

REPORT ON BOILERS.

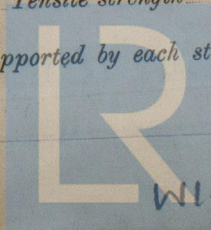
No. 59656

Received at London Office APR 27 1938

Writing Report 21st April 1938 When handed in at Local Office 22. 4. 1938 Port of Glasgow
 in Survey held at Glasgow Date, First Survey 3. 12. 37 Last Survey 15. 4. 1938
 on the S.S. AGIOS GEORGIOS IV (Number of Visits 23) Tons {Gross 2847
 Net 2916
 Built at Swanland By whom built Barbra & Son Yard No. 279 When built 1938
 Engines made at Whebburn on Tyne By whom made White's Marine Eng. Co Ltd Engine No. 14 C When made 1938
 Boilers made at Glasgow By whom made Barclay Curle & Co Ltd Boiler No. 37/11 When made 1938
 Indicated Horse Power Owners H. S. Hiclacon Port belonging to Piraeus

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd (Letter for Record S.)
 Heating Surface of Boilers 3802 sq ft Is forced draught fitted yes Coal or Oil fired both
 and Description of Boilers Two - single ended Working Pressure 240 lb
 tested by hydraulic pressure to 410 Date of test 30.3.38 No. of Certificate 20144 Can each boiler be worked separately
 of Firegrate in each Boiler 480 sq ft No. and Description of safety valves to each boiler One - 1 1/2" Improved High Lift Double
 of each set of valves per boiler {per Rule 9.31 sq ft ✓ as fitted 4.81 sq ft ✓ Pressure to which they are adjusted 240 lb Are they fitted with easing gear yes
 use of donkey boilers, state whether steam from main boilers can enter the donkey boiler —
 least distance between boilers or uptakes and bunkers or woodwork 10" Is oil fuel carried in the double bottom under boilers yes
 least distance between shell of boiler and tank top plating 2'-8" Is the bottom of the boiler insulated yes
 least internal dia. of boilers 13'-0 1/4" Length 11'-6" (men) Shell plates: Material Steel Tensile strength 29/33 tons
 thickness 1 3/8" Are the shell plates welded or flanged no Description of riveting: circ. seams {end D.R. hot ✓ inter. 3.993 ✓
 seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 1 7/16" ✓ Pitch of rivets 9 7/8" ✓
 percentage of strength of circ. end seams {plate 63.99 rivets 47.05 Percentage of strength of circ. intermediate seam {plate 85.44 rivets 88.87
 percentage of strength of longitudinal joint {plate 88.87 rivets 88.65 Working pressure of shell by Rules 242 lb
 thickness of butt straps {outer 1 1/16" inner 1 3/16" No. and Description of Furnaces in each Boiler Three - Deighton ✓
 material Steel Tensile strength 26/30 tons ✓ Smallest outside diameter 36 1/4" ✓
 thickness of plain part {top 5/8" bottom 5/8" Description of longitudinal joint welded ✓
 positions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 251 lb ✓
 plates in steam space: Material Steel Tensile strength 26/30 tons Thickness 1 5/16" Pitch of stays 18 1/2" x 18"
 are stays secured Double Nuts ✓ Working pressure by Rules 245 lb ✓
 plates: Material {front Steel back Steel Tensile strength 26/30 tons Thickness {front 59/64" back 25/32"
 pitch of stay tubes in nests 9.375 ✓ Pitch across wide water spaces 13 1/2" ✓ Working pressure {front 245 u.w.s back 249 lb
 stays to combustion chamber tops: Material Steel Tensile strength 28/32 tons ✓ Depth and thickness of girder 249 lb
 size 2 @ 10" x 29/32" Length as per Rule 35 1/2" (centre) Distance apart 9 1/4" No. and pitch of stays 27/32"
 each 3 @ 8" ✓ Working pressure by Rules 242 lb ✓ Combustion chamber plates: Material Steel
 tensile strength 26/30 Thickness: Sides 23/32" Back 23/32" 1/16" centre Top 23/32" Bottom 27/32"
 pitch of stays to ditto: Sides 9 1/4" x 8" Back 8 x 8" Centre 8 x 9 1/4" Top 8 x 9 1/4" Are stays fitted with nuts or riveted over Nuts ✓
 Working pressure by Rules 242 (u.w.s) Front plate at bottom: Material Steel Tensile strength 26/30 tons Thickness 7/8"
 thickness 59/64" Lower back plate: Material Steel Tensile strength 26/30 tons Thickness 7/8"
 pitch of stays at wide water space 13 1/2" ✓ Are stays fitted with nuts or riveted over Nuts ✓
 Working Pressure 242 sides Main stays: Material Steel Tensile strength 28/32 tons
 diameter {At body of stay, 3 1/4" No. of threads per inch 6 ✓ Area supported by each stay 328.5 sq in
 Over threads 244 lb Screw stays: Material Steel Tensile strength 26/30 tons
 Working pressure by Rules 244 lb No. of threads per inch 9 ✓ Area supported by each stay 44 sq in
 diameter {At turned off part, 1 3/4" No. of threads per inch 9 ✓ Area supported by each stay 44 sq in



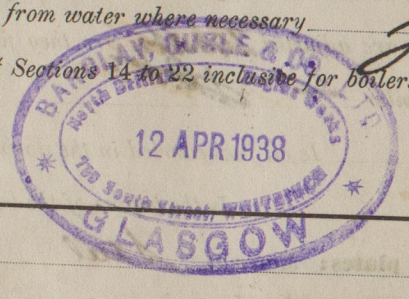
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Lloyd's Register
Foundation

Working pressure by Rules 245 lb. Are the stays drilled at the outer ends Yes Margin stays: Diameter { At turned off part, 2" or Over threads. 2" }
 No. of threads per inch 9 Area supported by each stay 83 sq. in. Working pressure by Rules 298 lb.
 Tubes: Material Weldless Steel External diameter { Plain 2 1/2 Stay 2 1/2 } Thickness { 3/16 5/16 } No. of threads per inch 9
 Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 300 lb. Manhole compensation: Size of opening 17 1/2"
 shell plate 20 1/2" x 16 1/4" Section of compensating ring 2 x 8 5/8" x 1 3/8" No. of rivets and diameter of rivet holes 40 @ 1 7/8"
 Outer row rivet pitch at ends 9 7/8" Depth of flange if manhole flanged 4 1/4" Steam Dome: Material Steel
 Tensile strength 30,000 Thickness of shell 3/16" Description of longitudinal joint Butt joint
 Diameter of rivet holes 1 7/8" Pitch of rivets 4" Percentage of strength of joint { Plate 100 Rivets 100 }
 Internal diameter 24" Working pressure by Rules 245 lb. Thickness of crown 3/16" No. and diameters of rivets in crown 10 @ 1 7/8"
 stays 10 Inner radius of crown 12" Working pressure by Rules 245 lb.
 How connected to shell By stays Size of doubling plate under dome 12" x 12" Diameter of rivet holes in dome 1 7/8"
 of rivets in outer row in dome connection to shell 10 @ 1 7/8"

Type of Superheater Horizontal Type Horizontal Manufacturers of Tubes See Mich. R. Steel forgings See Mich. R. Steel castings See Mich. R.
 Number of elements 12 each Bl. Material of tubes S. B. Steel Internal diameter and thickness of tubes See Mich. R.
 Material of headers M. S. Billet Tensile strength See Mich. R. Thickness See Mich. R. Can the superheater be shut off from the boiler Yes
 the boiler be worked separately Yes 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 1.77 sq. in. Are the safety valves fitted with easing gear Yes Working pressure 245 lb.
 Rules 240 lb. Pressure to which the safety valves are adjusted 245 lb. Hydraulic test pressure 480 lb.
 tubes See Mich. R. forgings and castings See Mich. R. and after assembly in place 480 lb. Are drain cocks fitted 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,
 FOR BARCLAY, CURLE & CO., LTD.
 Alexander Macneil, Engineer
 Glasgow, 8/2/38

Dates of Survey { During progress of work in shops - - - }
 while building { During erection on board vessel - - - }
 1937 Dec. 3, 9, 16, 29 (1938) Jan. 11, 19 Total No. of visits 23
 27 Feb. 4, 11, 18, 21, 23 Mar. 2, 10, 17, 18, 22, 23, 30, 31 Apr. 1, 6, 11, 15

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, etc.) These boilers have been built under special survey in accordance with the Society's Rules and approved plans. The materials and workmanship are good. The boilers are intended for Messrs White's Marine Eng. Co. Ltd. Engine No 14 C and have been sent to Sunderland to be installed in Messrs Bartram's yard No 279.
 22/4/38.

These boilers have been efficiently fitted on board and their safety valves have been adjusted under steam.
 L. R. Horne

Survey Fee ... £ 29 : 11 : - } When applied for, 15. 4. 1938.
 Travelling Expenses (if any) £ : : } When received, 3. 6. 1938.

G. Anderson, Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 APR 1938
 Assigned TRANSMIT TO LONDON

FR 22 JUL 1938