

Rpt. 5a.

REPORT ON BOILERS.

No. 14214

Received at London Office 16 SEP 1930

Date of writing Report 11. 9. 1930 When handed in at Local Office 11. 9. 1930 Port of MIDDLESBROUGH.

No. in Reg. Book. 78059 Survey held at STOCKTON. Date, First Survey 12 June 30 Last Survey 11. 9. 1930

on the Boiler for s/s. MAROUSSIO COULOUTROS (Number of Visits 17) Tons { Gross 3556, Net 2288.

Master _____ Built at Newcastle By whom built Tyne I.S.B. Co. Ltd. Yard No. _____ When built 1907.2

Engines made at Sunderland By whom made J. Dickinson & Sons Ltd Engine No. _____ When made 1907.

Boilers made at Stockton By whom made Riley Bros. (Boilermakers) Ltd Boiler No. 6025 When made 1930

Nominal Horse Power _____ Owners A. M. Coulouthros Port belonging to Andros.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel David Colville & Sons Ltd. (Letter for Record S.)

Total Heating Surface of Boilers 830 sq. ft. Is forced draught fitted no Coal or Oil fired coal.

No. and Description of Boilers 1 S.B. Working Pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs Date of test 11. 9. 30 No. of Certificate 6820. Can each boiler be worked separately _____

Area of Firegrate in each Boiler 30 1/2 sq. ft. No. and Description of safety valves to each boiler _____

Area of each set of valves per boiler { per Rule 27.25 as fitted _____ Pressure to which they are adjusted _____ Are they fitted with easing gear _____

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 _____ Is oil fuel carried in the double bottom under boilers _____

Smallest distance between shell of boiler and tank top plating _____ Is the bottom of the boiler insulated _____

Largest internal dia. of boilers 10' 0" Length 9' 6" Shell plates: Material steel Tensile strength 29/32.

Thickness 3/32 Are the shell plates welded or flanged no Description of riveting: circ. seams { end D.R. inter. _____

Long. seams T.R.D.B.S. (4 rivets) Diameter of rivet holes in { circ. seams 3/32 long. seams 13/16 Pitch of rivets { 3" 4/8

Percentage of strength of circ. end seams { plate 69.8 rivets 57 Percentage of strength of circ. intermediate seam { plate _____ rivets _____

Percentage of strength of longitudinal joint { plate 83.3 rivets 106.6 Working pressure of shell by Rules 124 lbs.

Thickness of butt straps { outer 1/2" inner 1/2" No. and Description of Furnaces in each Boiler 2 p.f.

Material steel Tensile strength 26/30. Smallest outside diameter 3' 2"

Length of plain part { top 5' 11 3/4" bottom 6' 6" Thickness of plates { crown 19/32 bottom 3/32 Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom _____ Working pressure of furnace by Rules 121 lbs.

End plates in steam space: Material steel Tensile strength 26/30. Thickness 7/8" Pitch of stays 17 x 18 (mean)

How are stays secured D.N.W. Working pressure by Rules 150 lbs.

End plates: Material { front steel back steel Tensile strength { 26/30. Thickness { 7/8" 5/8"

Span pitch of stay tubes in nests 10 7/16" Pitch across wide water spaces 14" x 8 1/2" Working pressure { front 141 lbs. back 135 "

Orders to combustion chamber tops: Material steel Tensile strength 28/32. Depth and thickness of girder _____

Centre 6 1/4 x 5" (double) Length as per Rule 2' 2" Distance apart 9" No. and pitch of stays _____

each 2. 8 1/2" Working pressure by Rules 141 lbs. Combustion chamber plates: Material steel

Tensile strength 26/30. Thickness: Sides 9/16" Back 19/32" Top 9/16" Bottom 25/32"

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

Working pressure by Rules 121 lbs. Front plate at bottom: Material steel Tensile strength 26/30.

Thickness 7/8" Lower back plate: Material steel Tensile strength 26/30. Thickness 7/8"

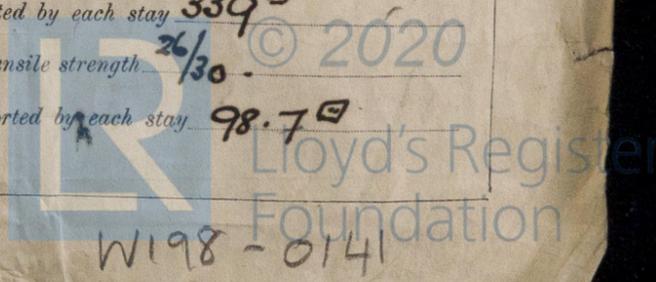
Pitch of stays at wide water space 14" x 10" Are stays fitted with nuts or riveted over nuts.

Working Pressure 319 lbs. Main stays: Material steel Tensile strength 28/32.

Diameter { At body of stay, or Over threads 2 1/2" No. of threads per inch 6. Area supported by each stay 339 sq. in.

Working pressure by Rules 130 lbs. Screw stays: Material steel Tensile strength 26/30.

Diameter { At turned off part, or Over threads 1 1/2" No. of threads per inch 9. Area supported by each stay 98.7 sq. in.



Working pressure by Rules **127 lbs.** Are the stays drilled at the outer ends **no.** Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turn off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. \frac{1\frac{1}{4}}{1\frac{1}{4}}$

No. of threads per inch **9.** Area supported by each stay **117.6** Working pressure by Rules **154 lbs.**

Tubes: Material **iron** External diameter $\left\{ \begin{array}{l} \text{Plain } 3\frac{1}{4} \text{ to } 3\frac{5}{8} \\ \text{Stay } 3\frac{1}{4} \text{ to } 3\frac{1}{2} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 10 \text{ W.G.} \\ \frac{5}{16} \end{array} \right.$ No. of threads per inch **9.**

Pitch of tubes **4\frac{1}{2} x 4\frac{1}{2}** Working pressure by Rules **p. 130 lbs. s. 223 lbs.** Manhole compensation: Size of opening in shell plate **20" x 16"** Section of compensating ring **7" x \frac{3}{4}"** No. of rivets and diameter of rivet holes **44 - \frac{29}{32}**

Outer row rivet pitch at ends **6"** Depth of flange if manhole flanged **7" x \frac{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 $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$

Internal diameter Working pressure by Rules Thickness of crown No. and diameter of stays

How connected to shell Inner radius of crown Working pressure by Rules

of rivets in outer row in dome connection to shell Size of doubling plate under dome Diameter of rivet holes and pitch

Type of Superheater Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$

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 Is a safety valve fitted to every part of the superheater which can be shut off from the boiler 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.** FOR RILEY BROS. (BOILERMAKERS) LIMITED. The foregoing is a correct description, J. H. Shields, Secretary

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right.$ **1930 June 25, 23 July 1, 5, 11, 16, 18, 22, 28, 31 Aug. 26, 29, Sep. 3, 5, 9, 11** Are the approved plans of boiler and superheater forwarded herewith **Yes.** (If not state date of approval.)

Total No. of visits **# 17**

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, &c.)

The materials and workmanship are good. This boiler has been built under special survey in accordance with the Rules and approved plans.

Survey Fee ... £ **5-10-0** When applied for **Monthly**

Travelling Expenses (if any) £ : : When received,

P. J. Mac
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **FRI. 7 NOV 1930** **FRI. 19 DEC 1930**

Assigned **TUE. 2 JUN 1931** **TUE. 10 NOV 1931**

New boiler built under special

