

REPORT ON BOILERS.

No. 16583

Received at London Office

Date of writing Report

192

When handed in at Local Office

16.12.

1927

Port of

West Hartlepool

No. in g. Book.

Survey held at

Hartlepool

Date, First Survey

14th May

Last Survey

14th Dec.

1927

on the

Twin S.S. No 494.

(Number of Visits)

Gross Tons
Net

16.9.27 Master Built at Levis, Quebec By whom built Davie S.B. & Rep Co. Ltd. Yard No. 494 When built 1927
10.27 Engines made at Hartlepool By whom made Richardsons Westgarth & Co Engine No. 2669 When made 1927
4.11.27 Boilers made at ditto By whom made ditto Boiler No. 2669 When made 1927
Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

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

Total Heating Surface of Boilers 12656 sq. ft Is forced draught fitted yes Coal or Oil fired coal or oil

No. and Description of Boilers Six single ended Working Pressure 190 lbs

Tested by hydraulic pressure to 335 Date of test 14.9.27(3) No. of Certificate 3712(3) Can each boiler be worked separately yes

Area of Firegrate in each Boiler 55 sq. ft No. and Description of safety valves to each boiler 2 direct spring

Area of each set of valves per boiler per Rule 72.88 sq. in. Pressure to which they are adjusted 16.58 sq. in. Are they fitted with easing gear

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 Is oil fuel carried in the double bottom under boilers

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

Largest internal dia. of boilers 13'-9 1/16" Length 11'-6" 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 2 R Lap

Long. seams Ind. riv. D.B.S. Diameter of rivet holes in 1 3/16" Pitch of rivets 3 3/8"

Percentage of strength of circ. end seams plate 64.8 rivets 66.6 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 85.3 rivets 87.25 combined 88.25 Working pressure of shell by Rules 190 lbs

Thickness of butt straps outer 5/8" inner 1" No. and Description of Furnaces in each Boiler 3 Deightons

Material Steel Tensile strength 26/30 Smallest outside diameter 3'-5 1/8"

Length of plain part top 9" bottom Thickness of plates crown 9/16" bottom 1/16" Description of longitudinal joint welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 198 lbs

End plates in steam space: Material Steel Tensile strength 26/30 Thickness 1 1/8" Pitch of stays 19" x 16"

How are stays secured Double nuts Working pressure by Rules 190 lbs

End plates: Material front Steel back Steel Tensile strength 26/30 Thickness 27/32" 3/4"

Lean pitch of stay tubes in nests 11 5/8" x 7 1/4" Pitch across wide water spaces 13 1/2" Working pressure front 207 lbs back 220 lbs

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

At centre 9 1/4" x 1 5/8" Length as per Rule 2'-9 1/32" Distance apart 10" No. and pitch of stays

At each three 8" Working pressure by Rules 194 Combustion chamber plates: Material Steel

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

Pitch of stays to ditto: Sides 9" x 8" Back 9" x 8 3/4" Top 8" x 9 5/8" Bottom 8" x 10" Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 190 lbs Front plate at bottom: Material Steel Tensile strength 26/30

Thickness 27/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 25/32"

Pitch of stays at wide water space 13 1/2" x 8 3/4" Are stays fitted with nuts or riveted over nuts

Working Pressure 191 lbs Main stays: Material Steel Tensile strength 28/32

Diameter At body of stay 2 3/4" Over threads 2 7/8" No. of threads per inch 6 Area supported by each stay 16" x 19"

Working pressure by Rules 201 lbs Screw stays: Material Steel Tensile strength 26/30

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

Shipping.

Working pressure by Rules 193 lb Are the stays drilled at the outer ends yes Margin stays: Diameter { At turned off part. 1 3/8" or Over threads 1 3/8"

No. of threads per inch 9 Area supported by each stay 11 1/2" x 9" Working pressure by Rules 206

Tubes: Material Iron External diameter { Plain 2 1/2" Stay 2 1/2" Thickness { 9/16" 5/8" No. of threads per inch 9

Pitch of tubes 3 5/8" x 3 5/8" Working pressure by Rules 224 lb Manhole compensation: Size of opening in shell plate 20 1/4" x 16 1/4" Section of compensating ring 21 5/8" x 1 5/32" No. of rivets and diameter of rivet holes 42 1 3/16"

Outer row rivet pitch at ends 8 1/8" 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 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 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 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**
Manufacturer.

M. J. Guthrie GENERAL MANAGER.
(HARTLEPOOL WORKS)
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) ✓
Total No. of visits 1
Forwarded with rpt on 26th

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

See accompanying machinery report.

Survey Fee	£	:	:	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. 14 AUG 1928

Assigned See Msl 76 2907