

## REPORT ON BOILERS.

No. 96399

Received at London Office

Date of writing Report

19

When handed in at Local Office

5/7/38

Port of

NEWCASTLE-ON-TYNE

No. in Survey held at

Newcastle-on-Tyne.

Date, First Survey

28 May 1937

Last Survey

11 July 1938

37886

on the

M. V. "DAPHNELLA"

(Number of Visits

Tons

Gross 8000.8078

Net 4789.

Master

Built at

Newcastle-on-Tyne (Hobson)

By whom built

R. W. Hawthorn Leslie &amp; Co. Ltd.

Yard No.

611.

When built 1938.

Engines made at

Newcastle-on-Tyne (Hobson)

By whom made

R. W. Hawthorn Leslie &amp; Co. Ltd.

Engine No.

3937.

When made 1938.

Boilers made at

Newcastle-on-Tyne (Hobson)

By whom made

R. W. Hawthorn Leslie &amp; Co. Ltd.

Boiler No.

3937.

When made 1938.

Nominal Horse Power

502.

Owners

Anglo Saxon Petroleum Co. Ltd.

Port belonging to

London.

MULTITUBULAR BOILERS ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel

(Plate) The Steel Company of Scotland (Furnaces) Dightons Ltd.

(Letter for Record

S. ✓)

Total Heating Surface of Boilers

2500 sq. ft.

Is forced draught fitted

Yes. ✓

Coal or Oil fired

oil. ✓

No. and Description of Boilers

One. Single Ended. ✓

Working Pressure

180 lb/sq. in. ✓

Tested by hydraulic pressure to

320 lb/sq. in.

Date of test

7-1-38

No. of Certificate

754

Can each boiler be worked separately

✓

Area of Firegrate in each Boiler

✓

No. and Description of safety valves to each boiler

2. Spring loaded.

Area of each set of valves per boiler

{per Rule

160"

{as fitted

16.58 sq. in.

Pressure to which they are adjusted

180 lb/sq. in.

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 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

Yes. ✓

Largest internal dia. of boilers

14'-3 5/8"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

28-32 tons

Thickness

1 3/16"

Are the shell plates welded or flanged

neither

Description of riveting: circ. seams

end

DR. Exp. ✓

long. seams

T. R. D. B. S. ✓

Diameter of rivet holes in

{circ. seams

1 1/4"

{long. seams

1 1/4"

Pitch of rivets

3 1/2"

Percentage of strength of circ. end seams

{plate

64.2%.

{rivets

48.4%.

Percentage of strength of circ. intermediate seam

{plate

✓

Percentage of strength of longitudinal joint

{plate

85.7%.

{rivets

91%.

{combined

89.4%.

Working pressure of shell by Rules

183 lb/sq. in.

Thickness of butt straps

{outer

29/32"

{inner

1 1/32"

No. and Description of Furnaces in each Boiler

3. Corrugated Morrison Section. ✓

Material

Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-7 1/8"

Length of plain part

{top

8 7/8"

{bottom

Thickness of plates

{crown

9/16"

{bottom

Description of longitudinal joint

welded. ✓

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

none.

Working pressure of furnace by Rules

189 lb/sq. in.

End plates in steam space: Material

Steel

Tensile strength

26-30 tons

Thickness

1 1/32"

Pitch of stays

21" x 17 3/4"

How are stays secured

Double nuts

Working pressure by Rules

183 lb/sq. in.

Tube plates: Material

{front

Steel

{back

Steel

Tensile strength

26-30 tons

Thickness

15/16"

Mean pitch of stay tubes in nests

9 1/4"

Pitch across wide water spaces

13 3/4" x 7 3/4"

Working pressure

{front

242 lb/sq. in.

{back

285 lb/sq. in.

Girders to combustion chamber tops: Material

Steel

Tensile strength

28-32 tons

Depth and thickness of girder

at centre

10" x 1 1/2"

Length as per Rule

2'-10 1/2"

Distance apart

10"

No. and pitch of stays

in each

3 @ 8"

Working pressure by Rules

194 lb/sq. in.

Combustion chamber plates: Material

Steel

Tensile strength

26-30 tons

Thickness: Sides

45/64"

Back

45/64"

Top

45/64"

Bottom

7/8"

Pitch of stays to ditto: Sides

8" x 8"

Back

8" x 8"

Top

8" x 10"

Are stays fitted with nuts or riveted over

Riveted ✓

Working pressure by Rules

180 lb/sq. in.

Front plate at bottom: Material

Steel

Tensile strength

26-30 tons

Thickness

15/16"

Lower back plate: Material

Steel

Tensile strength

26-30 tons

Thickness

27/32"

Pitch of stays at wide water space

15" x 8"

Are stays fitted with nuts or riveted over

nuts. ✓

Working Pressure

200 lb/sq. in.

Main stays: Material

Steel

Tensile strength

28-32 tons. ✓

Diameter

{At body of stay,

{or

{Over threads

3"

No. of threads per inch

6.

Area supported by each stay

372.75 sq. in.

Working pressure by Rules

181 lb/sq. in.

Screw stays: Material

Steel

Tensile strength

26-30 tons. ✓

Diameter

{At turned off part,

{or

{Over threads

1 1/2" &amp; 1 5/8"

No. of threads per inch

9.

Area supported by each stay

64 sq. in.



Working pressure by Rules *196 40/10* Are the stays drilled at the outer ends *No.* Margin stays: Diameter { At turned off part, *1 3/4"* or Over threads }  
 No. of threads per inch *9.* Area supported by each stay *92 0"* Working pressure by Rules *197 40/10*  
 Tubes: Material *Steel* External diameter { Plain *2 3/4"* Stay *2 3/4"* Thickness { *9 1/2"* No. of threads per inch *9.*  
*Corrosion Resistant Steel*  
 Pitch of tubes *4" x 3 7/8"* Working pressure by Rules *Plain 215 40/10 Stay 205 40/10* Manhole compensation: Size of opening in  
 shell plate *21" x 17"* Section of compensating ring *21" x 1 3/16"* No. of rivets and diameter of rivet holes *40 @ 1 1/4"*  
 Outer row rivet pitch at ends *8 3/4"* Depth of flange if manhole flanged *3 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 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 *None.* Manufacturers of { Tubes Steel forgings Steel castings }  
 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 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

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

*R. & W. HAWTHORN* The foregoing is a correct description,  
*R. B. Johnston.* Manufacturer.

Dates of Survey { During progress of work in shops - - }  
 while building { During erection on board vessel - - }

*See Monthly Report*

Are the approved plans of boiler and superheater forwarded herewith *17-5-37.*  
 (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. *"ANCYLUS" Nux RN 92146.*

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

*The boiler has been built under Special Survey in accordance with the Society's Rules & approved plan. The materials & workmanship are sound & good. The boiler was efficiently installed on board and its safety valves adjusted under steam to the approved working pressure.*

Survey Fee ... .. £

Travelling Expenses (if any) £

*See*

*Ticky Report*

When applied for, 19

When received, 19

*L. Prescott.*

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

*See Nov 26 96399*



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