

REPORT ON BOILERS.

No. 88184

Received at London Office

8 MAR 1932

Report of writing 5th March, 1932 When handed in at Local Office 5th March, 1932 Port of Newcastle-on-Tyne

No. in Survey held at Newcastle-on-Tyne Date, First Survey 27th October 1931 Last Survey 4th 3rd 1932
Book. 2078 on the M. S. "B. L. Hague" Tons Gross 12425 Net 7096
Tons

ester Built at Monfalcone By whom built C. Ruin. dell' Adriatico and No. 249 When built 1932
Engines made at Turin By whom made Fiat S. G. M. Engine No. 1801-2 When made 1932
Boilers made at Newcastle-on-Tyne By whom made R. W. Hawthorn, Leslie & Co. Ltd. Boiler No. 9548 When made 1932.
Nominal Horse Power 306 Owners Warind Tanker Co. Ltd. Port belonging to Danzig
Rehdererei J. M. & Co.

ULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland Ltd., & Roddingham Iron & Steel Co. Ltd. (Letter for Record S.)
Total Heating Surface of Boilers 4548 sq. ft. Is forced draught fitted Coal or Oil fired oil

and Description of Boilers Two Single Ended Working Pressure 200 lbs./sq. in.

Tested by hydraulic pressure to 350 lbs./sq. in. Date of test 1.3.32 No. of Certificate 566 Can each boiler be worked separately

Area of Firegrate in each Boiler 16.05 sq. ft. No. and Description of safety valves to each boiler Two Spring loaded.
Area of each set of valves per boiler 17.32 sq. ft. Pressure to which they are adjusted 200 lbs. Are they fitted with easing gear yes ✓
as fitted 19.24

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no. non return valves
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 no
Largest internal dia. of boilers 14'-1" Length 12'-0" Shell plates: Material Steel Tensile strength 28/32 tons/sq. in.
Thickness 1/32" Are the shell plates welded or flanged no Description of riveting: circ. seams and D.R. lap.

g. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 3/8" Pitch of rivets 3 7/8"
long. seams 1 3/8" 8 9/32"

Percentage of strength of circ. end seams plate 64.5 rivets 49 Percentage of strength of circ. intermediate seam plate - rivets -
Percentage of strength of longitudinal joint plate 85.2 rivets 95.8 combined 89.6 Working pressure of shell by Rules 200 lbs./sq. in.

Thickness of butt straps outer 1 3/16" inner 1 3/16" No. and Description of Furnaces in each Boiler 3 Morisons.
Material Steel Tensile strength 26/30 tons/sq. in. Smallest outside diameter 3'-6 3/16"

Length of plain part top - bottom - Thickness of plates crown 1 1/2" bottom 3/32" Description of longitudinal joint weld.
Dimensions of stiffening rings on furnace or e.c. bottom - Working pressure of furnace by Rules 204 lbs./sq. in.

End plates in steam space: Material Steel Tensile strength 26/30 tons/sq. in. Thickness 1 1/8" Pitch of stays 16 3/4" x 16"
Are stays secured D. Nuts Working pressure by Rules 219 lbs./sq. in.

End plates: Material front Steel back Steel Tensile strength 26/30 tons/sq. in. Thickness 1 1/8" 15/16"
Can pitch of stay tubes in nests 8 23/32" Pitch across wide water spaces 13 3/4" Working pressure front 213 lbs./sq. in. back 204 lbs./sq. in.

Orders to combustion chamber tops: Material Steel Tensile strength 28/32 tons/sq. in. Depth and thickness of girder
Centre 10" x 20 21/32" Length as per Rule 34 7/16" Distance apart 6 3/4" Centre 8 1/2" wings. No. and pitch of stays
each 308" Working pressure by Rules 205 lbs./sq. in. Combustion chamber plates: Material Steel

Tensile strength 26/30 tons/sq. in. Thickness: Sides 21/32" Back 5/8" Top 21/32" Bottom 7/8"
Pitch of stays to ditto: Sides 8" x 7 3/4" Back 7 3/8" x 7 5/8" Top 8 1/2" x 8" Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 223 lbs./sq. in. Front plate at bottom: Material Steel Tensile strength 26/30 tons/sq. in.
Thickness 1 5/16" Lower back plate: Material Steel Tensile strength 26/30 tons/sq. in. Thickness 1" ✓

Pitch of stays at wide water space 15" Are stays fitted with nuts or riveted over nuts.
Working Pressure 248 lbs./sq. in. Main stays: Material Steel Tensile strength 28/32 tons/sq. in.

Diameter At body of stay, 2 3/4" No. of threads per inch 6" Area supported by each stay 264 sq. in.
Over threads - Working pressure by Rules 248 lbs./sq. in. Screw stays: Material Steel Tensile strength 26/30 tons/sq. in.

Diameter At turned off part, 1 5/8" x 1 1/2" No. of threads per inch 9" Area supported by each stay 66.72 sq. in. 56.2 sq. in.
Over threads -

Working pressure by Rules $223 \frac{1}{2} \text{ lbs./sq. in.}$ Are the stays drilled at the outer ends ☒ No Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 1 \frac{1}{4} \text{ inch} \\ \text{Over threads } 1 \frac{3}{8} \text{ inch} \end{array} \right. \times$
No. of threads per inch $9 \times$ Area supported by each stay 83.4 sq. in. Working pressure by Rules $215 \frac{1}{2} \text{ lbs./sq. in.}$
Tubes: Material $\frac{1}{2} \text{ Steel}$ External diameter $\left\{ \begin{array}{l} \text{Plain } 2 \frac{3}{4} \text{ inch} \\ \text{Stay } 2 \frac{3}{4} \text{ inch} \end{array} \right. \times$ Thickness $\frac{1}{4} \text{ inch}$ No. of threads per inch $9 \times$
Pitch of tubes $3 \frac{7}{8} \times 3 \frac{7}{8} \text{ inch}$ Working pressure by Rules $215 \frac{1}{2} \text{ lbs./sq. in.}$ Manhole compensation: Size of opening $30 \text{ R. } 1 \frac{9}{16} \text{ dia.}$
shell plate $17 \times 13 \text{ inch}$ Section of compensating ring $9 \frac{1}{2} \times 1 \frac{7}{8} \text{ inch}$ No. of rivets and diameter of rivet holes $30 \text{ R. } 1 \frac{9}{16} \text{ dia.}$
Outer row rivet pitch at ends $10 \frac{3}{8} \text{ inch}$ 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 $\left\{ \begin{array}{l} \text{Plate } - \\ \text{Rivets } - \end{array} \right.$
Internal diameter $-$ Working pressure by Rules $-$ Thickness of crown $-$ No. and diameter of rivets $-$
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 $\left\{ \begin{array}{l} \text{Tubes } - \\ \text{Steel castings } - \end{array} \right.$
Number of elements $-$ Material of tubes $-$ Internal diameter and thickness of tubes $-$
Material of headers $-$ Tensile strength $-$ Thickness $-$ Can the superheater be shut off Made
the boiler be worked separately $-$ Is a safety valve fitted to every part of the superheater which can be shut off from the boiler $-$ Working pressure as $-$
Area of each safety valve $-$ Are the safety valves fitted with easing gear $-$ Hydraulic test pressure $-$
Rules $-$ Pressure to which the safety valves are adjusted $-$ Are drain cocks or valves fitted $-$
tubes $-$ castings $-$ and after assembly in place $-$
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. LTD.
The foregoing is a correct description,
R. B. Johnson
GENERAL MANAGER,

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops } - - - 1931 \text{ Oct. 27, Nov. 9, 13, 17, 25, 26, Dec. 8, 22, } \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel } - - - 1931 \text{ Nov. 30, 1932 Apr. 16, May 3, 12, } \\ \text{June 6, 8, 10, 13, 17, 21, 24, July 7} \end{array} \right. \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith ☒ Yes.
(If not state date of approval.)
Total No. of visits 17 at Newcastle
 12 at Thistle

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been constructed under special survey in accordance with the Rules and Approved Plan; the materials and workmanship are good. The boilers are being forwarded to Monfalcone to be fitted in the vessel.

The Boilers have been fitted on board at Monfalcone. The safety valves were adjusted to blow at 200 lbs. The steam oil fuel burning arrangement has been fitted in accordance with the approved plan and the requirements of Sect. 20 of the Rules have been satisfactorily carried out.

The "Lumi-Automatic High-Low Flame Control System" has been added and the arrangement carried out in accordance with the Secretary's letter of 25th May 1932 to Messrs. C. B. Burdett & Co. Ltd. The earthing connection from the "Protector glow" has not been.

Survey Fee $\dots \dots \dots \pounds 27 : 16 : 0$ When applied for, $15 \text{ MAR } 1932$
Travelling Expenses (if any) $\pounds \dots \dots \dots$ When received, $15 \text{ MAR } 1932$

A. B. Forster, P. R. Forster
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute $\text{TUE } 19 \text{ JUL } 1932$

Assigned See F. E. Rpt.