

14 SEP. 1928

Rpt. 5a.

REPORT ON BOILERS.

No. 48258

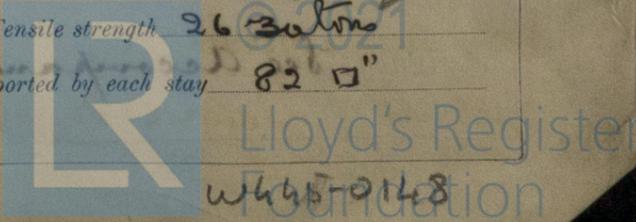
3 AUG 1928

Received at London Office

Date of writing Report 12 Sept 1928 When handed in at Local Office Glasgow Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 19. 3. 28 Last Survey 3-8 - 1928
 on the S.S. "USK MOUTH" (Number of Visits 33) Tons { Gross / Net }
 Master _____ Built at Burntisland By whom built Burntisland SBC Yard No. 148 When built 1928
 Engines made at Glasgow By whom made David Rowan & Co. Ltd Engine No. 885 When made 1928
 Boilers made at Glasgow By whom made David Rowan & Co. Ltd Boiler No. 885 When made 1928
 Nominal Horse Power 259 Owners Ulster Steamship Co. Ltd Port belonging to Newport

MULTITUBULAR BOILERS - MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Eutechhoffnungshütte a.G. Oberhausen & Witkowitzyer Bergbau und Eisenhütten Gewerkschaft in Witkowitz (Letter for Record (S))
 Total Heating Surface of Boilers 684 sq ft Is forced draught fitted no Coal or Oil fired coal
 No. and Description of Boilers one single ended main Working Pressure 120
 Tested by hydraulic pressure to 230 Date of test 26-6-28 No. of Certificate 17945 Can each boiler be worked separately ✓
 Area of Firegrate in each Boiler 27.5 sq ft No. and Description of safety valves to each boiler 2 direct spring
 Area of each set of valves per boiler { per Rule 0.34 sq ft / as fitted 7.80 sq ft } Pressure to which they are adjusted 120 Are they fitted with easing gear yes
 In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no
 Smallest distance between boilers or uptakes and bunkers or woodwork 12" Is oil fuel carried in the double bottom under boilers no
 Smallest distance between shell of boiler and tank top plating _____ Is the bottom of the boiler insulated no
 Largest internal dia. of boilers 9'-6" Length 9'-0" Shell plates: Material steel Tensile strength 28-32 tons
 Thickness 5/8" Are the shell plates welded or flanged no Description of riveting: circ. seams { end DR / inter. ✓ }
 long. seams lap. TR Diameter of rivet holes in { circ. seams 15/16" / long. seams 15/16" } Pitch of rivets { 2.83" / 4 7/8" }
 Percentage of strength of circ. end seams { plate 66.9 / rivets 64.2 } Percentage of strength of circ. intermediate seam { plate ✓ / rivets ✓ }
 Percentage of strength of longitudinal joint { plate 77.2 / rivets 88.0 / combined 76.6 } Working pressure of shell by Rules 120 maintain at 120
 Thickness of butt straps { outer ✓ / inner ✓ } No. and Description of Furnaces in each Boiler two plain
 Material steel Tensile strength 26-30 tons Smallest outside diameter 32.625"
 Length of plain part { top 66" / bottom 64" } Thickness of plates { crown 9" / bottom 16" } Description of longitudinal joint welded
 Dimensions of stiffening rings on furnace or c.c. bottom 3 1/2 x 3 1/2 x 1/2 Working pressure of furnace by Rules 157
 End plates in steam space: Material steel Tensile strength 26-30 tons Thickness 25/32" Pitch of stays 13 x 17"
 How are stays secured by nuts Working pressure by Rules 120
 Tube plates: Material { front steel / back " } Tensile strength { 26-30 tons } Thickness { 25/32" / 5/8" }
 Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14" Working pressure { front 121 / back 135 }
 Girders to combustion chamber tops: Material steel Tensile strength 28-32 tons Depth and thickness of girder
 at centre 2 @ 6 1/2 x 9 7/8" Length as per Rule 25.84" Distance apart 10 7/8" No. and pitch of stays
 in each 2 @ 8 1/8" Working pressure by Rules 132 Combustion chamber plates: Material steel
 Tensile strength 26-30 tons Thickness: Sides 9/16" Back 17/32" Top 9/16" Bottom 9/16"
 Pitch of stays to ditto: Sides 8 7/8 x 10 7/8" Back 9 x 8 3/4" Top 8 7/8 x 10 7/8" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 128 Front plate at bottom: Material steel Tensile strength 26-30 tons
 Thickness 25/32" Lower back plate: Material steel Tensile strength 26-30 tons Thickness 25/32"
 Pitch of stays at wide water space 13 1/4 x 8 3/4" Are stays fitted with nuts or riveted over nuts
 Working Pressure 188 Main stays: Material steel Tensile strength 28-32 tons
 Diameter { At body of stay 2" / Over threads 2 1/4" } No. of threads per inch 6 Area supported by each stay 221 sq in
 Working pressure by Rules 174 Screw stays: Material steel Tensile strength 26-30 tons
 Diameter { At turned off part, or 1 3/8" / Over threads 1 3/8" } No. of threads per inch 9 Area supported by each stay 82 sq in



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Working pressure by Rules 123 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 1 1/2" _{or Over threads}

No. of threads per inch 9 Area supported by each stay 94 0" Working pressure by Rules 120

Tubes: Material Iron External diameter ^{Plain} 3 1/4" Thickness ^{Stay} 3 1/4" No. of threads per inch 9

Pitch of tubes 4 3/8 x 4 1/2" Working pressure by Rules 180 Manhole compensation: Size of opening in shell plate 15" x 19" Section of compensating ring 5 1/2 x 3 1/4" No. of rivets and diameter of rivet holes 36 x 1 5/16"

Outer row rivet pitch at ends 4 1/2" Depth of flange if manhole flanged 3 Steam Dome: Material Iron

Tensile strength 241 Thickness of shell 1 1/2" Description of longitudinal joint Butt joint

Diameter of rivet holes 3/8" Pitch of rivets 1 1/2" Percentage of strength of joint ^{Plate} 80 _{Rivets}

Internal diameter 22 1/2" Working pressure by Rules 180 Thickness of crown 1 1/2" No. and diameter of stays 3 Inner radius of crown 1 1/2" Working pressure by Rules 180

How connected to shell By 3 stays Size of doubling plate under dome 15" x 19" Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell 36 x 1 5/16"

Type of Superheater Water Manufacturers of ^{Tubes} Steel castings

Number of elements 1 Material of tubes Steel Internal diameter and thickness of tubes 1 1/2" x 1/8"

Material of headers Steel Tensile strength 241 Thickness 1 1/2" Can the superheater be shut off and the boiler be worked separately Yes

Area of each safety valve 1 1/2" Are the safety valves fitted with easing gear Yes Working pressure as per Rules 123 Pressure to which the safety valves are adjusted 120 Hydraulic test pressure: tubes 180 and after assembly in place 180 Are drain cocks or valves fitted to free the superheater from water where necessary Yes

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with Yes

The foregoing is a correct description,
 For David Roway & Co. Ltd. Manufacturer.
Arch. W. Grierson

Dates of Survey ^{During progress of work in shops - -} See accompanying Machinery Report Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

^{During erection on board vessel - - -} See accompanying Machinery Report Total No. of visits 33 (in Shop) - 8 (on board)

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The materials and workmanship are good.
The boiler has been constructed under special survey in accordance with the Rules.

A.L.
3/8/28

This boiler has been securely fitted on board & found satisfactory
Safety valves adjusted under steam to 120 lb/p^{sq} in
See machinery report for record

C.B.
12.9.28

Survey Fee ... £ 4 : 4 : - When applied for, 6.9.28
 Travelling Expenses (if any) £ 0 : 0 : - When received, 18.9.28

S. C. Davis
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 7 - AUG 1928
 Assigned See accompanying Machy. Report.

Chie Bell
 18 SEP 1928
 Lloyd's Register Foundation