

REPORT ON BOILERS.

No. 8754

Received at London Office

12 MAY 1931

Date of writing Report

7th May

1931

When handed in at Local Office

May 7th

1931

Port of

Dundee.

No. in Survey held at

Dundee.

Date, First Survey 20th August 1930 Last Survey 28th April 1931

No. in

Book.

Oil Tank Vessel

"Bralanta"

(Number of Visits)

Gross

Net

on the

Master

Built at

Dundee.

By whom built

Baldon, S. & E. Co. Ltd.

Card No.

336

When built

1931

Engines made at

Göteborg.

By whom made

Götawerken.

Engine No.

When made

1931

Boilers made at

Dundee.

By whom made

Baldon, S. & E. Co. Ltd.

Boiler No.

540

When made

1931

Nominal Horse Power

Owners

Port belonging to

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel (Stay Bars) Vereinigte Stahlwerke A.G. Vitorice Ziljany bzecho Slovakia: Wm. Beardmore & Co. Ltd.

(Letter for Record)

S.

Total Heating Surface of Boilers

2903 $\frac{1}{2}$

Is forced draught fitted

Yes

Coal or Oil fired

Oil and Exhaust gas.

No. and Description of Boilers

Two S. E. Marine.

Working Pressure

150

Tested by hydraulic pressure to

245.

Date of test

28-1-31.

No. of Certificate

1033

Can each boiler be worked separately

Yes.

Area of Firegrate in each Boiler

oil

No. and Description of safety valves to each boiler

One fair backburns Improved Highdift.

Area of each set of valves per boiler

per Rule 66.
as fitted 48.

Pressure to which they are adjusted

150

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

to main boilers.

Smallest distance between boilers or uptakes and bunkers or woodwork

clear.

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

of deck flat.

Is the bottom of the boiler insulated

Yes.

Largest internal dia. of boilers

11' 8"

Length

11' 3"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

5/16

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

D.R. Lap.

inter.

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1"
long. seams 1 3/16"

Pitch of rivets

3/4

Percentage of strength of circ. end seams

plate 69%
rivets 48%

Percentage of strength of circ. intermediate seam

plate -
rivets -

Percentage of strength of longitudinal joint

plate 85.5%
rivets 85.9%
combined 88.4%

Working pressure of shell by Rules

151.

Thickness of butt straps

outer 5/8
inner 3/4

No. and Description of Furnaces in each Boiler

Two Leighton

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-4 1/4"

Length of plain part

top -
bottom -

Thickness of plates

crown 1/2
bottom 1/2

Description of longitudinal joint

Weld.

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

none

Working pressure of furnace by Rules

155

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

13/16

Pitch of stays 16 1/2" x 14"

How are stays secured

Double nuts and washers

Working pressure by Rules

155

Tube plates: Material

front Steel
back Steel

Tensile strength

26/30

Thickness

3/4

Working pressure

front 206
back 263

Mean pitch of stay tubes in nests

9"

Pitch across wide water spaces

13' x 4'

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

4 1/2 x 5/8

Length as per Rule

2'-6"

Distance apart

8 1/2"

No. and pitch of stays

in each

Two at 9"

Working pressure by Rules

154

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

21/32

Back

21/32

Top

21/32

Bottom

21/32

Pitch of stays to ditto: Sides

9 x 4

Back

8 x 8

Top

9 x 8 1/2

Are stays fitted with nuts or riveted over

No Nuts others riveted

Working pressure by Rules

S.B. 154. 156. T. 152.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

13/16

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

13/16

Pitch of stays at wide water space

12 x 8

Are stays fitted with nuts or riveted over

Riveted

Working Pressure

141.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay, 2 1/4
Over threads -

No. of threads per inch

6

Area supported by each stay

16 1/2 x 14

Working pressure by Rules

185.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, or over threads S. 1 3/4. B. 1 3/4. T. 1 1/2.

No. of threads per inch

9

Area supported by each stay

S. 63" B. 64" T. 46.5"



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S. B. T.
 Working pressure by Rules 240, 254, 165. Are the stays drilled at the outer ends Yes. Margin stays: Diameter { At turned off part, ✓
 or Over threads 1 3/4
 No. of threads per inch 9. Area supported by each stay 80 in². Working pressure by Rules 226.
 Tubes: Material Iron. External diameter { Plain 2 1/2
 Stay 2 1/2 Thickness { 3/8 x 5/16 No. of threads per inch 9.
 Pitch of tubes 3 1/2 x 3 3/4. Working pressure by Rules P. 145, S. 165, & 240. Manhole compensation: Size of opening in
 shell plate 20" x 16". Section of compensating ring (9 1/2 x 9 1/2) x 13/16. No. of rivets and diameter of rivet holes Two at 1" dia
 Outer row rivet pitch at ends 6 1/4. Depth of flange if manhole flanged 3". 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
 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 Yes.
 For THE CALEDON SHIPBUILDING & ENGINEERING Co. Ltd.
 The foregoing is a correct description,
H. S. Thompson Manufacturer.

Dates of Survey { During progress of 1930
 work in shops - AUG 20 SEPT 2-25 Oct. 1, 24, Dec 3-12, 30.
 while building { During erection on APRIL 10, 28
 board vessel - - -
 Are the approved plans of boiler and superheater forwarded herewith yes
 (If not state date of approval.)
 Total No. of visits 12.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under Special Survey in accordance with the approved Plan & the Rules of this Society. The materials & workmanship are good. The boilers have been satisfactorily fitted on board the Motor Vessel Bialanta (Dun Rpt No 8754). The safety valves adjusted under steam & tried for accumulation. The boilers examined under working conditions found satisfactory. This is a sister vessel to the M.V. Isma (Dun Rpt No 8738).

Survey Fee ... £ 19 : 8 : 0 } When applied for, 8th May 1931
 Travelling Expenses (if any) £ ✓ : } When received, 14.50 31.6.31

W. H. Copeman
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 24 JUL 1931
 Assigned See F. B. Rpt.