

# REPORT ON BOILERS.

No. 16411

Received at London Office

22 JUN 1926

Report 16<sup>th</sup> June 1926 When handed in at Local Office 21 June 1926 Port of WEST HARTLEPOOL

Survey held at West Hartlepool Date, First Survey 29 Sept 1925 Last Survey 15 June 1926

on the S.S. "CITY OF BATH" (Number of Visits 98.) Tons { Gross 5078.91 Net 3154.47

Built at West Hartlepool By whom built Wm Gray & Co. Ltd Yard No. 978 When built 1926

Made at West Hartlepool By whom made Central Marine Engine Engine No. 978 When made 1926

Made at ditto By whom made Works Boiler No. 978C When made 1926

Horse Power Owners Ellerman Lines Ltd (Hall Line Ltd) Port belonging to Liverpool

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

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

Heating Surface of Boilers 2386 sq. feet Is forced draught fitted yes Coal or Oil fired coal

Description of Boilers One single ended Working Pressure 265

Hydraulic pressure to 448 Date of test 24.2.26 No. of Certificate 3679 Can each boiler be worked separately yes

Grate in each Boiler 50.7 No. and Description of safety valves to each boiler 2 Cockburns high lift

Each set of valves per boiler { per Rule 7.1 as fitted 11.88 Pressure to which they are adjusted 270 lb Are they fitted with easing gear yes

Donkey boilers, state whether steam from main boilers can enter the donkey boiler

Distance between boilers or uptakes and bunkers or woodwork 16" Is oil fuel carried in the double bottom under boilers no

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

Internal dia. of boilers 14'-0" Length 12'-6" Shell plates: Material Steel Tensile strength 30 3/4 / 34

Are the shell plates welded or flanged no Description of riveting: circ. seams { end 8 R Lap inter. J. R. Lap

J. R. D.B.S. Diameter of rivet holes in { circ. seams 1 5/8" long. seams 1 5/8" Pitch of rivets { 4 3/4" end. 5" inter. 10 13/16"

Percentage of strength of circ. end seams { plate 65.9 rivets 82 of end. Percentage of strength of circ. intermediate seam { plate 67.5 rivets 60.6

Percentage of strength of longitudinal joint { plate 85 rivets 90 combined 87.8 Working pressure of shell by Rules 266

Butt straps { outer 1 3/16" inner 1 5/16" No. and Description of Furnaces in each Boiler 3 Deighton's

Steel Tensile strength 26/30 Smallest outside diameter 38 13/16"

Plain part { top bottom Thickness of plates { crown 23" bottom 32" Description of longitudinal joint welded

Stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 272

Stays in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 18" x 18 1/2"

Stays secured D. nuts & washers Working pressure by Rules 267

Stays: Material { front steel back steel Tensile strength { 26/30 Thickness { 1" 13/16"

Stays in nests 11 1/4" x 7 1/2" Pitch across wide water spaces 13 1/2" x 7 1/2" Working pressure { front 290 back 270

Combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder

0" x 1 3/4" Length as per Rule 35 1/2" Distance apart 8 1/8" No. and pitch of stays

Working pressure by Rules 265 Combustion chamber plates: Material Steel

Length 26/30 Thickness: Sides 23" / 32 Back 23" / 32 Top 23" / 32 Bottom 7" / 8"

Stays to ditto: Sides 7 1/2" x 9" Back 8 1/2" x 8" Top 8 1/8" x 8 1/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 265 Front plate at bottom: Material Steel Tensile strength 26/30

Lower back plate: Material Steel Tensile strength 26/30 Thickness 15" / 16"

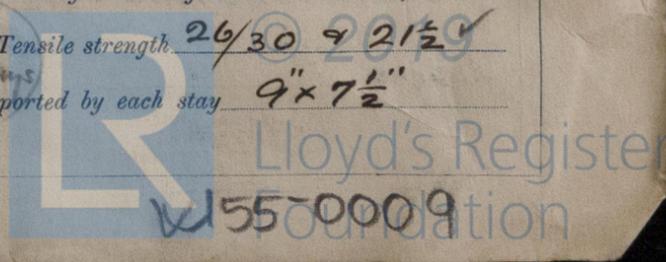
Stays at wide water space 13 1/2" x 8" Are stays fitted with nuts or riveted over nuts

Working pressure 294 Main stays: Material Steel Tensile strength 28/32

Body of stay, 3 3/8" No. of threads per inch 6 Area supported by each stay 18" x 18 1/4"

Working pressure by Rules 265 Screw stays: Material Steel & Iron Tensile strength 26/30 & 21 1/2

Stays turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 9" x 7 1/2"



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Working pressure by Rules 270 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>At turned off part, ✓</sup> 2" or Over threads 2"

No. of threads per inch 9 Area supported by each stay 8" x 11" Working pressure by Rules 270

Tubes: Material Iron External diameter <sup>Plain 2 1/2"</sup> <sub>Stay 2 1/2"</sub> Thickness <sup>8 W.G.</sup> <sub>5/16" x 3/8"</sub> No. of threads per inch 9

Pitch of tubes 3 3/4" x 3 3/4" Working pressure by Rules 290 Manhole compensation: Size of opening in shell plate 16" x 20" Section of compensating ring 20" x 1 7/32" No. of rivets and diameter of rivet holes 28 1 5/8"

Outer row rivet pitch at ends 10 13/16" Depth of flange if manhole flanged ✓ 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 <sup>Plate</sup> <sub>Rivets</sub> \_\_\_\_\_

Internal diameter \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of stays \_\_\_\_\_

How connected to shell \_\_\_\_\_ Inner radius of crown \_\_\_\_\_ Working pressure by Rules \_\_\_\_\_

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 <sup>Tubes</sup> \_\_\_\_\_ <sub>Steel castings</sub> \_\_\_\_\_

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 yes FOR THE CENTRAL MARINE ENGINE WORKS, (Ld. Gray & Co. Ld.)  
The foregoing is a correct description.  
*[Signature]* MANAGING DIRECTOR, C.M.E.W.

Dates of Survey <sup>During progress of work in shops - -</sup> <sub>while building <sup>During erection on board vessel - - -</sup></sub> See Report on Machy. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓

Total No. of visits ✓

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

*See accompanying machinery report.*

Survey Fee ... See Report on Machy. When applied for. ✓ 192

Travelling Expenses (if any) £ See Report on Machy. When received. ✓ 192

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

Committee's Minute FRI. 25 JUN 1926

Assigned See A.E. rpt. attached

