

# REPORT ON BOILERS.

Received at London Office 10 JUN 1931

Date of writing Report 10.2.31 When handed in at Local Office 3<sup>rd</sup> June 1931 Port of Greenock

No. in Reg. Book. Survey held at Greenock Date, First Survey 21<sup>st</sup> MARCH 1930. Last Survey 1<sup>st</sup> JUNE 1931.

on the S/S "Peruvian" (Number of Visits 2) (Gross 895 1/2 Tons) (Net 544 3/4 Tons)

Master \_\_\_\_\_ Built at Greenock By whom built Scotts St & Co Ltd Yard No. 551 When built 1931

Engines made at Sheet By whom made Procedes Thomson-Houston Locom Engine No. 4196 When made 1931

Boilers made at Greenock By whom made Scotts St & Co Ltd Boiler No. 623 When made 1931

Nominal Horse Power ✓ Owners The Atlantic Oil Shipping Co Ltd Port belonging to Panama

## MULTITUBULAR BOILERS ~~MAIN~~, AUXILIARY, ~~STEAM~~.

Manufacturers of Steel Scotts St & Co Ltd (Letter for Record ✓)

Total Heating Surface of Boilers 2243 # Is forced draught fitted yes Fuel Oil fired oil

No. and Description of Boilers one single ended Working Pressure 140

Tested by hydraulic pressure to 260 Date of test 8.9.30 No. of Certificate 1969 1970 Can each boiler be worked separately ✓

Area of Firegrate in each Boiler oil fuel No. and Description of safety valves to each boiler (Double) Corliss's Improved High Lift

Area of each set of valves per boiler (per Rule 11.88 as fitted 11.88) Pressure to which they are adjusted 140 Are they fitted with casing gear yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork 2.0 Is oil fuel carried in the double bottom under boilers no

Smallest distance between shell of boiler and tank top plating 8" Is the bottom of the boiler insulated yes

Largest internal dia. of boilers 12.0 Length 11-6" Shell plates: Material S Tensile strength 29.33

Thickness 13/16" Are the shell plates welded or flanged ✓ Description of riveting: circ. seams (end DR, inter. DBS)

long. seams DR + DBS Diameter of rivet holes in (circ. seams 1", long. seams 1") Pitch of rivets (circ. 3.39, long. 5 1/4")

Percentage of strength of circ. end seams (plate 40.5, rivets 45.1) Percentage of strength of circ. intermediate seam (plate ✓, rivets ✓)

Percentage of strength of longitudinal joint (plate 80.9, rivets 82.9, combined 89.2) Working pressure of shell by Rules 142

Thickness of butt straps (outer 1 1/16", inner 13/16") No. and Description of Furnaces in each Boiler 2 horizontal

Material S Tensile strength 26.30 Smallest outside diameter 3.4 5/8"

Length of plain part (top ✓, bottom ✓) Thickness of plates (crown 7/16", bottom 7/16") Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 153

End plates in steam space: Material S Tensile strength 26.30 Thickness 15/16" Pitch of stays 19" x 14 1/2"

How are stays secured DN Working pressure by Rules 141

Tube plates: Material (front S, back S) Tensile strength 26.30 Thickness (front 25/32", back 29/32")

Mean pitch of stay tubes in nests 10.875 Pitch across wide water spaces ✓ Working pressure (front 140, back 142)

Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder at centre 8 1/2 x 3/4 (2) Length as per Rule 2-10" Distance apart 10" No. and pitch of stays in each 3 at 8" Working pressure by Rules 145

Tensile strength 26.30 Thickness: Sides 19/32" Back 19/32" Top 19/32" Bottom 19/32"

Pitch of stays to ditto: Sides 8" x 9 1/2" Back 9" x 9" Top 8" x 10" Are stays fitted with nuts or riveted over yes

Working pressure by Rules 148 Front plate at bottom: Material S Tensile strength 26.30

Thickness 25/32" Lower back plate: Material S Tensile strength 26.30 Thickness 9/16"

Pitch of stays at wide water space ✓ Are stays fitted with nuts or riveted over ✓

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

Diameter (At body of stay, or Over threads) 2 1/4" No. of threads per inch 6 Area supported by each stay 275"

Working pressure by Rules 155 Screw stays: Material Iron Tensile strength 21 1/2

Diameter (At turned off part, or Over threads) 1 1/2" No. of threads per inch 9 Area supported by each stay 81"

If not, state whether, and when, one will be sent? Now.

\* See letter on part of report.

Working pressure by Rules **154** Are the stays drilled at the outer ends **90** Margin stays: Diameter  $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. \mathbf{1\frac{1}{2}"}$

No. of threads per inch **9** Area supported by each stay **76.5"** Working pressure by Rules **160**

Tubes: Material **S** External diameter  $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \mathbf{2\frac{1}{2}"}$  Thickness  $\left\{ \begin{array}{l} \mathbf{9\frac{1}{16} - 9\frac{1}{32}"} \\ \mathbf{9\frac{1}{16} - 9\frac{1}{32}"} \end{array} \right.$  No. of threads per inch **9**

Pitch of tubes **3 $\frac{5}{8}$ " + 3 $\frac{5}{8}$ "** Working pressure by Rules **141** Manhole compensation: Size of opening in shell plate **16" x 12"** Section of compensating ring **28" x 36" x 13/16"** No. of rivets and diameter of rivet holes **42 at 1"**

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

Tensile strength **120,000** Thickness of shell **1/2"** Description of longitudinal joint

Diameter of rivet holes **1/2"** Pitch of rivets **2"** Percentage of strength of joint  $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \mathbf{100\%}$

Internal diameter **28"** Working pressure by Rules **141** Thickness of crown **1/2"** No. and diameter of stays **141**

How connected to shell **Inner radius of crown** Working pressure by Rules **141** Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell **1/2" at 1"**

Type of Superheater **Water tube** Manufacturers of  $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right. \mathbf{Scotts'}$

Number of elements **1** Material of tubes **Steel** Internal diameter and thickness of tubes **28" x 1/2"**

Material of headers **Steel** Tensile strength **120,000** Thickness **1/2"** Can the superheater be shut off and the boiler be worked separately **Yes**

Area of each safety valve **1.5 sq. in.** Are the safety valves fitted with easing gear **Yes** Working pressure as per Rules **154** Pressure to which the safety valves are adjusted **154** Hydraulic test pressure: tubes **200** castings **200** and after assembly in place **200** Are drain cocks or valves 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** **SCOTT'S STEEL BUILDING & ENGINEERING COMPANY LIMITED.**

The foregoing is a correct description.

**Arch. Kenne** Chief Draughtsman

Dates of Survey  $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{During erection on board vessel - - -} \end{array} \right.$

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

Total No. of visits **1**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under special survey in accordance with the approved plans & the workmanship & material are of good quality & is now securely fitted on board.**

**This boiler is a duplicate of Run 90622 2/3 "Winkler" Lark Repl. 9019249.**

**This Report accompanies that of the Machinery.**

Survey Fee **Charged on Machinery Report** When applied for **192** When received **192**

**W. Gordon-Mitchell**  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 9 - JUN 1931**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

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