

# REPORT ON BOILERS.

No. 95751

Received at London Office -6 AUG 1929

Date of writing Report

When handed in at Local Office

-1 AUG 1929

Port of

Liverpool

No. in Survey held at

Birkenhead

Date, First Survey

28/12/29

Last Survey

23/7/1929

opening. Book.

S. S. 'Godfrey B. Holt'

(Number of Visits

78

Gross 3560

Tons

Net 2180

aster

Built at

Birkenhead

By whom built

Cammell Laird & Co

Yard No.

954

When built

1929

engines made at

Birkenhead

By whom made

Cammell Laird & Co

Engine No.

954

When made

1929

boilers made at

Birkenhead

By whom made

Cammell Laird & Co

Boiler No.

954

When made

1929

nominal Horse Power

401

Owners

J. Holt & Co (Ld) Ltd

Port belonging to

Liverpool

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Colville & Sons Ltd, Steel Co. of Scotland

(Letter for Record

5

Total Heating Surface of Boilers

1490 sq ft

Is forced draught fitted

ho

Coal or Oil fired

Coal

Description of Boilers

One Cylindrical multitubular

Am B.

Working Pressure

180 lb sq in

Tested by hydraulic pressure to

320 lb sq in

Date of test

15-8-29

No. of Certificate

2328

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

50 sq ft

No. and Description of safety valves to each boiler

Two spring loaded.

Area of each set of valves per boiler

per Rule

high lift valve

as fitted

Pressure to which they are adjusted

185 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

Yes

Smallest distance between boilers or uptakes and bunkers or woodwork

2'7"

Is oil fuel carried in the double bottom under boilers

ho

Smallest distance between shell of boiler and tank top plating

2'3"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12'6"

Length

10'6"

Shell plates: Material

Steel

Tensile strength

28-32 tons sq in

Thickness

1 1/2"

Are the shell plates welded or flanged

ho

Description of riveting: circ. seams

end

DR lap

Long. seams

Reck R. D. Balto

Diameter of rivet holes in

circ. seams

1 7/8"

Pitch of rivets

2 1/2"

Percentage of strength of circ. end seams

plate

62.3

Percentage of strength of circ. intermediate seam

plate

50

Percentage of strength of longitudinal joint

plate

85.8

Working pressure of shell by Rules

180 lb sq in

Thickness of butt straps

outer

29/32"

inner

29/32"

No. and Description of Furnaces in each Boiler

Three Corrugated.

Material

Steel

Tensile strength

26-30 tons sq in

Smallest outside diameter

3'1"

Length of plain part

top

bottom

Thickness of plates

crowd

bottom

Description of longitudinal joint

weld.

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

none

Working pressure of furnace by Rules

182 lb sq in

195

End plates in steam space: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1 7/8"

Pitch of stays

20x16"

How are stays secured

Double hats & plain washers.

Working pressure by Rules

184 lb sq in

Tube plates: Material

front

Steel

back

Steel

Tensile strength

26-30 tons sq in

Thickness

7/8"

29/32"

Mean pitch of stay tubes in nests

10 1/8"

Pitch across wide water spaces

14 1/4"

Working pressure

front

187 lb sq in

back

183 lb sq in

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons sq in

Depth and thickness of girder

at centre

2 plates 6 1/8 x 1"

Length as per Rule

2'4 7/8"

Distance apart

8 1/2"

No. and pitch of stays

in each

Two 8 3/4"

Working pressure by Rules

185 lb sq in

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons sq in

Thickness: Sides

7/8"

Back

1 1/2"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

8 3/4 x 8 1/2"

Back

9 x 7 1/4"

Top

8 3/4 x 8 1/2"

Are stays fitted with nuts or riveted over

hats

Working pressure by Rules

182 lb sq in

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

7/8"

Lower back plate: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1 1/8"

Pitch of stays at wide water space

14 3/8 x 9"

Are stays fitted with nuts or riveted over

hats

Working Pressure

187 lb sq in

Main stays: Material

Steel

Tensile strength

28-32 tons sq in

Diameter

At end of stay,

2 7/8"

No. of threads per inch

6

Area supported by each stay

320 sq in

Working pressure by Rules

192 lb sq in

Screw stays: Material

Steel

Tensile strength

26-30 tons sq in

Diameter

At end of part,

1 1/2"

No. of threads per inch

9

Area supported by each stay

650 sq in



Working pressure by Rules *1944 lb* Are the stays drilled at the outer ends *no* Margin stays: Diameter { *1 3/4"* }  
No. of threads per inch *9* Area supported by each stay *98 sq* Working pressure by Rules *1864 lb*  
Tubes: Material *B B Iron* External diameter { *3 1/4"* } Thickness { *10849* } No. of threads per inch *9*  
Pitch of tubes *4 3/8" x 4 3/8"* Working pressure by Rules *2154 lb* Manhole compensation: Size of opening in  
shell plate *2 1/2" x 17 1/2"* Section of compensating ring *17 3/8" x 1 3/32"* No. of rivets and diameter of rivet holes *36 @ 1 3/16"*  
Outer row rivet pitch at ends *8 1/4"* 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 { *Plate* *✓* }  
Internal diameter *✓* Working pressure by Rules *✓* Thickness of crown *✓* Rivets *✓* 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* *✓* }  
Number of elements *✓* Material 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 22 inclusive for boilers been complied with *Yls*

The foregoing is a correct description,  
**CAMMELL LAIRD AND COMPANY LIMITED.**  
*J. B. Laird* Manufacturer.

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

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

*This boiler has been constructed under special Survey, and in accordance with the approved plan. It has been satisfactorily fitted on board, and examined under steam.*

Survey Fee ... .. £ : : When applied for, 192  
Travelling Expenses (if any) £ : : When received, 192

*J. D. Millon*  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **LIVERPOOL -2 AUG. 1929**

Assigned *See accompanying Machy rpt.*