

## REPORT ON BOILERS.

No. 53254

-8 FEB 1933

-1 MAR 1933

Received at London Office

Date of writing Report

19

When handed in at Local Office

6. 2. 1933

Port of Glasgow

No. in Reg. Book.

Survey held at

Glasgow

Date, First Survey

19 10 32

Last Survey

3. 2.

19 33

(Number of Visits 34)

Gross

Tons

Net

Master

Built at

Burntisland

By whom built

Burntisland SB Co

Yard No. 174

When built 1933

Engines made at

Glasgow

By whom made

David Rowan &amp; Co Ltd

Engine No. 955

When made 1933

Boilers made at

Glasgow

By whom made

David Rowan &amp; Co Ltd

Boiler No. 955

When made 1933

Nominal Horse Power

112

Owners

Port belonging to

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

Manufacturers of Steel

Lobillier &amp; Co

(Letter for Record (S) )

Total Heating Surface of Boilers

19580' ✓

Is forced draught fitted

no

Coal or Oil fired

coal

No. and Description of Boilers

one single ended ✓

Working Pressure 200 ✓

Tested by hydraulic pressure to

350

Date of test

20-12-32

No. of Certificate

19186

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

57 3/4' ✓

No. and Description of safety valves to each boiler

Two, direct spring ✓

Area of each set of valves per boiler

per Rule

11.35 ✓

Pressure to which they are adjusted

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

2'-0" ✓

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

14'-9" ✓

Length

10'-6" ✓

Shell plates: Material

steel

Tensile strength 29-33 tons ✓

Thickness

1 3/32" ✓

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR ✓

long. seams

WBS. TR ✓

Diameter of rivet holes in

circ. seams

F 1 1/4" B 1 3/8" ✓

Pitch of rivets

F 3.209 B 3.68 ✓

Percentage of strength of circ. end seams

plate

F 61

B 62.6

Percentage of strength of circ. intermediate seam

plate

F 52.3

B 50

Percentage of strength of longitudinal joint

plate

85.2

Thickness of butt straps

outer

3 1/32" ✓

inner

1 3/32" ✓

No. and Description of Furnaces in each Boiler

Three Deighton ✓

Material

steel

Tensile strength

26-30 tons ✓

Smallest outside diameter

3'-7 3/16" ✓

Length of plain part

top

✓

Thickness of plates

crown

1 1/32" ✓

Description of longitudinal joint

welded ✓

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

✓

Working pressure of furnace by Rules

200

End plates in steam space: Material

steel

Tensile strength

26-30 tons ✓

Thickness

1 1/2" ✓

Pitch of stays 19 1/4" x 19" ✓

How are stays secured

DN ✓

Working pressure by Rules

200

Tube plates: Material

front

steel

back

"

Tensile strength

26-30 tons ✓

Thickness

3/32" ✓

25" ✓

Mean pitch of stay tubes in nests

10 1/2" ✓

Pitch across wide water spaces

14 1/4" ✓

Working pressure

front

202

back

209

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons ✓

Depth and thickness of girder

at centre

2 @ 8 3/8" x 7 1/8" ✓

Length as per Rule

2'-7 1/2" ✓

Distance apart

9 1/2" ✓

No. and pitch of stays

in each

2 @ 10 1/8" ✓

Working pressure by Rules

201

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons ✓

Thickness: Sides

2 3/32" ✓

Back

1 1/16" ✓

Top

2 3/32" ✓

Bottom

2 3/32" ✓

Pitch of stays to ditto: Sides

10 7/8" x 8 3/4" ✓

Back

9 1/4" x 8 1/4" ✓

Top

9 1/8" x 7 1/2" ✓

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

203

Front plate at bottom: Material

steel

Tensile strength

26-30 tons ✓

Thickness

2 3/32" ✓

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

5 1/4" ✓

64

Pitch of stays at wide water space

13 1/2" ✓

Are stays fitted with nuts or riveted over

nuts ✓

Working Pressure

205

Main stays: Material

steel

Tensile strength 28-32 tons ✓

Diameter

At body of stay,

3" ✓

or

3 1/4" ✓

No. of threads per inch

6 ✓

Area supported by each stay

389" ✓

Working pressure by Rules

202

Screw stays: Material

steel

Tensile strength 26-30 tons

Diameter

At turned off part,

1 7/8" &amp; 1 3/4" ✓

or

1 3/4" ✓

No. of threads per inch

9 ✓

Area supported by each stay

763" &amp; 88-6" ✓



Working pressure by Rules **200 & 205** Are the stays drilled at the outer ends **no** Margin stays: Diameter <sup>At turned off part.</sup> **1 7/8"**  
 No. of threads per inch **9** Area supported by each stay **93.5"** Working pressure by Rules **227**  
 Tubes: Material **Iron** External diameter <sup>Plain</sup> **3 1/4"** <sup>Stay</sup> **3 1/4"** Thickness **8 W.G.** No. of threads per inch **9**  
 Pitch of tubes **4 1/2" x 4 3/8"** Working pressure by Rules **230** Manhole compensation: Size of opening in  
 shell plate **15 1/2" x 19 1/2"** Section of compensating ring **9 1/4" x 1 9/32"** No. of rivets and diameter of rivet holes **32 @ 1 3/8"**  
 Outer row rivet pitch at ends **9 5/16"** 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 <sup>Plate</sup>  
 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 **none** Manufacturers of <sup>Tubes</sup>  
 Number of elements Material of tubes <sup>Steel castings</sup>  
 Material of headers Tensile strength Internal diameter and thickness of tubes  
 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 22 inclusive for boilers been complied with **yes**

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

Dates of Survey <sup>During progress of</sup> work in shops - -  
 while building <sup>During erection on</sup> board vessel - - -  
 Are the approved plans of boiler and superheater forwarded herewith  
 (If not state date of approval.)  
 SEE ACCOMPANYING MACHINERY REPORT. Total No. of visits **34**

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.)

The materials and workmanship are good.  
 The boiler has been constructed under special survey and sent to  
 Burntisland to be fitted in the vessel.

This boiler has been efficiently fitted on board, examined under steam & safety  
 valves adjusted 200 lbs  
 C.R.R.

Survey Fee ... £ **See Machinery Report** When applied for, 19  
 Travelling Expenses (if any) £ : : When received, 19

**L. J. Davis.**

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 7 FEB 1933**

**TUE. 7 MAR 1933**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**



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