

## REPORT ON BOILERS.

No. 20298.

7 JAN 1937

Received at London Office

Date of writing Report 25. 11. 36 When handed in at Local Office 31<sup>st</sup> DECEMBER 1936 Port of Greenock

No. in Reg. Book. Survey held at Greenock

Date, First Survey 4<sup>th</sup> FEBRUARY 1936 Last Survey 29<sup>th</sup> DECEMBER 1936

on the

M/S "San Casimiro"

(Number of Visits)

Gross Tons  
Net

Muster *Jm* Built at *Glasgow* By whom built *Blythswood SBC & Co* Yard No. *43* When built *1936*  
 Engines made at *Greenock* By whom made *John & Maccaid & Co* Engine No. *1799* When made *1936*  
 Boilers made at *ditto* By whom made *ditto* Boiler No. *1796* When made *1936*  
 Nominal Horse Power *503* Owners *Eagle Oil Refining Co* Port belonging to *London*

MULTITUBULAR BOILERS ~~XXXXXX~~, AUXILIARY, ~~XXXXXX~~.Manufacturers of Steel *Colville Scottish Steel Co Steel Co of Scotland Cargo Fleet Iron Co* (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 *2-11-36* No. of Certificate *2076* ✓ Can each boiler be worked separately ✓Area of Firegrate in each Boiler *6.4* No. and Description of safety valves to each boiler *Double Spring*Area of each set of valves per boiler { per Rule *16* as fitted *16.58* } 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 *14-0* ✓ Is the bottom of the boiler insulated *yes*Largest internal dia. of boilers *14-6* ✓ Length *11-6* ✓ Shell plates: Material *S* ✓ Tensile strength *29.33*Thickness *15/32* ✓ Are the shell plates welded or flanged ✓ Description of riveting: circ. seams { end *DE* inter. ✓long. seams *TR & DBS* ✓ Diameter of rivet holes in { circ. seams *17/32* long. seams *15/32* } Pitch of rivets { *3.524* *47/8* }Percentage of strength of circ. end seams { plate *65-4* rivets *453* } Percentage of strength of circ. intermediate seam { plate *86.32* rivets ✓Percentage of strength of longitudinal joint { plate *86.45* rivets *84.49* combined } 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* *30*Material *S* Tensile strength *26-30* ✓ Smallest outside diameter *3-4 1/8* ✓Length of plain part { top ✓ bottom ✓ } Thickness of plates { crown *9/16* bottom ✓ } 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 *19/32* ✓ Pitch of stays *21-19 1/2* ✓How are stays secured *DN Washers* Working pressure by Rules *191*Tube plates: Material { front *S* back *S* } Tensile strength { *26-30* } Thickness { *15/16* *11/16* } ✓Mean pitch of stay tubes in nests *9 3/4* 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 girderat centre *8 1/2 x 3 1/4 (2)* ✓ Length as per Rule *2-4 5/8* ✓ Distance apart *9* ✓ No. and pitch of staysin each *3 at 4 1/2* ✓ Working pressure by Rules *193* ✓ Combustion chamber plates: Material *S* ✓Tensile strength *26-30* Thickness: Sides *11/16* ✓ Back *11/16* ✓ Top *11/16* ✓ Bottom *7/8* ✓Pitch of stays to ditto: Sides *4 1/2 x 4 1/16* ✓ Back *4 1/16 x 4 1/2* ✓ Top *9 x 4 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 *15/16* ✓ Lower back plate: Material *S* Tensile strength *26-30* ✓ Thickness *13/16* ✓Pitch of stays at wide water space *14* ✓ Are stays fitted with nuts or riveted over *Marquise Stays Nuts & other Rivets*Working Pressure *189* ✓ Main stays: Material *S* Tensile strength *28-32* ✓Diameter { At body of stay, *3 1/4* or Over threads ✓ } 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 { At turned off part, *1 3/8* or Over threads ✓ } 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 9/0 ✓ Margin stays: Diameter { At turn d off part, 1 5/8" Over threads ✓

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

Tubes: Material Iron External diameter { Plain } 2 1/2" Thickness { 9/32" } No. of threads per inch 9 ✓

Pitch of tubes 3 3/4" x 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 2-11" x 2-5/8" x 19/32" 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 Working pressure by Rules

How connected to shell Inner radius of crown Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell Size of doubling plate under dome

Type of Superheater

Number of elements Material of tubes Manufacturers of { Tubes Steel castings 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 22 inclusive for boilers been complied with

The foregoing is a correct description,  
For JOHN G. KINCALD & CO. LIMITED.  
*W. Carter* Director. Manufacturer.

Dates of Survey { During progress of work in shops - - } Are the approved plans of boiler and ~~superheater~~ forwarded herewith yes (If not state date of approval.)

while building { During erection on board vessel - - - } 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 "Arctia" Lrk Rpt No. 20189

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

Survey Fee charged on Mailyaff : : When applied for, 19

Travelling Expenses (if any) : : When received, 19

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

Committee's Minute GLASGOW 6 JAN 1937

Assigned SEE ACCOMPANYING MACHINERY REPORT.