

REPORT ON BOILERS.

No. 68936

Received at London Office. 2 NOV 1944

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 Date of writing Report..... 19..... When handed in at Local Office. 86. 10. 1944 Port of Glasgow
 No. in Survey held at Glasgow Date, First Survey 18. 1. 44 Last Survey 16. 10. 1944
 1. Book. (Number of Visits 46) Tons Gross 813 Net 334
 on the S.S. "EMPIRE JURA"
 Built at Glasgow By whom built A. J. Inglis Ltd Yard No. 1282P When built 1944
 Engines made at Glasgow By whom made David Rowan & Co. Ltd Engine No. 1158 When made 1944
 Boilers made at - do - By whom made - do - Boiler No. 1158 When made 1944
 nominal Horse Power 139 Owners Ministry of War Transport Port belonging to

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland, Ltd (Letter for Record S. ✓)
 Heating Surface of Boilers 2100 # Is forced draught fitted Yes ✓ Coal or Oil fired Oil ✓
 and Description of Boilers One single ended ✓ Working Pressure 190 lbs/sq. in.
 Tested by hydraulic pressure to 335 lbs/sq. in. Date of test 21-8-44 No. of Certificate 21742 Can each boiler be worked separately ✓
 Area of Firegrate in each Boiler ✓ No. and Description of safety valves to each boiler One - 3 1/4" double ✓
 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 190 lbs/sq. in. Are they fitted with easing gear Yes ✓
 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 2 ft. Is oil fuel carried in the double bottom under boilers No.
 Smallest distance between shell of boiler and tank top plating Open floor Is the bottom of the boiler insulated Yes
 Greatest internal dia. of boilers 14'-6" Length 11'-6" Shell plates: Material S. ✓ Tensile strength 29/33 Tons ✓
 Thickness 1 7/32" Are the shell plates welded or flanged No Description of riveting: circ. seams { end Double ✓ inter. ✓
 Seams D.B.S.T.R. ✓ Diameter of rivet holes in { circ. seams 8.1 5/16" F 1 3/16" Pitch of rivets { 8.3.528" V F 3.2 ✓ 8 15/16" ✓
 Percentage of strength of circ. end seams { plate 8.62.7 F 62.9 ✓ rivets 8.50.1 F 45 ✓ Percentage of strength of circ. intermediate seam { plate ✓ rivets ✓
 Percentage of strength of longitudinal joint { plate 85.3 ✓ rivets 92.5 ✓ Working pressure of shell by Rules ✓
 combined 89.1
 Thickness of butt straps { outer 59" ✓ inner 1 3/4" ✓ No. and Description of Furnaces in each Boiler 3 Deighton ✓
 Material S. ✓ Tensile strength 26/30 Tons ✓ Smallest outside diameter 3'-6 7/8" ✓
 Thickness of plain part { top ✓ bottom ✓ Thickness of plates { crown 9" ✓ bottom 16" ✓ Description of longitudinal joint Welded ✓
 Extensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules ✓
 Plates in steam space: Material S. ✓ Tensile strength 26/30 Tons ✓ Thickness 1 1/2" Pitch of stays 20 1/2" x 18 1/2" ✓
 Are stays secured D.N. ✓ Working pressure by Rules ✓
 Plates: Material { front S. ✓ back S. ✓ Tensile strength { 26/30 Tons ✓ Thickness { 27 1/32" ✓ 34" ✓
 Pitch of stay tubes in nests 9 7/8" ✓ Pitch across wide water spaces 13 3/4" ✓ Working pressure { front ✓ back ✓
 Stays to combustion chamber tops: Material S. ✓ Tensile strength 28/32 Tons ✓ Depth and thickness of girder
 at 2 @ 10" x 7 3/8" ✓ Length as per Rule 39 7/16" ✓ Distance apart 9 1/4" ✓ No. and pitch of stays
 at 3 @ 10" ✓ Working pressure by Rules ✓ Combustion chamber plates: Material S. ✓
 Tensile strength 26/30 Tons ✓ Thickness: Sides 23 3/32" ✓ Back 11" ✓ Top 23 3/32" ✓ Bottom 23 3/32" ✓
 of stays to ditto: Sides 9 1/4" x 10" ✓ Back 9 3/4" x 8 1/4" ✓ Top 9 1/4" x 10" ✓ Are stays fitted with nuts or riveted over Nuts ✓
 Working pressure by Rules ✓ Front plate at bottom: Material S. ✓ Tensile strength 26/30 Tons ✓
 Thickness 24 1/32" ✓ Lower back plate: Material S. ✓ Tensile strength 26/30 Tons ✓ Thickness 25 1/32" ✓
 of stays at wide water space 13 1/2" ✓ Are stays fitted with nuts or riveted over Nuts ✓
 Working pressure Main stays: Material S. ✓ Tensile strength 28/32 Tons ✓
 at body of stay 2 3/4" x 3" ✓ No. of threads per inch 6 ✓ Area supported by each stay ✓
 Over threads 3.32 ✓
 Working pressure by Rules ✓ Screw stays: Material S. ✓ Tensile strength 26/30 Tons ✓
 at turned off part 1 5/8" x 1 3/4" ✓ No. of threads per inch 9 ✓ Area supported by each stay ✓
 Over threads 1 5/8" x 1 3/4" ✓

Working pressure by Rules. ✓ Are the stays drilled at the outer ends. *No* Margin stays: Diameter { At turned off part. ✓
Over threads. *1 3/4", 1 7/8", 2"*

No. of threads per inch. *9* ✓ Area supported by each stay. ✓ Working pressure by Rules. ✓

Tubes: Material. *Steel* ✓ External diameter { Plain. *2 3/4"* ✓ Thickness { *9 W.G.* ✓
Stay. *5 1/16" 9 3/8"* ✓ No. of threads per inch. *9*

Pitch of tubes. *3 7/8" x 4"* ✓ Working pressure by Rules. ✓ Manhole compensation: Size of opening in
shell plate. *15 1/2" x 19 1/2"* ✓ Section of compensating ring. *9 1/2" x 1 7/32"* ✓ No. of rivets and diameter of rivet holes. *34 @ 1 5/16"*

Outer row rivet pitch at ends. *8 15/16"* ✓ 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 forgings.
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. 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 T⁶ & Co
Arch-H. Goussier Manufacturer.

| | | | |
|---|---|-------------------------|---|
| Dates of Survey while building | During progress of work in shops - - | <i>See accompanying</i> | Are the approved plans of boiler and superheater forwarded herewith <i>Yes</i> |
| | During erection on board vessel - - | <i>machinery report</i> | (If not state date of approval.) Total No. of visits <i>1</i> |

Is this Boiler a duplicate of a previous case.....Yes.....If so, state Vessel's name and Report No. "Empire Coppice" Glasgow Report No. 6,726

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)..... This boiler has been built under special survey in accordance with the Society's Rules and approved plans. The materials and workmanship are good. It has been satisfactorily installed in the vessel and the safety valves have been adjusted to the working pressure. The specification requirements have been carried out satisfactorily.

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|------------------------------|-----|-----|---|---------------------|------------------------|---------|
| Survey Fee | ... | ... | £ | } <i>See Machy.</i> | When applied for,..... | 19..... |
| Travelling Expenses (if any) | £ | : | : | | When received..... | 19..... |

Jas. Stevenson & J. M. Dale
Engineer Surveyors to Lloyd's Register of Shipping.

Committee's Minute..... GLASGOW 31 OCT 1944

Assigned.....

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Foundation