

REPORT ON BOILERS.

No. 57724

Received at London Office

-2 DEC '36

Date of writing Report

19

When handed in at Local Office

28. 11. 1936

Port of

Glasgow.

No. in Survey held at
Reg. Book.

Carfin.

Date, First Survey

16. 6. 36

Last Survey

25th Nov. 1936.

on the

Boiler No. 3415

Ness Point

(Number of Visits 17)

Gross
Tons
Net

Master

Built at

By whom built

Yard No.

When built

Engines made at

By whom made

Engine No.

When made

Boilers made at

Carfin

By whom made

Alex. Anderson & Sons Ltd.

Boiler No. 3415

When made 1936

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles Ltd

(Letter for Record

S. V)

Total Heating Surface of Boilers

581 sq. ft.

Is forced draught fitted

No

Coal or Oil fired

Coal.

No. and Description of Boilers

One Single ended Cylinder return tube

Working Pressure

160 lbs.

Tested by hydraulic pressure to

290 lbs.

Date of test

25-11-36

No. of Certificate

19852

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

23.5 sq. ft.

No. and Description of safety valves to each boiler

Area of each set of valves per boiler

per Rule
as fitted7.96 sq. in.

Pressure to which they are adjusted

160 lbs./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

16"

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

No

Largest internal dia. of boilers

9'-0"

Length

9'-1 3/4"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1 1/16"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

inter.

long. seams

T. R. D. B. S.

Diameter of rivet holes in

circ. seams

15/16"

Pitch of rivets

long. seams

13/16"

5-56"

Percentage of strength of circ. end seams

plate

67.3

rivets

55.3

Percentage of strength of circ. intermediate seam

plate

85.5

rivets

Yes

Percentage of strength of longitudinal joint

plate

85.5

rivets

100.0

Working pressure of shell by Rules

167 lbs.

Thickness of butt straps

outer

9/16"

inner

1 1/16"

No. and Description of Furnaces in each Boiler

Two plain

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

2'-8"

Length of plain part

top

70.8"

bottom

70.8"

Thickness of plates

crown

5/8"

Description of longitudinal joint

Welded

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

Yes

Working pressure of furnace by Rules

173 lbs.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Pitch of stays

14" Centre
18" Wing

How are stays secured

Double nuts & loose washers

Working pressure by Rules

166 lbs.

Tube plates: Material

front

Steel

back

Tensile strength

26-30 tons

Thickness

7/8"

Pitch of stays

14" Centre
18" Wing

Mean pitch of stay tubes in nests

10.3"

Pitch across wide water spaces

13 1/2"

Working pressure

front

180 lbs.

back

160 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

6" 2 @ 2 1/32"

Length as per Rule

22.7"

Distance apart

9 3/4" Max.

No. and pitch of stays

in each

2 @ 6 15/16"

Working pressure by Rules

172 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

9/16"

Back

19/32"

Top

19/32"

Bottom

3/4"

Pitch of stays to ditto: Sides

8 3/4" x 7 15/16"

Back

8 1/2" x 8 3/4"

Top

9 3/4" x 6 15/16"

Are stays fitted with nuts or riveted over

Yes

Working pressure by Rules

160 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

7/8"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

Yes

Working Pressure

242 lbs.

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

2 1/2"

Over threads

No. of threads per inch

6

Area supported by each stay

256 sq. inches

Working pressure by Rules

173 lbs.

Screw stays: Material

Iron

Tensile strength

21.5 tons

Diameter

At turned off part,

1 1/2"

Over threads

No. of threads per inch

9

Area supported by each stay

77.5 sq. inches

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Foundation

Working pressure by Rules 162 lb. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 3/4"
No. of threads per inch 9 Area supported by each stay 97 sq. inches Working pressure by Rules 186 lb.
Tubes: Material Steel External diameter { Plain 3" Thickness { 5/16" & 3/8" No. of threads per inch 9
Pitch of tubes 4 1/4" x 4 5/8" Working pressure by Rules 250 lb. Manhole compensation: Size of opening in
shell plate 16" x 12" Section of compensating ring 7" x 3/4" No. of rivets and diameter of rivet holes 46 @ 1 3/16"
Outer row rivet pitch at ends 5 9/16" Depth of flange if manhole flange 3" M'Neil 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 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 ✓ Manufacturers of { Tubes
Material of tubes Steel castings Internal diameter and thickness of tubes
Number of elements Tensile strength Thickness Can the superheater be shut off and
Material of headers Is a safety valve fitted to every part of the superheater which can be shut off from the boiler
the boiler be worked separately Are the safety valves fitted with easing gear Working pressure as per
Area of each safety valve Pressure to which the safety valves are adjusted Hydraulic test pressure:
Rules tubes, castings and after assembly in place 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 Yes

The foregoing is a correct description.
Per Pro. ALEX. ANDERSON & SONS, LTD
S. W. B. Fleming Manufacturer.

Dates of Survey { During progress of 1936 June: 16, 22, 26 July: 14, 28 Are the approved plans of boiler and superheater forwarded herewith Yes.
work in shops - - - Aug: 12, 14, 20 Sep 3 Oct: 1, 9, 15, 28
while building { During erection on board vessel - - - Total No. of visits 17
Nov: 3, 13, 20, 25

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

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

This boiler has been built under survey in accordance with the Rules and approved plan. The materials and workmanship are good. The boiler is to the order of Messrs. Plenty & Son Ltd Newbury and intended for a Tug boat building for the Lowestoft Harbour Board.

28/11/36.

Survey Fee ... £ 4 : 4 : 0
Travelling Expenses (if any) £ : :

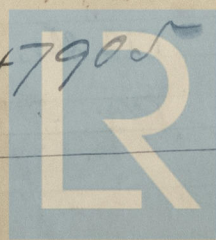
When applied for 30 NOV 1936
When received, 16-1-1937

G. E. Murdoch

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1 DEC 1936

Assigned TRANSMIT TO LONDON



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