

# REPORT ON BOILERS.

No. 19932.

Received at London Office 27 MAR 1935

Date of writing Report 7 3 1935 When handed in at Local Office 23<sup>rd</sup> MARCH 1935. Port of Glasgow

No. in Survey held at Glasgow Date, First Survey 13<sup>th</sup> DECEMBER 1929. Last Survey 22<sup>nd</sup> MARCH 1934.  
eg. Book. S/S 'VOREDA' (Number of Visits ) Gross 4216.35.  
on the Tons Net 4372.99.

Master Built at Glasgow By whom built Glasgow Dyl<sup>l</sup> Yard No. 420 When built 1935  
Engines made at Glasgow By whom made John & Maccaid C<sup>l</sup> Engine No. 672 When made 1935  
Boilers made at ditto By whom made ditto Boiler No. 672 When made 1935  
Nominal Horse Power Owners Voreda Steamship C<sup>o</sup> L<sup>td</sup> Port belonging to Glasgow

# RETAIN

## MULTITUBULAR BOILERS—MAIN, [REDACTED]

Manufacturers of Steel Scottish S. & C. L<sup>td</sup> Balville L<sup>td</sup> Steel C<sup>o</sup> of Scotland (Letter for Record S)

Total Heating Surface of Boilers 10596 # Is forced draught fitted yes Coal or Oil fired Both

No. and Description of Boilers 3 Single Ended Working Pressure 220

Tested by hydraulic pressure to 380 Date of test 22/8/30 No. of Certificate S/C 1966 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 48.46 # No. and Description of safety valves to each boiler Boeklerus imposed High Lift (3)

Area of each set of valves per boiler per Rule 12.52 Pressure to which they are adjusted 225 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler yes

Smallest distance between boilers or uptakes and bunkers or woodwork 2'-1" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2'-9" Is the bottom of the boiler insulated No

Largest internal dia. of boilers 14'-4.38" Length 12'-6" Shell plates: Material S Tensile strength 29.33

Thickness 1 2/32" Are the shell plates welded or flanged No Description of riveting: circ. seams DR

long. seams TR & DBS Diameter of rivet holes in circ. seams 1 1/16" Pitch of rivets inter 4.88

Percentage of strength of circ. end seams plate 65.4 Percentage of strength of circ. intermediate seam plate

Percentage of strength of longitudinal joint rivets 43.8 Working pressure of shell by Rules 220

Thickness of butt straps outer 1 1/4" No. and Description of Furnaces in each Boiler 4 Deepglow

Material S Tensile strength 26-30 Smallest outside diameter 3'-8 3/8"

Length of plain part top Thickness of plates bottom 1 1/16" Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 224

End plates in steam space: Material S Tensile strength 26-30 Thickness 1 1/32" Pitch of stays 2 3/4 x 16 1/2"

How are stays secured DN Working pressure by Rules 226

Tube plates: Material front Steel Tensile strength 26-30 Thickness 29/32"

Mean pitch of stay tubes in nests 9.47" Pitch across wide water spaces 13 1/2" Working pressure front 231

Girders to combustion chamber tops: Material S Tensile strength 29-33 Depth and thickness of girder

at centre 12'-7 7/8 (2) Length as per Rule 46'-13/32" Distance apart 8 1/2" No. and pitch of stays

in each 4'-8 7/8" Working pressure by Rules 233 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 23/32" Back 1 1/16" Top 23/32" Bottom 1"

Pitch of stays to ditto: Sides 8 7/8 x 8 3/4" Back 8 3/4 x 8 3/8" Top 8 7/8 x 8 1/2" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 233 Front plate at bottom: Material S Tensile strength 26-30

Thickness 3 1/32" Lower back plate: Material Steel Tensile strength 26-30 Thickness 29/32"

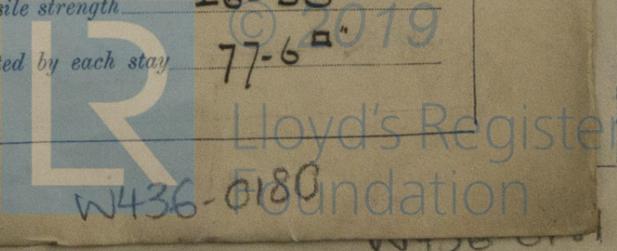
Pitch of stays at wide water space 14 1/2" Are stays fitted with nuts or riveted over Nuts

Working Pressure 248 Main stays: Material S Tensile strength 28-32

Diameter At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 358 #

Working pressure by Rules 223 Screw stays: Material S Tensile strength 26-30

Diameter At turned off part, 1 7/8" No. of threads per inch 9 Area supported by each stay 77.6 #



Working pressure by Rules 238 Are the stays drilled at the outer ends 910 Margin stays: Diameter <sup>At turned off part,</sup> 2 1/8"  
 No. of threads per inch 9 Area supported by each stay 94.3 sq. in. Working pressure by Rules 293  
 Tubes: Material 9100 External diameter <sup>Plain</sup> 2 1/2" Thickness <sup>Stay</sup> 3/8 + 5/16" No. of threads per inch 9  
 Pitch of tubes 3 1/16 + 3 3/4" Working pressure by Rules 278 Manhole compensation: Size of opening  
 shell plate 16 1/2 + 20 1/2" Section of compensating ring 3-3 + 3-0 + 1 2/3" No. of rivets and diameter of rivet holes 36 at 1 2/32"  
 Outer row rivet pitch at ends 1 1/4" Depth of flange if manhole flanged 3 3/4" Steam Dome: Material —  
 Tensile strength Thickness of shell Description of longitudinal joint  
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint <sup>Plate</sup> <sup>Rivets</sup>  
 Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays  
 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 Manufacturers of <sup>Tubes</sup> <sup>Steel castings</sup>  
 Number of elements Material of tubes Internal diameter and thickness of tubes  
 Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately  
 Area of each safety valve Are the safety valves fitted with easing gear Working pressure as per Rules  
 Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes castings and after assembly in place 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

The foregoing is a correct description,  
 FOR JOHN G. KIRKALD & CO. LIMITED.  
W. Carter Director, Manufacturer.

Dates of Survey <sup>During progress of work in shops - -</sup> <sup>During erection on board vessel - - -</sup>  
 while building  
 Are the approved plans of boiler ~~and superheater~~ forwarded herewith Yes  
 (If not state date of approval.)  
 Total No. of visits

Is this Boiler a duplicate of a previous case 910 If so, state Vessel's name and Report No.

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These Boilers have been built under special survey in accordance with the approved plans & the workmanship, material are of good quality. They have now been securely fitted on board. Plus Report. also manufacture's that of the Machinery

Survey Fee charged on Daily Report When applied for, 19  
 Travelling Expense (if any) £ — When received, 19

W. G. Gordon-Mackie  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 26 MAR 1935  
 Assigned See accompanying Mach. Report.



Rpt. 13.  
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