

REPORT ON BOILERS.

Sld. No. 32275
Mat. No. 16141

Received at London Office OCT 21 1937

Date of writing Report 192 When handed in at Local Office 20.10.1927 Port of Middlesbrough
 No. in Survey held at Stockton Date, First Survey 23 July Last Survey 13 Oct 1927
 Reg. Book. M/V "POZARICA" (Number of Visits) Gross 1893
 on the Stockton Tons Net 838
 Master Sunderland Built at Sunderland By whom built Wm. Deafrain Yard No. 634 When built 1938
 Engines made at Sunderland By whom made W. Duxford & Sons Ltd. Engine No. 634 When made 1938
 Boiler made at Stockton By whom made Stockton C.E. & Riley Boilers Ltd. Boiler No. 6269 When made 1927
 Nominal Horse Power 434 Owners MacAndrews & Co. Ltd. Port belonging to London

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

Manufacturers of Steel Steel Company of Scotland. (Letter for Record S)
 Total Heating Surface of Boilers 1180 sq. ft. Is forced draught fitted Yes Coal or Oil fired Oil
 No. and Description of Boilers Working Pressure 120 lbs.
 Tested by hydraulic pressure to 230 Date of test 13.10.37 No. of Certificate 6919 Can each boiler be worked separately Yes
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two direct Spring (backburn imp. high lift)
 Area of each set of valves per boiler {per Rule 5.4 as fitted 6.28} 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 Yes
 Smallest distance between boilers or uptakes and bunkers or woodwork Yes Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating 1'-6" Is the bottom of the boiler insulated Yes
 Largest internal dia. of boilers 10'-6" Length 10'-6" Shell plates: Material Steel Tensile strength 29/33
 Thickness 7/8" Are the shell plates welded or flanged No Description of riveting: circ. seams {end DR inter. Yes}
 long. seams T.R. DR S. Diameter of rivet holes in {circ. seams 15/16 long. seams 13/16} Pitch of rivets {3" 5/16"}
 Percentage of strength of circ. end seams {plate 68.7 rivets 43.8} Percentage of strength of circ. intermediate seam {plate 97.7 rivets 83.9} Working pressure of shell by Rules 126
 Percentage of strength of longitudinal joint {plate 97.7 rivets 83.9}
 Thickness of butt straps {outer 1/2 inner 7/8} No. and Description of Furnaces in each Boiler 2 cf.
 Material Steel Tensile strength 26/30 Smallest outside diameter 2'-0 1/2" 2'-10 1/4"
 Length of plain part {top Yes bottom Yes} Thickness of plates {crown 3/8 bottom 3/8} Description of longitudinal joint weld
 Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 154
 End plates in steam space: Material Steel Tensile strength 26/30 Thickness 7/8 Pitch of stays 18 x 19 (mean)
 How are stays secured DN & W. Working pressure by Rules 127 1/2
 Tube plates: Material {front S back S} Tensile strength {26/30} Thickness {7/8}
 Mean pitch of stay tubes in nests 10 1/4" Pitch across wide water spaces 14 x 7 1/2" Working pressure {front 210 back 225}
 Girders to combustion chamber tops: Material S Tensile strength 28/32 Depth and thickness of girder
 at centre 1 1/2 x 7/8 double Length as per Rule 2'-4 5/8" Distance apart 8 3/4" No. and pitch of stays
 in each 2 @ 9" Working pressure by Rules 127 Combustion chamber plates: Material S
 Tensile strength 26/30 Thickness: Sides 19/32 Back 7/16 Top 19/32 Bottom 19/32
 Pitch of stays to ditto: Sides 9 x 9 1/2 mean 9 x 8 1/2 Top 9 x 8 3/4 Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 141 Front plate at bottom: Material S Tensile strength 26-30
 Thickness 7/8 Lower back plate: Material S Tensile strength 26-30 Thickness 7/8
 Pitch of stays at wide water space 14 x 8 1/2" Are stays fitted with nuts or riveted over nuts
 Working Pressure 233 Main stays: Material S Tensile strength 28-32
 Diameter {At body of stay 2 7/8 or Over threads 2 7/8} No. of threads per inch 6 Area supported by each stay 378
 Working pressure by Rules 131 Screw stays: Material S Tensile strength 26-30
 Diameter {At turned off part 1 3/8 or Over threads 1 3/8} No. of threads per inch 9 Area supported by each stay 75 sq.

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Working pressure by Rules **135**. Are the stays drilled at the outer ends Margin stays: Diameter ^{At turned off part.} **1 1/2** or ^{Over threads} **1 1/2** Working pressure by Rules **136**.

No. of threads per inch **9**. Area supported by each stay **91.7**

Tubes: Material **Lap Weld Iron** External diameter ^{Plain} **2 1/2** Thickness ^{Stay} **10 5/16** No. of threads per inch **9**.

Pitch of tubes **3 3/4** Working pressure by Rules **P 175 S 189**. Manhole compensation: Size of opening in shell plate **20 x 16**. Section of compensating ring **7 x 7/8** No. of rivets and diameter of rivet holes **36** **1 1/4**.

Outer row rivet pitch at ends **6"** Depth of flange if manhole flanged Steam Dome: Material _____

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 stays _____ Inner radius of crown _____ Working pressure by Rules _____

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 ^{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 off and 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 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 23 inclusive for boilers been complied with **yes** and on behalf of **Stockton Chemical Engineers & Shipbuilders Ltd.** The foregoing is a correct description, **G. H. Riley** Manufacturer.

Dates of Survey ^{During progress of work in shops - -} **1937 July 23 Aug 13 Sep 2, 28, 29 Oct 13** Are the approved plans of boiler and superheater forwarded herewith **1.2.37** (If not state date of approval.)

^{During erection on board vessel - - -} _____ Total No. of visits **6**

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

The materials & workmanship are good. The boiler has been made under special survey in accordance with the approved plan & the Requirements of the Rules. On completion the boiler was examined under 230 lbs hydraulic pressure & found sound & tight and it has been forwarded to Sunderland to be fitted on board. This boiler has been securely fixed on board the vessel, examined under steam & safety valves adjusted in accordance with Rule requirements. For recommendation please see Memoy. Rpt.

Survey Fee **£ 8 17 0** When applied for **20.10.1937**
 Travelling Expenses (if any) **£ 7 17** When received **28 DEC. 1937**

W. H. Hasen.
R. C. Moffitt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **TUE 18 JAN 1938**
 Assigned **See Std. F.E. 32275**



If not state whether and when, one will be sent. Is a report also sent on the hull of the ship? [Fam. 1234 - Copyright Ink.]