

REPORT ON BOILERS.

Slid. No. 32275
Lab. No. 16144
OCT 28 1937

Received at London Office

Date of writing Report

192

When handed in at Local Office

23-10-1937

1927

Port of

Middlesbrough

No. in Reg. Book

Survey held at

Stockton

Date, First Survey

2nd Sept

Last Survey

15 Oct 1937

on the

M/V "POZARICA"

(Number of Visits

4)

Gross 1893

Net 838

Master

Built at

Sunderland

By whom built

Wm. Bayford & Sons Ltd.

Yard No.

634

When built

1938

Engines made at

Sunderland

By whom made

W. Doxford & Sons Ltd.

Engine No.

634

When made

1938

Boilers made at

Stockton

By whom made

Stockton C.E. & Riley Boilers Ltd.

Boiler No.

6270

When made

1937

Nominal Horse Power

434

Owners

Macduff & Co. Ltd.

Port belonging to

London

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Steel Company of Scotland

(Letter for Record

S

Total Heating Surface of Boilers

1582

Is forced draught fitted

Yes

Coal or Oil fired

oil exhaust gas

No. and Description of Boilers

15B

Working Pressure

120

Tested by hydraulic pressure to

230

Date of test

15-10-37

No. of Certificate

6920

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

4.4 sq ft

No. and Description of safety valves to each boiler

Two direct Spring (Lockburn) (Dup. High Lift)

Area of each set of valves per boiler

per Rule 7.94 sq ft

as fitted

Pressure to which they are adjusted

120

Are they fitted with easing gear

Yes

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

1'-6"

Is oil fuel carried in the double bottom under boiler

No

Smallest distance between shell of boiler and tank top plating

1'-6"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

10'-6"

Length

10'-6"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

7/8

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end DR

long. seams

T.R. D.B.S.

Diameter of rivet holes in

circ. seams 17/16

long. seams 13/16

Pitch of rivets

3 x 6

Percentage of strength of circ. end seams

plate 88.75

rivets 43.8

Percentage of strength of circ. intermediate seam

plate

Percentage of strength of longitudinal joint

plate 84

rivets 97.5

Working pressure of shell by Rules

126

Thickness of butt straps

outer 7/8

inner 7/8

No. and Description of Furnaces in each Boiler

1 cf.

Material

S

Tensile strength

26/30

Smallest outside diameter

2'-10 1/2"

Length of plain part

top

Thickness of plates

bottom 7/8

Description of longitudinal joint

weld

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

Working pressure of furnace by Rules

154

End plates in steam space: Material

Steel

Tensile strength

26 30

Thickness

7/8

Pitch of stays 18" x 18" mesh

How are stays secured

D.N. & W.

Working pressure by Rules

144

Tube plates: Material

front Steel

back Steel

Tensile strength

26/30

Thickness

7/8

13/16

Mean pitch of stay tubes in nests

10 1/4

Pitch across wide water spaces

14 x 7 1/4

Working pressure

front 210

back 225

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

6 1/2 x 7/8 double

Length as per Rule

2'-4 9/32

Distance apart

8 3/4

No. and pitch of stays

in each

2 x 9

Working pressure by Rules

127

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

19/32

Back

19/32

Top

19/32

Bottom

19/32

Pitch of stays to ditto: Sides

8 1/4 x 9 3/4

Back

10 x 9

Top

8 3/4 x 9

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

134

Front plate at bottom: Material

S

Tensile strength

26/30

Thickness

7/8

Lower back plate: Material

S

Tensile strength

26/20

Thickness

7/8

Pitch of stays at wide water space

14 x 10

Are stays fitted with nuts or riveted over

nuts

Working Pressure

210

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay

2 7/2

No. of threads per inch

6

Area supported by each stay

356 sq in

Working pressure by Rules

124

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part

1 1/2

No. of threads per inch

9

Area supported by each stay

88 sq in

Is a Report also sent on the Hull of the Ship?

Em. 1224 - Copyable Ink.

Working pressure by Rules **142**. Are the stays drilled at the outer ends **no** Margin stays: Diameter ^{At turned off part,} **1 7/8** or Over threads **1 7/8**
 No. of threads per inch **9** Area supported by each stay **108** Working pressure by Rules **140**
 Tubes: Material **lap Weld Iron** External diameter { Plain **2 1/2** Stay **2 1/2** Thickness **10** No. of threads per inch **9**
 Pitch of tubes **3 3/4 x 3 7/8** Working pressure by Rules **P 175 S 189** Manhole compensation: Size of opening in shell plate **20 x 16** Section of compensating ring **7 x 7/8** No. of rivets and diameter of rivet holes **36 1 7/16**
 Outer row rivet pitch at ends **6"** Depth of flange if manhole flanged
 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
 Number of elements Material of tubes Manufacturers of { Tubes Steel castings 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 23 inclusive for boilers been complied with **yes.**

For and on behalf of
 The foregoing is a correct description,
 Section of Chemical Engineers & Riley Boilers Ltd
 Manufacturer.
G. W. Riley

Dates of Survey while building { During progress of work in shops -- **1917: Sep 2 28 Oct 13 15** During erection on board vessel -- --
 Are the approved plans of boiler and superheater forwarded herewith **1.2.37.**
 (If not state date of approval.)
 Total No. of visits **4**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 The material & workmanship are good.
 The boiler has been made under Special Survey in accordance with the approved plan & requirements of the rules.
 It was tested to 230 lbs⁰ hydraulic pressure & found sound & tight & has been forwarded to Sunderland to be fitted on board.

This boiler has been securely fixed on board the vessel, examined under steam & safety valves adjusted in accordance with rule requirements

In recommendation please see ency. Rpt.
D. J. Hasw.

Survey Fee **10 : 10 : 0** When applied for, **25 10 1927**
 Travelling Expenses (if any) £ : : When received, **28 DEC. 1927**

R. Colloff
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE 18 JAN 1938**
 Assigned **See Sld. J.E. 32275**

