

## REPORT ON BOILERS.

No. 21039

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Date of writing Report 15<sup>th</sup> AUGUST 1940. When handed in at Local Office 16<sup>th</sup> AUG. 1940 Port of GREENOCK

No. in Reg. Book. 59301 on the 1881 GREENOCK

Date, First Survey 14<sup>th</sup> JULY 1939. Last Survey 8-8-40 19(Number of Visits ) Gross 5990  
Tons Net 3700

S.S. NOVELIST

Master Built at Glasgow By whom built Harland & Wolff Yard No. 10336 When built 1940  
Engines made at Greenock By whom made John G. Kincaid & Co. Ltd. Engine No. 703 When made 1940  
Boilers made at Greenock By whom made John G. Kincaid & Co. Ltd. Boiler No. 703 When made 1940  
Nominal Horse Power 524 Owners Charente Steamship Co Port belonging to

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

Manufacturers of Steel Colvilles L<sup>td</sup> (Letter for Record S R)  
Total Heating Surface of Boilers 1239 sq ft Is forced draught fitted No Coal or Oil fired Coal  
No. and Description of Boilers One Cylindrical single ended Working Pressure 120 lbs  
Tested by hydraulic pressure to 230 lb. Date of test 15-1-40 No. of Certificate 2202 Can each boiler be worked separately Yes  
Area of Firegrate in each Boiler 35 sq ft No. and Description of safety valves to each boiler 2" double opening 14 lb.  
Area of each set of valves per boiler {per Rule 5.73 sq ft as fitted 6.28 sq ft Pressure to which they are adjusted 120 lb. Are they fitted with easing gear Yes  
In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler No  
Smallest distance between boilers or uptakes and bunkers or woodwork on upper deck Is oil fuel carried in the double bottom under boilers Yes  
Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated Yes  
Largest internal dia. of boilers 12'-6" Length 9'-10 3/8" Shell plates: Material S Tensile strength 28 3/32 tons  
Thickness 3/4" Are the shell plates welded or flanged No. Description of riveting: circ. seams {end DR. inter. Yes  
long. seams T.R. D.B.S. Diameter of rivet holes in {circ. seams 7/8" long. seams 13/16" Pitch of rivets {2.887" 6.0  
Percentage of strength of circ. end seams {plate 70% rivets 45.6% Percentage of strength of circ. intermediate seam {plate rivets  
Percentage of strength of longitudinal joint {plate 86.4% rivets 88.6% combined 90.6% Working pressure of shell by Rules 129 lb.  
Thickness of butt straps {outer 5/8" inner 3/4" No. and Description of Furnaces in each Boiler Two plain  
Material S Tensile strength 26/30 tons Smallest outside diameter 3'-7 1/4"  
Length of plain part {top 6'-3" bottom Thickness of plates {crown 2 1/32" bottom Description of longitudinal joint Weld.  
Dimensions of stiffening rings on furnace or c.c. bottom 6'-3 1/2" T.Bar x 5/8" Working pressure of furnace by Rules 126 lb.  
End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 1/8" Pitch of stays 24" x 17"  
How are stays secured D.R. Working pressure by Rules 120.8  
Tube plates: Material {front S back Tensile strength {26/30 tons Thickness {7/8" 3/4"  
Mean pitch of stay tubes in nests 12.1875" Pitch across wide water spaces 14 1/2" Working pressure {front 124 lb back 134 lb  
Girders to combustion chamber tops: Material S Tensile strength 28 3/32 tons Depth and thickness of girder  
at centre 7" x 1 1/4" Length as per Rule 2'-4" Distance apart 9 No. and pitch of stays  
in each 2-9" Working pressure by Rules 151 lb Combustion chamber plates: Material S  
Tensile strength 26/30 tons Thickness: Sides 5/8" Back 5/8" Top 5/8" Bottom 5/8"  
Pitch of stays to ditto: Sides 9 x 10" Back 9 x 9" Top 9 x 9" Are stays fitted with nuts or riveted over Nuts  
Working pressure by Rules 149.5 lb Front plate at bottom: Material S Tensile strength 26/30 tons  
Thickness 7/8" Lower back plate: Material S Tensile strength 26/30 tons Thickness 1 1/8"  
Pitch of stays at wide water space 14 1/4" Are stays fitted with nuts or riveted over Nuts  
Working Pressure 189 lb Main stays: Material S Tensile strength 28 3/32 tons  
Diameter {At body of stay, 2 1/2" or Over threads No. of threads per inch 6 Area supported by each stay 408 sq in  
Working pressure by Rules 132 lb Screw stays: Material Iron Tensile strength 21 1/2 tons  
Diameter {At turned off part, 1 3/8" or Over threads No. of threads per inch 9 Area supported by each stay 81 sq in



Working pressure by Rules 125 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 102.6" Working pressure by Rules 145 lb  
Tubes: Material Lap welded A.S. External diameter { Plain 3 1/2" Stay 3 1/2" Thickness { 7/16" 3/8" No. of threads per inch 9.  
Pitch of tubes 4 7/8" x 4 7/8" Working pressure by Rules 258 lb Manhole compensation: Size of opening in shell plate 16 x 20 Section of compensating ring 2-7 3/4" x 2-3 3/4" x 7 5/8" No. of rivets and diameter of rivet holes 36 - 1 1/32  
Outer row rivet pitch at ends 7 1/2" Depth of flange if manhole flanged McNeil type 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,  
J. G. KINCAID & COY. LIMITED  
W. Carter Manufacturer.

Dates of Survey { During progress of work in shops - - while building { During erection on board vessel - - -  
SEE MACHINERY REPORT  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
Total No. of visits

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.)  
This boiler has been constructed under Special Survey in accordance with the Rules & approved plans. The materials & workmanship are sound & good. The Safety valves have been adjusted under steam.  
This boiler is eligible in my opinion to be fitted in a vessel Classed in the Society's Register Book

Survey Fee ... £ : When applied for, 19  
Travelling Expenses (if any) £ : When received, 19  
See Machinery report

Charles H. Hunter  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 20 AUG 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT