

# REPORT ON BOILERS.

No. 49587

11 SEP 1929

Received at London Office

Date of writing Report

192

When handed in at Local Office

9.9.29

1929

Port of

Glasgow

No. in Survey held at

Glasgow

Date, First Survey

6.11.28

Last Survey

29.8.29

1929

of opening Book.

"BAHADUR"

(Number of Visits 67)

Gross 5024

on the

S/S TALUKBAR

Tons Net 3397

Master

Built at

Port Glasgow

By whom built

Lithgows Ltd

Yard No. 823

When built

1929

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No. 895

When made

1929

Donkey boilers made at

Glasgow

By whom made

David Rowan & Co Ltd

Boiler No. 894A

When made

1929

Nominal Horse Power

Owners

Port belonging to

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

James Dunlop & Co Ltd

(Letter for Record 15)

Total Heating Surface of Boilers

1000 sq ft

Is forced draught fitted no

Coal or Oil fired coal

No. and Description of Boilers

one single ended

Working Pressure 110

Tested by hydraulic pressure to

215

Date of test

12.6.29

No. of Certificate

18325

Can each boiler be worked separately -

Area of Firegrate in each Boiler

37.8 sq ft

No. and Description of safety valves to each boiler

two high lift

Area of each set of valves per boiler

per Rule 2.5 sq ft

as fitted 3.14 sq ft

Pressure to which they are adjusted

115

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

12"

Is oil fuel carried in the double bottom under boilers

on deck

Smallest distance between shell of boiler and tank top plating

no tank

Is the bottom of the boiler insulated

yes

Mean internal dia. of boilers

11'-6"

Length

10'-0"

Shell plates: Material

steel

Tensile strength 29-33 tons

Thickness

2 1/2"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end inter. 2-8 1/2"

Long. seams

lap T.R.

Diameter of rivet holes in

circ. seams 1 5/16"

long. seams 1 5/16"

Pitch of rivets

2-8 1/2"

Percentage of strength of circ. end seams

plate 66.4

rivets 59.4

Percentage of strength of circ. intermediate seam

plate 44.9

rivets 78.6

Percentage of strength of longitudinal joint

plate 44.9

rivets 78.6

combined 75.52

Working pressure of shell by Rules

110

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

42 1/2"

Length of plain part

top 69 5/16"

bottom 75 3/8"

Thickness of plates

crowns 2 1/2"

bottom 2 1/2"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

137

End plates in steam space: Material

steel

Tensile strength

26-30

Thickness

1"

Pitch of stays

24x14

How are stays secured

WN

Working pressure by Rules

113

Tube plates: Material

front steel

back "

Tensile strength

26-30 tons

Thickness

1 3/16"

1 1/16"

Lean pitch of stay tubes in nests

10"

Pitch across wide water spaces

14 1/4"

Working pressure

front 116

back 167

Girders to combustion chamber tops: Material

steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

2 @ 7 1/4 x 9 1/16"

Length as per Rule

31 3/4"

Distance apart

9"

No. and pitch of stays

at each

2 @ 10 1/8"

Working pressure by Rules

113

Combustion chamber plates: Material

steel

Tensile strength

26-30 tons

Thickness: Sides

9 1/16"

Back

9 1/16"

Top

9 1/16"

Bottom

7 1/8"

Pitch of stays to ditto: Sides

9 x 10 1/8"

Back

9 1/2 x 9 3/4"

Top

9 x 10 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

117

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

1 3/16"

Lower back plate: Material

steel

Tensile strength

26-30 tons

Thickness

5/8"

Pitch of stays at wide water space

13 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

114

Main stays: Material

steel

Tensile strength

28-32 tons

Diameter

At body of stay

2 1/4"

Over threads

No. of threads per inch

6

Area supported by each stay

3630"

Working pressure by Rules

118

Screw stays: Material

steel

Tensile strength

26-30 tons

Diameter

At turned off part

1 1/2" & 1 3/8"

Over threads

No. of threads per inch

9

Area supported by each stay

107 & 92.50"



Lloyd's Register Foundation

W147-0201

# REPORT ON BOILERS

Working pressure by Rules 112 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part,</sup> 1 9/8" <sub>or Over threads</sub>

No. of threads per inch 9 Area supported by each stay 1340" Working pressure by Rules 112

Tubes: Material Iron External diameter <sup>Plain</sup> 3 1/4" Thickness <sup>8 W.S.</sup> 5/16" & 1/4" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 208 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 @ 15/16"

Outer row rivet pitch at ends 4 1/2" Depth of flange if manhole flanged 3" Steam Dome: Material none

Tensile strength 58 Thickness of shell 5/16" Description of longitudinal joint butt

Diameter of rivet holes 5/16" Pitch of rivets 1 1/2" Percentage of strength of joint <sup>Plate</sup> 80 <sub>Rivets</sub>

Internal diameter 19" Working pressure by Rules 112 Thickness of crown 5/16" No. and diameter of stays 11 Working pressure by Rules 208

Inner radius of crown 3" Working pressure by Rules 112

How connected to shell direct Size of doubling plate under dome 19" x 15" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 15/16" @ 1 1/2"

Type of Superheater none Manufacturers of <sup>Tubes</sup> none <sub>Steel castings</sub>

Number of elements 1 Material of tubes iron Internal diameter and thickness of tubes 3 1/4" x 5/16"

Material of headers iron Tensile strength 58 Thickness 5/16" Can the superheater be shut off and the boiler be worked separately no Is a safety valve fitted to every part of the superheater which can be shut off from the boiler no

Area of each safety valve 1 1/2" Are the safety valves fitted with easing gear no Working pressure as per Rules 112 Pressure to which the safety valves are adjusted 112 Hydraulic test pressure: 138

tubes castings and after assembly in place no Are drain cocks or valves fitted to free the superheater from water where necessary no

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.  
Archd. W. Grierson

Dates of Survey <sup>During progress of work in shops - -</sup> See Accompanying Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) no

<sup>while building</sup> <sub>board vessel - - -</sub> machinery report Total No. of visits 67

**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, satisfactorily fitted in the vessel and its safety valves adjusted under steam.

*a.g.*  
9/19/29.

Survey Fee ... £ 6 : 12 : When applied for, 10 SEP 1929

Travelling Expenses (if any) £ 0 : 0 : 0 When received, 14.9.1929

*Schdano*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 SEP 1929

Assigned See Accompanying Machinery Report

Rpt. 13.  
RE  
Date of writ  
No. in Reg. Bo  
14981.  
Built at  
Owners  
Electric  
System  
Pressure  
Direct  
If alterna  
Has the A  
Generato  
are they  
Where mo  
series with  
Are all te  
short circ  
Position  
is the ver  
if situat  
are their  
Earthin  
their resp  
Main S  
a fuse on  
Switch  
are they  
woodwor  
are they  
permane  
with nu  
and is t  
bars  
Main  
AND F  
Instru  
Earth  
Fus  
Switc  
Joint