

REPORT ON BOILERS.

No. 16207
SAT. JUL 19 1924

Received at London Office

Date of writing Report 11th July 1924 When handed in at Local Office 17th July 1924 Port of WEST HARTLEPOOL

No. in Reg. Book. Survey held at Hartlepool Date, First Survey 6 Feby Last Survey 17th July 1924

on the S S "LETHBRIDGE" (Number of Visits 119) Tons {Gross Net

Master _____ Built at Middlesbrough By whom built Furness S.B.C. & Co. Yard No. 69 When built 1924

Engines made at Hartlepool By whom made Richardsons Westgarth & Co. Ltd. Engine No. 2646 When made 1924

Boilers made at ditto By whom made ditto Boiler No. 2646 When made 1924

Nominal Horse Power 195 Owners Steamship Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 3412 sq. ft. Is forced draught fitted no Coal or Oil fired Coal

No. and Description of Boilers 2. single ended Working Pressure 185 lbs

Tested by hydraulic pressure to 328 Date of test 13.5.24 No. of Certificate 3638 Can each boiler be worked separately yes

Area of Firegrate in each Boiler 58.12 sq. ft. No. and Description of safety valves to each boiler 2. direct spring

Area of each set of valves per boiler {per Rule 10.62 as fitted 14.88 Pressure to which they are adjusted 190 lbs Are they fitted with easing gear yes

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

Smallest distance between boilers or uptakes and bunkers or woodwork about 4 feet Is oil fuel carried in the double bottom under boilers no

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

Largest internal dia. of boilers 13'-3 13/16" Length 11'-0" Shell plates: Material Steel Tensile strength 29/33

Thickness 1 3/32" Are the shell plates welded or flanged no Description of riveting: circ. seams {end DR Lap inter. 3/8"

long. seams J.R. D.B.S. Diameter of rivet holes in {circ. seams 1 3/16" long. seams 1 3/16" Pitch of rivets { 3/8" 8 1/8"

Percentage of strength of circ. end seams {plate 64.8 rivets 47.5 Percentage of strength of circ. intermediate seam {plate 85.35 rivets 92.5

Percentage of strength of longitudinal joint {combined 89.2 Working pressure of shell by Rules 185 lbs

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

Material Steel Tensile strength 26/28 Smallest outside diameter 39 13/16"

Length of plain part {top 17" bottom 32" Thickness of plates {crown 17/32" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom yes Working pressure of furnace by Rules 192.5

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 3/16" Pitch of stays 18" x 19"

How are stays secured D. Nuts Working pressure by Rules 192

Tube plates: Material {front Steel back Steel Tensile strength { 26/30 Thickness {Centre 3/4" Wings 27/32"

Mean pitch of stay tubes in nests 8 3/4" x 11 1/4" 11 1/2" x 8 3/4" Pitch across wide water spaces 14 1/4" x 8 3/4" Working pressure {front 188 back 201

Girders to combustion chamber tops: Material Steel Tensile strength 26/30 Depth and thickness of girder

at centre 8" x 1 5/8" Length as per Rule 27 3/8" Distance apart 11" No. and pitch of stays

in each 2 8 5/8" Working pressure by Rules 194 Combustion chamber plates: Material Steel

Tensile strength 26/30 Thickness: Sides 1/16" x 2 1/2" Back 1/16" Top 1/16" x 2 3/32" Bottom 3/4"

Pitch of stays to ditto: Sides 10 1/2" x 8 3/4" x 8 3/4" Back 10 5/8" x 8" Top 10" x 8 3/4" x 11" x 8 5/8" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 185 Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 7/16" Lower back plate: Material Steel Tensile strength 26/30 Thickness 13/16"

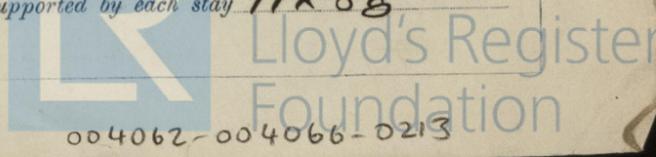
Pitch of stays at wide water space 15" x 8" Are stays fitted with nuts or riveted over nuts

Working Pressure 186 Main stays: Material Steel Tensile strength 28/32

Diameter {At body of stay 3" x 2 7/8" or Over threads 3" x 2 7/8" No. of threads per inch 6 Area supported by each stay 19 1/2" x 18" x 16" x 18"

Working pressure by Rules 191 Screw stays: Material Steel Tensile strength 26/30

Diameter {At turned off part, 1 3/4" or Over threads 1 3/4" No. of threads per inch 9 Area supported by each stay 11" x 8 5/8"



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Working pressure by Rules 191 Are the stays drilled at the outer ends no Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part} \\ \text{or} \\ \text{Over threads} \end{array} \right. \left. \begin{array}{l} \checkmark \\ \\ \checkmark \end{array} \right. \frac{1}{2}''$

No. of threads per inch 9 Area supported by each stay $12 \frac{13}{16} \times 8''$ Working pressure by Rules 205

Tubes: Material Iron External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \left. \begin{array}{l} \checkmark \\ \checkmark \end{array} \right. \frac{3}{4}''$ Thickness $\left\{ \begin{array}{l} \frac{8}{16} \\ \frac{3}{8} \\ \frac{7}{16} \end{array} \right. \checkmark$ No. of threads per inch 9

Pitch of tubes $4 \frac{1}{2}'' \times 4 \frac{3}{8}''$ Working pressure by Rules 219 Manhole compensation: Size of opening in shell plate $20 \frac{1}{4}'' \times 16 \frac{1}{4}''$ Section of compensating ring $22'' \times 1 \frac{3}{32}''$ No. of rivets and diameter of rivet holes 38 $\frac{3}{16}''$

Outer row rivet pitch at ends $8 \frac{1}{8}''$ Depth of flange if manhole flanged $4 \frac{1}{4}''$ 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 $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right. \checkmark$

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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right. \checkmark$

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

The foregoing is a correct description,
FOR RICHARDSONS, WESTGARTH & CO. LIMITED
L. D. Wignall Manufacturer.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{---} \\ \text{---} \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith No. (If not state date of approval.) See Machinery report attached

Total No. of visits _____

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

See accompanying machinery report.

Survey Fee ... £ See Machinery Report attached When applied for, 192

Travelling Expenses (if any) £ _____ When received, 192

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

Committee's Minute TUES. 19 AUG 1924

Assigned _____

