

REPORT ON BOILERS.

No. 87192

Received at London Office 28 MAY 1931

Date of writing Report 19 When handed in at Local Office 22nd May 1931 Port of NEWCASTLE-ON-TYNE.

No. in Survey held at Reg. Book.

Scotswood

Date, First Survey

3rd March

Last Survey

20th May 1931

74830. on the

Steel Se. "JOLLY CHARLES"

(Number of Visits

30,

Gross 637.

Tons Net 285.

Master

Built at

Lowestoft

By whom built

J. Chambers Ltd

Yard No. ✓

When built 1920.

Engines made at

So. Shields.

By whom made

G.T. Grey & Co. Ltd.

Engine No. ✓

When made 1920

Boilers made at

Scotswood

By whom made

S.W.G. Armstrong Whitworth & Co. (Engs) Ltd

Boiler No. 9144

When made 1931.

Nominal Horse Power

108.

Owners

Leopold Walford Shipping Ltd (Inq) Port belonging to

London.

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY OR DONKEY~~

Manufacturers of Steel Colvilles Ld. Glasgow (Plate) Brownies Ltd. (Inq) (Letter for Record 8.)

Total Heating Surface of Boilers

1940 sq ft.

Is forced draught fitted

No.

Coal or Oil fired

Coal.

No. and Description of Boilers

One S.E. Multitubular.

Working Pressure

180 lb/sq in.

Tested by hydraulic pressure to

320 lb/sq in.

Date of test

23.4.31.

No. of Certificate

548.

Can each boiler be worked separately ✓

Area of Firegrate in each Boiler

61 sq ft.

No. and Description of safety valves to each boiler

2 Spring loaded (High Lift)

Area of each set of valves per boiler

per Rule 8.2.2.4.6.2.2.0

as fitted

6.225"

Pressure to which they are adjusted

180 lb/sq in.

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

on platform

and bunkers

on platform

15"

Is oil fuel carried in the double bottom under boilers

✓

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes.

Largest internal dia. of boilers

14' - 3 1/4"

Length

11' - 0"

Shell plates: Material

Steel

Tensile strength

29-33 tons

Thickness

1 5/32"

Are the shell plates welded or flanged

No.

Description of riveting: circ. seams

end

3.72"

long. seams

T.R. Double Butt Straps

Diameter of rivet holes in

circ. seams

1 1/4"

Pitch of rivets

8 9/16"

Percentage of strength of circ. end seams

plate

66.4%

rivets

45.0%

Percentage of strength of circ. intermediate seam

plate

85.3%

rivets

92.0%

Percentage of strength of longitudinal joint

plate

85.3%

rivets

92.0%

Working pressure of shell by Rules

183 lb/sq in.

Thickness of butt straps

outer

2 9/32"

inner

1 5/32"

No. and Description of Furnaces in each Boiler

3 Beighton Section.

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3' - 6 1/2"

Length of plain part

top

✓

Thickness of plates

crown

1 7/32"

bottom

Description of longitudinal joint

Welded.

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

None.

Working pressure of furnace by Rules

180.5 lb/sq in.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 7/32"

Pitch of stays

19" x 19 1/4"

How are stays secured

Nuts & Washers inside & outside

Working pressure by Rules

189 lb/sq in.

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons

Thickness

1 1/16"

Pitch of stays

19" x 19 1/4"

Mean pitch of stay tubes in nests

10 3/8"

Pitch across wide water spaces

14 1/4"

Working pressure

front

199 lb/sq in.

back

203 lb/sq in.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

8 1/2" x 13 1/8"

Length as per Rule

2' - 8"

Distance apart

8 1/4"

No. and pitch of stays

in each

2 @ 10"

Working pressure by Rules

203 lb/sq in.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

1 1/16"

Back

3 1/32"

Top

1 1/16"

Bottom

1 1/16"

Pitch of stays to ditto: Sides

10" x 8 1/4"

Back

9" x 9"

Top

10" x 8 1/4"

Are stays fitted with nuts or riveted over

Nuts.

Working pressure by Rules

185 lb/sq in.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

2 9/32"

Pitch of stays at wide water space

14 1/4" x 9"

Are stays fitted with nuts or riveted over

Nuts.

Working Pressure

237 lb/sq in.

Main stays: Material

Steel

Tensile strength

28-32 tons

Diameter

At body of stay,

3"

or

Over threads

No. of threads per inch

6.

Area supported by each stay

36.75 sq ins

Working pressure by Rules

183 lb/sq in.

Screw stays: Material

Steel

Tensile strength

26-30 tons

Diameter

At turned off part,

1 5/8"

or

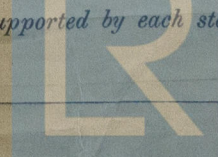
Over threads

No. of threads per inch

9.

Area supported by each stay

82.5 sq ins.



Lloyd's Register Foundation

If not, state whether, and when, one will be sent?

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

Laws.

[2m, 12, 23, Copyable Ink.]

491-0097

Working pressure by Rules $183 \frac{1}{2} \text{ lb/sq. in.}$ Are the stays drilled at the outer ends *No.* Margin stays: Diameter *At turned off part, $1 \frac{1}{8} \times 2 \frac{1}{2}$ "*
 No. of threads per inch *9.* Area supported by each stay *104.65 sq. in. & 108.5 sq. in.* Working pressure by Rules *203 lb/sq. in. & 219 lb/sq. in.*
 Tubes: Material *Steel* External diameter *Plain $3 \frac{1}{4}$ "* Thickness *8 wtg.* No. of threads per inch *9.*
 Pitch of tubes *$4 \frac{1}{2}$ "* Working pressure by Rules *Plain 230 lb/sq. in. & Stay 206 lb/sq. in.* Manhole compensation: Size of opening in
 shell plate *$21" \times 17"$* Section of compensating ring *$19 \frac{1}{2}" \times 15 \frac{1}{32}"$* No. of rivets and diameter of rivet holes *36 @ $1 \frac{5}{16}"$*
 Outer row rivet pitch at ends *$8 \frac{3}{4}" \times 4"$* Depth of flange if manhole flanged *$3 \frac{3}{8}"$* Steam Dome: Material *None.*
 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 *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 *Yes.*

The foregoing is a correct description,
A. Newney Manufacturer.

FOR *SIR W. & ARTHUR WHITEWORTH & COMPANY (ENGINEERS) LTD.,*
 Dates of Survey *During progress of work in shops - - Mar. 3. 5. 6. 10. 12. 16. 18. 24. 26. 27. 31. Apr. 1.* Are the approved plans of boiler and superheater forwarded herewith *Yes.*
8. 13. 15. 16. 17. 20. 22. 23. 24. May 1. 4. 8. 11. 12.
During erection on board vessel - - 14. 18. 19. 20.
 Total No. of visits *30.*

Is this Boiler a duplicate of a previous case *No.* If so, state Vessel's name and Report No. *✓*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *The Boiler has been built under Special Survey & in accordance with the Society's Rules & approved plans. The material and workmanship are sound and good. Hydraulically tested as per Rules & found satisfactory. The boiler was efficiently installed on board & its safety valves adjusted under steam to the approved working pressure.*

Survey Fee ... £ *13* : - : - When applied for, *27 MAY 1931*
 Travelling Expenses (if any) £ : : : When received, *6. 6. 1931*

L. P. Lester
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute *TUE. 9 JUN 1931*

Assigned *See Minute on New Cy No 87191*