

REPORT ON BOILERS.

No. 49823

Received at London Office

13 NOV 1929

Date of writing Report

192

When handed in at Local Office

11

1929

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

27. 11. 28

Last Survey

9-11-

1929

(Number of Visits

32

Gross

Tons

Net

Master

Built at

Burntisland

By whom built

Burntisland S.B. & Co.

Yard No.

156

When built

1929

Engines made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Engine No.

912

When made

1929

Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Boiler No.

912

When made

1929

Nominal Horse Power

331

Owners

Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Withnortyger Bergbau- und Eisenhütten-Gesellschaft in Withnortyger.

Manufacturers of Steel

Vereinigte Stahlwerke A.G. Hütte Ruhrort-Heiderich. Gütthoffnungshütte Oberhausen for Record (S)

Total Heating Surface of Boilers

1005 sq ft

Is forced draught fitted

No

Coal or Oil fired

coal

No. and Description of Boilers

one single ended

Working Pressure

120

Tested by hydraulic pressure to

230

Date of test

19-10-29

No. of Certificate

18477

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

33 sq ft

No. and Description of safety valves to each boiler

two direct spring

Area of each set of valves per boiler

per Rule

9.33 sq ft

as fitted

9.8 sq ft

Pressure to which they are adjusted

120 lbs

Are they fitted with easing gear

Yes

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

No.

Smallest distance between boilers or uptakes and bunkers or woodwork

1'-0"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

Boiler in tween deck

Is the bottom of the boiler insulated

Yes

Largest external dia. of boilers

10'-8"

Length

10'-7"

Shell plates: Material

steel

Tensile strength

29.33 tons

Thickness

31/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

inter.

Long. seams

TR lap

Diameter of rivet holes in

circ. seams

15/16"

Pitch of rivets

2.816"

4 1/4"

Percentage of strength of circ. end seams

plate

66.4

rivets

59.4

Percentage of strength of circ. intermediate seam

plate

77.9

rivets

78.6

Percentage of strength of longitudinal joint

plate

77.9

rivets

78.6

combined

78.1

Working pressure of shell by Rules

120 tons

Thickness of butt straps

outer

inner

No. and Description of Furnaces in each Boiler

two plain

Material

steel

Tensile strength

26.30 tons

Smallest outside diameter

3'-1 9/16"

Length of plain part

top

bottom

6'-7 1/2"

7'-2 1/8"

Thickness of plates

crown

bottom

5/8"

Description of longitudinal joint

welded

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

none

Working pressure of furnace by Rules

127

End plates in steam space: Material

steel

Tensile strength

26.30 tons

Thickness

15/16"

Pitch of stays

17"x18"

How are stays secured

DN

Working pressure by Rules

131

Tube plates: Material

front

back

steel

Tensile strength

26.30 tons

Thickness

15/16"

21/32"

Mean pitch of stay tubes in nests

11 1/8"

Pitch across wide water spaces

14 1/4"

Working pressure

front

back

256

123

Girders to combustion chamber tops: Material

steel

Tensile strength

28.32 tons

Depth and thickness of girder

at centre

2@ 7" x 9 1/16"

Length as per Rule

29 25/32"

Distance apart

9"

No. and pitch of stays

in each

2@ 9 1/2"

Working pressure by Rules

121

Combustion chamber plates: Material

steel

Tensile strength

26.30 tons

Thickness: Sides

9/16"

Back

9/16"

Top

9/16"

Bottom

15/16"

Pitch of stays to ditto: Sides

9 1/2" x 9"

Back

9 1/2" x 9"

Top

9 1/2" x 9"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

126

Front plate at bottom: Material

steel

Tensile strength

26.30 tons

Thickness

15/16"

Lower back plate: Material

steel

Tensile strength

26.30 tons

Thickness

15/16"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

274

Main stays: Material

steel

Tensile strength

28.32 tons

Diameter

At body of stay,

Over threads

2 1/2"

No. of threads per inch

6

Area supported by each stay

306

Working pressure by Rules

128

Screw stays: Material

steel

Tensile strength

26.30 tons

Diameter

At turned off part,

Over threads

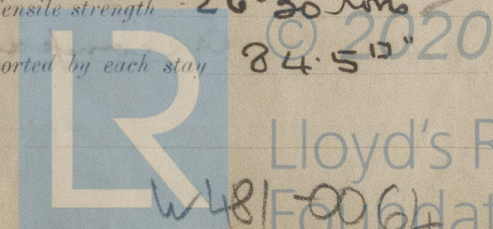
1 3/8"

No. of threads per inch

9

Area supported by each stay

84.5 sq in



Lloyd's Register Foundation

Working pressure by Rules 120 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/2" & 1 5/8" ✓
No. of threads per inch 9 Area supported by each stay 103.5 & 109.7 1/2" Working pressure by Rules 121 & 139
Tubes: Material Iron External diameter { Plain 3 1/4" Thickness { 9 w.g. No. of threads per inch 9
Pitch of tubes 4 1/2" & 4 3/8" Working pressure by Rules 230 Manhole compensation: Size of opening in
shell plate 19" x 15" Section of compensating ring 7" x 2 1/2" No. of rivets and diameter of rivet holes 36 @ 1 5/16"
Outer row rivet pitch at ends 4 1/4" Depth of flange if manhole flanged 3" Steam Dome: Material none
Tensile strength 221 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 155
of rivets in outer row in dome connection to shell Diameter of rivet holes and pitch

Type of Superheater none

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 22 inclusive for boilers been complied with

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

Dates of Survey { During progress of work in shops - - - See Accompanying
while building { During erection on board vessel - - - Machinery Report
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)
Total No. of visits 32

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 in accordance with the Rules.

This boiler has now been efficiently fitted on board & its
safety valves have been adjusted under steam. The
thicknesses of the adjusting washers were 3/8".

John Houston
Leith, 9th Dec
1929

Survey Fee ... £ 6 : 14 : 00 When applied for, 11 NOV 1929
Travelling Expenses (if any) £ : : : When received, 20th Nov 1929

S. C. Davis.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 NOV 1929

Assigned See Accompanying Machinery Report

TUE. 17 DEC 1929
See Lth 18 Dec 1929