

# REPORT ON BOILERS.

No. 62686

AUG 21 1940

Received at London Office

Date of writing Report

19

When handed in at Local Office

17-8-40

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

(Number of Visits 18)

Gross 5300

Boiler No. E.W. 124 M/V. "TREVILLY"

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Tons

Net

Master

Built at

Pt. Glasgow

By whom built

Lithgow Ld.

Yard No. 928

When built 1940

Engines made at

Glasgow

By whom made

Bareilly Works

Engine No. EW 125

When made 1940

Boilers made at

Glasgow

By whom made

Bareilly Works

Boiler No. EW 124

When made 1940

Nominal Horse Power

449

Owners

Main Steamship Co. Ld.

Port belonging to

London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

Colvile & Co.

(Letter for Record S)

Total Heating Surface of Boilers

1183 sq ft

Is forced draught fitted No

Coal or Oil fired <sup>oil fired</sup> exhaust Heat

No. and Description of Boilers

One - Exhaust Heat & oil fired Boiler

Working Pressure 120 lbs

Tested by hydraulic pressure to

230 lbs

Date of test 22-9-39

No. of Certificate 20452

Can each boiler be worked separately ✓

Area of Firegrate in each Boiler

-

No. and Description of safety valves to each boiler 1 - 2" I.H.L. Smith

Area of each set of valves per boiler

per Rule 5.470 sq ft  
as fitted 6.280 sq ft

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

24" <sup>bulk!</sup>

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

9'-9"

Length 10'-6"

Shell plates: Material Steel

Tensile strength 29/33

Thickness

9/16"

Are the shell plates welded or flanged No

Description of riveting: circ. seams end D.R. Lap  
inter. ✓

long. seams

T.R.D. B.S.

Diameter of rivet holes in

circ. seams 13/16"  
long. seams 3/4"

Pitch of rivets

2.978"  
5"

Percentage of strength of circ. end seams

plate 72.71.  
rivets 49.05

Percentage of strength of circ. intermediate seam

plate ✓  
rivets

Percentage of strength of longitudinal joint

plate 85.0.  
rivets 98.05  
combined 89.61.

Working pressure of shell by Rules 122 lbs

Thickness of butt straps

outer 7/16"  
inner 9/16"

No. and Description of Furnaces in each Boiler 1 - Reighton

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 141 lbs

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness 25/32"

Pitch of stays 16" x 14"

How are stays secured

Double Nuts

Working pressure by Rules

123 lbs.

Tube plates: Material

front Steel  
back

Tensile strength

26/30

Thickness

11/16"

Mean pitch of stay tubes in nests

10 7/16"

Pitch across wide water spaces

13 3/8"

Working pressure front 165 lbs  
back 158 lbs

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

7 5/8" x 22 17/32"

Length as per Rule

2'-6 23/32"

Distance apart

9 1/2"

No. and pitch of stays

in each

22 10 1/2"

Working pressure by Rules

120 lbs.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

19/32"

Back

19/32"

Top

19/32"

Bottom

19/32"

Pitch of stays to ditto: Sides

10 1/2" x 9 1/2"

Back

10 1/2" x 9 1/2"

Top

10 1/2" x 9 1/2"

Are stays fitted with nuts or riveted over

Nuts

Working pressure by Rules

120 lbs.

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

25/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

25/32"

Pitch of stays at wide water space

13 3/8"

Are stays fitted with nuts or riveted over

Nuts

Working Pressure

130 lbs.

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay, 2 1/8"  
or  
Over threads

No. of threads per inch

6

Area supported by each stay

2240"

Working pressure by Rules

135 lbs

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

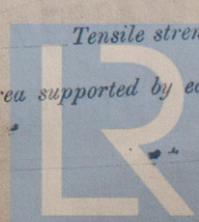
At turned off part, 1 1/2"  
or  
Over threads

No. of threads per inch

9

Area supported by each stay

1000"



Lloyd's Register Foundation  
WT157-0113

Working pressure by Rules 126 lbs Are the stays drilled at the outer ends No Margin stays: Diameter 1 5/8" (At turned off part, or Over threads)

No. of threads per inch 9 Area supported by each stay 1150" Working pressure by Rules 132 lbs

Tubes: Material Steel External diameter 3" + 1/4" Thickness 11 + 10 L.S.G. No. of threads per inch 9

Pitch of tubes 4 1/4" x 4 1/8" + 2 7/8" + 2 3/4" Working pressure by Rules 140 lbs Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 19" x 9/16" No. of rivets and diameter of rivet holes 44 @ 7/8"

Outer row rivet pitch at ends 5 1/2" 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 Plate Rivets

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 Nil

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 \_\_\_\_\_

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 \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place \_\_\_\_\_ Are drain cocks or valves fitted to free the superheater from water where necessary \_\_\_\_\_



The foregoing is a correct description, FOR BAROLAY, CURLE & CO., LTD Manufacturer. Alexander Macnutt

Dates of Survey (1939) May 30, June 8, 13, July 3 Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)

During erection on board vessel 12, 31, Aug 7, 11, 16, 25, Sept 8, 15, Oct 10, Dec 4, (1940) Jan 8, Feby 5, Mar 1, Aug 8. Total No. of visits 18

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

Rob  
17/8/40

Survey Fee ... £ 7 : 17 : 0 When applied for, 20 AUG 1940

Travelling Expenses (if any) £ : : When received, 30 - 9 - 1940

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

Committee's Minute GLASGOW 20 AUG 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT.



Rpt. 13.  
Date of writing  
No. in Reg. B 85176  
Built at...  
Owners...  
Electrical  
Is vessel  
Have plan  
Heating...  
has the go  
trip switch  
if not con  
arranged  
test for m  
of the ge  
near un  
injury a  
contact...  
are they  
and oil...  
material  
semi-ins  
Is the c  
to pilot  
side of s  
and for  
Are con  
ammete  
equalise