

REPORT ON BOILERS.

No. 49587

11 SEP 1929

Received at London Office

Date of writing Report

1929

When handed in at Local Office

9.9.29

1929

Port of

Glasgow

No. in Survey held at

Date, First Survey

6.11.28

Last Survey

29.8.29

1929

of opening Book.

"BAHADUR"

(Number of Visits

67

Gross

5024

Tons

Net

3397

Master

Built at

Port Glasgow

By whom built

Lithgow & Co Ltd

Yard No.

823

When built

1929

Engines made at

Glasgow

By whom made

David Rowan & Co Ltd

Engine No.

895

When made

1929

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 (S))

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

Test pressure 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

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.

Long. seams

Lap T.R.

Diameter of rivet holes in

circ. seams

15"

long. seams

15"

Pitch of rivets

2-8 15"

4 1/4"

Percentage of strength of circ. end seams

plate

66.4

rivets

59.4

Percentage of strength of circ. intermediate seam

plate

-

rivets

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

bottom

69 5/16"

75 3/8"

Thickness of plates

crown

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

back

steel

Tensile strength

26-30 tons

Thickness

13/16"

1 1/16"

Lean pitch of stay tubes in nests

10"

Pitch across wide water spaces

14 1/4"

Working pressure

front

back

116

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 9/16"

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

9/16"

Back

9/16"

Top

9/16"

Bottom

7/8"

Pitch of stays to ditto: Sides

9x10 1/8"

Back

9 1/2 x 9 3/4"

Top

9x10 1/8"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

114

Front plate at bottom: Material

steel

Tensile strength

26-30 tons

Thickness

13/16"

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

363 sq in

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 & 92.5 sq in

REPORT ON BOILERS

Working pressure by Rules 113 & 110 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, or Over threads. 1 9/8"

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

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

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 1 1/2" Description of longitudinal joint { Plate Rivets

Diameter of rivet holes 3/16" Pitch of rivets 1 1/2" Percentage of strength of joint { Plate Rivets

Internal diameter 18" Working pressure by Rules 112 Thickness of crown 1 1/2" No. and diameter of stays 18 Working pressure by Rules 112

How connected to shell none Size of doubling plate under dome none Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell none

Type of Superheater none Manufacturers of { Tubes Steel castings

Number of elements 1 Material of tubes Iron Internal diameter and thickness of tubes 18" x 1/2"

Material of headers Iron Tensile strength 58 Can the superheater be shut off and the boiler be worked separately yes

Area of each safety valve 1 1/2" Are the safety valves fitted with easing gear yes Working pressure as per Rules 112 Pressure to which the safety valves are adjusted 112 Hydraulic test pressure: 132

tubes castings and after assembly in place yes Are drain cocks or valves fitted to free the superheater from water where necessary yes

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 { 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.) yes
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.
9/9/29.

Survey Fee ... £ 6 : 12 : When applied for, 10 SEP 1929
Travelling Expenses (if any) £ ... When received, 14. 9. 1929

Schwan

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 10 SEP 1929

Assigned See Accompanying Machy Report

Rpt. 13.
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Date of writ
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