

REPORT ON BOILERS.

Std. No. 30472
Hpl. No. 16939

6 AUG 1930

Received at London Office

2 OCT 1930

Date of writing Report

19

When handed in at Local Office

Port of

West Hartlepool

1st Oct 1930

No. in
Reg. Book

Survey held at

Hartlepool

Date, First Survey

2 June

Last Survey

21 July

1930

on the

M.V. No 709

M.V. THORSHOLM.

(Number of Visits

22)

Tons

Gross 6748

Net 4046

Master

Built at

Sunderland

By whom built

Simp & Sons Ltd

Yard No.

709

When built

1930

Engines made at

Sunderland

By whom made

Wm Dorford & Sons Ltd.

Engine No.

177

When made

1930

Boilers made at

Hartlepool

By whom made

Richardsons Westgarth & Co Ltd

Boiler No.

D205

When made

1930

Nominal Horse Power

116.

Owners

Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY. & WASTE HEAT. (A)

Manufacturers of Steel

Steel Company of Scotland Ltd

(Letter for Record S)

Total Heating Surface of Boilers

1745 sq. ft.

Is forced draught fitted

yes

Coal or Oil fired

Wing furnaces oil.

No. and Description of Boilers

One. single ended.

Working Pressure

156 lbs

Tested by hydraulic pressure to

275 lb

Date of test

16.7.30

No. of Certificate

3785

Can each boiler be worked separately

yes

Area of Firegrate in each Boiler

No. and Description of safety valves to each boiler

2 Marine type.

Area of each set of valves per boiler

per Rule 15.85

Pressure to which they are adjusted

155-158

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

3'-0"

Is oil fuel carried in the double bottom under boilers

yes

Smallest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Largest internal dia. of boilers

11'-4 5/16"

Length

11'-6"

Shell plates: Material

Steel

Tensile strength

28/32

Thickness

27 3/32"

Are the shell plates welded or flanged

no

Description of riveting: circ. seams

end

DR Lap

long. seams

D.R. D.B.S.

Diameter of rivet holes in

circ. seams

1 3/32"

long. seams

1 3/32"

Pitch of rivets

3 1/2"

5 1/16" row 2 3/32" row

Percentage of strength of circ. end seams

plate 68.2

rivets 49.9

Percentage of strength of circ. intermediate seam

plate 81.8

rivets 80.6

Percentage of strength of longitudinal joint

plate 81.8

rivets 80.6

combined 90.6

Working pressure of shell by Rules

150 lbs

Thickness of butt straps

outer 1/16"

inner 1/16"

No. and Description of Furnaces in each Boiler

3. 2 wing furnaces, 1 Centre plain

Material

Steel

Tensile strength

26/30

Smallest outside diameter

Cor. 31 1/2" plain 24"

Length of plain part

top 100"

bottom 100"

Thickness of plates

crown 3/8"

Cor. 19"

Description of longitudinal joint

welded

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

Working pressure of furnace by Rules

Cor. 166 plain 157

End plates in steam space: Material

Steel

Tensile strength

26/30

Thickness

1"

Pitch of stays

19 1/2 x 14

How are stays secured

Double nuts.

Working pressure by Rules

158 lb

Tube plates: Material

front steel

back steel

Tensile strength

26/30

Thickness

25 3/32"

11 1/16"

Mean pitch of stay tubes in nests

wings 9 1/8 x 10 1/8"

Centre 8 5/8 x 12"

Pitch across wide water spaces

13 1/4 x 9 3/32"

Working pressure

front 153 lb

back 157 lb

Girders to combustion chamber tops: Material

Steel

Tensile strength

28/32

Depth and thickness of girder

at centre

Wing 7 1/4 x 1 3/8"

Cent 7 3/4 x 1 3/8"

Length as per Rule

27 7/8"

Distance apart

9" wings, 10 1/2" Cent.

No. and pitch of stays

in each

3 6 3/4"

Working pressure by Rules

160 W. 178 C.

Combustion chamber plates: Material

Steel

Tensile strength

26/30

Thickness: Sides

19 3/32"

Back

23 3/32"

Top

19 3/32"

Bottom

19 3/32"

Pitch of stays to ditto: Sides

9 x 8 3/4"

Back

8 1/2 x 8"

Top

6 3/4 x 10 1/2"

Are stays fitted with nuts or riveted over

Back riveted

Working pressure by Rules

154 lb

Front plate at bottom: Material

Steel

Tensile strength

26/30

Thickness

3 3/4"

Thickness

25 3/32"

Lower back plate: Material

Steel

Tensile strength

26/30

Thickness

3 3/4"

Pitch of stays at wide water space

13 5/8 x 8 1/2"

Are stays fitted with nuts or riveted over

nuts

Working Pressure

176 lb

Main stays: Material

Steel

Tensile strength

28/32

Diameter

At body of stay, or Over threads 2 1/2 x 2 3/8"

No. of threads per inch

6

Area supported by each stay

21 1/2 x 13 x 16 1/2 x 14

Working pressure by Rules

158 + 170 lb

Screw stays: Material

Steel

Tensile strength

26/30

Diameter

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

No. of threads per inch

9

Area supported by each stay

8 3/4 x 9

Working pressure by Rules 159 lb Are the stays drilled at the outer ends no Margin stays: Diameter 1 1/8" At turned off part, or Over threads 1 1/8"
No. of threads per inch 9 Area supported by each stay 11 5/16" x 8 1/2" Working pressure by Rules 157 lb
Tubes: Material Iron External diameter 2 1/2" wings Thickness 8 W.G. Wimp. 11 W.B. Centre No. of threads per inch 9
Pitch of tubes 3 5/8" x 3 9/16" W. 3 x 2 3/8" C Working pressure by Rules 210 x 187 Stay. 155 plain Manhole compensation: Size of opening in shell plate 12" x 16" Section of compensating ring 11 15/16" x 7/8" No. of rivets and diameter of rivet holes 28 1 1/2"
Outer row rivet pitch at ends 5 1/16" Depth of flange if manhole flanged ✓ 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 ✓
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 none 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 Yes

The foregoing is a correct description,
For RICHARDSON, WESTGARTH & CO. LIMITED

Manufacturer.

Dates of Survey During progress of work in shops - - - 19.6.30, 2.5.31, 12.18.30, 27.30.30, 3.7.31, 10.11.30, 18.30.31, 25.28.29.30.31 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓
while building During erection on board vessel - - - Total No. of visits 22

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

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

This boiler has been built under Special Survey and is in accordance with the approved plan.
On completion it satisfactorily withstood the hydraulic test. The mountings have been examined and tested.
It is being despatched to Sunderland for fitting on board. This boiler has been satisfactorily fitted in the vessel. The safety valves adjusted under steam for notation see Machinery report.

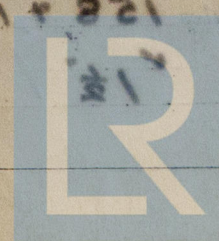
Survey Fee £ 11 : 12 : 0 When applied for 5 Aug 30

Travelling Expenses (if any) £ When received 1 Sep 30

R.D. Shilston
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUE. 14 OCT 1930

Assigned Su. F. E. Rpt



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Foundation