

REPORT ON BOILERS.

No. 86948

20 MAR 1931

Received at London Office

No. of visiting Report

192

When handed in at Local Office

18/3/31

Port of Newcastle-on-Tyne.

No. in Book.

Survey held at St. Peter's, Hebburn.

Date, First Survey

28 March/30

Last Survey

19 March 1931

on the Donkey Baler for the S. S. M. V. "Agnita"

(Number of Visits)

3561

Tons

1977

Master

Built at Hebburn

By whom built

Hawthorn Leslie & Co. Ltd

No.

548

When built

1931.

Engines made at

Amsterdam

By whom made

Werkspoor

Engine No.

9413

When made

1931.

Boilers made at

St. Peter's

By whom made

Hawthorn Leslie & Co. Ltd

Boiler No.

9413

When made

1931.

Nominal Horse Power

483

Owners

Anglo-Sax Pet. Co. Ltd

Port belonging to

The Hague.

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Co. of Scotland

(Letter for Record)

B

Total Heating Surface of Boilers

1139 sq ft

Is forced draught fitted

yes

Coal or Oil fired

Oil.

No. and Description of Boilers

One, two furnace cylindrical

Working Pressure

150 lbs

Tested by hydraulic pressure to

245 lbs

Date of test

30.3.30

No. of Certificate

465

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

1 pair Lockburns

1. H. L. Type

Area of each set of valves per boiler

per Rule

as fitted

2 1/4 x 2

Pressure to which they are adjusted

150 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 or uptakes and bunkers or woodwork

Under deck

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

no

Largest internal dia. of boilers

10'-6"

Length

10'-6"

Shell plates: Material

B

Tensile strength

30/33 T.

Thickness

25/32"

Are the shell plates welded or flanged

yes

Description of riveting: circ. seams

end

D. R. Lap

Long. seams

D. R. D. B. S.

Diameter of rivet holes in

circ. seams

1"

Pitch of rivets

3 1/8"

Percentage of strength of circ. end seams

plate

66.6

rivets

51.8

Percentage of strength of circ. intermediate seam

plate

-

rivets

Percentage of strength of longitudinal joint

plate

80.5

rivets

85.5

combined

89.5

Working pressure of shell by Rules

160 lbs

Thickness of butt straps

outer

11/16"

inner

13/16"

No. and Description of Furnaces in each Boiler

Two vertical sections.

Material

B

Tensile strength

26/30 T.

Smallest outside diameter

2-9 1/8"

Length of plain part

top

-

bottom

Thickness of plates

crown

4/16"

bottom

Description of longitudinal joint

weld.

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

none

Working pressure of furnace by Rules

193 lbs

End plates in steam space: Material

B

Tensile strength

26/30 T

Thickness

29/32"

Pitch of stays

15 1/2" x 15"

How are stays secured

D. R. L.

Working pressure by Rules

162 lbs

Tube plates: Material

front

Steel

back

Tensile strength

26/30 T

Thickness

29/32"

25/32"

Mean pitch of stay tubes in nests

4 1/8" x 4 1/8"

Pitch across wide water spaces

13 1/2"

Working pressure

front

201 lbs

back

340 lbs

Girders to combustion chamber tops: Material

B

Tensile strength

28/32 T.

Depth and thickness of girder

at centre

4" x 1/2" D.

Length as per Rule

25 9/16"

Distance apart

4 1/2"

No. and pitch of stays

in each

8 @ 8"

Working pressure by Rules

146 lbs

Combustion chamber plates: Material

B

Tensile strength

26/30 T.

Thickness: Sides

21/32"

Back

21/32"

Top

21/32"

Bottom

21/32"

Pitch of stays to ditto: Sides

8" x 4 1/2"

Back

8 1/4" x 4 1/4"

Top

8" x 4 1/2"

Are stays fitted with nuts or riveted over

Riveted

Working pressure by Rules

166 lbs

Front plate at bottom: Material

B

Tensile strength

26/30 T.

Thickness

29/32"

Lower back plate: Material

B

Tensile strength

26/30 T

Thickness

29/32"

Pitch of stays at wide water space

15" x 4 1/4"

Are stays fitted with nuts or riveted over

Riveted

Working Pressure

148 lbs

Main stays: Material

B

Tensile strength

28/32 T

Diameter

At body of stay.

2 3/8"

No. of threads per inch

6

Area supported by each stay

232 sq"

Working pressure by Rules

169 lbs

Screw stays: Material

B

Tensile strength

26/30 T

Diameter

At turned off part.

1 3/8"

No. of threads per inch

9

Area supported by each stay

600 sq"

© 2018



Lloyd's Register Foundation

Working pressure by Rules 1685 Are the stays drilled at the outer ends *yes.* Margin stays: Diameter *1 5/8"* At turned off part, or Over threads
 No. of threads per inch 9 Area supported by each stay 84.30 Working pressure by Rules 1482
 Tubes: Material *Steel* External diameter *2 3/4"* Thickness *9 W. 2* No. of threads per inch 9
 Pitch of tubes *3 15/16" x 3 15/16"* Working pressure by Rules 2152
 shell plate *21 x 14"* Section of compensating ring *8" x 29/32"* No. of rivets and diameter of rivet holes *36 @ 1 1/16"* Manhole compensation: Size of opening in
 Outer row rivet pitch at ends *6 7/8"* Depth of flange if manhole flanged *3 1/2"* Steam Dome: Material *Iron.*
 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 Manufacturers of Tubes
 Number of elements Material of tubes Steel castings
 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 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 R. & W. HAWTHORN, LESLIE & Co. LD.
 Manufacturer.

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - - }
 See *July Report* Are the approved plans of boiler and superheater forwarded herewith *Yes.*
 (If not state date of approval.)
 Total No. of visits

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

The Boiler has been built under special survey in accordance with the approved plan, the Rules of the Society, & has been securely fitted on board the vessel & its safety valves adjusted under steam to working pressure.

Survey Fee ... £ *40* When applied for. 192
 Travelling Expenses (if any) £ *Repairs.* When received. 192

Geo. A. Ferguson.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute WED. 8 APR 1931

Assigned *See F. & R. Rpt.*