

REPORT ON BOILERS.

Std. No. 31628
Mach. No. 15364

Received at London Office 14 MAR 1935 18 MAY 1935

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

Master Built at Sunderland By whom built Wm Doreford & Sons Ltd Card No. 614 When built 1935

Engines made at Sunderland By whom made Wm Doreford & Sons Ltd Engine No. 614 When made 1935

Boilers made at Stockton By whom made Stockton Chemical Engineers and Riley, Boiler Mfg. Co. Boiler No. 6092 When made 1935

Nominal Horse Power Owners Lorduncrain 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. 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

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 Direct Spring. No.

Area of each set of valves per boiler { per Rule 15.3 sq. ft. as fitted 16.6 sq. ft. Pressure to which they are adjusted 120 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 No.

Smallest distance between shell of boiler and tank top plating 2'-10" 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. 3/8" Pitch of rivets { 5 3/8"

Per cent. 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% Working pressure of shell by Rules 123 lbs.

Percentage of strength of longitudinal joint { plate 84.9% rivets 83.8% combined No. and Description of Furnaces in each Boiler 2 e.f.

Thickness of butt straps { outer 9/16" inner 11/16" Material steel Tensile strength 26/30 Smallest outside diameter 3'-11 1/2" 3'-8 1/8"

Length of plain part { top 13" bottom 3/32" Description of longitudinal joint weld. Working pressure of furnace by Rules 121 lbs.

Dimensions of stiffening rings on furnace or c.c. bottom No. and Description of Furnaces in each Boiler 2 e.f. Working pressure by Rules 142 lbs.

Stays in steam space: Material steel Tensile strength 26/30 Thickness 27" Pitch of stays 17" x 16" How are stays secured D.N. & W.

Deck plates: Material steel Tensile strength 26/30 Thickness { 32" 13" 7/16" Working pressure { front 157 lbs back 249 lbs

Span pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 14" Working pressure { front 157 lbs back 249 lbs

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 3/32 Back 9/16 Top 19/32 Bottom 7/8"

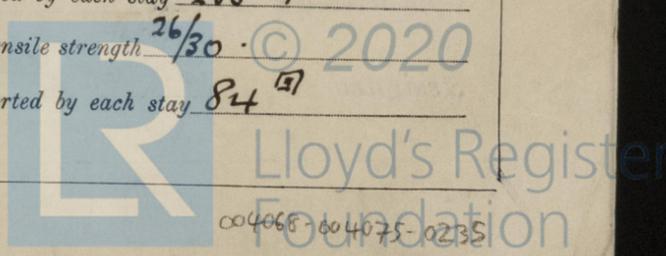
Pitch of stays to ditto: Sides 9" x 9 7/8" Back 9 1/2" x 8 3/4" Top 9" x 9 1/2" Are stays fitted with nuts or riveted over nuts

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 27/32

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, or Over threads 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, or Over threads 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 $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. \frac{1}{8}$ ✓
 No. of threads per inch 9. Area supported by each stay 100 ✓ Working pressure by Rules 152 lb.
 Tubes: Material lapwelded iron External diameter $\left\{ \begin{array}{l} \text{Plain } 2\frac{3}{4} \text{ to } 2\frac{1}{2} \\ \text{Stay } 2\frac{3}{4} \text{ to } 3 \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 10 \text{ to } 6 \\ 5/16 \end{array} \right.$ No. of threads per inch 9. ✓
 Pitch of tubes 3³/₄ x 3³/₄ Working pressure by Rules p. 160 lbs. s. 276 lbs. 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 - 16 ✓
 Outer row rivet pitch at ends 6¹/₄" 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 $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$ _____
 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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$ _____
 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 $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops - -} \end{array} \right. \left. \begin{array}{l} 1935 \text{ Jan } 30 \text{ Feb } 8, 18, 25 \text{ Mar } \\ 9, 12 \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith Yes.
 while building $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel - - -} \end{array} \right. \left. \begin{array}{l} 6 \\ \end{array} \right.$ 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 my Rpt

H. G. Mason

P. J. R. C. A.

 Engineer Surveyor to Lloyd's Register of Shipping

Survey Fee £ 11-2-0. When applied for, 12.8.1935
 Travelling Expenses (if any) £ : : When received, 14.5.1935

Committee's Minute FRL 24 MAY 1935
 Assigned See Std. F.E. 31628

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