

# REPORT ON BOILERS.

No. 67272

Received at London Office

1 JUL 1943

Date of writing Report

19

When handed in at Local Office

28. 6

1943

Port of

Glasgow

No. in Survey held at

Glasgow

Reg. Book.

Date, First Survey

20th Nov 1942

Last Survey

18th June 1943

(Number of Visits

17

Gross

Tons

Net

on the

S.S. "BRIGHTON."

Built at

Burntisland

By whom built

Burntisland S.B. Co. Ltd.

Yard No

271

When built

1943

Engines made at

Glasgow

By whom made

David Brown &amp; Co. Ltd.

Engine No

1128

When made

1943

Boilers made at

do-

By whom made

do-

Boiler No

1116

When made

1943

Nominal Horse Power

512

Owners

Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilles, Ltd.

(Letter for Record

S

Total Heating Surface of Boilers

7248  $\text{sq ft}$ 

Is forced draught fitted

Yes

Coal or Oil fired

Coal

No. and Description of Boilers

3 Single-ended

Working Pressure

220 lb

Tested by hydraulic pressure to

380 lb

Date of test

22-2-43

No. of Certificate

21361

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

55  $\text{sq ft}$ 

No. and Description of safety valves to each boiler

1-3" anti

Area of each set of valves per boiler

per Rule 12.950

as fitted 14.140

Pressure to which they are adjusted

220 lb

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

front of boiler to bulkhead = 9'0"

Is oil fuel carried in the double bottom under boilers

No.

Smallest distance between shell of boiler and tank top plating

2'0"

Is the bottom of the boiler insulated

Yes

Largest external dia. of boilers

15'3"

Length

11'6"

Shell plates: Material

S

Tensile strength

29/33 tons

Thickness

1 7/16"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

long. seams

DBS TR

Diameter of rivet holes in

circ. seams

B 1 1/2" F 1 3/8"

Pitch of rivets

B 4.13" F 3.435"

Percentage of strength of circ. end seams

plate

B 63.68 F 60

rivets

47.2

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.36

rivets

89

combined

88.5

Thickness of butt straps

outer 1 3/32"

inner 1 7/32"

No. and Description of Furnaces in each Boiler

3 Single-ended

Material

S

Tensile strength

26/30 tons

Smallest outside diameter

3'9 3/8"

Length of plain part

top

bottom

Thickness of plates

crown 11/16"

bottom

Description of longitudinal joint

welded

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

End plates in steam space: Material

S

Tensile strength

26/30 tons

Thickness

1 3/8"

Pitch of stays

19" x 22"

How are stays secured

D.N.

Tube plates: Material

front S

back S

Tensile strength

26/30 tons

Thickness

15/16"

25/32"

Mean pitch of stay tubes in nests

9.66"

Pitch across wide water spaces

14"

Girders to combustion chamber tops: Material

S

Tensile strength

28/32 tons

Depth and thickness of girder

at centre

2 @ 8 3/4" x 7/8"

Length as per Rule

33 1/2"

Distance apart

8"

No. and pitch of stays

in each

3 @ 8 1/4"

Combustion chamber plates: Material

S

Tensile strength

26/30 tons

Thickness: Sides

21/32"

Back

23/32"

Top

21/32"

Bottom

13/16"

Pitch of stays to ditto: Sides

8 1/4" x 8"

Back

10" x 8"

Top

8 1/4" x 8"

Are stays fitted with nuts or riveted over

Nuts

Front plate at bottom: Material

S

Tensile strength

26/30 tons

Thickness

15/16"

Lower back plate: Material

S

Tensile strength

26/30 tons

Thickness

13/16"

Pitch of stays at wide water space

13 7/16"

Are stays fitted with nuts or riveted over

Nuts

Main stays: Material

S

Tensile strength

28/32 tons

Diameter

At body of stay, 3" + 3 1/4"

or

Over threads

No. of threads per inch

6

Screw stays: Material

S

Tensile strength

26/30 tons

Diameter

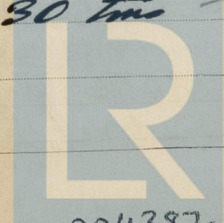
At turned off part, 1 5/8" + 1 3/4"

or

Over threads

No. of threads per inch

9



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Are the stays drilled at the outer ends No ✓ Margin stays: Diameter { At turned off part, 1 7/8" or Over threads

No. of threads per inch 9

Tubes: Material S External diameter { Plain 3" Stay Thickness { 1/4" 5/16" 3/8" No. of threads per inch 9

Pitch of tubes 4 1/8" x 4 3/16" Manhole compensation: Size of opening in End plate 16" x 12" Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓

Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 4" ✓ 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 Thickness of crown No. and diameter of stays Inner radius of crown

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 Smokestack type 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 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

Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and 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

The foregoing is a correct description,  
For David Rowan & Co. Ltd. Manufacturer.  
Arch. H. Grierson

Dates of Survey { During progress of work in shops - - 1942 Nov 26 Dec 1, 8, 15, 18, 29 1943 Jan 19, 27 Feb 11, 22, Mar 4, 9, 11, 12, 17, 26 Jun 18, while building { During erection on board vessel - - - } Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)

Total No. of visits 17

Is this Boiler a duplicate of a previous case Yes ✓ If so, state Vessel's name and Report No. "CARLTON" No. Rpt. 66000

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under special survey in accordance with the Rules and approved plans, and the materials and workmanship are good. They have been sent to Burntisland for installation in the vessel.

These boilers have been efficiently fitted on board and the safety valves adjusted to 228 lbs/sq. in.  
J. F. Campbell.

Survey Fee ... £ See mach. 7 Rpt. When applied for, 19

Travelling Expenses (if any) £ See When received, 19

M. Brown  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 29 JUN 1943  
TUES. 31 AUG 1943  
Assigned see minute on Lth. Rpt. Rph