

## REPORT ON BOILERS.

No. 21039

Received at London Office

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

No. in Reg. Book. 89301 on the S.S. "NOVELIST"

Date, First Survey 14<sup>th</sup> JULY 1939. Last Survey 8.8.40 19(Number of Visits ) Tons { Gross 5990  
Net 3700

Master Built at Glasgow By whom built Harland & Wolff Ltd 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. Ltd Port belonging to

## MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd (Letter for Record S ✓)

Total Heating Surface of Boilers 8208 sq ft Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers Two D.E. cylindrical Working Pressure 210 lb

Tested by hydraulic pressure to 365 lb Date of test 15.1.40 No. of Certificate 2201 Can each boiler be worked separately Yes

Area of Firegrate in each Boiler 107.5 No. and Description of safety valves to each boiler 2 3/4" double opening I.H.L.

Area of each set of valves per boiler { per Rule 11.4 sq ft as fitted 11.88 sq ft Pressure to which they are adjusted 210 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 9 1/2" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2' 8" Is the bottom of the boiler insulated Yes

Largest internal dia. of boilers 15' 8 1/2" Length 17' 6" Shell plates: Material S Tensile strength 28/32 tons

Thickness 1 1/2" & 1 5/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end DR inter. TR

long. seams T.R. D.S. Diameter of rivet holes in { circ. seams 1 1/2" 1 5/16" Pitch of rivets { 4.205" & 3.428" 10 5/8"

Percentage of strength of circ. end seams { plate 64.3 & 61.72 rivets 46. & 44.37 Percentage of strength of circ. intermediate seam { plate 64.42 rivets 69.7

Percentage of strength of longitudinal joint { plate 85.87 rivets 83.47 combined 88.87 Working pressure of shell by Rules 212 lb

Thickness of butt straps { outer 1 1/8" inner 1 1/4" No. and Description of Furnaces in each Boiler 6 Dighton

Material S Tensile strength 26/30 tons Smallest outside diameter 3' 8 3/32"

Length of plain part { top bottom Thickness of plates { crown 4 1/4" bottom 1 1/4" Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 211.5 lb

End plates in steam space: Material S Tensile strength 26/30 tons Thickness 1 5/32" Pitch of stays 22 x 2 1/4"

How are stays secured D.N. Working pressure by Rules 212 lb

Tube plates: Material { front S back Tensile strength { 26/30 tons Thickness { 1" 1 1/32"

Mean pitch of stay tubes in nests 12.1875" Pitch across wide water spaces 14 1/2" Working pressure { front 230 lb back 262 lb

Girders to combustion chamber tops: Material S Tensile strength 28/32 tons Depth and thickness of girder

at centre 12 1/8" x 1 3/4" Length as per Rule 3'-10" Distance apart 9 1/4" No. and pitch of stays

in each 409" Working pressure by Rules 217 lb Combustion chamber plates: Material S

Tensile strength 26/30 tons Thickness: Sides 23/32 Back Top 23/32 Bottom 23/32

Pitch of stays to ditto: Sides 9 1/4" x 9" Back Top 9 1/4" x 9" Are stays fitted with nuts or riveted over Nuts

Working pressure by Rules 217 lb Front plate at bottom: Material S Tensile strength 26/30 tons

Thickness 1" Lower back plate: Material Tensile strength Thickness

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

Working Pressure Main stays: Material S Tensile strength 28/32 tons

Diameter { At body of stay, or Over threads 3 3/4" & 3 1/2" No. of threads per inch 6 Area supported by each stay 489 sq in

Working pressure by Rules 224 lb Screw stays: Material Iron Tensile strength 21 1/2 tons

Diameter { At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 83.25 sq in



Working pressure by Rules 218 lb Are the stays drilled at the outer ends No Margin stays: Diameter At turned off part, or Over threads ☒  
No. of threads per inch ☒ Area supported by each stay ☒ Working pressure by Rules ☒  
Tubes: Material Iron Lap Welded External diameter Plain 3 1/2" Thickness 7/32" 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 19 1/2" x 15 1/2" Section of compensating ring 3-0 1/2" x 2-8" x 1 1/2" No. of rivets and diameter of rivet holes 34 - 1 1/2"  
Outer row rivet pitch at ends 10 5/8" Depth of flange if manhole flanged 5 Steam Dome: Material Iron  
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 The Superheater Co. Ltd. Manufacturers of See Manchester Certificate  
N<sup>o</sup> C 486 & C 487 attached to report.  
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 Yes Is a safety valve fitted to every part of the superheater which can be shut off from the boiler Yes  
Area of each safety valve 3.14" Are the safety valves fitted with easing gear Yes Working pressure as per  
Rules 210 lb Pressure to which the safety valves are adjusted 215 lb Hydraulic test pressure:  
tubes \_\_\_\_\_ forgings and castings \_\_\_\_\_ and after assembly in place 525 lb Are drain cocks or  
valves fitted to free the superheater from water where necessary Yes  
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
W. C. Carter Manufacturer.

Dates of Survey During progress of work in shops - - Are the approved plans of boiler and superheater forwarded herewith  
while building During erection on board vessel - - (If not state date of approval.)  
SEE MACHINERY REPORT 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.)  
These boilers have been built under Special Survey in accordance with the Rules and approved plans. The materials & workmanship are sound & good. The Safety valves have been adjusted under steam accumulation test. Superheater safety valves adjusted under steam. These boilers are 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 J. Hunter  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 20 AUG 1940

Assigned SEE ACCOMPANYING MACHINERY REPORT