

REPORT ON BOILERS.

No. 17316

-6 MAR 1934

Received at London Office

16 DEC 1933

Date of writing Report

19

When handed in at Local Office

14.12.1933

Port of

West Hartlepool

No. in Survey held at

Book.

Date, First Survey

26 Sept

Last Survey

8 Dec 1933

(Number of Visits 23)

Gross Tons
Net

on the

Steam trawler "BRIMNES"

ater

Built at

Middlesbrough

By whom built

Messrs Smith's Dock Co Ltd

ard No.

965

When built

1934

ines made at

Middlesbrough

By whom made

Messrs Smith's Dock Co Ltd

Engine No.

428

When made

1934

ers made at

Hartlepool

By whom made

Messrs Richardson Westgarth & Co Ltd

Boiler No.

228

When made

1933

inal Horse Power

Owners

Oddoson & Co Ltd

Port belonging to

Hull

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel

The Steel Company of Scotland

(Letter for Record S)

al Heating Surface of Boilers

2335 sq ft

Is forced draught fitted

No.

Coal or Oil fired

Coal

and Description of Boilers

One, Single Ended

Working Pressure 225 lb

ted by hydraulic pressure to

384 lb

Date of test

23-11-33

No. of Certificate

3811

Can each boiler be worked separately

Yes

a of Firegrate in each Boiler

54 sq ft

No. and Description of safety valves to each boiler

Pair Coxburns Improved High Lift

a of each set of valves per boiler

per Rule 6.08

as fitted 7.94

Pressure to which they are adjusted

230 lbs

Are they fitted with easing gear

Yes

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

Yes

llest distance between boilers or uptakes and bunkers or woodwork

1'-0"

Is oil fuel carried in the double bottom under boilers

No

llest distance between shell of boiler and tank top plating

Is the bottom of the boiler insulated

Yes

est internal dia. of boilers

15'6"

Length

10'9"

Shell plates: Material

Mild Steel

Tensile strength

29-33 tons

ness

1 7/32"

Are the shell plates welded or flanged

Yes

Description of riveting: circ. seams

end

D.R. Lap.

seams

T.R.D.B.S.

Diameter of rivet holes in

circ. seams 1 7/16"

long. seams 1 1/2"

Pitch of rivets

3 7/8"

inter.

10'8"

centage of strength of circ. end seams

plate 62.9

rivets 43.2

Percentage of strength of circ. intermediate seam

plate

85.18

centage of strength of longitudinal joint

plate 84.74

combined 84.24

Working pressure of shell by Rules

226.8 lb

tness of butt straps

outer 1 3/16"

inner 1 5/16"

No. and Description of Furnaces in each Boiler

3. Morrison type

rial

Mild Steel

Tensile strength

26-30 tons

Smallest outside diameter

3'-8 5/8"

th of plain part

top

bottom

Thickness of plates

crown 1 1/16"

bottom

Description of longitudinal joint

Welded

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

Working pressure of furnace by Rules

225.8 lb

plates in steam space: Material

Mild Steel

Tensile strength

26-30 tons

Thickness

1 5/16"

Pitch of stays

17 1/2" x 20"

are stays secured

Double nuts & washers

Working pressure by Rules

228 lb

plates: Material

front Mild Steel

back

Tensile strength

26-30 tons

Thickness

1"

7/8"

pitch of stay tubes in nests

10 3/4"

Pitch across wide water spaces

14 1/2" x 9"

Working pressure

front 237 lb

back 239 lb

ers to combustion chamber tops: Material

Mild Steel

Tensile strength

26-30 tons

Depth and thickness of girder

atre

9 1/4" x 7/8"

Length as per Rule

34 1/32"

Distance apart

8 3/4"

No. and pitch of stays

ch

3 x 8"

Working pressure by Rules

229 lb

Combustion chamber plates: Material

Mild Steel

ile strength

26-30 tons

Thickness: Sides

2 1/32"

Back

2 1/32"

Top

1 1/16" x 2 1/32"

Bottom

1"

of stays to ditto: Sides

8 1/8" x 8"

Back

8 1/8" x 8"

Top

8 3/4" x 8" 8 1/8" x 8"

Are stays fitted with nuts or riveted over

Nuts

ing pressure by Rules

235 lb, 234 lb, 230 lb

Front plate at bottom: Material

Mild Steel

Tensile strength

26-30 tons

tness

1"

Lower back plate: Material

Mild Steel

Tensile strength

26-30 tons

Thickness

15/16"

of stays at wide water space

15" x 8"

Are stays fitted with nuts or riveted over

Nuts

ing Pressure

250 lb

Main stays: Material

Mild Steel

Tensile strength

28-32 tons

eter

At body of stay,

3 1/4"

or

Over threads

3"

No. of threads per inch

6

Area supported by each stay

350 sq in & 297.5 sq in

ing pressure by Rules

229 lb & 226 lb

Screw stays: Material

Mild Steel

Tensile strength

26-30 tons

meter

At turned off part,

13 1/4" x 1 5/8"

or

Over threads

No. of threads per inch

9

Area supported by each stay

405 sq in, 65 sq in, 64 sq in

003674-003686-0060

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Working pressure by Rules ^{259lb 237lb} 234lb. Are the stays drilled at the outer ends No. Margin stays: Diameter { At turned off part, 1 7/8" Over threads }
No. of threads per inch 9. Area supported by each stay 90 sq in Working pressure by Rules 236lb.
Tubes: Material Hot drawn steel External diameter { Plain 3 1/2" Stay 3 1/2" } Thickness { 7/16", 3/8", 5/16" } No. of threads per inch 9
Pitch of tubes 5" x 4 1/2" Working pressure by Rules 260lb. Manhole compensation: Size of opening in shell plate 14" x 14" Section of compensating ring 32 1/2" x 31" x 1 7/32" No. of rivets and diameter of rivet holes 30" x 1 1/2"
Outer row rivet pitch at ends 10 1/8" Depth of flange if manhole flanged ✓ Steam Dome: Material Mild steel.
Tensile strength 26-30 tons Thickness of shell 15/16" Description of longitudinal joint T.R. Lap.
Diameter of rivet holes 1 3/16" Pitch of rivets 4 1/4" Percentage of strength of joint { Plate 72 Rivets 73.7 }
Internal diameter 36" Working pressure by Rules 515lb. Thickness of crown 1" No. and diameter of stays ✓ Inner radius of crown 36" Working pressure by Rules 292lb.
How connected to shell Riveted. Size of doubling plate under dome ✓ Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 1 5/16" x 9.04"

Type of Superheater Smoke tube Manufacturers of Tubes Superheater Co. Ltd. Steel castings
Number of elements 49. Material of tubes S. D. Steel Internal diameter and thickness of tubes 19 1/4" - 3 1/4"
Material of headers Steel Tensile strength ✓ Thickness 1" Can the superheater be shut off and the boiler be worked separately ✓
Area of each safety valve 1.76 sq in Are the safety valves fitted with easing gear ✓ Working pressure as per Rules app. 225lb. Pressure to which the safety valves are adjusted 230lb. Hydraulic test pressure: tubes 1000 lbs. headers 675lb. and after assembly in place 675lb. 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.

For RICHARDSON, WESTGARTH & CO. LIMITED
The foregoing is a correct description,
W. E. J. Bourdage Manufacturer.

Dates of Survey { During progress of work in shops - - } 1931 Sep 24 Oct 3 6 10 13 16 19 24 26 27 Are the approved plans of boiler and superheater forwarded herewith No. 6-9-33.
while building { During erection on board vessel - - } Nov. 2 6 8 13 15 16 17 20 22 23 27 30 Dec 8 (If not state date of approval.)
Total No. of visits ✓

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 constructed under Special Survey, and in accordance with the approved plan, for a working pressure of 225lb per square inch. The materials and workmanship have been found good and upon completion the Boiler was tested by hydraulic pressure of 384lb per square inch with satisfactory results.
The Boiler is to be dispatched to Middlesbrough for fitting on board the vessel.

This boiler has been securely fitted aboard and its safety valve adjusted under steam.

M. J. McCann

Survey Fee ... £ 15 : 12 : 0
Travelling Expenses (if any) £ : :

When applied for, 19
When received, 1934

J. Brooke Smith
Engineer Surveyor to Lloyd's Register of Shipping.

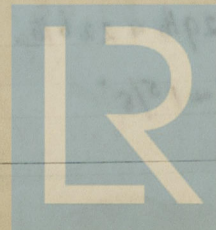
Committee's Minute

FRI. 9 MAR 1934

FRI. 27 APR 1934

Assigned

See Ind. 15050



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