

## REPORT ON BOILERS.

No. 92792

Received at London Office 26 AUG 1935

Writing Report 2<sup>nd</sup> Aug. 1935 When handed in at Local Office 2<sup>nd</sup> Aug. 1935 Port of **NEWCASTLE-ON-TYNE**

Size of op. **9**

Survey held at **Newcastle-on-Tyne** Date, First Survey **28 Jan 1935** Last Survey **31. 7. 1935**

2 on the **"S.S. DUMFRIES"** (Number of Visits **—**) Tons { Gross **5075.5143** Net **3125.3064**

Built at **Hebburn-on-Tyne** By whom built **Row. Hawthorn, Leslie & Co. Ltd.** No. **595** When built **1935**

made at **Wallsend-on-Tyne** By whom made **R. E. Marine Eng. Co. Ltd.** Engine No. **2815** When made **1935**

made at **Wallsend-on-Tyne** By whom made **R. E. Marine Eng. Co. Ltd.** Boiler No. **2815** When made **1935**

al Horse Power **442** Owners **B. G. Lutherland & Co. Ltd.** Port belonging to **Newcastle-on-Tyne**

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

Manufacturers of Steel **The Steel Company of Scotland Ltd.** (Letter for Record **S**)

Heating Surface of Boilers **1369 sq. ft.** Is forced draught fitted **No** Coal or Oil fired **Coal**

Description of Boilers **One Single Ended** Working Pressure **150 lbs./sq. in.**

of Firegrate in each Boiler **34 sq. ft.** Date of test **29.4.35** No. of Certificate **639** Can each boiler be worked separately **—**

of each set of valves per boiler { per Rule **10.37 sq. in.** No. and Description of safety valves to each boiler **Two direct spring loaded.** Pressure to which they are adjusted **150 lbs./sq. in.** Are they fitted with easing gear **Yes.**

se of donkey boilers, state whether steam from main boilers can enter the donkey boiler **No.**

Distance between boilers or uptakes and bunkers **2'-6"** Is oil fuel carried in the double bottom under boilers **No**

Distance between shell of boiler and tank top plating **2'-4"** Is the bottom of the boiler insulated **Yes.**

Internal dia. of boilers **11'-10 3/8"** Length **11'-0"** Shell plates: Material **Steel** Tensile strength **29/33 tons/sq. in.**

Thickness **13/16"** Are the shell plates welded or flanged **No** Description of riveting: circ. seams { end **DR. Lap.** inter. **—**

seams **T.R.D.B.S.** Diameter of rivet holes in { circ. seams **1 1/8"** long, seams **15/16"** Pitch of rivets { **3 3/4"** **6 1/2"**

Percentage of strength of circ. end seams { plate **70** rivets **51.7** Percentage of strength of circ. intermediate seam { plate **—** rivets **—**

Percentage of strength of longitudinal joint { plate **85.6** rivets **97.5** combined **90.5** Working pressure of shell by Rules **152 lbs./sq. in.**

Thickness of butt straps { outer **5/8"** inner **3/4"** No. and Description of Furnaces in each Boiler **Two Brighton**

Material **Steel** Tensile strength **26/30 tons/sq. in.** Smallest outside diameter **3'-5 1/8"**

Thickness of plates { crown **7/16"** bottom **7/16"** Description of longitudinal joint **weld.**

Dimensions of stiffening rings on furnace or c.c. bottom **—** Working pressure of furnace by Rules **152 lbs./sq. in.**

plates in steam space: Material **Steel** Tensile strength **26/30 tons/sq. in.** Thickness **1 1/4"** Pitch of stays **2'-2" x 16"**

are stays secured **D. Nuts** Working pressure by Rules **156 lbs./sq. in.**

plates: Material { front **Steel** back **Steel** Tensile strength { **26/30 tons/sq. in.** Thickness { **7/8"** **3/4"**

pitch of stay tubes in nests **10 5/8"** Pitch across wide water spaces **14 1/2"** Working pressure { front **186 lbs./sq. in.** back **178 lbs./sq. in.**

lers to combustion chamber tops: Material **Steel** Tensile strength **29/33 tons/sq. in.** Depth and thickness of girder

entre **8" x 2 @ 3/4"** Length as per Rule **2'-6"** Distance apart **11 7/8"** No. and pitch of stays

ach **2 @ 8 7/8"** Working pressure by Rules **156 lbs./sq. in.** Combustion chamber plates: Material **Steel**

ile strength **26/30 tons/sq. in.** Thickness: Sides **1 1/16"** Back **2 1/8"** Top **1 1/16"** Bottom **7/8"**

h of stays to ditto: Sides **11 3/4" x 8 7/8"** Back **10" x 9 5/8"** Top **11 7/8" x 8 7/8"** Are stays fitted with nuts or riveted over **Nuts**

Working pressure by Rules **150 lbs./sq. in.** Front plate at bottom: Material **Steel** Tensile strength **26/30 tons/sq. in.**

ckness **7/8"** Lower back plate: Material **Steel** Tensile strength **26/30 tons/sq. in.** Thickness **13/16"**

h of stays at wide water space **14 1/2" x 10"** Are stays fitted with nuts or riveted over **Nuts**

Working Pressure **172 lbs./sq. in.** Main stays: Material **Steel** Tensile strength **28/32 tons/sq. in.**

meter { At body of stay, **2 3/4"** No. of threads per inch **6** Area supported by each stay **416 sq. in.**

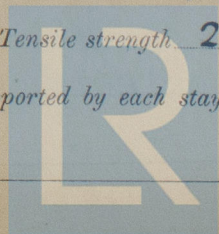
Over threads **—**

Working pressure by Rules **157 lbs./sq. in.** Screw stays: Material **Steel** Tensile strength **26/30 tons/sq. in.**

meter { At turned off part, **1 5/8"** No. of threads per inch **9** Area supported by each stay **96.25 sq. in.**

Over threads **1 3/4"**

W240-0015

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Working pressure by Rules 158 lbs/sq in Are the stays drilled at the outer ends No Margin stays: Diameter 1 3/4" (At turned off part, or Over threads)

No. of threads per inch 9 Area supported by each stay 120.626 sq in Working pressure by Rules 150 lbs/sq in

Tubes: Material 90 Steel External diameter 3" Thickness 9 W.G. No. of threads per inch 9

Pitch of tubes 4 1/4" x 4 1/4" Working pressure by Rules 190 lbs/sq in + 170 lbs/sq in Manhole compensation: Size of shell plate 20" x 16" Section of compensating ring 16 1/2" x 1" No. of rivets and diameter of rivet holes 32 - 1 3/16"

Outer row rivet pitch at ends 8 1/2" Depth of flange if manhole flanged Comp. Ring flanged 3 1/2" Steam Dome: Material No Steam

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 — Inner radius of crown — Working pressure by Rules —

How connected to shell — Size of doubling plate under dome — Diameter of rivet holes —

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 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 Rules — Pressure to which the safety valves are adjusted — Hydraulic test tubes — castings — and after assembly in place — Are drain cocks or valves 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, See under Report

Dates of Survey During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith yes (If not state date of approval.)

while building During erection on board vessel - - - 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 in accordance with the Rules and approved plan; the material and workmanship are good. The boiler has been satisfactorily installed in the vessel. Examined under working conditions and found satisfactory.

Survey Fee £ See Report on Machinery When applied for, 19

Travelling Expenses (if any) £ When received, 19

M. B. Forster  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE. 13 AUG 1935

Assigned See other J.E. Rpt  
hwc 92792