

Rpt. 5a.

## REPORT ON BOILERS.

No. 16701.

Received at London Office FRI JUL 4 1924

Date of writing Report 30 June 1924 When handed in at Local Office 3 July 1924 Port of WEST HARTLEPOOL

No. in Survey held at West Hartlepool Date, First Survey 10 July 1923 Last Survey 1 July 1924

Reg. Book. 38552 on the S.S. "CITY OF SALISBURY" (Number of Visits) Gross 5779 Tons Net 3859

Master Built at Sunderland By whom built Wear Shipyard of Wm Gray &amp; Co Ltd Yard No. 955 When built 1924

Engines made at West Hartlepool By whom made Central Marine Eng. Works Engine No. 955 When made 1924

Boilers made at ditto By whom made ditto Boiler No. do When made 1924

Nominal Horse Power Owners Ellerman Lines Ltd (Hull branch) Port belonging to Liverpool

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

Manufacturers of Steel John Spencer &amp; Sons Ltd. (Letter for Record S)

Total Heating Surface of Boilers 7986 sq ft Is forced draught fitted yes Coal or Oil fired Oil or coal.

No. and Description of Boilers 3 single ended Working Pressure 225 lb

Tested by hydraulic pressure to 388 Date of test 9.5.24 No. of Certificate 3637 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 72 sq ft No. and Description of safety valves to each boiler Two direct spring

Area of each set of valves per boiler {per Rule 16.39 sq ft as fitted 19.24 sq ft Pressure to which they are adjusted 230 lb 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 12" 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

Largest internal dia. of boilers 15'-9" Length 12'-4" Shell plates: Material Steel Tensile strength 28/30

Thickness 1 1/32" Are the shell plates welded or flanged yes Description of riveting: circ. seams {end DR Lap inter. J.R. Lap

Long. seams J.R. D.B.S. Diameter of rivet holes in {circ. seams 1 5/8" long. seams 1 5/8" Pitch of rivets {5" 11 1/8"

Percentage of strength of circ. end seams {plate shell flanged rivets 85.3 Percentage of strength of circ. intermediate seam {plate 67.5 rivets 64

Percentage of strength of longitudinal joint {plate 85.3 rivets 90 combined 88.7 Working pressure of shell by Rules 225 lb

Thickness of butt straps {outer 1 7/32" inner 1 1/32" No. and Description of Furnaces in each Boiler 4 Deightons

Material Steel Tensile strength 26/30 Smallest outside diameter 38 5/8"

Length of plain part {top bottom Thickness of plates {crown 5/8" bottom 5/8" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 236 lb

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

How are stays secured D. nuts &amp; washers Working pressure by Rules 230 lb

End plates: Material {front Steel back do Tensile strength {26/30 Thickness {15/16 13/16

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

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

Centre 9 3/4" x 1 3/4" Length as per Rule 36 7/16" Distance apart 8 3/4" No. and pitch of stays

Each 3 9" Working pressure by Rules 225 Combustion chamber plates: Material Steel

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

Pitch of stays to ditto: Sides 9" x 8 3/4" Back 9" x 8 3/4" Top 9" x 8 3/4" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 230 lb Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 15/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 29/32

Pitch of stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over nuts

Working Pressure 243 lb 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 17"

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 9" x 8 3/4"

Working pressure by Rules 228

Diameter {At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 20 3/4" x 17"

Working pressure by Rules 228

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

Working pressure by Rules 228

Diameter {At body of stay, 3 1/4" No. of threads per inch 6 Area supported by each stay 20 3/4" x 17"

Working pressure by Rules 228

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

Working pressure by Rules 228



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Working pressure by Rules 230 lb. Are the stays drilled at the outer ends no Margin stays: Diameter { At turned off part, 2" ✓  
No. of threads per inch 9 ✓ Area supported by each stay 11 3/8" x 9" Working pressure by Rules 242 lb  
Tubes: Material Iron ✓ External diameter { Plain 2 3/4" ✓ Thickness 8 w.o. ✓ No. of threads per inch 9 ✓  
Pitch of tubes 4" x 4" ✓ Working pressure by Rules 243 Manhole compensation: Size of opening  
shell plate 16" x 20" ✓ Section of compensating ring 22" x 1 1/2" ✓ 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 3 1/2" ✓ 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  
Internal diameter Working pressure by Rules Thickness of crown No. and diameter  
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 Schmidt ✓ Manufacturers of { Tubes Marine & Loco. Superheater Ltd ✓  
Number of elements 216 Material of tubes Steel ✓ Forging, do do  
Material of headers Forged steel Tensile strength Internal diameter and thickness of tubes 15 x 20 m.m.  
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. in. ✓ 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 10% 1200 lb. forgings 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 ✓  
The foregoing is a correct description,  
FOR THE CENTRAL MARINE ENGINE WORKS,  
(21, Grog & Co. St.) Manufacture

Dates of Survey { During progress of work in shops - - }  
while building { During erection on board vessel - - }  
See attached report on Machinery  
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 attached Report When applied for, ✓ 192  
Travelling Expenses (if any) £ on Machinery When received, ✓ 192

Committee's Minute TUES. 8 JUL 1924

Assigned

See Sld JE 28821

R.D. Philston.

Engineer Surveyor to Lloyd's Register of Shipping.



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