

REPORT ON BOILERS.

Received at London Office OCT 25 '38

Date of writing Report 1-9-38 When handed in at Local Office 21st OCTOBER 1938 Port of Cremack

No. in Reg. Book. 1016 Surrey held at Cremack Date, First Survey 4th MARCH 1938 Last Survey 20th OCTOBER 1938

on the M/S "Dositia" (Number of Visits) Gross 8053.30 Tons Net 4464.94

Master Edmund Built at Princes Glasgow By whom built Lithgow & Co Yard No. 910 When built 1938

Engines made at Cremack By whom made John Hancock & Co L^d Engine No. 1114 When made 1938

Boilers made at ditto By whom made ditto Boiler No. 1114 When made 1938

Nominal Horse Power 1000 Owners Anglo Saxon Petroleum Co L^d Port belonging to London

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

Manufacturers of Steel Steel Co of Scotland, Colville, Scottish I.S. Co L^d (Letter for Record S)

Total Heating Surface of Boilers 2502 # Is forced draught fitted yes Coal or Oil fired oil

No. and Description of Boilers one Single Ended Working Pressure 180

Tested by hydraulic pressure to 320 Date of test 22.4.38 No. of Certificate 2155 Can each boiler be worked separately -

Area of Firegrate in each Boiler 16.8 No. and Description of safety valves to each boiler Double Spring

Area of each set of valves per boiler per Rule 16.8 Pressure to which they are adjusted 185 Are they fitted with easing 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 2.6 Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 17.0 Is the bottom of the boiler insulated -

Largest internal dia. of boilers 14.6 Length 11.6 Shell plates: Material S Tensile strength 29.33

Thickness 1 5/32 Are the shell plates welded or flanged - Description of riveting: circ. seams DR

long. seams TRIDBS Diameter of rivet holes in circ. seams 1 7/32 Pitch of rivets 3.52

Percentage of strength of circ. end seams plate 65.4 rivets 45.3 Percentage of strength of circ. intermediate seam plate 85.33 rivets 85.75

Percentage of strength of longitudinal joint combined 87.79 Working pressure of shell by Rules 180

Thickness of butt straps outer 7/8 inner 1 No. and Description of Furnaces in each Boiler 3 Deighton

Material S Tensile strength 26.30 Smallest outside diameter 2.7 1/8

Length of plain part top 9 1/16 bottom 9 1/16 Thickness of plates 9 1/16 Description of longitudinal joint weld

Dimensions of stiffening rings on furnace or c.c. bottom - Working pressure of furnace by Rules 189

End plates in steam space: Material S Tensile strength 26.30 Thickness 1 9/32 Pitch of stays 21-19 1/2

How are stays secured DNi workun Working pressure by Rules 187 15/16

Tube plates: Material S Tensile strength 26-30 Thickness 1 1/16

Mean pitch of stay tubes in nests 9.375 Pitch across wide water spaces 13 1/2 Working pressure front 225 back 191

Girders to combustion chamber tops: Material S Tensile strength 29.33 Depth and thickness of girder

at centre 8 1/2 + 3/4 (2) Length as per Rule 2.75/8 Distance apart 9 No. and pitch of stays

in each 3 at 4 1/2 Working pressure by Rules 193 Combustion chamber plates: Material S

Tensile strength 26.30 Thickness: Sides 1 1/16 Back 1 1/16 Top 1 1/16 Bottom 7/8

Pitch of stays to ditto: Sides 4 1/2 + 7/16 Back 4 7/16 + 7/16 Top 9 + 7/16 Are stays fitted with nuts or riveted over Riveted

Working pressure by Rules 184 Front plate at bottom: Material S Tensile strength 26.30

Thickness 1 5/16 Lower back plate: Material S Tensile strength 26.30 Thickness 1 3/16

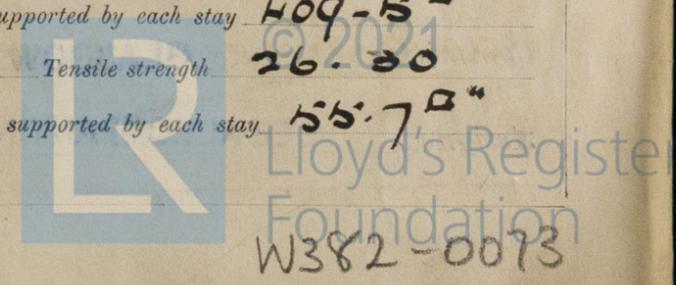
Pitch of stays at wide water space 14 Are stays fitted with nuts or riveted over Marquill stays Riveted

Working Pressure 189 Main stays: Material S Tensile strength 28.32

Diameter 3 1/4 No. of threads per inch 6 Area supported by each stay 409.5

Working pressure by Rules 191 Screw stays: Material S Tensile strength 26.30

Diameter 1 3/8 No. of threads per inch 9 Area supported by each stay 55.7



Working pressure by Rules **184** Are the stays drilled at the outer ends **No** Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 1\frac{5}{8}'' \\ \text{or} \\ \text{Over threads} \end{array} \right.$

No. of threads per inch **9** Area supported by each stay **80.3 sq"** Working pressure by Rules **189**

Tubes: Material **Iron** External diameter $\left\{ \begin{array}{l} \text{Plain } 2\frac{1}{2}'' \\ \text{Stay} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 9/32'' \\ 11/32'' \end{array} \right.$ No. of threads per inch **9**

Pitch of tubes **3 3/4 + 3 3/4** Working pressure by Rules **210** Manhole compensation: Size of opening in shell plate **16 1/2 + 20 1/2** Section of compensating ring **2 1/2 + 2 7/8 + 1 9/32** No. of rivets and diameter of rivet holes **38 at 1 5/16**

Outer row rivet pitch at ends **9 1/4** Depth of flange if manhole flanged **3 1/4** 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 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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel forgings} \\ \text{Steel castings} \end{array} \right.$

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 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 casing gear Working pressure as per Rules Pressure to which the safety valves are adjusted Hydraulic test pressure: tubes forgings and 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

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

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building} \end{array} \right.$ $\left\{ \begin{array}{l} \text{During erection on board vessel - -} \end{array} \right.$ **SEE MACHINERY REPORT** 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 **yes** If so, state Vessel's name and Report No. **M/S DORCASIA Ent Rpt 20610**

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. Boiler now securely fitted on board. This report accompanies trial of the machinery.**

Survey Fee **£ 100 paid on Maily Rpt.** : } When applied for, 19
 Travelling Expenses (if any) **£** : } When received, 19

W. Gordon Sinclair
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW 25 OCT 1938**

Assigned **SEE ACCOMPANYING MACHINERY REPORT.**

