

REPORT ON BOILERS.

No. 86846

Received at London Office 25 FEB 1931

Date of writing Report

19

When handed in at Local Office

24. 2. 1931

Port of Newcastle-on-Tyne

No. in
Reg. Book.

Survey held at

St. Peter's - Hebburn

Date, First Survey

3rd Feb 1930

Last Survey

19. 2. 1931

on the

Donkey boiler for the M/V "KARPA"

(Number of Visits

Tons

Gross 3007

Net 1630

Master

Built at

Hebburn

By whom built

Hawthorn Leslie & Co. Ltd. No. 545

When built 1931

Engines made at

St. Peter's

By whom made

Hawthorn Leslie & Co. Ltd. Engine No. 3775

When made 1931

Boilers made at

St. Peter's

By whom made

Hawthorn Leslie & Co. Ltd. Boiler No. 3775

When made 1931

Nominal Horse Power

380

Owners

Anglo-Bascon Del. Co. Ltd. Port belonging to London

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

Manufacturers of Steel

The Steel Co. of Scotland

(Letter for Record B)

Total Heating Surface of Boilers

837 sq. ft.

Is forced draught fitted

yes

Coal or Oil fired

oil

No. and Description of Boilers

1 Simple ended marine

Working Pressure

150 lbs

Tested by hydraulic pressure to

300

Date of test

20. 3. 30

No. of Certificate

439

Can each boiler be worked separately

—

Area of Firegrate in each Boiler

—

No. and Description of safety valves to each boiler

1 pair of spring loaded 1 1/2" H.L. type

Area of each set of valves per boiler

per Rule

4.2 sq. ft.

as fitted

6.280 sq. ft.

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

Is oil fuel carried in the double bottom under boilers

no

Smallest distance between shell of boiler and tank top plating

in main deck

Is the bottom of the boiler insulated

Largest internal dia. of boilers

9'-10"

Length

9'-8"

Shell plates: Material

B

Tensile strength

29/33 T.

Thickness

29/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

inter

—

long. seams

B. R. D. S. S.

Diameter of rivet holes in

circ. seams

1"

Pitch of rivets

3"

—

Percentage of strength of circ. end seams

plate

66.6

rivets

51.3

Percentage of strength of circ. intermediate seam

plate

80.5

rivets

—

Percentage of strength of longitudinal joint

plate

80.5

rivets

84.6

combined

89.2

Working pressure of shell by Rules

141 lbs

Thickness of butt straps

outer

11/16"

inner

13/16"

No. and Description of Furnaces in each Boiler

Two Morrison section

Material

B

Tensile strength

26/30 T

Smallest outside diameter

2-8 3/8"

Length of plain part

top

—

bottom

Thickness of plates

crown

3 1/16"

bottom

Description of longitudinal joint

Weld

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

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" x 14 3/4"

How are stays secured

D. nuts

Working pressure by Rules

140 lbs

Tube plates: Material

front

Steel

back

Tensile strength

26/30 T

Thickness

23/32"

Mean pitch of stay tubes in nests

4 7/8"

Pitch across wide water spaces

14 1/4"

Working pressure

front

224 lbs

back

224 lbs

Girders to combustion chamber tops: Material

B

Tensile strength

28/32 T

Depth and thickness of girder

at centre

6 1/2" x 1 1/16"

Length as per Rule

23 5/8"

Distance apart

4 1/2"

No. and pitch of stays

in each

2 @ 4 1/2"

Working pressure by Rules

192 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

4 1/2" x 4 1/2"

Back

4 1/2" x 4 1/2"

Top

4 1/2" x 4 1/2"

Are stays fitted with nuts or riveted over

Riveted

Working pressure by Rules

144 lbs

Front plate at bottom: Material

B

Tensile strength

26/30 T

Thickness

29/32"

Thickness

29/32"

Lower back plate: Material

B

Tensile strength

26/30 T

Thickness

29/32"

Pitch of stays at wide water space

15 3/8" x 4 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

144 lbs

Main stays: Material

B

Tensile strength

28/32 T

Diameter

At body of stay,

2 1/4"

or

Over threads

No. of threads per inch

6

Area supported by each stay

221.25 sq. in.

Working pressure by Rules

150 lbs

Screw stays: Material

B

Tensile strength

26/30 T

Diameter

At turned off part,

1 3/8"

or

Over threads

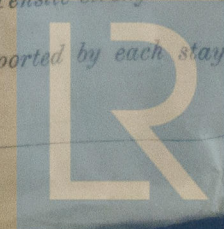
No. of threads per inch

9

Area supported by each stay

56.4 sq. in.

W1134-0012

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Working pressure by Rules 180 lbs Are the stays drilled at the outer ends ☒ No Margin stays: Diameter ^{At turn-d off part} 1 5/8" ^{Over threads} 1 5/8" /

No. of threads per inch 9 Area supported by each stay 84.5" Working pressure by Rules 162 lbs

Tubes: Material Stm External diameter ^{Plain} 2 3/4" ^{Stay} 2 3/4" Thickness ^{9 W. 2} 1 1/4" ^{5/16} No. of threads per inch 9

Pitch of tubes 3 5/16" x 3 5/16" Working pressure by Rules 156 lbs Manhole compensation: Size of opening in shell plate 21" x 14" Section of compensating ring 20" x 29/32" No. of rivets and diameter of rivet holes 36 @ 1" /

Outer row rivet pitch at ends 6 3/4" Depth of flange if manhole flanged 3 1/2" Steam Dome: Material Stm.

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

How connected to shell Inner radius of crown Working pressure by Rules

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} ^{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, 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

For R. & W. HAWTHORN LESLIE & Co. LD.

The foregoing is a correct description,

Manufacturer.

Dates of Survey ^{During progress of work in shops - -} ^{During erection on board vessel - - -} See Survey 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. M/V. Aquilona.

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

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

86

169

30

285

20

Survey Fee £ 60 : When applied for, 19

Travelling Expenses (if any) £ 9 each Rpt. : When received, 19

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

Committee's Minute

FRI. 27 FEB. 1931

Assigned

See other J.E. Rpt



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