

REPORT ON BOILERS.

No. 61944

Received at London Office

JAN 24 1940

Date of writing Report

19

When handed in at Local Office

20.1.1940

Port of

Glasgow

No. in Survey held at
Book.

Date, First Survey

1939 Sept. 28th

Last Survey

16th Jan. 1940

(Number of Visits

8

Gross

80

Tons

Net

13 on the BOILER No 3581. s.t. Peter Joliffe

Built at

Bristol

By whom built

Kear Hill & Sons Ltd

Yard No.

277

When built

1940

Engines made at

Newbury

By whom made

Henty & Son Ltd.

Engine No.

2449

When made

1940

Boilers made at

CARFIN

By whom made

ALEX. ANDERSON & SONS LTD

Boiler No

3581

When made

Nominal Horse Power

51

Owners

Poole Harbour Commissioners

Port belonging to

Poole.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

COLVILLES LTD.

(Letter for Record

S

Total Heating Surface of Boilers

1035.85 sq. ft.

Is forced draught fitted

No.

Coal or Oil fired

coal

Type and Description of Boilers

ONE-CYLINDRICAL MULTITUBULAR. (SINGLE ENDED.)

Working Pressure

180 lbs/sq. in.

Tested by hydraulic pressure to

360 lbs

Date of test

16-1-40

No. of Certificate

20511

Can each boiler be worked separately

Area of Firegrate in each Boiler

32.5 sq. ft.

No. and Description of safety valves to each boiler

Two, spring loaded High lift.

No. of each set of valves per boiler

per Rule

as fitted 6.28 sq. in.

Pressure to which they are adjusted

185 lbs

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

18"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

yes.

Largest internal dia. of boilers

10'-4 1/4"

Length

9-10 5/16"

Shell plates: Material

STEEL

Tensile strength

29-32 Tons/sq. in.

Thickness

7/8"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

inter.

D.R.L.A.P.

Riv. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams

15/16"

long. seams

15/16"

Pitch of rivets

2 7/8"

Percentage of strength of circ. end seams

plate 67.5

rivets 43.6

Percentage of strength of circ. intermediate seam

plate

✓

rivets

✓

Percentage of strength of longitudinal joint

plate 85.6

rivets 89.6

combined 89.4

Working pressure of shell by Rules

188 lbs/sq. in.

Thickness of butt straps

outer 3/4"

inner 7/8"

No. and Description of Furnaces in each Boiler

TWO-MORISON SECTION

Material

STEEL

Tensile strength

26-30 Tons/sq. in.

Smallest outside diameter

2'-11 1/4"

Length of plain part

top

bottom

Thickness of plates

crown

1/2"

Description of longitudinal joint

FORGE WELDED.

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

Working pressure of furnace by Rules

204 lbs/sq. in.

End plates in steam space: Material

Steel.

Tensile strength

26-30 Tons/sq. in.

Thickness

27/32"

Pitch of stays

14" x 14"

How are stays secured

DOUBLE NUTS & LOOSE WASHERS.

Working pressure by Rules

190 lbs/sq. in.

End plates: Material

front

Steel.

Tensile strength

26-30 Tons/sq. in.

Thickness

27/32"

back

Steel.

Tensile strength

26-30 "

Thickness

25/32"

Span pitch of stay tubes in nests

10-6.25"

Pitch across wide water spaces

13 1/4"

Working pressure

front

197 lbs/sq. in.

back

194 lbs/sq. in.

Ends to combustion chamber tops: Material

Steel

Tensile strength

28-32 Tons/sq. in.

Depth and thickness of girder

Centre

6 1/2" x 5/8"

Length as per Rule

25 5/8"

Distance apart

7 1/2" & 7 7/8"

No. and pitch of stays

Each

2 @ 7 7/8"

Working pressure by Rules

187 lbs/sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 Tons/sq. in.

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

8" x 7 7/8"

Back

8" x 8"

Top

7 7/8" & 7 1/2" x 7 7/8"

Are stays fitted with nuts or riveted over

Fitted with Nuts.

Working pressure by Rules

190 lbs/sq. in.

Front plate at bottom: Material

Steel

Tensile strength

26-30 Tons/sq. in.

Thickness

27/32"

Lower back plate: Material

Steel

Tensile strength

26-30 Tons/sq. in.

Thickness

27/32"

Pitch of stays at wide water space

13 1/4" x 8"

Are stays fitted with nuts or riveted over

Fitted with Nuts.

Working Pressure

240 lbs/sq. in.

Main stays: Material

Steel.

Tensile strength

28-32 Tons/sq. in.

Grip

At body of stay,

2 1/4"

No. of threads per inch

6.

Area supported by each stay

196 sq. ins.

Working pressure by Rules

180 lbs/sq. in.

Screw stays: Material

Steel.

Tensile strength

26-30 Tons/sq. in.

Grip

At turned off part,

1 1/2"

No. of threads per inch

9

Area supported by each stay

64 sq. ins.

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Foundation

003614-003619-0155

Working pressure by Rules 195 lbs/sq in Are the stays drilled at the outer ends No. Margin stays: Diameter 1 1/4" (At turned off part, or Over threads 1 1/4")
No. of threads per inch 9 Area supported by each stay 85 sq ins. Working pressure by Rules 215 lbs/sq in
Tubes: Material S.D. steel. External diameter 3 1/4" Thickness 8 w.g. No. of threads per inch 9
Pitch of tubes 4 1/4" x 4 1/4" Working pressure by Rules 230 lbs/sq in Manhole compensation: Size of opening 19 1/2" x 15 1/2"
shell plate 19 1/2" x 15 1/2" Section of compensating ring 15" x 7/8" No. of rivets and diameter of rivet holes 48 1 5/16"
Outer row rivet pitch at ends 6 1/2" Depth of flange if manhole flanged 3" 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
Internal diameter Working pressure by Rules Thickness of crown No. and diameter
stays Inner radius of crown Working pressure by Rules
How connected to shell Size of doubling plate under dome Diameter of rivet holes and
of rivets in outer row in dome connection to shell

Type of Superheater Manufacturers of Tubes
Steel forgings
Steel castings
Number of elements Material of tubes Internal diameter and thickness of tubes
Material of headers Tensile strength Thickness Can the superheater be shut off
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
Rules Pressure to which the safety valves are adjusted Hydraulic test press
tubes forgings and castings and after assembly in place Are drain cock
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,
Per PROLEX ANDERSON & SONS, LTD. Manufactured by J. W. C. Fleming

Dates of Survey { During progress of work in shops - - } 1939 Sept. 28 Oct. 11, 19 Nov. 2, 4 Are the approved plans of boiler and superheater forwarded herewith Yes
while building { During erection on board vessel - - } 30, 1940 Jan. 9, 16 (If not state date of approval.)
Total No. of visits 8

Is this Boiler a duplicate of a previous case If so, state Vessel's name and Report No.

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

The materials and workmanship are good
The Boiler has been constructed under Special Survey
To the Order of Poole Harbour Commissioners
This Boiler has now being placed on board the vessel, properly fitted
and secured in place. Accumulation test carried out and the
20/1/40 safety valves adjusted under steam, for a working pressure 180 lbs per
sq inch. The Boiler finally examined under full working conditions
and found satisfactory

Survey Fee ... £ 6 : 18 : 0

Travelling Expenses (if any) £ :

When applied for, 23 JAN 1940

When received, 13. 3. 19

J. Brooke
John D. ...
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute GLASGOW 23 JAN 1940

Assigned TRANSMIT TO LONDON

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