

## REPORT ON BOILERS.

No. 49074

Date of writing Report 16-4-1929

Received at London Office

24 APR 1929

1929

When handed in at Local Office 16-4-1929

Port of

Glasgow

No. in Reg. Book

Survey held at

Glasgow

Date, First Survey

20-2-29

Last Survey

16-4-1929

1929

on the

(Number of Visits)

Tons

Gross

Net

Master

Built at

By whom built

Yard No.

When built

Engines made at

By whom made

Engine No.

When made

Boilers made at

Garfin

By whom made

Anderson Sons Ltd

Boiler No.

3045

When made

1929

Nominal Horse Power

Owners

Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

B. Colville Sons

Total Heating Surface of Boilers

460 sq ft

Is forced draught fitted

(Letter for Record

S

No. and Description of Boilers

1 loco-marine

Coal or Oil fired

Working Pressure

150 lb

Tested by hydraulic pressure to

275 lb

Date of test

8-4-29

No. of Certificate

18248

Can each boiler be worked separately

Area of Firegrate in each Boiler

18.3 sq ft

No. and Description of safety valves to each boiler

Area of each set of valves per boiler

per Rule

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

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

Largest internal dia. of boilers

Barrel 4'-5 3/16"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

28-32

Thickness

13/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

S.R.

long. seams

D.R.-D.B.S.

Diameter of rivet holes in

circ. seams

13/16"

Pitch of rivets

2-8"

Percentage of strength of circ. end seams

plate

59.3

rivets

53.3

Percentage of strength of circ. intermediate seam

plate

71

rivets

142

Percentage of strength of longitudinal joint

plate

71

rivets

142

Working pressure of shell by Rules

Barrel 150 lb

Thickness of butt straps

outer

3/8"

inner

1/2"

No. and Description of Furnaces in each Boiler

1. Rectangular

Material

Steel

Tensile strength

26-30

Smallest outside diameter

Length of plain part

top 4'-5 13/16"

bottom

Thickness of plates

crown

1/2"

bottom

Description of longitudinal joint

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

3" x 2 1/2"

Working pressure of furnace by Rules

Smokebox 12 1/2 lb

End plates in steam space: Material

Steel

Tensile strength

26-30

Smokebox

plate

5"

Long

13"

How are stays secured

D.N. + Riveted doublers

Working pressure by Rules

Boorplate 17 1/2 lb

Tube plates: Material

front

Steel

back

Tensile strength

26-30

Thickness

5/8"

Mean pitch of stay tubes in nests

9 1/2"

Pitch across wide water spaces

Working pressure

front

159 lb

back

Stays to combustion chamber tops: Material

Steel

Tensile strength

26-30

Depth and thickness of girders

Length as per Rule

in each

Working pressure by Rules

163 lb

Combustion chamber plates: Material

Steel

Tensile strength

26-30

Thickness: Sides

1/2"

Back

1/2"

Top

1/2"

Bottom

Bottom

Pitch of stays to ditto: Sides

7 1/2" x 6 1/2"

Back

4" x 4 1/2"

Top

7 1/2" x 6 1/2"

Are stays fitted with nuts or riveted over

nuts

Working pressure by Rules

171 lb

Front plate at bottom: Material

Steel

Tensile strength

26-30

Thickness

13/32"

Lower back plate: Material

Steel

Tensile strength

26-30

Thickness

5/8"

Pitch of stays at wide water space

Are stays fitted with nuts or riveted over

Working Pressure

Main stays: Material

Steel

Tensile strength

28-32

Diameter

At body of stay,

1 1/8"

or

No. of threads per inch

6

Area supported by each stay

117 sq in

Working pressure by Rules

191 lb

or

153 lb

Screw stays: Material

Steel

Tensile strength

26-30

Diameter

At turned off part,

1 1/2"

or

No. of threads per inch

9

Area supported by each stay

48.7 sq in

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Working pressure by Rules **163 lb** Are the stays drilled at the outer ends **no** Margin stays: Diameter **1 1/2"** (At turned off part, or Over threads)  
 No. of threads per inch **9** Area supported by each stay **71.25 sq in** Working pressure by Rules **146 lb**  
 Tubes: Material **Iron** External diameter **2 1/2"** Thickness **10. w.g.** No. of threads per inch **9**  
 Pitch of tubes **3 3/8" x 3 3/8"** Working pressure by Rules **145 lb** Manhole compensation: Size of opening in shell plate **15" x 11"** Section of compensating ring **5" x 5/8"** No. of rivets and diameter of rivet holes **40 - 1 3/16"**  
 Outer row rivet pitch at ends **3 1/8"** Depth of flange if manhole flanged  
 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 of stays  
 How connected to shell Size of doubling plate under dome Working pressure by Rules  
 of rivets in outer row in dome connection to shell Diameter of rivet holes and pitch

**Type of Superheater**  
 Number of elements Material of tubes Manufacturers of Tubes  
 Material of headers Tensile strength Steel castings  
 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  
 tubes, castings Pressure to which the safety valves are adjusted Hydraulic test pressure:  
 to free the superheater from water where necessary and after assembly in place Are drain cocks or valves fitted

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

The foregoing is a correct description,

**ALEX. ANDERSON & SONS, LTD.** Manufacturer.

Dates of Survey { During progress of work in shops - - } **1929 Feb 20 Mar 25 Apr 28 16**  
 while building { During erection on board vessel - - - }

Are the approved plans of boiler and superheater forwarded herewith **with**  
 (If not state date of approval.)  
 Total No. of visits **6**

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

This boiler has been built under Special Survey to approved plans and the Society's Rules. Materials and workmanship are good. It is to the order of Mr Mc Kie & Baxter, for hull No 1244 for shipment to Singapore.

Survey Fee ... £ **4 : 4 : 0**

Travelling Expenses (if any) £ **✓ : : :**

When applied for,

**12 APR 1929**

When received,

**15-5-1929**

**H. L. Sutherland**

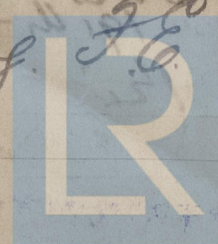
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 23 APR 1929**

Assigned **TRANSMIT TO LONDON**

TUE. 18 MAR 1930

See Eng. J.E. 262530



Lloyd's Register Foundation