

## REPORT ON BOILERS.

Sld. No. 29666

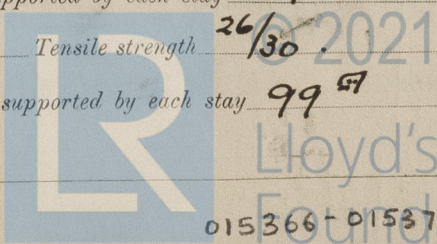
Mch. No. 13113.

Received at London Office 21 NOV 1927

Date of report 18. 11. 1927 When handed in at Local Office 18. 11. 1927 Port of MIDDLESBROUGH  
 No. in Survey held at STOCKTON Date, First Survey 12. 10. 27 Last Survey 18. 11. 1927  
 on the boiler for Messrs Swan Hunter & Wigham Richardson (Number of Visits 7) Gross 2280 Tons Net 1354  
 S.S. S. THERESE  
 Master Built at Sunderland By whom built Swan Hunter & Wigham Yard No. 1327 When built 1928  
 Engines made at Sunderland By whom made George Blaik Ltd. Engine No. 1157 When made 1928  
 Boilers made at Stockton By whom made Messrs Riley Bros. Boiler No. 5769 When made 1927  
 Nominal Horse Power 224 Owners Jens Lund & Co Port belonging to Torsberg

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

Manufacturers of Steel David Colville & Sons. (Letter for Record S ✓)  
 Total Heating Surface of Boilers 880 sq. ft. Is forced draught fitted no. Coal or Oil fired Coal.  
 No. and Description of Boilers One S.E. Marine Working Pressure 100 lbs.  
 Tested by hydraulic pressure to 200 lbs. Date of test 18. 11. 24 No. of Certificate 6595. Can each boiler be worked separately  
 Area of Firegrate in each Boiler 30 sq. ft. No. and Description of safety valves to each boiler Two spring loaded.  
 Area of each set of valves per boiler {per Rule 9.5" as fitted 9.8 (22 2 1/2") Pressure to which they are adjusted 105 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 8'-0" 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 No.  
 Largest internal dia. of boilers 10'-0" Length 10'-0" Shell plates: Material Steel Tensile strength 28/32  
 Thickness 1 1/32 Are the shell plates welded or flanged no. Description of riveting: circ. seams {end S.R. inter.  
 long. seams D.R.D.B.S. Diameter of rivet holes in {circ. seams 1 1/16" long. seams 1 1/16" Pitch of rivets {2 1/8" 3 7/8"  
 Percentage of strength of circ. end seams {plate 55.9 rivets 50.2 Percentage of strength of circ. intermediate seam {plate rivets  
 Percentage of strength of longitudinal joint {plate 82.2 rivets 83.1 combined 92.2 Working pressure of shell by Rules 104 lbs.  
 Thickness of butt straps {outer 7/16" inner 9/16" No. and Description of Furnaces in each Boiler Two plain  
 Material Steel Tensile strength 26/30 Smallest outside diameter 3'-2"  
 Length of plain part {top 6'-3 3/4" bottom 6'-9" Thickness of plates {crown 9/32" bottom 9/32" Description of longitudinal joint weld.  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 114 lbs.  
 End plates in steam space: Material S. Tensile strength 26/30 Thickness 3/4" Pitch of stays 1 1/4" x 1 1/4"  
 How are stays secured D.N.R.W. (Front) D.N.W. (Back) Working pressure by Rules 106 lbs.  
 Tube plates: Material {front Steel back Steel Tensile strength {26/30 Thickness {3/4" 5/8"  
 Mean pitch of stay tubes in nests 10" Pitch across wide water spaces 13 1/2" Working pressure {front 108 lbs. back 137 lbs.  
 Girders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder  
 at centre 5 3/4" x 7/8" (double) Length as per Rule 2'-4" Distance apart 9" No. and pitch of stays  
 in each 2 - 8 1/2" x 9" Working pressure by Rules 100 lbs. Combustion chamber plates: Material Steel  
 Tensile strength 26/30 Thickness: Sides 7/8" Back 9/16" Top 7/8" Bottom 7/8"  
 Pitch of stays to ditto: Sides 11" x 8 1/2" Back 11" x 9" Top 9" x 8 1/2" Are stays fitted with nuts or riveted over nuts  
 Working pressure by Rules 104 lbs. Front plate at bottom: Material S. Tensile strength 26/30  
 Thickness 3/4" Lower back plate: Material Steel Tensile strength 26/30 Thickness 3/4"  
 Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts  
 Working Pressure 1 1/2 lbs. Main stays: Material Steel Tensile strength 28/32  
 Diameter {At body of stay, or Over threads 2 1/4" No. of threads per inch 6 Area supported by each stay 289 sq.  
 Working pressure by Rules 119 lbs. Screw stays: Material Steel Tensile strength 26/30  
 Diameter {At turned off part, or Over threads 1 3/8" No. of threads per inch 9 Area supported by each stay 99 sq.



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Working pressure by Rules 102 lbs Are the stays drilled at the outer ends no ✓ Margin stays: Diameter { At turned off part, 1 7/8" ✓  
or Over threads  
No. of threads per inch 9 ✓ Area supported by each stay 100 ✓ Working pressure by Rules 101 lbs.  
Tubes: Material iron ✓ External diameter { Plain 3 1/4 6 3 1/4 ✓ Thickness { 10 w 9 ✓ No. of threads per inch 9 ✓  
Stay 3" 1 3 1/4 ✓  
Pitch of tubes 4 1/4" x 4 3/8" ✓ Working pressure by Rules p. 130 s - 269 lbs. Manhole compensation: Size of opening in  
shell plate 20 x 16" ✓ Section of compensating ring 4" x 3/4" ✓ No. of rivets and diameter of rivet holes 40 - 5/16" ✓  
Outer row rivet pitch at ends 9" ✓ Depth of flange if manhole flanged 3" ✓ Steam Dome: Material  
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 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,

J. B. Shields Secretary, RILEY BROS. (BOILERMAKERS) LIMITED, Manufacturer.

Dates of Survey { During progress of work in shops - - - 1927  
while building { During erection on board vessel - - -  
Oct 12-18-21-24-28 Nov 16-18

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes

Total No. of visits 7

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

The materials and workmanship are good.  
This boiler has been built under special survey in accordance with the Rules and approved plan.  
This boiler has been satisfactorily fitted in the vessel & the safety valves adjusted under steam. For notation see machinery report.

Survey Fee ... .. £ 5-18-0

When applied for, 192

Travelling Expenses (if any) £ : : }

When received, 192

MONTHLY A/c

Harbottle  
P. J. Ham  
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

TUES. 13 MAR 1928

Assigned

See old J.E. 29666



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Foundation