

## REPORT ON BOILERS.

(Boiler No. 2010)

Received at London Office

No. 79543

WEB. 14 JAN. 1920

Date of writing Report

191

When handed in at Local Office

- 6 SEP 1919 Port of

LIVERPOOL

WEB. 14 JAN. 1920

No. in Survey held at  
Reg. Book.

Birkenhead

Date, First Survey March 26<sup>th</sup> Last Survey Aug 27<sup>th</sup> 1919

on the s/s No. 305

S. Glassford

(Number of Visits 31)

Tons { Gross  
Net

Master

Built at Ardrossan

By whom built Ardrossan S.B. &amp; D.D. Co. Ltd.

When built

Engines made at  
Plates

Glasgow

By whom made McAlister &amp; Baxter

When made

Boilers made at Birkenhead

By whom made Cammell, Laird &amp; Co. Ltd.

In 2010

When made 1919

Registered Horse Power

Owners Mann, Macneal &amp; Co. Ltd.

Port belonging to Glasgow

## MULTITUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.

Manufacturers of Steel

J. Colville & Sons, Ltd.,  
Park Gate, S. & S. Co. Ltd.,  
High St. & S. Co. Ltd.

Letter for record S

Total Heating Surface of Boilers 4500

Is forced draft fitted

No. and Description of

Boilers 2 Cylindrical Multitubular Single Ended

Working Pressure 180 lb

Tested by hydraulic pressure to 360 lb

Date of test 21/1/19, 27/8/19

Certificates 2054, 2057 Can each boiler be worked separately

Area of fire grate in each boiler 62 sq. ft.

No. and Description of

Safety valves to each boiler

Area of each valve

Pressure to which they are adjusted

Are they fitted with easing gear

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

Mean dia. of boilers 15'6" Length 10'6"

Material of shell plates Steel

Thickness 1 3/4"

Range of tensile strength 28/32 tons

Are the shell plates welded or flanged No.

Descrip. of riveting: cir. seams DR. Lap.

long. seams TR. Double Butt

Diameter of rivet holes in long. seams 1 5/8"

Pitch of rivets 9"

of plates or width of butt straps 19 1/2"

Per centages of strength of longitudinal joint

rivets 88.2

Working pressure of shell by

Size of manhole in shell 16" x 12"

Size of compensating ring

Rivets 85.41

No. and Description of Furnaces in each

Boiler 3 Corrugated Material Steel

Outside diameter 4 1/2"

Depth of plain part

Thickness of plates

crown 3 3/4"

bottom 3 1/4"

Description of longitudinal joint Weld

No. of strengthening rings

Working pressure of furnace by the rules 185 lb

Combustion chamber

Material Steel Thickness: Sides 1/2"

Back 1/2"

Top 1/2"

Bottom 1/2"

Pitch of stays to ditto: Sides 9" x 9 1/2"

Back 9 1/2" x 9 1/2"

If stays are fitted with nuts or riveted heads

Nuts

Working pressure by rules 195 lb

Material of stays Steel

Area at

Smallest part 2 1/2" x 2 1/2"

Area supported by each stay 91.43 sq. in.

Working pressure by rules 199 lb

End plates in steam space: Material Steel Thickness 1 3/4"

How are stays secured

Nuts

Working pressure by rules 183 lb

Material of stays Steel

Area at smallest part 829 sq. in.

Area supported by each stay 462 sq. in.

Working pressure by rules 186.7 lb

Material of Front plates at bottom Steel

Thickness 3/4"

Material of

per back plate Steel Thickness 1/2"

Greatest pitch of stays 15 1/2" x 10 1/2"

Working pressure of plate by rules 193 lb

Diameter of tubes 3 1/4"

Material of tube plates Steel

Thickness: Front 1 3/4"

Back 1 3/4"

Mean pitch of stays 10 1/2" x 8 1/2"

Pitch across wide

Working pressures by rules 263 lb

Girders to Chamber tops: Material Steel

Depth and thickness of

at centre 2 7/8" x 7/8"

Length as per rule 2'8"

Distance apart 9"

Number and pitch of Stays in each 2-9 1/2"

Working pressure by rules 180 lb

Steam dome: description of joint to shell

%

% of strength of joint

Thickness of shell plates

Material

Description of longitudinal joint

Diam. of rivet holes

Working pressure of shell by rules

Crown plates

Thickness

How stayed

Type

Date of Approval of Plan

Tested by Hydraulic Pressure to

Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Pressure to which each is adjusted

Is Easing Gear fitted

The foregoing is a correct description,

CAMMELL LAIRD AND COMPANY LIMITED.

J. W. L. and Manufacturer.

During progress of work in shops -

Mar 26, Apr 1, 10, 17, 30, May 5, 13, 19, 22, 26, 29, June 3, 5, 11, 12, 16, 20, 26, July 1, 2, 4, 9, 11, 14, 23, 25, Aug 1, 13, 21, 26, 27.

During erection on board vessel -

Is the approved plan of boiler forwarded herewith

Total No. of visits 31.

LOCAL SECRETARY

(Forwarded to him with his Rpt 79408 on 8.8.19 - &amp; not returned)

## GENERAL REMARKS

(State quality of workmanship, opinions as to class, &amp;c.)

These boilers have been constructed under  
Survey in accordance with the approved plan and the Secretary's letter (E) of the 2<sup>nd</sup> October 1918.  
materials and workmanship are of good quality. When tested by water to twice the  
working pressure the boilers were found tight and satisfactory in every respect

&amp; Foreign Ship

£ 15 : 0

When applied for, - 6 SEP 1919

Travelling Expenses (if any) £

When received, 17.10. 1919

Committee's Minute

LIVERPOOL

- 9 SEP 1919

Transmit to London.

R. G. Deford

Engineer Surveyor to Lloyd's Register of Shipping.

GLASGOW

13 JAN 1920

Lloyd's Register  
Foundation