

REPORT ON BOILERS.

No. 16411.

Received at London Office 22 July 1926

Writing Report 16th 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/25 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. 9 When built 1926

made at West Hartlepool By whom made Central Marine Engine No. 9 When made 1926

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

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

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

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

Heating Surface of Boilers 5186 sq. ft. Is forced draught fitted yes Coal or Oil fired coal

Description of Boilers 2 single ended Working Pressure 265 lbs

Tested by hydraulic pressure to 448 lbs Date of test 24.2.26 No. of Certificate 3679 Can each boiler be worked separately yes

Firegrate in each Boiler 58.64 sq. ft. No. and Description of safety valves to each boiler 2 Cockburns High Lift

Pressure on each set of valves per boiler { per Rule 7.73 as fitted 11.88 Pressure to which they are adjusted 270 lbs Are they fitted with easing gear yes

Distance between 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 15'-0" Length 12'-6" Shell plates: Material Steel Tensile strength 31-34

Thickness of shell plates 1 5/8" Are the shell plates welded or flanged no Description of riveting: circ. seams { end D.R. Lap inter. J.R. Lap

Material J.R. & B.S. Diameter of rivet holes in { circ. seams 1 1/16" long. seams 1 1/16" Pitch of rivets { 4 3/4" end 5" inter. 11 3/8"

Percentage of strength of circ. end seams { plate 64.6 rivets 89 of end. Percentage of strength of circ. intermediate seam { plate 66.2 rivets 62.4

Percentage of strength of longitudinal joint { plate 85.2 rivets 85.6 combined 87.5 Working pressure of shell by Rules 266

Thickness of butt straps { outer 1 1/4" inner 1 3/8" No. and Description of Furnaces in each Boiler 3 Deightons

Material Steel Tensile strength 26/30 Smallest outside diameter 45"

Thickness of plain part { top 1 3/8" bottom 1 3/8" Thickness of plates { crown 1 3/16" bottom 1 3/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 267

Stays in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 16" x 20"

Are stays secured D nuts & washers Working pressure by Rules 265

Material { front Steel back Steel Tensile strength { 26/30 Thickness { 1" 13/16"

Pitch of stay tubes 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

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

Material 10" x 1 3/4" Length as per Rule 35 13/32 Distance apart 8 5/8" No. and pitch of stays

3 - 8 3/8" Working pressure by Rules 265 Combustion chamber plates: Material Steel

Strength 26/30 Thickness: Sides 23/32 Back 23/32 Top 23/32 Bottom 16

Pitch of stays to ditto: Sides 9" x 7 1/2" Back 8" x 8 1/2" Top 8 3/8" x 8 3/8" Are stays fitted with nuts or riveted over nuts

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

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

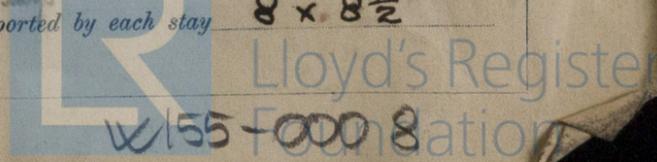
Pitch of stays at wide water space 13 1/2" x 8 1/2" Are stays fitted with nuts or riveted over nuts

Working Pressure 284 Main stays: Material Steel Tensile strength 28/32

At body of stay, or Over threads 3 3/8" No. of threads per inch 6 Area supported by each stay 20" x 16"

Working pressure by Rules 268 Screw stays: Material Steel & iron Tensile strength 26/30 & 21 1/2"

At turned off part, or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 8" x 8 1/2"



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Working pressure by Rules 268 Are the stays drilled at the outer ends no Margin stays: Diameter ^{At turned off part,} 2" _{or} ^{Over threads} 2"

No. of threads per inch 9 Area supported by each stay 8 1/2 x 10 3/4 Working pressure by Rules 270

Tubes: Material Iron External diameter ^{Plain} 2 1/2" ^{Stay} 2 1/2" Thickness 8 W G ^{8 W G} 5/16 x 3/8 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

shell plate 16 x 20 Section of compensating ring 20 x 1 5/8 No. of rivets and diameter of rivet holes 28 1 1/8

Outer row rivet pitch at ends 11 3/8 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 ^{Plate} _____ _{Rivets} _____

Internal diameter _____ Working pressure by Rules _____ Thickness of crown _____ No. and _____

stays _____ Inner radius of crown _____ Working pressure by Rules _____

How connected to shell _____ Size of doubling plate under dome _____ Diameter of rivet hole _____

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 used of _____

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 _____

Rules _____ Pressure to which the safety valves are adjusted _____ Hydraulic test _____

tubes _____, castings _____ and after assembly in place _____ Are drain cocks or _____

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 _____

The foregoing is a correct description _____

Dates of Survey ^{During progress of work in shops - -} _____ ^{During erection on board vessel - - -} _____

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.

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|------------------------------|----------------------------------|-------------------|-------------------------------------|-----|
| Survey Fee | £ <u>See Report on Machinery</u> | When applied for. | <input checked="" type="checkbox"/> | 192 |
| Travelling Expenses (if any) | £ _____ | When received. | <input checked="" type="checkbox"/> | 192 |

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

Committee's Minute FRI. 25 JUN 1926

Assigned See Rpt attached

