

# REPORT ON BOILERS.

No. 92792

Received at London Office - 6 AUG '35

NEWCASTLE-ON-TYNE

Writing Report 2<sup>nd</sup> Aug. 1935 When handed in at Local Office 2<sup>nd</sup> Aug. 1935 Port of

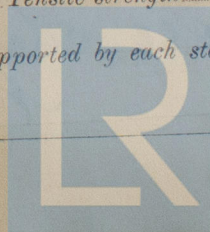
Survey held at Newcastle-on-Tyne Date, First Survey 28<sup>th</sup> Jan/35 Last Survey 31. 7. 1935  
 s.s. "DUMFRIES"  
 Tons { Gross 5075 514 3  
 Net 3125 306 4

Built at Hebburn-on-Tyne By whom built R.W. 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. J. Sutherland & Co. Ltd. Port belonging to Newcastle-on-Tyne

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

Manufacturers of Steel The Steel Company of Scotland, Ltd. (Letter for Record S ✓)  
 Heating Surface of Boilers 7395<sup>sq</sup> Is forced draught fitted No Coal or Oil fired Coal  
 and Description of Boilers Three Single Ended Working Pressure 225 lbs./sq.  
 by hydraulic pressure to 388 lbs./sq. Date of test 11. 4. 35 No. of Certificate 636 Can each boiler be worked separately yes.  
 of Firegrate in each Boiler 53.7<sup>sq</sup> No. and Description of safety valves to each boiler 2 Direct Spring loaded.  
 of each set of valves per boiler { per Rule 12.8<sup>sq</sup> Pressure to which they are adjusted 230 lbs./sq. Are they fitted with easing gear yes.  
 as fitted 14.14<sup>sq</sup>  
 se of donkey boilers, state whether steam from main boilers can enter the donkey boiler -  
 least distance between boilers or uptakes and bunkers 2'-9 1/2" Is oil fuel carried in the double bottom under boilers No  
 least distance between shell of boiler and tank top plating 23 1/2" Is the bottom of the boiler insulated yes.  
 least internal dia. of boilers 15'-3" Length 11'-6" Shell plates: Material Steel Tensile strength 29/33 tons/sq.  
 thickness 1 1/2" Are the shell plates welded or flanged No Description of riveting: circ. seams { end D.R. Lap  
 seams T.R.D.B.S. Diameter of rivet holes in { circ. seams 1 1/2" Pitch of rivets { 4" 10 1/4"  
 { long. seams 1 1/2"  
 Percentage of strength of circ. end seams { plate 62.5  
 { rivets 46.7 Percentage of strength of circ. intermediate seam { plate  
 { rivets 85.37  
 Percentage of strength of longitudinal joint { rivets 85.6  
 { combined 87.8 Working pressure of shell by Rules 226 lbs./sq.  
 Thickness of butt straps { outer 1 3/16" No. and Description of Furnaces in each Boiler Three Eight tons  
 { inner 1 5/16" Tensile strength 26/30 tons/sq. Smallest outside diameter 3'-7 1/8"  
 Material Steel Thickness of plates { crown 1 1/16"  
 { bottom 1 1/16" Description of longitudinal joint weld.  
 Length of plain part { top  
 { bottom  
 Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 234 lbs./sq.  
 d plates in steam space: Material Steel Tensile strength 26/30 tons/sq. Thickness 1 17/32" Pitch of stays 21 3/4" x 22"  
 How are stays secured D. Nuts Working pressure by Rules 231 lbs./sq.  
 be plates: Material { front Steel Tensile strength { 26/30 tons/sq. Thickness { 1 3/32" 3/4"  
 { back  
 Can pitch of stay tubes in nests 9" Pitch across wide water spaces 14 1/2" Working pressure { front 231 lbs./sq.  
 { back 248 lbs./sq.  
 Orders to combustion chamber tops: Material Steel Tensile strength 29/33 tons/sq. Depth and thickness of girder  
 centre 9 3/4" x 2 @ 7/8" Length as per Rule 2'-8 1/2" Distance apart 11" No. and pitch of stays  
 each 3 @ 7/4" Working pressure by Rules 226 lbs./sq. Combustion chamber plates: Material Steel  
 Tensile strength 26/30 tons/sq. Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 1"  
 Pitch of stays to ditto: Sides 9 1/16" x 9 3/4" Back 9 3/8" x 10" Top 7 1/4" x 11" Are stays fitted with nuts or riveted over Nuts  
 Working pressure by Rules 228 lbs./sq. Front plate at bottom: Material Steel Tensile strength 26/30 tons/sq.  
 Thickness 1 1/32" Lower back plate: Material Steel Tensile strength 26/30 tons/sq. Thickness 15/16"  
 Pitch of stays at wide water space 14 1/2" x 10" Are stays fitted with nuts or riveted over Nuts  
 Working Pressure 231 lbs./sq. Main stays: Material Steel Tensile strength 28/32 tons/sq.  
 Diameter { At body of stay, 3 1/2"  
 { Over threads - No. of threads per inch 6 Area supported by each stay 478.5<sup>sq</sup>  
 Working pressure by Rules 226 lbs./sq. Screw stays: Material Steel Tensile strength 26/30 tons/sq.  
 Diameter { At turned off part, 1 7/8"  
 { Over threads - No. of threads per inch 9 Area supported by each stay 94.45<sup>sq</sup>

W240-0014



Lloyd's Register Foundation



PILLARS, No. of

in 'two

in Ho

Centre Line I

Stiffeners and

Plating, thick

STRINGERS AN

Uppermost Co

Stringer Plat

Ang

Thickness o

in way of

Thickness o

in way of

Thickness o

If Sheathed

Second Dec

Stringer Pla

STRAKES

AT PLATE KE

DBLG

OTTOM PLATI

of Strakes ..

LGE PLATING

Strakes .....

DE PLATING

Strakes .....

PER DECK,

strake in W

PER DECK,

strake in B

RAKE BELOW

strake in W

RAKE BELOW

strake in B

P SIDE PL

DGE SIDE

EO'TLE SI

al No. o

SHIP

ER P

EL.

Working pressure by Rules 226 lbs./sq. in. Are the stays drilled at the outer ends No. Margin stays: Diameter (At turned off part, or Over threads) 2 1/8" Working pressure by Rules 238 lbs./sq. in.

No. of threads per inch 9 Area supported by each stay 119.87 sq. in. Tubes: Material 40 Steel External diameter (Plain Stay) 3 1/4" Thickness 7/16" No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 280 + 256 lbs./sq. in. Manhole compensation: Size of opening 16" x 12" Section of compensating ring None No. of rivets and diameter of rivet holes -

Outer row rivet pitch at ends - Depth of flange if manhole flanged B. L. P. Flange 4 5/8" 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 (Plate Rivets) -

Internal diameter - Working pressure by Rules - Thickness of crown - No. and diameter of rivets in outer row in dome connection to shell -

How connected to shell - Size of doubling plate under dome - Working pressure by Rules -

Type of Superheater R. E. Marine Smoke Tube Type Manufacturers of Tubes Stewart & Lloyd Headers Frothingham Steel Co.

Number of elements 159 Material of tubes 40 Steel Internal diameter and thickness of tubes 15 mm x 2 1/2 mm

Material of headers Forged Steel Tensile strength 26/30 tons/sq. in. Thickness 1 1/8" Can the superheater be shut the boiler be worked separately No Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes

Area of each safety valve 3.14 sq. in. Are the safety valves fitted with easing gear Yes Working pressure Heating

Rules 225 lbs./sq. in. Pressure to which the safety valves are adjusted 230 lbs./sq. in. Hydraulic test pressure Design

tubes 1500 lbs./sq. in. Headers castings 675 lbs./sq. in. and after assembly in place 450 lbs./sq. in. Are drain cocks or valves by hydraulic test

to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

The foregoing is a correct description of the boiler and superheater

Dates of Survey (During progress of work in shops - - -) See Index Report

while building (During erection on board vessel - - -)

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

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.) These boilers have been constructed under special survey in accordance with the Rules and approved plan; the materials and workmanship are good. The boilers have been satisfactorily installed in the vessel, examined under working conditions and found satisfactory.

Survey Fee ... See Rpt. on Machinery When applied for, 19

Travelling Expenses (if any) £ ... When received, 19

A. B. Forster

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute TUE. 18 AUG 1935

Assigned See other J.E. Rpt No. 92792



© 2020 Lloyd's Register Foundation