

## REPORT ON BOILERS.

No. 100,147

Received at London Office - 6 FEB 1942

Date of writing Report

19

When handed in at Local Office

30/1/1942

Port of

NEWCASTLE-ON-TYNE

No. in Reg. Book.

Survey held at

Newcastle on Tyne

Date, First Survey

7 Jan

Last Survey

26/1/1942

on the

M.V. "SAN VENANCIO"

(Number of Visits)

Gross 8152

Tons

Net 4801

Master

Built at

Newcastle (Hethorn)

By whom built

R.W. Hawthorn, Leslie

Yard No.

636

When built

1942-

Engines made at

Newcastle (St Peter's)

By whom made

ditto

Engine No.

3974

When made

1942-

Boilers made at

ditto

By whom made

ditto

Boiler No.

3974

When made

1942-

Nominal Horse Power

233

Owners

Eagle Oil Coy.

Port belonging to

London

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

Manufacturers of Steel

Colvilles &amp; Co.

Furnace Plates by The Steel Coy of Scotland

(Letter for Record

S.)

Total Heating Surface of Boilers

3500 sq ft.

Is forced draught fitted

Yes

Coal or Oil fired

Oil fired

No. and Description of Boilers

One Single ended

Working Pressure

180 lb/sq in.

Tested by hydraulic pressure to

320 lb

Date of test

19/9/41

No. of Certificate

912

Can each boiler be worked separately

Yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

Two 4" dia. spring loaded

Area of each set of valves per boiler

per Rule 22.44 sq in.

as fitted 25.12

Pressure to which they are adjusted

180 lb

Are they fitted with easing gear

Yes

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

No main Boilers.

Smallest distance between boilers or uptakes and bunkers or woodwork

Is oil fuel carried in the double bottom under boilers

no D.Btm

Smallest distance between shell of boiler and tank top plating

3' 4 1/2"

Boiler fitted on deck flat in ER.

Is the bottom of the boiler insulated

Yes

Largest internal dia. of boilers

16' 0 3/8"

Length

12' 6" mean

Shell plates: Material

S.

Tensile strength

28 &amp; 32 tons

Thickness

1 5/16"

Are the shell plates welded or flanged

Neither

Description of riveting: circ. seams

end D.R. lap

inter. none

long. seams

T.R. Dbl butt strap

Diameter of rivet holes in

circ. seams 1 3/8"

Pitch of rivets

3.95"

9 3/8"

Percentage of strength of circ. end seams

plate 65.2

rivets 47.1

Percentage of strength of circ. intermediate seam

plate None

rivets

Percentage of strength of longitudinal joint

plate 85.3

rivets 93.0

combined 89.3

Working pressure of shell by Rules

180 lb.

Thickness of butt straps

outer 1"

inner 1 1/8"

No. and Description of Furnaces in each Boiler

3 Morison Corrugated

Material

S.

Tensile strength

26 &amp; 30 tons

Smallest outside diameter

4' 0 1/4"

Length of plain part

top 1"

bottom 1"

Thickness of plates

crown 5/8"

bottom 5/8"

Description of longitudinal joint

free welded

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

none

Working pressure of furnace by Rules

189 lb.

End plates in steam space: Material

S.

Tensile strength

26 &amp; 30 tons

Thickness

1 1/32"

Pitch of stays 22" x 20 3/4" max.

How are stays secured

Nuts inside &amp; outside

Working pressure by Rules

185 lb.

Tube plates: Material

front S.

back S.

Tensile strength

26 &amp; 30 tons

Thickness

1 1/16"

Mean pitch of stay tubes in nests

9 7/8"

Pitch across wide water spaces

13 3/4" x 7 3/4"

Working pressure

front 200 lb

back 243 lb.

Girders to combustion chamber tops: Material

S.

Tensile strength

28 &amp; 32 tons

Depth and thickness of girder

at centre

10 3/4" x 3 3/4" x two

Length as per Rule

37 1/2" - 1/4"

Distance apart

10 1/2"

No. and pitch of stays

in each

3 @ 8 3/4"

Working pressure by Rules

182.5 lb.

Combustion chamber plates: Material

S.

Tensile strength

26 &amp; 30 tons

Thickness: Sides

45/64"

Back

45/64"

Top

45/64"

Bottom

1"

Pitch of stays to ditto: Sides

8 3/4" x 7"

Back

8 1/4" x 7 1/16"

Top

10 1/2" x 8 3/4"

Are stays fitted with nuts or riveted over

nuts on top stays and back marginal stays.

Remainder riveted

Working pressure by Rules

182 lb

Front plate at bottom: Material

S.

Tensile strength

26 &amp; 30 tons

Thickness

1"

Lower back plate: Material

S.

Tensile strength

26 &amp; 30 tons

Thickness

27/32"

Pitch of stays at wide water space

15" x 8 1/4"

Are stays fitted with nuts or riveted over

with nuts.

Working Pressure

198 lb.

Main stays: Material

S.

Tensile strength

28 &amp; 32 tons

Diameter

At body of stay, or over threads

3 1/4"

No. of threads per inch

6

Area supported by each stay

450 sq in.

Working pressure by Rules

206 lb.

Screw stays: Material

S.

Tensile strength

26 &amp; 30 tons

Diameter

At turned-off part, or over threads

1 3/4" girder stays

No. of threads per inch

9

Area supported by each stay

92 sq in 1 3/4"

63.5 sq in 1 1/2"

Contd. P.T.O

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Working pressure by Rules 197<sup>th</sup> Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part, 1 3/4"  
No. of threads per inch 9 Area supported by each stay 93.5 sq in Working pressure by Rules 194<sup>th</sup>  
Tubes: Material Lap welded W.I. External diameter 2 3/4" Thickness 3/8" x 5/16" No. of threads per inch 9  
Pitch of tubes 4" x 3 7/8" Working pressure by Rules 214<sup>th</sup> Manhole compensation: Size of opening in  
shell plate 21" x 17" Section of compensating ring 25 x 1 5/16" No. of rivets and diameter of rivet holes 36 of 1 7/16" dia  
Outer row rivet pitch at ends 10" Depth of flange if manhole flanged 4 1/2" Steam Dome: Material None  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint Plate  
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 None Manufacturers of Tubes  
Number of elements Material of tubes Steel forgings  
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 Yes  
The foregoing is a correct description,  
R. & W. HAMILTON, LESLIE & CO. LIMITED  
38/oluk Manufacturer.

Dates of Survey { During progress of work in shops - - }  
while building { During erection on board vessel - - }  
Are the approved plans of boiler and superheater forwarded herewith 21/6/40  
(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. DIPLODON, Yard no 632 (Eng 3969),  
Nwc. Rpt no. 99860

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)  
This Donkey Boiler has been constructed under special survey in accordance with the approved plans and the Society's Rules, and the materials and workmanship are good. The Boiler has been efficiently fitted on board and tested under steam under working conditions.  
See also Machy Rpt H.B.

Survey Fee ... .. £ See Machy Rpt When applied for, 19  
Travelling Expenses (if any) £ H.B. When received, 19

A. Watt.  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute FRI. 13 FEB 1942

Assigned See Nwc. J.E. 100147