

## REPORT ON BOILERS.

No. 20643.

Received at London Office

OCT 25 '38

Date of writing Report 1-9-38 When handed in at Local Office 21<sup>st</sup> OCTOBER 1938 Port of Cremack  
No. in Reg. Book. 115 Survey held at Cremack Date, First Survey 4<sup>th</sup> MARCH 1938 Last Survey 20<sup>th</sup> OCTOBER 1938  
on the M/S "Dorinda" (Number of Visits ☒) Gross 8053.30 Tons Net 4464.94  
Master James Glasgow Built at Leith Glasgow By whom built Leith Glasgow & Co Yard No. 910 When built 1938  
Engines made at Cremack By whom made John Macdonald & Co Engine No. 1114 When made 1938  
Boilers made at ditto By whom made ditto Boiler No. 1114 When made 1938  
Nominal Horse Power 1114 Owners Anglo Saxon Petroleum Co Ltd Port belonging to London

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

Manufacturers of Steel Steel Co of Scotland, Colville, Scottish D.S. Co Ltd (Letter for Record S)  
Total Heating Surface of Boilers 2502 sq ft 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 sq ft No. and Description of safety valves to each boiler Double Spring  
Area of each set of valves per boiler {per Rule 16.8 as fitted 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 1/32 Are the shell plates welded or flanged - Description of riveting: circ. seams {end DR inter. -  
long. seams TRIDBS Diameter of rivet holes in {circ. seams 1 7/32 long. seams 1 5/32 Pitch of rivets { 3.52 7 7/8  
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 {plate 85.33 rivets 85.75 combined 87.74 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 {crown 9 1/16 bottom 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 DN, washers Working pressure by Rules 187 15 1/16  
Tube plates: Material {front S back S Tensile strength { 26-30 Thickness { 1 1/16 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 x 3 1/4 (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 x 7 1/16 Back 4 7/16 x 7 1/2 Top 9 x 7 1/2 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 Riveted  
Working Pressure 189 Main stays: Material S Tensile strength 28.32 Diameter {At body of stay, or Over threads 3 1/4 No. of threads per inch 6 Area supported by each stay 409.5 sq in  
Working pressure by Rules 191 Screw stays: Material S Tensile strength 26.30 Diameter {At turned off part, or Over threads 1 3/8 No. of threads per inch 9 Area supported by each stay 55.7 sq in



Working pressure by Rules 184 Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 5/8" or Over threads }  
No. of threads per inch 9 Area supported by each stay 80.3 sq. in. Working pressure by Rules 189  
Tubes: Material Iron External diameter { Plain 2 1/2" Stay } Thickness { 9/32" 11/32" 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" x 20 1/2" Section of compensating ring 2 1/2" x 2 1/2" x 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 { 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 forgings 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 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.  
Director. Manufacturer.

Dates { During progress of work in shops - - }  
of Survey while { During erection on board vessel - - }  
building

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 Enk 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 accords with that of the Machinery

Survey Fee £100 paid on Maily Rpt.  
Travelling Expenses (if any) £

When applied for, 19  
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.



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