

REPORT ON BOILERS.

No. 47666

7 MAR 1928

Received at London Office

Date of writing Report

192

When handed in at Local Office 25.2.1928

Port of

Glasgow

No. in Survey held at

Reg. Book.

Glasgow

S. S. "Oporto"

Date, First Survey

7.11.27

Last Survey

22.1.28

1928.

on the

Boiler intended for Mess. Ramage & Ferguson of No. 265.

(Number of Visits 12)

Tons { Gross
Net

Master

Built at Leith

By whom built

Ramage & Ferguson Ltd Yard No. 365 When built 1928

Engines made at

Leith

By whom made

Ramage & Ferguson Ltd

Engine No. 265

When made 1928

Boilers made at

Glasgow

By whom made

Baird & Co. Ltd

Boiler No. 265

When made 1928

Nominal Horse Power

269

Owners The Elder & Co. Ltd

Port belonging to Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Wm Beadmore

(Letter for Record S)

Total Heating Surface of Boilers

4026 sq ft

Is forced draught fitted

Coal or Oil fired

No. and Description of Boilers

Two S.S. Return Loke

25B

Working Pressure 220 lb.

Tested by hydraulic pressure to

380 lb

Date of test

22.2.28

No. of Certificate 17790

Can each boiler be worked separately

Area of Firegrate in each Boiler

53.6 sq ft

No. and Description of safety valves to each boiler

Area of each set of valves per boiler

{ per Rule
as fitted

Pressure to which they are adjusted

Are they fitted with easing gear

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

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

13' 6"

Length

12' 0"

Shell plates: Material

S

Tensile strength 28-32 tons

Thickness

1 1/2"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

{ end D.R. overlap
inter

long. seams

25B. 3 R. 5 mils in pitch

Diameter of rivet holes in

{ circ. seams
long. seams

1 3/8"

Pitch of rivets

1 1/2"

Percentage of strength of circ. end seams

{ plate 67.64
rivets 42.71

Percentage of strength of circ. intermediate seam

{ plate
rivets

Percentage of strength of longitudinal joint

{ plate 85.8
rivets 84.45
combined 89.15

Working pressure of shell by Rules 221.

Thickness of butt straps

{ outer 1 1/2"
inner 1 3/4"

No. and Description of Furnaces in each Boiler

3 Deighlous

Material

S

Tensile strength

26-30 tons

Smallest outside diameter

40 1/4"

Length of plain part

{ top
bottom

Thickness of plates

{ crown 3/8"
bottom 5/8"

Description of longitudinal joint

Weld.

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

✓

Working pressure of furnace by Rules 226.

End plates in steam space: Material

S

Tensile strength

26-30 tons

Thickness

1 1/8"

Pitch of stays 24"

How are stays secured

double nuts & washers

Working pressure by Rules 220.

Tube plates: Material

{ front
back } S

Tensile strength

{ 26-30 tons

Thickness

{ 1 1/8"
1 3/16"

Mean pitch of stay tubes in nests

8.5"

Pitch across wide water spaces

13.45"

Working pressure

{ front 225.
back 228.

Girders to combustion chamber tops: Material

S

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

10 3/8 x 1 5/8"

Length as per Rule

35"

Distance apart

9"

No. and pitch of stays

in each

3 @ 4 3/4"

Working pressure by Rules

235

Combustion chamber plates: Material

S

Tensile strength

26-30 tons

Thickness: Sides

1 1/16"

Back

2 1/32"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

9 1/4 x 1 3/4"

Back

8 3/4 x 1 5/8"

Top

9 x 1 3/4"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

223

Front plate at bottom: Material

S

Tensile strength

26-30 tons

Thickness

1 1/8"

Lower back plate: Material

S

Tensile strength

26-30 tons

Thickness

2 1/32"

Pitch of stays at wide water space

14 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

220

Main stays: Material

S

Tensile strength

28-32 tons

Diameter

{ At body of stay,
or
Over threads

2 1/8"

No. of threads per inch

6

Area supported by each stay

258 sq in

Working pressure by Rules

236

Screw stays: Material

S

Tensile strength

26-30 tons

Diameter

{ At turned off part,
or
Over threads

1 5/8"

No. of threads per inch

9

Area supported by each stay

66.5 sq in

W280-0160

Working pressure by Rules 228. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 2 1/8 or Over threads 2 1/8
No. of threads per inch 9 Area supported by each stay 84.75 Working pressure by Rules 252.
Tubes: Material Iron External diameter { Plain 2 1/2 Thickness { 8/16 No. of threads per inch 9
Pitch of tubes 3 3/8 x 3 3/4 Working pressure by Rules 300 Manhole compensation: Size of opening in
shell plate 19 1/2 x 15 1/2 Section of compensating ring 35 1/2 x 31 1/2 x 1 1/2 No. of rivets and diameter of rivet holes 34 @ 1 1/2
Outer row rivet pitch at ends 9 1/16 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 { Plate Rivets
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 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 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 Are the safety valves fitted with easing gear Working pressure as per
Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:
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 23 inclusive for boilers been complied with

FOR BAROLAY, CURLE & CO., LTD.

John Alexander
ENGINE WORKS MANAGER

The foregoing is a correct description,

Manufacturer.

Dates of Survey { During progress of 1927 Nov. 7-28 Dec 6-19-28 (1928) Are the approved plans of boiler and superheater forwarded herewith
work in shops - - - (If not state date of approval.)
while building { During erection on Jan 9-23-31 Feb 8-21-22 Total No. of visits 12
board vessel - - -

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

The Boilers have been built under special Survey and in accordance with the Rules. The materials and workmanship are good. On completion they have been tested by hydraulic pressure with satisfactory results.
The Boilers have been dispatched to Leth.

Survey Fee ... £ 25 : 18 : -

Travelling Expenses (if any) £ : : -

When applied for 6 - MAR 1928

When received, 192

See auth. rpt.
192
Proof Minutes
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 6 - MAR 1928

Assigned TRANSMIT TO LONDON

TUES. 24 JUL 1928

See Lth. auth. rpt.
No. 17424

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Foundation