

REPORT ON BOILERS.

No. 16793

Received at London Office 21/11/1925

Date of writing Report 20th April 1925 When handed in at Local Office 30 Apr 1925 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 23 Sept 1924 Last Survey 21 April 1925

8371 on the S.S. "CITY OF KIMBERLEY" (Number of Visits 92) Tons {Gross 1204.93 Net 879.59

Built at West Hartlepool By whom built Wm Gray & Co. Ltd. Yard No. 967 When built 1925

Engines made at West Hartlepool By whom made Central Marine Engine Works Engine No. 967 When made 1925

Boilers made at ditto By whom made ditto Boiler No. 967 When made 1925

Nominal Horse Power 592 Owners Ellerman & Bucknall 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 8379 sq ft Is forced draught fitted yes Coal or Oil fired either

No. and Description of Boilers Three Single ended. Working Pressure 225

Tested by hydraulic pressure to 388 Date of test 23.1.25 20/11/25 No. of Certificate 3653 3654 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 69 sq ft No. and Description of safety valves to each boiler 2 Cockburn Medical high lift

Area of each set of valves per boiler {per Rule 11.64 sq ft as fitted 14.14 sq ft Pressure to which they are adjusted 230 Are they fitted with easing gear yes

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

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

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

Largest internal dia. of boilers 16'-0" Length 12'-4" Shell plates: Material Steel Tensile strength 28/30

Thickness 1 5/8" Are the shell plates welded or flanged yes Description of riveting: circ. seams {end 2 R. Lap inter 2 R. Lap

Working seams 2 R. D.B.S. Diameter of rivet holes in {circ. seams 1 5/8" long. seams 1 5/8" Pitch of rivets {plate 67.5 rivets 62.8

Percentage of strength of circ. end seams {plate Shell flanged. rivets 85.5 Percentage of strength of circ. intermediate seam {plate 67.5 rivets 62.8

Percentage of strength of longitudinal joint {plate 88 rivets 88.6 combined 88.6 Working pressure of shell by Rules 226

Thickness of butt straps {outer 1 7/8" inner 1 3/8" No. and Description of Furnaces in each Boiler 4 Deightons

Material Steel Tensile strength 26/30 Smallest outside diameter 39 3/8"

Length of plain part {top bottom Thickness of plates {crown 2 1/2" bottom 3/2" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 244

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/4" Pitch of stays 17" x 20 3/4"

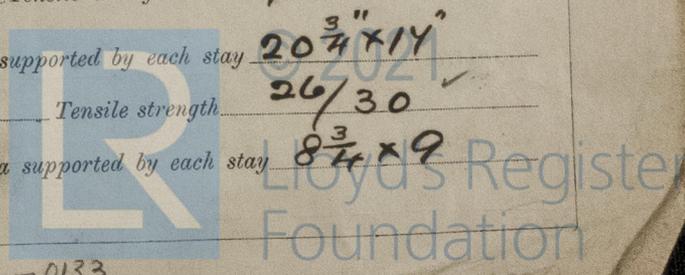
How are stays secured D Nuts & washers Working pressure by Rules 230 15"

Tube plates: Material {front Steel back Steel Tensile strength {26/30 Thickness {13 1/16 16

Mean pitch of stay tubes in nests 12" x 8" Pitch across wide water spaces 14" Working pressure {front 233 back 237

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder at centre 9 3/4" x 1 3/4" Length as per Rule 36 2/16 Distance apart 8 3/4" No. and pitch of stays in each Three 9" Working pressure by Rules 226 Combustion chamber plates: Material Steel Tensile strength 26/30 Thickness: Sides 23 3/32 Back 23 3/32 Top 23 3/32 Bottom 7 3/8"

Pitch of stays to ditto: Sides 8 3/4" x 9" Back 8 3/4" x 9" Top 8 3/4" x 9" Are stays fitted with nuts or riveted over nuts Working pressure by Rules 230 Front plate at bottom: Material Steel Tensile strength 26/30 Thickness 29 3/32 Lower back plate: Material Steel Tensile strength 26/30 Thickness 29 3/32 Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over nuts Working Pressure 243 Main stays: Material Steel Tensile strength 28/32 Diameter {At body of stay 3 1/4" No. of threads per inch 6 Area supported by each stay 20 3/4" x 14" Working pressure by Rules 228 Screw stays: Material Steel Tensile strength 26/30 Diameter {At turned off part 1 3/4" No. of threads per inch 9 Area supported by each stay 8 3/4" x 9"



Working pressure by Rules 230 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 9" x 11 3/8" Working pressure by Rules 242
 Tubes: Material Iron External diameter { Plain 2 3/4" Stay 2 3/4" } Thickness { 8 YG 5/16" x 1/4" } No. of threads per inch 9
 Pitch of tubes 4" x 4" Working pressure by Rules 275 + 243 Manhole compensation: Size of opening in shell plate 16 x 21 Section of compensating ring 21" x 1 5/8" No. of rivets and diameter of rivet holes 28 1 5/8"
 Outer row rivet pitch at ends 11" 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 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 Schmidts Manufacturers of { Tubes Marine & Loco Superheater Co. Steel castings ✓ }
 Number of elements 216 Material of tubes Steel Internal diameter and thickness of tubes 15 3/4" m. 2 1/2" m
 Material of headers Forged steel Tensile strength _____ Thickness 1" 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 sq" Are the safety valves fitted with easing gear yes Working pressure as per Rules 225 lb Pressure to which the safety valves are adjusted 235 lb Hydraulic test pressure: tubes 675 lb castings 675 lb and after assembly in place 450 lb Are drain cocks or valves fitted to free the superheater from water where necessary yes

Have all the requirements of Sections 14 to 23 inclusive for boilers been complied with yes
 FOR THE CENTRAL MARINE ENGINE WORKS.
 The foregoing is a correct description,
John H. Gearings Manufacturer.
 DIRECTOR.

Dates of Survey { During progress of work in shops -- } See attached report on Machinery Are the approved plans of boiler and superheater forwarded herewith yes (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.)

~~A 25 ton evaporator fitted, the coils of which were tested to 450 lb, and the body to 50 lbs per square inch.~~

See machinery report accompanying

Survey Fee £ See Party } When applied for, _____ 192
 Travelling Expenses (if any) £ Rpt } When received, _____ 192

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

Committee's Minute FRI. 8 MAY 1925

Assigned See other rpt

