

# REPORT ON BOILERS.

No. 16346

Received at London Office 10 OCT 1925

Date of writing Report Oct 1925 When handed in at Local Office 8 Oct 1925 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 8 May Last Survey 1 Oct 1925

574 on the S.S. "TRESILLIAN" (Number of Visits 54) Gross 4743.06 Tons Net 2872.84

Master Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 968 When built 1925

Engines made at West Hartlepool By whom made Central Marine Engine Engine No. 968 When made 1925

Boiler No. R310 When made 1925

Indicated Horse Power 67. Owners The Main S.S. Co. Ltd Port belonging to London.

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

Manufacturers of Steel D Colville & Sons Ltd (Letter for Record S)

Total Heating Surface of Boilers 1012 Is forced draught fitted no Coal or Oil fired coal

No. and Description of Boilers 1. Single ended Working Pressure 100

Tested by hydraulic pressure to 200 Date of test 26.8.25 No. of Certificate 3672 Can each boiler be worked separately

Area of Firegrate in each Boiler 29 sq ft No. and Description of safety valves to each boiler 2 direct spring

Area of each set of valves per boiler per Rule 11.0 as fitted 16.58 Pressure to which they are adjusted 100 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 10" Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 11'-0" Length 10'-9" Shell plates: Material Steel Tensile strength 28/32

Thickness 19/32 Are the shell plates welded or flanged no Description of riveting: circ. seams end 2 R. Lap. inter 38

Long. seams D.R. D.B.S. Diameter of rivet holes in circ. seams 13/16 long. seams 13/16 Pitch of rivets 3 1/2

Percentage of strength of circ. end seams plate 74 rivets 41 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 76.9 rivets 76.9 combined Working pressure of shell by Rules 100

Thickness of butt straps outer 7/16 inner 9/16 No. and Description of Furnaces in each Boiler 2 plain

Material Steel Tensile strength 26/30 Smallest outside diameter 40 1/8"

Length of plain part top 82" bottom 76" Thickness of plates crown 9/16 bottom 7/16 Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 109

End plates in steam space: Material Steel Tensile strength 26/32 Thickness 3/4" Pitch of stays 20" x 14"

How are stays secured Double nuts & washers Working pressure by Rules 103

Tube plates: Material front Steel back Steel Tensile strength 26/30 Thickness 3/4 5/8"

Lean pitch of stay tubes in nests 13 1/2" x 9" Pitch across wide water spaces 14 1/4" x 9" Working pressure front 134 back 108

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

At centre 6" x 1 1/4" Length as per Rule 28 5/16" Distance apart 10 1/2" No. and pitch of stays

In each 2 10 1/2" Working pressure by Rules 100 Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 9/16 Back 9/16 Top 9/16 Bottom 9/16

Pitch of stays to ditto: Sides 10 1/2" x 10 1/2" Back 10" x 11" Top 10 1/2" x 10 1/2" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 103 Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 3/4 Lower back plate: Material Steel Tensile strength 26/30 Thickness 3/4

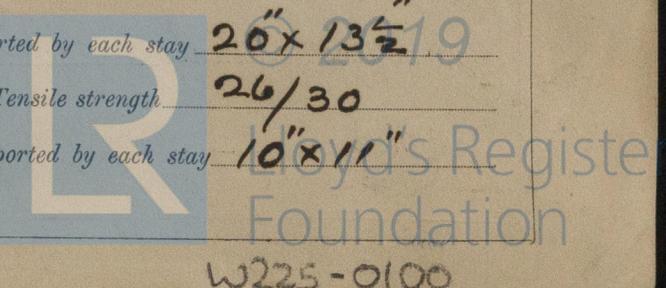
Pitch of stays at wide water space 16 1/2" x 10" Are stays fitted with nuts or riveted over nuts

Working Pressure 122 Main stays: Material Steel Tensile strength 28/32

Diameter At body of stay 2 1/8" No. of threads per inch 6 Area supported by each stay 26" x 13 1/2" x 19

Working pressure by Rules 112 Screw stays: Material Steel Tensile strength 26/30

Diameter At turned off part 1 1/2" No. of threads per inch 9 Area supported by each stay 10" x 11"



Working pressure by Rules 113 Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 1 1/8" or Over threads 1 1/8" }  
 No. of threads per inch 9 Area supported by each stay 10" x 1 5/8" Working pressure by Rules 111  
 Tubes; Material Iron External diameter { Plain 3 1/4" Stay 3 1/4" } Thickness { 10 XYG } No. of threads per inch 9  
 Pitch of tubes 4 1/2" x 4 1/2" Working pressure by Rules 130 & 190 Manhole compensation: Size of opening in shell plate 20" x 14 1/2" Section of compensating ring 16 1/2" x 19" No. of rivets and diameter of rivet holes 36 - 13/16"  
 Outer row rivet pitch at ends 4" Depth of flange if manhole flanged 3" Steam Dome: Material None  
 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 None Manufacturers of { Tubes \_\_\_\_\_ 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 \_\_\_\_\_, 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 23 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
 FOR THE CENTRAL MARITIME ENGINE WORKS,  
 (W. Gray & Co. Ltd.) Manufacturer.

Dates of Survey { During progress of work in shops - - } See attached report on Machinery. Are the approved plans of boiler and superheater forwarded DIRECTOR. (If not state date of approval.)  
 { During erection on board vessel - - }  
 Total No. of visits \_\_\_\_\_

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)  
See accompanying machinery report

Survey Fee ... .. £ : : } When applied for, 192  
 Travelling Expenses (if any) £ : : } When received, 192

R. D. Shilston.  
 Engineer Surveyor to Lloyd's Register of Shipping.

TUES. 13 OCT 1925

Committee's Minute \_\_\_\_\_  
 Assigned See other report

