

REPORT ON BOILERS.

No. 94000

Received at London Office

1 JUL 1928

Date of writing Report

July 6th 1928

When handed in at Local Office

12 JULY 1928

Port of

LIVERPOOL

No. in Survey held at

Birkenhead

Date, First Survey

Sept 16th 1927

Last Survey

July 2nd 1928

3035 on the

S. S. "Iactician"

(Number of Visits 181)

Gross 5887

Tons Net 3683

Master

Built at

Birkenhead

By whom built

Cammell Laird & Co. Ltd

Yard No. 935

When built 1928

Engines made at

Birkenhead

By whom made

Cammell Laird & Co. Ltd

Engine No. 935

When made 1928

Boilers made at

Birkenhead

By whom made

Cammell Laird & Co. Ltd

Boiler No. 935

When made 1928

Nominal Horse Power

524.

Owners

Charente S. S. Co. Ltd

Port belonging to

Liverpool

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

David Colville & Sons Ltd

(Letter for Record 4)

Total Heating Surface of Boilers

1242 sq ft

Is forced draught fitted

No

Coal or Oil fired

Coal

No. and Description of Boilers

One Cylindrical S. S. Multitubular

Working Pressure

120 lb sq in

Tested by hydraulic pressure to

230 lb sq in

Date of test

6.2.28

No. of Certificate

2304

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

35 sq ft

No. and Description of safety valves to each boiler

Two Spring loaded

Area of each set of valves per boiler

{ per Rule 10.5 sq ft

{ as fitted 11.878 sq ft

Pressure to which they are adjusted

120 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

No

Smallest distance between boilers or uptakes and bunkers or woodwork

10"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

15" to flat.

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12'-6"

Length

10'-6" 2 1/2"

Shell plates: Material

Steel

Tensile strength

28-32 tons sq in

Thickness

23/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

{ end OR lap

Pitch of rivets

Jettie Riv. D Butts

Diameter of rivet holes in

{ circ. seams 13/16"

{ long. seams 7/8"

Pitch of rivets

{ 5.79" longit.

{ 2.37 circumf.

Percentage of strength of circ. end seams

{ plate 65.7%

{ rivets 50%

Percentage of strength of circ. intermediate seam

{ plate 84.9%

{ rivets 111.7%

Percentage of strength of longitudinal joint

{ plate 84.9%

{ rivets 111.7%

{ combined 92%

Working pressure of shell by Rules

120.7 lb sq in

Thickness of butt straps

{ outer 9/16"

{ inner 1/16"

No. and Description of Furnaces in each Boiler

Two plain

Material

Steel

Tensile strength

26-30 tons sq in

Smallest outside diameter

5'-7 1/4"

Length of plain part

{ top 6'-2"

{ bottom 6'-2"

Thickness of plates

{ crown 9/8"

{ bottom 9/8"

Description of longitudinal joint

Weld.

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

None

Working pressure of furnace by Rules

122 lb sq in

End plates in steam space: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1 1/16"

Pitch of stays

23 3/4" x 1 7/4"

How are stays secured

Double nuts & washers

Working pressure by Rules

121 lb sq in

End plates: Material

{ front Steel

{ back Steel

Tensile strength

{ 26-30 tons sq in

{ 26-30 tons sq in

Thickness

{ front 27/32"

{ back 23/32"

Can pitch of stay tubes in nests

12.1875"

Pitch across wide water spaces

14 1/2"

Working pressure

{ front 122 lb sq in

{ back 124 lb sq in

Orders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons sq in

Depth and thickness of girder

Centre

Two plates 7 1/4" x 9 1/8"

Length as per Rule

30.6"

Distance apart

9 7/8"

No. and pitch of stays

Each

Two at 9 3/4"

Working pressure by Rules

125 lb sq in

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons sq in

Thickness: Sides

19/32"

Back

9/16"

Top

19/32"

Bottom

19/16"

Pitch of stays to ditto: Sides

9 3/4" x 8 3/4"

Back

9" x 9"

Top

9 3/4" x 9 1/8"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

124 lb sq in

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

27/32"

Lower back plate: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1 1/16"

Pitch of stays at wide water space

As per plate

16"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

120 lb sq in

Main stays: Material

Steel

Tensile strength

28-32 tons sq in

Grip

{ At body of stay, 2 1/2"

{ Over threads

No. of threads per inch

6

Area supported by each stay

408 sq in

Working pressure by Rules

130 lb sq in

Screw stays: Material

Iron

Tensile strength

21 1/2 tons sq in

Grip

{ At turned off part, 1 3/8", 1 1/2", 1 5/8"

{ Over threads

No. of threads per inch

9

Area supported by each stay

81 (back plates)

002653-002658-002655

Working pressure by Rules *124 lb* Are the stays drilled at the outer ends *no* Margin stays: Diameter *1 1/2"*
No. of threads per inch *9* Area supported by each stay *99 sq"* Working pressure by Rules *127 lb*
Tubes: Material *Lapweld iron* External diameter *3 1/2"* Thickness *1/8"* No. of threads per inch *9*
Pitch of tubes *18 x 2 1/2"* Working pressure by Rules *124 lb* Manhole compensation: Size of opening *44 - 19/16"*
shell plate *18 x 2 1/2"* Section of compensating ring *7 1/2" x 3/4"* No. of rivets and diameter of rivet holes *44 - 19/16"*
Outer row rivet pitch at ends *6 3/8"* Depth of flange if manhole flanged *3 1/4"* Steam Dome: Material *✓*
Tensile strength *✓* Thickness of shell *✓* Description of longitudinal joint *✓*
Diameter of rivet holes *✓* Pitch of rivets *✓* Percentage of strength of joint *✓*
Internal diameter *✓* Working pressure by Rules *✓* Thickness of crown *✓* No. and diameter
stays *✓* Inner radius of crown *✓* Working pressure by Rules *✓*
How connected to shell *✓* Size of doubling plate under dome *✓* Diameter of rivet holes and
of rivets in outer row in dome connection to shell *✓*

Type of Superheater *none* Manufacturers of *✓*
Number of elements *✓* Material of tubes *✓* Internal diameter and thickness of tubes *✓*
Material of headers *✓* Tensile strength *✓* Thickness *✓* Can the superheater be shut off
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
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 *✓*

The foregoing is a correct description,

Dates of Survey *During progress of work in shops - - -* Are the approved plans of boiler and superheater forwarded herewith *✓*
while building *During erection on board vessel - - -* (If not state date of approval.)
See Machinery report. Total No. of visits *101.*

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

This Donkey boiler has been constructed under special Survey and the material & workmanship are good. It has been satisfactorily fitted on board, examined under steam & its safety valves adjusted.

Survey Fee ... £ *8 : 6 : 0*

Travelling Expenses (if any) £ : :

When applied for, *12 JULY 1928*

When received, *3. 8. 28*

J. S. Milton & W. S. Shields.
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute *LIVERPOOL* *13 JULY 1928*

Assigned

See accompanying Machinery rpt.



Lloyd's Register
Foundation