

REPORT ON BOILERS.

No. 48873

Received at London Office

13 FEB 1929

Date of writing Report

192

When handed in at Local Office

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

29. 10. 28

Last Survey

1929

(Number of Visits)

42

Gross Tons

4251.45

Net Tons

2635.40

on the

new steel

S/S "PENYBRYN"

Master

Built at

Burntisland

By whom built

Burntisland SBCo

Yard No.

150

When built

1929

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No.

898

When made

1929

Boilers made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No.

898

When made

1929

nominal Horse Power

Owners Lundsgaard and Söner

Port belonging to

Farsund.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Vereinte Stahlwerke a. G. Hoerder Verein of Arose
Witkowitz Bergbau und Eisenhütten Gewerkschaft in Witkowitz

Gas Dunlop & Co Ltd

(Letter for Record (S))

Total Heating Surface of Boilers

1005 sq ft

Is forced draught fitted

No

Coal or Oil fired

coal

Working Pressure

120

Area as per No. and Description of Boilers

one single ended

Pressure tested by hydraulic pressure to

230

Date of test

28-1-29

No. of Certificate

18185

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

330 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

as fitted

9.8

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

9"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Boiler on upper deck

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

10'-8"

Length

10'-7"

Shell plates: Material

steel

Tensile strength

29.33 tons

Thickness

3/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

DR lap

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

66.7

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

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"

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

Working pressure by Rules

131

How are stays secured

front

back

steel

Tensile strength

26-30 tons

Thickness

15/16"

2 1/2"

Tube plates: Material

front

back

steel

Tensile strength

26-30 tons

Working pressure

front

back

256

123

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

20 1/4" x 9"

Length as per Rule

29 3/32"

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

28-30 tons

Diameter

At bottom of stay

Over threads

2 1/4"

No. of threads per inch

6

Area supported by each stay

306 sq in

Working pressure by Rules

128

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part

Over threads

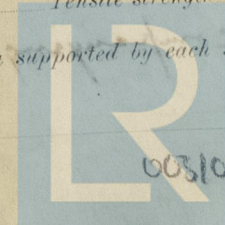
1 3/8"

No. of threads per inch

9

Area supported by each stay

84.50 sq in



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Checked 13/2/29

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" Working pressure by Rules 121 & 139 ✓
Tubes: Material Iron External diameter { Plain 3 1/4" Thickness { 9 W.S. 4 1/2" 3/8" 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 19" x 15" Section of compensating ring 7" x 2 1/2" No. of rivets and diameter of rivet holes 36 @ 1 1/2"
Outer row rivet pitch at ends 4 1/4" Depth of flange if manhole flanged 3" Steam Dome: Material none
Tensile strength 021 Thickness of shell Description of longitudinal joint
Diameter of rivet holes Pitch of rivets Percentage of strength of joint { Plate 28
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.
Arch. H. Grierson Manufacturer.

Dates of Survey { During progress of work in shops - - See Accompanying
while building { During erection on board vessel - - Machy Report
Are the approved plans of boiler and superheater forwarded herewith
(If not, state date of approval.)
Total No. of visits 42

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 & tried
under steam. The safety valves have been adjusted to 120lbs
& found satisfactory, the thicknesses of the adjusting washers
being as follows: - Forst valve 3/8" After Valve 3/8".

For particulars as to class see Leith Rpt No. 17545.

John Houston.

Survey Fee ... £ 6 : 14 : When applied for 11 FEB 1929
Travelling Expenses (if any) £ : : When received 15th March 1929

S. Davis.

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 12 FEB 1929

TUE 26 MAR 1929

Assigned See Accompanying Machy Report
See Minute on Ab Rk
408 73



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