

REPORT ON BOILERS.

No. 68583

Received at London Office

113 JUL 1944

Date of writing Report

10

When handed in at Local Office

11. 7. 1944

Port of

Glasgow

No. in Survey held at
Reg. Book.

Glasgow

Date, First Survey

18. 8. 44

Last Survey

5. 7. 1944

(Number of Visits

37)

Gross

2370

Tons

Net

281

on the S.S. "EMPIRE ROSEBERY"

Master

✓

Built at

Glasgow

By whom built Blythwood S/B Co. Ltd. Yard No. 77

When built 1944

Engines made at

Glasgow

By whom made

David Rowan & Co. Ltd.

Engine No. 1140

When made 1944

Boilers made at

- do -

By whom made

- do -

Boiler No. 1126

When made 1944

Nominal Horse Power

242

Owners

Ministry of War Transport.

Port belonging to

Glasgow

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Bolwilles Ltd.

(Letter for Record (S))

Total Heating Surface of Boilers

3360 sq

Is forced draught fitted

Yes

Coal or Oil fired

Oil

No. and Description of Boilers

One single ended boiler

Working Pressure 220 lb/sq

Tested by hydraulic pressure to

380 lb/sq

Date of test

24-3-44

No. of Certificate

21689

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2 1/2 Improved high lift double

Area of each set of valves per boiler

{ per Rule 8.95 sq

{ as fitted 9.8 sq

Pressure to which they are adjusted

220 lb/sq

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

2'-5"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

Open floors

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16'-0"

Length

12'-0"

Shell plates: Material

S.

Tensile strength 29/33 Tons

Thickness

1 1/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

{ end D.R.

{ inter. ✓

long. seams

T.R.D.B.S.

Diameter of rivet holes in

{ circ. seams BACK 1 1/8" FRONT 1 7/16"

{ long. seams 1 9/16"

Pitch of rivets

{ BACK 4 1/16" FRONT 3 5/16"

{ 10 1/16"

Percentage of strength of circ. end seams

{ plate BACK 62.4 FRONT 60.5

{ rivets " 47.8 " 46.3

Percentage of strength of circ. intermediate seam

{ plate ✓

{ rivets ✓

Percentage of strength of longitudinal joint

{ plate 85.5

{ rivets 85.8

{ combined 88.2

Working pressure of shell by Rules

✓

Thickness of butt straps

{ outer 1 5/32"

{ inner 1 3/32"

No. and Description of Furnaces in each Boiler

3 Dighton Furnaces

Material

S.

Tensile strength

26/30 Tons

Smallest outside diameter

3'-10 13/32"

Length of plain part

{ top ✓

{ bottom ✓

Thickness of plates

{ crown 45"

{ bottom 64"

Description of longitudinal joint

Welded.

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

✓

Working pressure of furnace by Rules

✓

End plates in steam space: Material

S.

Tensile strength

26/30 Tons

Thickness

1 7/16"

Pitch of stays 20" x 2'-0 1/2"

How are stays secured

D.N.

Working pressure by Rules

✓

Tube plates: Material

{ front S.

{ back S.

Tensile strength

26/30 Tons

Thickness

{ 7/8"

{ 35/32"

Mean pitch of stay tubes in nests

9 1/4"

Pitch across wide water spaces

13 1/2"

Working pressure

{ front ✓

{ back ✓

Girders to combustion chamber tops: Material

S.

Tensile strength

28/32 Tons

Depth and thickness of girder

at centre 2 @ 9 3/4" x 7/8"

Length as per Rule

2'-10 9/16"

Distance apart

No. and pitch of stays

in each 3 @ 8 1/4"

Working pressure by Rules

✓

Combustion chamber plates: Material

S.

Tensile strength

26/30 Tons

Thickness: Sides

2 3/32"

Back

2 1/32"

Top

2 3/32"

Bottom

2 7/32"

Pitch of stays to ditto: Sides

9 3/4" x 8 1/4"

Back

8 1/2" x 8"

Top

8 1/2" x 9 3/4"

Are stays fitted with nuts or riveted over

Nuts.

Working pressure by Rules

✓

Front plate at bottom: Material

S.

Tensile strength

26/30 Tons

Thickness

7/8"

Lower back plate: Material

S.

Tensile strength

26/30 Tons

Thickness

1 3/16"

Pitch of stays at wide water space

13 7/16"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

✓

Main stays: Material

S.

Tensile strength

28/32 Tons

Diameter

{ At body of stay, 3 1/2" & 3 1/4"

{ Over threads ✓

No. of threads per inch

6

Area supported by each stay

✓

Working pressure by Rules

✓

Screw stays: Material

S.

Tensile strength

26/30 Tons

Diameter

{ At turned off part, 1 5/8" & 1 3/4"

{ Over threads ✓

No. of threads per inch

9

Area supported by each stay

✓

Working pressure by Rules ☒ Are the stays drilled at the outer ends *No* Margin stays: Diameter *At turned off part, ☒ Over threads $1\frac{7}{8}" \times 2\frac{1}{4}"$*

No. of threads per inch *9* Area supported by each stay ☒ Working pressure by Rules ☒

Tubes: Material *S.* External diameter *Plain $2\frac{1}{2}"$ Stay $2\frac{1}{2}"$* Thickness *9 W.G. $\frac{5}{16}" \frac{3}{8}" \frac{7}{16}"$* No. of threads per inch *9*

Pitch of tubes *$3\frac{5}{8}" \times 3\frac{3}{4}"$* Working pressure by Rules ☒ Manhole compensation: Size of opening in end shell plate *$16" \times 12"$* Section of compensating ring ☒ No. of rivets and diameter of rivet holes ☒

Outer row rivet pitch at ends ☒ Depth of flange if manhole flanged *$4\frac{1}{8}"$* Steam Dome: Material ☒

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

Manufacturers of *Tubes ☒ Steel forgings ☒ 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 ☒ forgings and 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 *Yes*

The foregoing is a correct description,
For David Rowan & Co. Ltd.
Arch. H. Grierson Manufacturer.

Dates of Survey *During progress of work in shops - - 1944 Aug 18-23 Sep 9-10-15-17 Oct 8-14-27* Are the approved plans of boiler and superheater forwarded herewith *Yes*
while building *During erection on board vessel - - - Feb 9-10-24-26-29 Mar 14-24-27-30 Apr 1* (If not state date of approval.)
May 23 Jun 2-6-9-14-19 Jul 5 Total No. of visits *37*

Is this Boiler a duplicate of a previous case *Yes* If so, state Vessel's name and Report No. *"Empire Pym" Gls. Rept No 68260*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler has been built under special survey in accordance with the Society's Rules and approved plans.*
The materials and workmanship are good. It has been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure.
The specification requirements have been carried out satisfactorily.

RJE.
10-7-44

Survey Fee ... £ *See Machy Rept* When applied for, 19
Travelling Expenses (if any) £ : : When received, 19

Jas. Stevenson
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

GLASGOW 11 JUL 1944

Assigned



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Lloyd's Register Foundation

Rpt. 13.

Date of writ

No. in Reg. B

374 90

Built at

Owners

Electrical

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