

## REPORT ON BOILERS.

Std. No. 31628  
Mach. No. 15364

Date of writing Report 12. 3. 35 When handed in at Local Office 12. 3. 35 Port of MIDDLESBROUGH  
 No. in Survey held at STOCKTON Date, First Survey 30 Jan Last Survey 12. 3. 35  
 on the M/V "KIRRIEMOOR" (Number of Visits 6) Tons { Gross 4970 Net 3032  
 Built at Sunderland By whom built Wm. Bayford & Son Ltd. Card No. 614 When built 1935  
 Engines made at Sunderland By whom made Wm. Bayford & Son Ltd. Engine No. 614 When made 1935  
 Boilers made at Stockton By whom made Stockton Chemical Engineers and Riley Boilers Ltd. Boiler No. 6092 When made 1935  
 Nominal Horse Power 100 Owners Dr. Duncan's Shipping Co. Port belonging to London

## MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record S.)  
 Total Heating Surface of Boilers 1660 sq. ft. Is forced draught fitted No. Coal or Oil fired No.  
 No. and Description of Boilers 1 S.B. Working Pressure 120 lbs.  
 Tested by hydraulic pressure to 230 lbs. Date of test 12. 3. 35 No. of Certificate 6873 Can each boiler be worked separately Yes  
 Area of Firegrate in each Boiler 15.3 sq. ft. No. and Description of safety valves to each boiler 2 Direct Spring  
 Area of each set of valves per boiler { per Rule 16.6 sq. ft. Pressure to which they are adjusted 120 Are they fitted with easing gear No.  
 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 2' 10" Is oil fuel carried in the double bottom under boilers No.  
 Smallest distance between shell of boiler and tank top plating 11' 10 5/8" Is the bottom of the boiler insulated No.  
 Largest internal dia. of boilers 11' 10 5/8" Length 11' 6" Shell plates: Material Steel Tensile strength 29/33  
 Thickness 11" Are the shell plates welded or flanged No. Description of riveting: circ. seams { end D.R. inter. Yes  
 Long. seams T.R.D.B.S. (4 rivets) Diameter of rivet holes in { circ. seams 1 1/16" Pitch of rivets { 3 3/8" inter. 5 3/8"  
 Percentage of strength of circ. end seams { plate 68.5 rivets 45.6 Percentage of strength of circ. intermediate seam { plate 84.9 rivets 83.8  
 Percentage of strength of longitudinal joint { plate 84.9 rivets 83.8 combined 83.8 Working pressure of shell by Rules 123 lbs.  
 Thickness of butt straps { outer 9 1/16" inner 11" No. and Description of Furnaces in each Boiler 2 e.f.  
 Material Steel Tensile strength 26/30 Smallest outside diameter 3' 11 1/2" 3' 8 1/8"  
 Length of plain part { top 13" bottom 32" Description of longitudinal joint Weld  
 Dimensions of stiffening rings on furnace or c.c. bottom Yes Working pressure of furnace by Rules 121 lbs.  
 End plates in steam space: Material Steel Tensile strength 26/30 Thickness 27" Pitch of stays 17" x 16"  
 How are stays secured D.N. & W. Working pressure by Rules 142 lbs.  
 End plates: Material { front Steel back Steel Tensile strength { 26/30 Thickness { 32" 13" 76"  
 Can pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 14" Working pressure { front 157 lbs. back 249  
 Orders to combustion chamber tops: Material Steel Tensile strength 28/32 Depth and thickness of girder  
 Centre 7' 5 7/8" (double) Length as per Rule 30 1/2" Distance apart 9" No. and pitch of stays  
 Each 2 - 9 1/2" Working pressure by Rules 126 lbs. Combustion chamber plates: Material Steel  
 Tensile strength 26/30 Thickness: Sides 32" Back 9" Top 19" Bottom 7"  
 Pitch of stays to ditto: Sides 9" x 9 7/8" Back 9 1/2" x 8 3/4" Top 9" x 9 1/2" Are stays fitted with nuts or riveted over Nuts  
 Working pressure by Rules 129 lbs. Front plate at bottom: Material Steel Tensile strength 26/30  
 Thickness 27/32" Lower back plate: Material Steel Tensile strength 26/30 Thickness 27"  
 Pitch of stays at wide water space 13 1/2" x 9 1/2" Are stays fitted with nuts or riveted over Nuts  
 Working Pressure 201 lbs. Main stays: Material Steel Tensile strength 28/32  
 Diameter { At body of stay, 2 1/4" No. of threads per inch 6 Area supported by each stay 288.4  
 Working pressure by Rules 120 lbs. Screw stays: Material Steel Tensile strength 26/30  
 Diameter { At turned off part, 1 3/8" No. of threads per inch 9 Area supported by each stay 84



Working pressure by Rules 120 lb. Are the stays drilled at the outer ends no. Margin stays: Diameter { At turned off part, 1 5/8 or Over threads 1 5/8 ✓  
No. of threads per inch 9 Area supported by each stay 100 ✓ Working pressure by Rules 152 lb.  
Tubes: Material Lapwelded iron External diameter { Plain 2 3/4 16 2 3/4 Thickness { 10 16 No. of threads per inch 9 ✓  
Pitch of tubes 3 3/4 x 3 3/4 Working pressure by Rules p. 160 lb. s. 276 lb. Manhole compensation: Size of opening  
shell plate 20" x 16" Section of compensating ring 7 x 1" No. of rivets and diameter of rivet holes 44 - 13 ✓  
Outer row rivet pitch at ends 6 1/4 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  
stays Inner radius of crown Working pressure by Rules  
How connected to shell Size of doubling plate under dome Diameter of rivet holes and p  
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  
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 casing gear Working pressure as  
Rules Pressure to which the safety valves are adjusted Hydraulic test press  
tubes castings and after assembly in place Are drain cocks or valves f  
to free the superheater from water where necessary

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with

Yes. For and on behalf of  
Stockton Chemical Engineers & Riley Boilers Ltd.  
The foregoing is a correct description,  
Geo. W. Riley  
MANUFACTURER

Dates of Survey { During progress of work in shops - - 1935 Jan 30 Feb 8. 18. 25 Mar 9. 12 Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
while building { During erection on board vessel - - - 6 Total No. of visits

Is this Boiler a duplicate of a previous case No. If so, state Vessel's name and Report No. ✓

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. It will be installed at Sunderland.

This boiler has been securely fixed on board the vessel  
examined under steam, Safety valves adjusted to working  
pressure & accumulation test. Carried out - Satisfactory

In recommendation Please see history Rpt

W. T. G. A. M.

Survey Fee ... £ 11-2-0. When applied for, 12. 8. 1935  
Travelling Expenses (if any) £ : : When received, 14. 5. 1935

P. J. R. A. M.

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRL 24 MAY 1935

Assigned

See Std. 76 31628



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Foundation