

REPORT ON BOILERS.

No. 95751.

Received at London Office

-6 AUG 1929

Date of writing Report

192

When handed in at Local Office

1 AUG. 1929

Port of

Liverpool

No. in
Reg. Book.

Survey held at

Birkenhead

Date, First Survey

Decr 28th / 1928

Last Survey

July 23rd 1929.

on the

S.S. "Godfrey B. Holt"

(Number of Visits

78

Gross

3560

Tons

Net

2180

Master

Built at

Birkenhead

By whom built

Cammell Laird & Co. Ltd

Yard No.

954

When built

1929

Engines made at

Birkenhead

By whom made

Cammell Laird & Co. Ltd

Engine No.

954

When made

1929

Boilers made at

Birkenhead

By whom made

Cammell Laird & Co. Ltd

Boiler No.

954

When made

1929

Nominal Horse Power

401

Owners

J. Holt & Co (Liv) Ltd

Port belonging to

Liverpool

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

D. Colville & Son Ltd, Steel C. of Scotland

(Letter for Record

S

Total Heating Surface of Boilers

5776 sq ft

Is forced draught fitted

Yls

Coal or Oil fired

Coal

No. and Description of Boilers

Two Cylindrical multitubular

Working Pressure

180 lb sq in

Tested by hydraulic pressure to

320 lb sq in

Date of test

26.2.29

No. of Certificate

2326

Can each boiler be worked separately

Yls

Area of Firegrate in each Boiler

61 1/2 sq ft

No. and Description of safety valves to each boiler

Two spring loaded

Area of each set of valves per boiler

per Rule 11.86 sq in

Pressure to which they are adjusted

185 lb sq in

Are they fitted with easing gear

Yls

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

21"

Is oil fuel carried in the double bottom under boilers

No

Smallest distance between shell of boiler and tank top plating

2'-3"

Is the bottom of the boiler insulated

Yls

Largest internal dia. of boilers

15'-3 3/4"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

29/33 tons sq in

Thickness

1 7/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end

D.R. Lap

Long. seams

Double R. double butts

Diameter of rivet holes in

circ. seams

1 1/4"

long. seams

1 1/4"

Pitch of rivets

3-4.55"

8 3/4"

Percentage of strength of circ. end seams

plate 63.75

rivets 46.3

Percentage of strength of circ. intermediate seam

plate

85.7

rivets

85.6

Percentage of strength of longitudinal joint

plate 85.7

rivets 85.6

Working pressure of shell by Rules

181 1/2 lb

Thickness of butt straps

outer 1 7/16"

inner 1 1/16"

No. and Description of Furnaces in each Boiler

Three Corrugated

Material

Steel

Tensile strength

26-30 tons sq in

Smallest outside diameter

3'-9 1/16"

Length of plain part

top

bottom

Thickness of plates

crucible

1 9/32"

Description of longitudinal joint

weld

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

None

Working pressure of furnace by Rules

189 lb sq in

End plates in steam space: Material

Steel

Tensile strength

26-30 tons sq in

Thickness

1 9/32"

Pitch of stays

20 1/2 x 17"

How are stays secured

Double nuts small washers

Working pressure by Rules

181 lb sq in

Tube plates: Material

front Steel

back Steel

Tensile strength

26-30 tons sq in

Thickness

7/8"

3/4"

Mean pitch of stay tubes in nests

10 3/32"

Pitch across wide water spaces

14"

Working pressure

front 189 lb sq in

back 181 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 @ 8 3/4 x 7 1/8"

Length as per Rule

2'-11 7/8"

Distance apart

9"

No. and pitch of stays

in each

Three 8 3/4"

Working pressure by Rules

181 lb sq in

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons sq in

Thickness: Sides

7/8"

Back

7/8"

Top

7/8"

Bottom

7/8"

Pitch of stays to ditto: Sides

8 3/4 x 9"

Back

8 3/4 x 8 1/2"

Top

9 x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

181 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 1/16"

Pitch of stays at wide water space

14 1/4 x 8 3/4"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

189 lb sq in

Main stays: Material

Steel

Tensile strength

28-32 tons sq in

Diameter

At body of stay, 3"

No. of threads per inch

6

Area supported by each stay

348 sq in

Working pressure by Rules

190 lb sq in

Screw stays: Material

Steel

Tensile strength

26-30 tons sq in

Diameter

At turned off part, 1 7/8"

No. of threads per inch

9

Area supported by each stay

74 sq in

Working pressure by Rules *204 lb* Are the stays drilled at the outer ends *do* Margin stays: Diameter *1 3/4*
 No. of threads per inch *9* Area supported by each stay *107 sq* Working pressure by Rules *182 lb*
 Tubes: Material *Kon B.B.* External diameter *3 1/2* Thickness *1/2* No. of threads per inch *9*
 Pitch of tubes *4 3/16 x 4 3/16* Working pressure by Rules *210 lb* Manhole compensation: Size of opening *18 1/2*
 shell plate *2 1/4 x 17 1/4* Section of compensating ring *18 1/4 x 1 1/32* No. of rivets and diameter of rivet holes *43 x 1 1/4*
 Outer row rivet pitch at ends *9* 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 pitch
 of rivets in outer row in dome connection to shell *✓*

Type of Superheater *Horizontal Marine* Manufacturers of *✓*
 Number of elements *112* Material of tubes *Steel* Internal diameter and thickness of tubes *15 1/2 dia 2.5*
 Material of headers *Steel* Tensile strength *✓* Thickness *1"* Can the superheater be shut off *✓*
 the boiler be worked separately *Yes* Is a safety valve fitted to every part of the superheater which can be shut off from the boiler *Yes*
 Area of each safety valve *3.150* Are the safety valves fitted with easing gear *Yes* Working pressure as *185 lb*
 Rules *✓* Pressure to which the safety valves are adjusted *185 lb* Hydraulic test pressure *380 lb*
 tubes *✓* castings *✓* and after assembly in place *380 lb* Are drain cocks or valves fitted *✓*
 to free the superheater from water where necessary *Yes*
 Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with *Yes*

The foregoing is a correct description,
 CAMMELL LAIRD AND COMPANY LTD. Manufacturers

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

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

These boilers have been constructed under special Survey, and in accordance with the approved plan. They have been satisfactorily fitted on board and examined under steam.

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

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

Committee's Minute *LIVERPOOL - 2 AUG. 1929*
 Assigned *See accompanying machinery rpt.*