

# REPORT ON BOILERS.

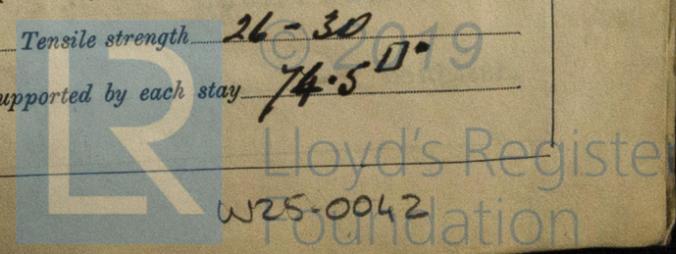
Sld. No. 32345  
Hall No. 16226

Received at London Office JAN 15 1938

Date of writing Report 19 When handed in at Local Office 13-1-1938 Port of Middlesbrough  
 No. in Survey held at Stockton Date, First Survey 19 Nov/37 Last Survey 10 Jan/38  
 on the M.V. DERRYMORE (Number of Visits 8) Gross Tons 4799 Net Tons 2822  
 Built at Burntisland By whom built Burntisland S.S.C. Yard No. 213 When built 1938  
 Engines made at Sunderland By whom made W. Donald & Sons Ltd Engine No. 202 When made 1938  
 Boilers made at Stockton By whom made Stockton C. Eng. & Shipbuilders Ltd Boiler No. 6755 When made 1938  
 Nominal Horse Power Owners McEwen & Sons Ltd Port belonging to London

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

Manufacturers of Steel Steel Company of Scotland Ltd & Colvilles Ltd. (Letter for Record S)  
 Total Heating Surface of Boilers 1390 sq. ft. Is forced draught fitted no. Coal or Oil fired oil.  
 No. and Description of Boilers 18B. Working Pressure 120 lbs  
 Tested by hydraulic pressure to 230 lbs Date of test 10.1.38 No. of Certificate 6927 Can each boiler be worked separately Yes.  
 Area of Firegrate in each Boiler No. and Description of safety valves to each boiler Two direct spring.  
 Area of each set of valves per boiler {per Rule 12.8 sq. in. as fitted 16.6 sq. in. Pressure to which they are adjusted 120 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 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 Yes.  
 Largest internal dia. of boilers 11'-10 7/8" Length 11'-0" Shell plates: Material S Tensile strength 29-33  
 Thickness 1/16" Are the shell plates welded or flanged no. Description of riveting: circ. seams {end DR inter. ✓  
 Long. seams U.R. D.B.S. Diameter of rivet holes in {circ. seams 1 1/16" long. seams 1 3/16" Pitch of rivets { 3 3/8" 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 83.7  
 Percentage of strength of longitudinal joint {plate 84.9 rivets 83.7 combined Working pressure of shell by Rules 123 lbs  
 Thickness of butt straps {outer 9/16" inner 11/16" No. and Description of Furnaces in each Boiler 2 cf.  
 Material S Tensile strength 26-30 Smallest outside diameter 3'-8 1/2"  
 Length of plain part {top ✓ bottom ✓ Thickness of plates {crown 13/32" bottom 13/32" Description of longitudinal joint weld.  
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 121 lbs  
 End plates in steam space: Material S Tensile strength 26-30 Thickness 27/32" Pitch of stays 16" x 17 1/2"  
 How are stays secured D.N. 9 W - D.N. 9 rivetted washers Working pressure by Rules 139 lbs  
 Tube plates: Material {front Steel back Steel Tensile strength { 26/30 Thickness { 13/16"  
 Mean pitch of stay tubes in nests 11 1/4" x 7 13/16" Pitch across wide water spaces 13 1/2" x 7" Working pressure {front 152 back 125  
 Girders to combustion chamber tops: Material S Tensile strength 28-32 Depth and thickness of girder  
 at centre 7" x 7 3/8" double Length as per Rule 2'-6 1/2" Distance apart 8" No. and pitch of stays  
 in each 2 @ 9 1/2" Working pressure by Rules 141 lbs Combustion chamber plates: Material S  
 Tensile strength 26-30 Thickness: Sides 19/32" Back 9/16" Top 19/32" Bottom 1/16"  
 Pitch of stays to ditto: Sides 10" x 9" Back 8 3/4" x 9 1/2" Top 8" x 9 1/2" Are stays fitted with nuts or riveted over nuts  
 Working pressure by Rules 129 lbs Front plate at bottom: Material S Tensile strength 26-30  
 Thickness 27/32" Lower back plate: Material S 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 213 lbs Main stays: Material S Tensile strength 28-32  
 Diameter {At body of stay, 2 1/4" No. of threads per inch 6 Area supported by each stay 259 sq. in.  
 Working pressure by Rules 133 Screw stays: Material S Tensile strength 26-30  
 Diameter {At turned off part, 1 3/8" No. of threads per inch 9 Area supported by each stay 74.5 sq. in.



Working pressure by Rules 133 lbs Are the stays drilled at the outer ends NO Margin stays: Diameter <sup>At turned off part,</sup> 1 7/8" or 1 7/8" Over threads ✓

No. of threads per inch 9 Area supported by each stay 100 Working pressure by Rules 152 lbs

Tubes: Material Weld iron External diameter <sup>Plain</sup> 2 1/2" Thickness <sup>Stay</sup> 5/16" No. of threads per inch 9

Pitch of tubes 3 1/2" x 3 3/4" Working pressure by Rules P. 175 S 221 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 @ 15/16"

Outer row rivet pitch at ends 7" Depth of flange if manhole flanged \_\_\_\_\_ Steam Dome: Material \_\_\_\_\_

Tensile strength \_\_\_\_\_ Thickness of shell \_\_\_\_\_ Description of longitudinal joint \_\_\_\_\_

Diameter of rivet holes \_\_\_\_\_ Pitch of rivets \_\_\_\_\_ Percentage of strength of joint <sup>Plate</sup> \_\_\_\_\_ <sup>Rivets</sup> \_\_\_\_\_

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 pitch \_\_\_\_\_

of rivets in outer row in dome connection to shell \_\_\_\_\_

Type of Superheater \_\_\_\_\_ Manufacturers of <sup>Tubes</sup> \_\_\_\_\_ <sup>Steel castings</sup> \_\_\_\_\_

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 22 inclusive for boilers been complied with yes

The foregoing is a correct description, yes

G. W. Riley Manufacture

Dates of Survey <sup>During progress of work in shops - - -</sup> 1937 Nov 19 30 Dec 7 10 16 23 1938 Jan 5 10 Are the approved plans of boiler and superheater forwarded herewith yes (If not state date of approval.)

<sup>During erection on board vessel - - -</sup> \_\_\_\_\_ Total No. of visits 8

Is this Boiler a duplicate of a previous case yes. If so, state Vessel's name and Report No. Boiler No 6254. Chalk Rpt

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

The boiler has been made under special survey in accordance with the approved plans & the requirements of the Rules. The material & workmanship are good & the boiler was found sound & tight under hydraulic test 230 lbs.

The boiler is to be forwarded to Sunderland for fitting on board.

This boiler has been securely fixed on board the vessel & examined under steam & safety valves adjusted to working pressure in accordance with Rule requirements.

In recommendation please see below. Rpt.

Survey Fee ... £ 9 : 6 : 0 When applied for, 14-1-1938

Travelling Expenses (if any) £ : : When received, 6.4.1938 frw.

J. H. Hasw.

R. Colloff

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute WED. 20 APR 1938

Assigned See Lth 7E 19520