

28 MAR 1929

13621

Rpt. 5a.

REPORT ON BOILERS.

No. 13489.

Date of writing Report 29. 11. 1928 When handed in at Local Office 29. 11. 1928 Port of MIDDLESBROUGH.

No. in Reg. Book. Survey held at STOCKTON. Date, First Survey 29. 9. 28. Last Survey 29. 11. 1928.

on the donkey boiler for ss. "LLANARTH" (Ymer. Riley Bros N° 5848). (Number of Visits 15. Gross Tons Net

Master Built at Sunderland. By whom built Bartham & Sons Yard No. 265. When built 1929

Engines made at Stockton By whom made Blair & Co (1926) Ltd Engine No. 1981 When made 1929

Boilers made at . do . By whom made . do . Boiler No. 1981. When made 1929

Nominal Horse Power Owners Pictou S.S. Co Ltd Port belonging to London.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Co. (Letter for Record S. /)

Total Heating Surface of Boilers 1550 sq. Is forced draught fitted no Coal or Oil fired coal.

No. and Description of Boilers One S.B. Working Pressure 120 lbs.

Tested by hydraulic pressure to 230 lbs. Date of test 29. 11. 28 No. of Certificate 6672. Can each boiler be worked separately

Area of Firegrate in each Boiler 50 sq. No. and Description of safety valves to each boiler Pair Spring loaded.

Area of each set of valves per boiler {per Rule 14.3 as fitted 15.3} Pressure to which they are adjusted 125 lbs. Are they fitted with easing gear Yes.

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler no.

Smallest distance between boilers or uptakes and bunkers or woodwork 2' 0" Is oil fuel carried in the double bottom under boilers no.

Smallest distance between shell of boiler and tank top plating 3' 6" Is the bottom of the boiler insulated no.

Largest internal dia. of boilers 12' 6" Length 11' 0" Shell plates: Material Steel Tensile strength 28/32.

Thickness 23/32 Are the shell plates welded or flanged no. Description of riveting: circ. seams end D.R. inter.

long. seams T.R.D.B.S. (snicks) Diameter of rivet holes in {circ. seams 15" long. seams 12" Pitch of rivets {2 1/4 x 5 1/2 5 1/2

Percentage of strength of circ. end seams {plate 68.7. rivets 42.4. Percentage of strength of circ. intermediate seam {plate 86.3. rivets 42.4.

Percentage of strength of longitudinal joint {plate 86.3. rivets 92.6. combined 87.3. Working pressure of shell by Rules 123 lbs.

Thickness of butt straps {outer 2" inner 1 1/2" No. and Description of Furnaces in each Boiler 3 Corrugated

Material Steel Tensile strength 26/30. Smallest outside diameter 2' 11 1/4"

Length of plain part {top bottom} Thickness of plates {crown 3/8" bottom 3/8" Description of longitudinal joint weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 147 lbs.

End plates in steam space: Material Steel Tensile strength 26/30. Thickness 3/4" Pitch of stays 16 1/4 x 15"

How are stays secured D.N.W. Working pressure by Rules 121 lbs.

Tube plates: Material {front back} Steel Tensile strength {26/30. Thickness {1 1/2" 1 1/2"

Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 13 1/8 x 8 1/2 Working pressure {front 123 lbs. back 137 lbs.

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

at centre 8' 5/8" (double). Length as per Rule 2' 8" Distance apart 10" No. and pitch of stays

in each 2 x 10 1/2 Working pressure by Rules 146 lbs. Combustion chamber plates: Material Steel

Tensile strength 26/30. Thickness: Sides 5/8" Back 1 1/2" Top 5/8" Bottom 5/8"

Pitch of stays to ditto: Sides 10 x 10 1/2 Back 8 1/2 x 9 1/2 Top 10 x 10 1/2 Are stays fitted with nuts or riveted over nuts

Working pressure by Rules 121 lbs. Front plate at bottom: Material Steel Tensile strength 26/30.

Thickness 1 1/2 Lower back plate: Material Steel Tensile strength 26/30 Thickness 3/2

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

Working Pressure 128 lbs. Main stays: Material Steel Tensile strength 28/32.

Diameter {At body of stay. or Over threads} 2 3/8 No. of threads per inch 6. Area supported by each stay 25 lb.

Working pressure by Rules 120 lbs. Screw stays: Material Steel Tensile strength 26/30.

Diameter {At turned off part. or Over threads} 1 1/2 No. of threads per inch 9. Area supported by each stay 105 lb.



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Working pressure by Rules 120 lb Are the stays drilled at the outer ends no. Margin stays: Diameter 1 1/2" (At turned off part. or Over threads)
No. of threads per inch 9 Area supported by each stay 10.48 Working pressure by Rules 120 lb
Tubes: Material iron External diameter 3 1/2" to 3 3/4" Thickness 10 W.G. No. of threads per inch 9
Pitch of tubes 4 3/8" x 4 1/2" Working pressure by Rules p. 130. s. 237 lb Manhole compensation: Size of opening in shell plate 20" x 16" Section of compensating ring 7 1/2" No. of rivets and diameter of rivet holes 44 - 15"
Outer row rivet pitch at ends 6" Depth of flange if manhole flanged ✓ Steam Dome: Material
Tensile strength 205 Thickness of shell 10 W.G. Description of longitudinal joint
Diameter of rivet holes 18/19 Pitch of rivets 2 1/2" Percentage of strength of joint Plate Rivets
Internal diameter 18/19 Working pressure by Rules 120 lb Thickness of crown 10 W.G. No. and diameter of stays
How connected to shell 18/19 Inner radius of crown 10 W.G. Working pressure by Rules 120 lb
Size of doubling plate under dome 18/19 Diameter of rivet holes and pitch of rivets in outer row in dome connection to shell

Type of Superheater
Number of elements 1 Material of tubes iron Manufacturers of Tubes
Material of headers iron Tensile strength 205 Internal diameter and thickness of tubes 3 1/2" to 3 3/4" 10 W.G.
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 18/19 Are the safety valves fitted with easing gear 18/19 Working pressure as per Rules 120 lb
Pressure to which the safety valves are adjusted 120 lb Hydraulic test pressure: 180 lb
tubes 18/19 and after assembly in place 18/19 Are drain cocks or valves fitted to free the superheater from water where necessary 18/19
Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes

RILEY BROS. (BOILERMAKERS) LIMITED.
The foregoing is a correct description,

J. H. Shields SECRETARY Manufacturer.

Dates of Survey 1928
During progress of work in shops - Sep 27. Oct 9. 10. 12. 16. 18. 25. 31. Nov Are the approved plans of boiler and superheater forwarded herewith Yes
(If not state date of approval.)
During erection on board vessel - 2. 7. 8. 13. 20. 27. 29. Total No. of visits 15

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

This boiler is a duplicate of Messrs. Riley Bros. No. 5779 (Inst. Rpt No 13303).
It has been built under special survey in accordance with the Rules and approved Plan. The materials and workmanship are good.
This boiler has been securely fitted aboard and its safety valves adjusted and tested under steam with satisfactory results.

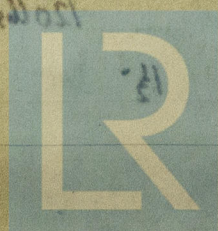
Survey Fee £ 10-6-0 When applied for, 1928
Travelling Expenses (if any) £ When received, 1928

MONTHLY A/R

M. Man
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute Enl. 5 APR 1929

Assigned See Minute
Inst Rpt 13621



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