of threads per inch

9.

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Are the stays drilled at the outer ends

Lo.

No. of threads per inch

9

Margin stays: Diameter

At turned off part, 1.86.
or
Over threads 2.

Tubes: Material

Seamless Steel

External diameter

Plain 3 1/4.
Stay 3 1/4.

Thickness 8 WG

No. of threads per inch 9

Pitch of tubes 2 1/2 x 4 9/16

shell plate 20 x 16

Section of compensating ring 2 1/2 x 2 1/2 x 1 1/2

Manhole compensation: Size of opening

Outer row rivet pitch at ends 9

Depth of flange if manhole flanged 3 1/2

Steam Dome: Material

Tensile strength

Thickness of shell

Description of longitudinal joint

Diameter of rivet holes

Pitch of rivets

Percentage of strength of joint

Internal diameter

Thickness of crown

Inner radius of crown

How connected to shell

Size of doubling plate under dome

of rivets in outer row in dome connection to shell

Diameter of rivet holes and pitch

Type of Superheater

Manufacturers of

Tubes

Steel forgings

Steel castings

Number of elements

Material of tubes

Tensile strength

Thickness

Material of headers

the boiler be worked separately

Is a safety valve fitted to every part of the superheater which can be shut off and

Area of each safety valve

Are the safety valves fitted with easing gear

Pressure to which the safety valves are adjusted

tubes

forgings and castings

and after assembly in place

Hydraulic test pressure

valves fitted to free the superheater from water where necessary

Are drain cocks

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

THE LYTHAM SHIPBUILDING and

ENGINEERING COMPANY LIMITED

Manufacturers

Dates of Survey

During progress of work in shops - -

while building

During erection on board vessel - -

See Mch report.

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

Total No. of visits

Is this Boiler a duplicate of a previous case

yes

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

FRESHMERE (See 14th 1193)

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 and the Society's Rules. The materials and workmanship are sound and good. The boiler has been satisfactorily fitted on board, examined under steam and the safety valves adjusted under steam to the approved working pressure.

It is eligible in my opinion to be classed in the Register Book with notation 1 SP. F.D. - 3 CF - 180 lbs/sq. in.

Survey Fee

Travelling Expenses (if any) £

When applied for,

19

When received,

19

Committee's Minute

Assigned

Transmit to Loner.

H. J. Hindley

Engineer Surveyor to Lloyd's Register of Shipping.

See minute on 28. Rpt

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