

Rpt. 5a.

NEWCASTLE-ON-TYNE

no: 81329

12 MAY 1927

REPORT ON BOILERS.

No. 12775

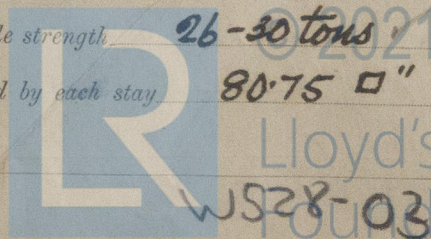
Received at London Office

1 DEC 1926

Date of writing Report **26-11-1926** When handed in at Local Office **29-11-1926** Port of **Middlesbrough**
No. in Reg. Book **Stockton** Date, First Survey **14th January** Last Survey **29-11-1926**
on the **New Steel S.S. Anglo-Australian** (Number of Visits **29**) Gross Tons { Net Tons {
Master **Hallsend** Built at **Sunderland** By whom built **Messrs Short & Co** Yard No. **424** When built **1924**
Engines made at **Stockton** By whom made **Hallsend Shipway & Co Ltd** Engine No. **2627** When made **1924**
Boiler made at **Stockton** By whom made **Messrs Riley Bros. Ltd.** Boiler No. **5654** When made **1926**
Nominal Horse Power **453** Owners **Lawther & Co Ltd** Port belonging to **London**

MULTITUBULAR BOILERS: ~~MAIN, AUXILIARY, OR~~ DONKEY.

Manufacturers of Steel **Cargo Fleet Iron Co. N^o 1st Road, Durham** S. & J. Coy. (Letter for Record **(S)**)
Total Heating Surface of Boilers **1330 sq ft** Is forced draught fitted **no** Coal or Oil fired **coal**
No. and Description of Boilers **One Single End** Working Pressure **120 lbs**
Tested by hydraulic pressure to **230 lbs** Date of test **29-11-26** No. of Certificate **6520** Can each boiler be worked separately **yes**
Area of Firegrate in each Boiler **40 sq ft** No. and Description of safety valves to each boiler **2 spring loaded**
Area of each set of valves per boiler { per Rule **12.3** Pressure to which they are adjusted **122 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 **on Ymen decks** Is oil fuel carried in the double bottom under boilers **yes**
Smallest distance between shell of boiler and tank top plating **yes** Is the bottom of the boiler insulated **no**
Largest internal dia. of boilers **12'-0"** Length **10'-6"** Shell plates: Material **Steel** Tensile strength **28-32 tons**
Thickness **11/16"** Are the shell plates welded or flanged **no** Description of riveting: circ. seams { end **LAP. DR.** inter. **yes**
Long. seams { **Double Butt Straps** Diameter of rivet holes in { circ. seams **15/16"** Pitch of rivets { **3"** inter. **5 3/8"**
{ **Double Riveted** Diameter of rivet holes in { long. seams **13/16"** Pitch of rivets { **5 3/8"**
{ **4 rivets in pitch** plate **68.66** Percentage of strength of circ. intermediate seam { plate **yes** rivets **yes**
Percentage of strength of circ. end seams { rivets **54.6** Working pressure of shell by Rules **120 lbs**
Percentage of strength of longitudinal joint { plate **84.89** rivets **86.3** combined **91.35**
Thickness of butt straps { outer **13" x 7/32"** inner **13" x 2 1/32"** No. and Description of Furnaces in each Boiler **Two Plain**
Material **Steel** Tensile strength **26-30 tons** Smallest outside diameter **45"**
Length of plain part { top **77.8"** Thickness of plates { crown **2 1/32"** Description of longitudinal joint **weld**
{ bottom **86.25"** Working pressure of furnace by Rules **118 lbs**
Dimensions of stiffening rings on furnace or c.c. bottom **yes** Working pressure of furnace by Rules **118 lbs**
End plates in steam space: Material **Steel** Tensile strength **26-30 tons** Thickness **25/32"** Pitch of stays **16 1/2" x 13"**
How are stays secured **Double Nuts and loose washers 8" x 9/16"** Working pressure by Rules **120 lbs** **15 1/2" tubes**
End plates: Material { front **Steel** Tensile strength **26-30 tons** Thickness **25/32"** Working pressure { front **149 lbs** back **130 lbs**
{ back **Steel** Tensile strength **26-30 tons** Thickness **25/32"** Working pressure { front **149 lbs** back **130 lbs**
Pitch of stay tubes in nests **10.27"** Pitch across wide water spaces **14 1/4" x 8 3/4"** Working pressure { front **149 lbs** back **130 lbs**
Orders to combustion chamber tops: Material **Steel** Tensile strength **28-32 tons** Depth and thickness of girder
centre **7" x 1 1/4"** Length as per Rule **31"** Distance apart **8 1/2"** No. and pitch of stays
each **2 @ 9 1/2"** Working pressure by Rules **128 lbs** Combustion chamber plates: Material **Steel**
Tensile strength **26-30 tons** Thickness: Sides **9/16"** Back **19/32"** Top **9/16"** Bottom **1 1/16"**
Pitch of stays to ditto: Sides **9 1/2" x 8 1/2"** Back **10" x 9 3/4"** Top **9 1/2" x 8 1/2"** Are stays fitted with nuts or riveted over **nuts**
Working pressure by Rules **124 lbs** Front plate at bottom: Material **Steel** Tensile strength **26-30 tons**
Thickness **25/32"** Lower back plate: Material **Steel** Tensile strength **26-30 tons** Thickness **25/32"**
Pitch of stays at wide water space **14 1/4" x 9 3/4"** Are stays fitted with nuts or riveted over **nuts**
Working Pressure **166 lbs** Main stays: Material **Steel** Tensile strength **28-32 tons**
Girth { At body of stay, **2 1/4"** No. of threads per inch **6** Area supported by each stay **268 sq"**
{ Over threads **2 1/4"** Working pressure by Rules **129 lbs** Screw stays: Material **Steel** Tensile strength **26-30 tons**
{ At turned off part, **1 3/8"** No. of threads per inch **9** Area supported by each stay **80.75 sq"**
{ Over threads **1 3/8"**



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Working pressure by Rules 125 lbs Are the stays drilled at the outer ends NO Margin stays: Diameter { At turned off part. 1 9/8" or Over threads 1 9/8"
No. of threads per inch 9 Area supported by each stay 118.2 sq" Working pressure by Rules 128 lbs
Tubes: Material iron External diameter { Plain 3 1/4" Thickness 8 1/8" No. of threads per inch 9
Stay 3"
Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 5169 & P 230 lbs Manhole compensation: Size of opening in
shell plate 16" x 20" Section of compensating ring 1" x 1 5/16" MC NEIL No. of rivets and diameter of rivet holes 40 - 5/16"
Outer row rivet pitch at ends 6" Depth of flange if manhole flanged ✓ Steam Dome: Material ✓ iron
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 ✓ ON

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

J. H. Shields Secretary Manufacturer.

Dates of Survey { During progress of work in shops - Jan. 14. 20. 29. Feb. 5. 12. 19. 26. Mar. 2. 9. 17. 25. 29 are the approved plans of boiler and superheater forwarded herewith Forwarded
while building { During erection on board vessel - Feb. 2. 9. 26. Mar. 5. 12. 27. Jun. 30. Jul. 6. 14. 21. 28. Oct. 4. 26. (If not state date of approval.) with Rpt No 12664.
Total No. of visits 29

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

This boiler is a duplicate of Builders No 5597, Rpt No 12423.
& 5653 one Rpt No 12664.

This boiler has been constructed under Special Survey:
is of good material and workmanship and on completion
was tested by hydraulic pressure with satisfactory results.

This Donkey boiler is securely fixed in place & its
safety valves have been adjusted under steam

Survey Fee £ 8 : 18 : - When applied for MONTHLY A/c.
Travelling Expenses (if any) £ : : When received, 192

W. H. Roberts William D. Dyer
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 17 MAY 1921

Assigned

See P. E. rpt attached
(Sld. 29431)



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