

# REPORT ON BOILERS.

No. 61274

Received at London Office

JUN 28 1939

Date of writing Report

19

When handed in at Local Office

19

Port of GlasgowNo. in Survey held at  
Reg. Book.GlasgowDate, First Survey 26th Jan 1939.Last Survey 13-6-

1939

on the new S/S "CEFN-Y-BRYN"(Number of Visits 35)Gross  
Tons  
Net

Master \_\_\_\_\_ Built at Burntisland By whom built Burntisland SBCo Ld. Yard No. 227 When built 1939  
 Engines made at Glasgow By whom made David Rowan & Co Ltd Engine No. 1031 When made 1939  
 Boilers made at Glasgow By whom made David Rowan & Co Ltd Boiler No. 1031 When made 1939  
 Nominal Horse Power \_\_\_\_\_ Owners \_\_\_\_\_ Port belonging to \_\_\_\_\_

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

Manufacturers of Steel Steel Company of Scotland Ltd (Letter for Record S)  
 Total Heating Surface of Boilers 1180 Is forced draught fitted no Coal or Oil fired coal  
 No. and Description of Boilers one single ended Working Pressure 220  
 Tested by hydraulic pressure to 380 Date of test 19-5-39 No. of Certificate 20387 Can each boiler be worked separately yes  
 Area of Firegrate in each Boiler 32.9 sq ft No. and Description of safety valves to each boiler 2 spring loaded (ordinary)  
 Area of each set of valves per boiler { per Rule 6.2760" as fitted 6.280" Pressure to which they are adjusted 220 lb/sq in Are they fitted with easing gear yes  
 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 BETWEEN MAIN BOILERS Is oil fuel carried in the double bottom under boilers No.  
 Smallest distance between shell of boiler and tank top plating 3'-0" Is the bottom of the boiler insulated yes.  
 Largest internal dia. of boilers 11'-6" Length 10'-6" Shell plates: Material S Tensile strength 9-33 tons  
 Thickness 1 1/4" Are the shell plates welded or flanged no Description of riveting: circ. seams { end DR inter. —  
 long. seams DRS TR Diameter of rivet holes in { circ. seams } 13/16" Pitch of rivets { 8"  
 Percentage of strength of circ. end seams { plate 62.7 rivets 49.7 Percentage of strength of circ. intermediate seam { plate 85.15 rivets 92.7  
 Percentage of strength of longitudinal joint { combined 88.9 Working pressure of shell by Rules 222  
 Thickness of butt straps { outer 27/32" inner 21/32" No. and Description of Furnaces in each Boiler Two Vertical  
 Material S Tensile strength 26-30 tons Smallest outside diameter 3'-4 3/4"  
 Length of plain part { top — bottom — Thickness of plates { crown 9/8" bottom — Description of longitudinal joint welded  
 Dimensions of stiffening rings on furnace or c.c. bottom — Working pressure of furnace by Rules 223  
 End plates in steam space: Material S Tensile strength 26-30 tons Thickness 1 1/4" Pitch of stays 2 1/2" x 14"  
 How are stays secured DN Working pressure by Rules 221  
 Tube plates: Material { front Steel back — Tensile strength 26-30 tons Thickness { 15/16" 25/32"  
 Mean pitch of stay tubes in nests 9.7" Pitch across wide water spaces 14" Working pressure { front 229 back 232  
 Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder  
 at centre 2 @ 7 1/4" x 7 1/8" Length as per Rule 28 1/16" Distance apart 9 1/4" No. and pitch of stays  
 in each 2 @ 8 7/8" Working pressure by Rules 220 Combustion chamber plates: Material Steel  
 Tensile strength 26-30 tons Thickness: Sides 3/4" Back 2 1/32" Top 3/4" Bottom 3/4"  
 Pitch of stays to ditto: Sides 8 7/8" x 9 1/4" Back 8" x 8 1/2" Top 8 7/8" x 9 1/4" Are stays fitted with nuts or riveted over nuts  
 Working pressure by Rules 220 Front plate at bottom: Material Steel Tensile strength 26-30 tons  
 Thickness 15/16" Lower back plate: Material S Tensile strength 26-30 tons Thickness 53/64"  
 Pitch of stays at wide water space 13 1/2" Are stays fitted with nuts or riveted over nuts  
 Working Pressure 227 Main stays: Material Steel Tensile strength 28-32 tons  
 Diameter { At body of stay, 2 3/4" & 3" No. of threads per inch 6 Area supported by each stay 280" & 321"  
 Over threads — Working pressure by Rules 233 & 244 Screw stays: Material Steel Tensile strength 26-30 tons  
 Diameter { At turned off part, 1 7/8" & 1 3/4" No. of threads per inch 9 Area supported by each stay 68" & 83"  
 Over threads —



Working pressure by Rules 224 & 220 Are the stays drilled at the outer ends no Margin stays: Diameter <sup>(At turned off part, or Over threads)</sup> 1 3/4 1 7/8  
No. of threads per inch 9 Area supported by each stay 83" & 91" Working pressure by Rules 220 & 234  
Tubes: Material Iron External diameter <sup>Plain</sup> 3 Thickness <sup>Stay</sup> 3 8 W.S. No. of threads per inch 9  
Pitch of tubes 4 3/16" x 4 1/8" Working pressure by Rules 250 Manhole compensation: Size of opening in  
shell plate 19 1/2 x 15 1/2 Section of compensating ring 8 3/4 x 1 1/4 No. of rivets and diameter of rivet holes 32 @ 1 1/4  
Outer row rivet pitch at ends 8 1/4 Depth of flange if manhole flanged 3" Steam Dome: Material none  
Tensile strength Thickness of shell Description of longitudinal joint  
Diameter of rivet holes Pitch of rivets Percentage of strength of joint <sup>Plate</sup>  
Internal diameter Working pressure by Rules Thickness of crown <sup>Rivets</sup> 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 <sup>Tubes</sup>  
<sup>Steel forgings</sup>  
<sup>Steel castings</sup>  
Number of elements Material of tubes Interval 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 forgings and 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

The foregoing is a correct description,  
for David Rowan & Co. Ltd. Manufacturer.  
Arch. H. Grierson

Dates of Survey <sup>(During progress of work in shops - -)</sup>  
while building <sup>(During erection on board vessel - - -)</sup>  
Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) yes  
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.

The boiler has been constructed under special survey and has been sent to  
Burntisland to be fitted in the vessel.

Exb  
26/6/39

This boiler has been efficiently fitted on board and the safety valves  
adjusted to 220 lbs/sq. in.

J. F. Campbell.

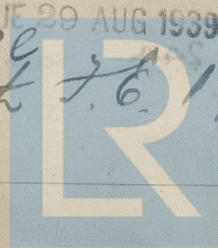
Survey Fee ... £ See Machinery Report When applied for, 19  
Travelling Expenses (if any) £ : : When received, 19

Sh. Davis

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 JUN 1939

Assigned SEE ACCOMPANYING MACHINERY REPORT.



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