

# REPORT ON BOILERS.

No. 62686

Received at London Office

AUG 21 1940

Date of writing Report

19

When handed in at Local Office

17. 8. 1940

Port of Glasgow

No. in Reg. Book.

Glasgow

Date, First Survey

(1939) May 30<sup>th</sup>

Last Survey

8<sup>th</sup> Aug. 1940

85176 on the

Boiler No. E.W. 124 M.V. "TREVILLEY"

(Number of Visits 18)

Gross 5300

Tons

Net

Master

Built at Glasgow

By whom built Lithgow & Co.

Yard No. 928

When built 1940

Engines made at

Glasgow

By whom made Barclay Curie

Engine No. E.W. 125

When made 1940

Boilers made at

Glasgow

By whom made Barclay Curie

Boiler No. E.W. 124

When made 1940

Nominal Horse Power

449

Owners Main Steamship Co. Ltd.

Port belonging to London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvilli 12

(Letter for Record

S.)

Total Heating Surface of Boilers

1684 sq ft

Is forced draught fitted

No

Coal or Oil fired

oil

No. and Description of Boilers

1 - S.E.

Working Pressure

120 lbs.

Tested by hydraulic pressure to

230 lbs.

Date of test

22-9-39

No. of Certificate

20451 Can each boiler be worked separately

-

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 - 2 1/4" I.H.L. valve

Area of each set of valves per boiler

per Rule 7.80" as fitted 7.950"

Pressure to which they are adjusted

120 lbs.

Are they fitted with easing gear

Yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

-

Smallest distance between boilers

on supports and bunkers on woodwork 24"

Is oil fuel carried in the double bottom under boilers

Yes

Smallest distance between shell of boiler and tank top plating

30"

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

12'-9"

Length

11'-0"

Shell plates: Material

Steel

Tensile strength

29/33

Thickness

2 3/32"

Are the shell plates welded or flanged

No

Description of riveting: circ. seams

end D.R. Lap

long. seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 13/16"

Pitch of rivets

2.4/14"

Percentage of strength of circ. end seams

plate 66.36 rivets 47.41

Percentage of strength of circ. intermediate seam

plate - rivets -

Percentage of strength of longitudinal joint

plate 85.86 rivets 93.28 combined 92.12

Working pressure of shell by Rules

123 lbs.

Thickness of butt straps

outer 9/16" inner 7/16"

No. and Description of Furnaces in each Boiler

3 - Deighton

Material

Steel

Tensile strength

26/30

Smallest outside diameter

3'-1 1/4"

Length of plain part

top bottom

Thickness of plates

crown 3/8" bottom

Description of longitudinal joint

welded

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

-

Working pressure of furnace by Rules

142 lbs.

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

15/16"

Pitch of stays 18 1/2" x 18"

How are stays secured

Double Nuts

Working pressure by Rules

121 lbs.

Tube plates: Material

front back

Steel

Tensile strength

26/30

Thickness

23/32" 1 1/16"

Mean pitch of stay tubes in nests

10 7/16"

Pitch across wide water spaces

14"

Working pressure

front 125 lbs. back 152 lbs.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

8" x 20 19/32"

Length as per Rule

2'-9 3/4"

Distance apart

9 1/2"

No. and pitch of stays

in each

20 10 1/2"

Working pressure by Rules

121 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

19/32"

Back

9/16"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

10 1/2" x 9 1/2"

Back

9 1/2" x 9 1/8"

Top

10 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

121 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

23/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

2 1/32"

Pitch of stays at wide water space

14"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

165 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay, or Over threads

2 1/2"

No. of threads per inch

6

Area supported by each stay

3330"

Working pressure by Rules

133 lbs.

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

At turned off part, or Over threads

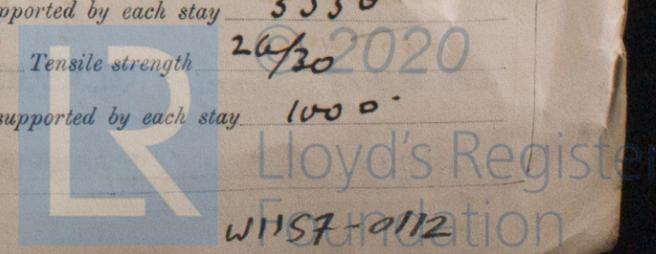
1 1/2"

No. of threads per inch

9

Area supported by each stay

1000"



Working pressure by Rules 144 lbs. Are the stays drilled at the outer ends No Margin stays: Diameter <sup>At turned off part,</sup> 1 5/8 or <sup>Over threads</sup> 1 5/8 ✓  
 No. of threads per inch 9 Area supported by each stay 107.5 Working pressure by Rules 151 lbs  
 Tubes: Material Steel External diameter <sup>Plain</sup> 3 Thickness <sup>Stay</sup> 5/16 x 1/4 No. of threads per inch 9  
 Pitch of tubes 4 1/4 x 4 1/8 Working pressure by Rules 140 lbs Manhole compensation: Size of opening in  
 shell plate 20 x 16 Section of compensating ring 19 x 2 3/32 No. of rivets and diameter of rivet holes 44 @ 1 5/16  
 Outer row rivet pitch at ends 6 Depth of flange if manhole flanged 4 Steam Dome: Material Nil  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint <sup>Plate</sup> <sup>Rivets</sup>  
 Internal diameter Working pressure by Rules Thickness of crown 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 Nil

Manufacturers of <sup>Tubes</sup> <sup>Steel forgings</sup> <sup>Steel castings</sup>

Number of elements Material of tubes 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 casing gear Working pressure as per  
 Rules Pressure to which the safety valves are adjusted Hydraulic test pressure:  
 tubes forgings and 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



The foregoing is a correct description,  
 For BARCLAY, CURLE & CO. LTD. Manufacturer  
 Alexander Macdonell

Dates of Survey <sup>During progress of work in shops - -</sup> <sup>During erection on board vessel - - -</sup> See accompanying Boiler Report.  
 Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)  
 Total No. of visits ✓

Is this Boiler a duplicate of a previous case yes If so, state Vessel's name and Report No. TREVANION Blt No 59049.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This Boiler has been built under Special Survey in accordance with the Rules and approved plan. Materials and workmanship are good. This Boiler has been satisfactorily fitted on board and Safety Valves adjusted under Steam to 120 lbs/sq in.

986  
17/8/40

Survey Fee ... .. £ 11 : 4 : 0 } When applied for 20 AUG 1940  
 Travelling Expenses (if any) £ : : } When received, 30-9-1940

G. H. Macdonell  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 20 AUG 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT.

