

Rpt. 5a.

REPORT ON BOILERS.

52181
No. 51970
19 MAR 1932

Received at London Office

2 DEC 1931

Date of writing Report

19

When handed in at Local Office

30.11.1931

Part of

Glasgow

No. in
Reg. Book.

Survey held at

Glasgow

Date, First Survey

23.9.31

Last Survey

26.11.1931

on the

S.S. "Rowan"

(Number of Visits

28)

Gross

500

Tons

Net

188

Master

Built at

Bowling

By whom built

Scott & Son

Yard No.

321

When built

1931

Engines made at

Glasgow

By whom made

Aitchison Blair & Co. Ltd.

Engine No.

183

When made

1931

Boilers made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Boiler No.

387

When made

1931

Nominal Horse Power

110

Owners

Frontier Town S.S. Coy.

Port belonging to

Newry

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

L. D. Miles Ltd.

Lanarkshire Steel Co. Ltd.

(Letter for Record

(S)

Total Heating Surface of Boilers

2000 sq ft

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

26.11.31

No. of Certificate

19058

Can each boiler be worked separately

Area of Firegrate in each Boiler

60.4 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

15'0"

Length

10'0"

Shell plates: Material

steel

Tensile strength

29.33 tons

Thickness

1 5/16"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

inter.

long. seams

NB 3, TR

Diameter of rivet holes in

circ. seams

F 1 1/4" B 1 3/8"

Pitch of rivets

F 3.22" B 3.747"

Percentage of strength of circ. end seams

plate

F 61.1 B 63.2

rivets

F 46.3 B 47.9

Percentage of strength of circ. intermediate seam

plate

rivets

Percentage of strength of longitudinal joint

plate

85.33

rivets

89.6

combined

88.6

Working pressure of shell by Rules

200

Thickness of butt straps

outer

1"

inner

1 1/8"

No. and Description of Furnaces in each Boiler

Three Heighton bonneted

Material

steel

Tensile strength

26.30 tons

Smallest outside diameter

45 1/2"

Length of plain part

top

bottom

Thickness of plates

crown

bottom

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

202

End plates in steam space: Material

steel

Tensile strength

26.30 tons

Thickness

1 9/32"

Pitch of stays

19" x 20"

How are stays secured

BN

Working pressure by Rules

202

Tube plates: Material

front

steel

back

"

Tensile strength

26.30 tons

Thickness

3/32"

25"

32"

Mean pitch of stay tubes in nests

10'2"

Pitch across wide water spaces

14 1/4"

Working pressure

front

back

202

210

Girders to combustion chamber tops: Material

steel

Tensile strength

28.32 tons

Depth and thickness of girder

at centre

2 @ 8 5/8" x 7"

Length as per Rule

20 5/8"

32 9/16"

Distance apart

9 1/2"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

202

Combustion chamber plates: Material

steel

Tensile strength

26.30 tons

Thickness: Sides

3/32"

Back

2 1/32"

Top

2 3/32"

Bottom

1"

Pitch of stays to ditto: Sides

8 1/4" x 10 3/8"

Back

9 1/4" x 8"

Top

9 1/2" x 8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

201

Front plate at bottom: Material

steel

Tensile strength

26.30 tons

Thickness

29"

Lower back plate: Material

steel

Tensile strength

26.30 tons

Thickness

25"

32"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

202

Main stays: Material

steel

Tensile strength

28.32 tons

Diameter

At body of stay,

or

Over threads

3"

No. of threads per inch

6

Area supported by each stay

385 sq in

Working pressure by Rules

205

Screw stays: Material

steel

Tensile strength

26.30 tons

Diameter

At turned off part,

or

Over threads

1 5/8" & 1 3/4"

No. of threads per inch

9

Area supported by each stay

76 sq in & 88 sq in

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Working pressure by Rules 200 & 205 Are the stays drilled at the outer ends ☒ No Margin stays: Diameter { At turned off part, ☒ 1 3/4" Over threads ☒ 200
No. of threads per inch 9 Area supported by each stay 91 Working pressure by Rules 200
Tubes: Material steel External diameter { Plain 3 1/4" Stay 3 1/4" Thickness 8 w.g. 7/16 3/8 No. of threads per inch 9
Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules 219 Manhole compensation: Size of opening in
shell plate 15 1/2" x 19 1/2" Section of compensating ring 9 1/2" x 1 7/16" No. of rivets and diameter of rivet holes 32 @ 1 3/8"
Outer row rivet pitch at ends 9 1/2" 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 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. Manufacturer.
Arch. H. Grierson

Dates of Survey { During progress of work in shops -- 1931 Sep. 23 24 29 30 Oct. 1 2 6 8 Are the approved plans of boiler and superheater forwarded herewith yes
while building { During erection on board vessel -- 9 12 14 15 16 19 21 23 26 27 28 30 Total No. of visits 28
Nov. 2 3 5 9 11 16 18 26

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 in accordance with the Rules.

The boiler will be fitted on board of Glasgow.

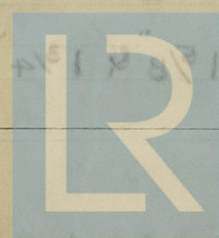
Survey Fee ... £ 13 : 6 : 0 When applied for, 27.11.31.
Travelling Expenses (if any) £ : : : When received, 1.12.31.

S. C. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 1-DEC 1931

Assigned TRANSMIT TO LONDON



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