

REPORT ON BOILERS.

No. 49428

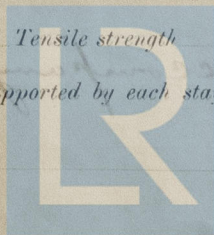
Received at London Office

24 JUL 1929

Date of writing Report 22/7/1929 When handed in at Local Office 23/7/1929 Port of Glasgow.
 No. in Reg. Book 18255 Survey held at Glasgow. Date, First Survey 23. 6. 29 Last Survey 9th July 1929.
 on the S.S. MASUNDA (Number of Visits 46 Gross Tons 18276 Net 18255)
 Master ✓ Built at Glasgow. By whom built A. Stephens & Son Ltd. Card No. 524. When built 1929.
 Engines made at Glasgow By whom made A. Stephens & Son Ltd. Engine No. 524 When made 1929
 Boilers made at - do - By whom made - do - Boiler No. 524. When made 1929.
 Nominal Horse Power Owners Port belonging to

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Thos. The Steel Company of Scotland. (Letter for Record S. ✓)
 Total Heating Surface of Boilers 6738 ✓ Is forced draught fitted ✓ Coal or Oil fired Coal ✓
 No. and Description of Boilers Three single inclined, return tubes. 3 S.B. Working Pressure 200 lb.
 Tested by hydraulic pressure to 350 lb. Date of test 19.4.29 No. of Certificate 18255 Can each boiler be worked separately Yes.
 Area of Firegrate in each Boiler 57.6 ✓ No. and Description of safety valves to each boiler Two Corbourn Improved High Lift
 Area of each set of valves per boiler 12.5 ✓ Pressure to which they are adjusted 200 ✓ 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 ✓ No side bunkers Is oil fuel carried in the double bottom under boilers ✓
 Smallest distance between shell of boiler and tank top plating 2-0" Is the bottom of the boiler insulated Yes.
 Largest internal dia. of boilers 15'-0" Length 12'-0" Shell plates: Material Steel Tensile strength 29/33 ton
 Thickness 1 5/16" ✓ Are the shell plates welded or flanged ✓ Description of riveting: circ. seams end D.R.
 long. seams T.R.D.B.S. ✓ Diameter of rivet holes in 1 5/8" ✓ Pitch of rivets 4 1/4" 9 1/2"
 Percentage of strength of circ. end seams plate 67.6 ✓ Percentage of strength of circ. intermediate seam plate 88.5 ✓
 Percentage of strength of longitudinal joint plate 88.5 ✓ Working pressure of shell by Rules 200 lb. ✓
 Thickness of butt straps outer 1 1/8" ✓ No. and Description of Furnaces in each Boiler Three Single Section. 3 c.f.
 Material Steel Tensile strength 26/30 ton Smallest outside diameter 3'-8 3/4"
 Length of plain part top 5' ✓ Thickness of plates bottom 5/8" ✓ Description of longitudinal joint weld ✓
 Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 204 lb.
 End plates in steam space: Material Steel Tensile strength 26/30 ton Thickness 1 1/8" Pitch of stays 18" x 16" ✓
 How are stays secured D.N. ✓ Working pressure by Rules 203 lb. ✓
 Tube plates: Material front Steel ✓ Tensile strength 26/30 ton Thickness 7/8" 3/4"
 Mean pitch of stay tubes in nests 9.8" Pitch across wide water spaces 14" x 7 3/4" Working pressure front 205 lb. back 209 lb. ✓
 Girders to combustion chamber tops: Material Steel ✓ Tensile strength 28/32 ton Depth and thickness of girder
 at centre 9 1/2" x 1 1/16" Length as per Rule 37 37/64" Distance apart 8 3/8" No. and pitch of stays
 in each 3 @ 9" Working pressure by Rules 207 lb. ✓ Combustion chamber plates: Material Steel ✓
 Tensile strength 26/30 ton Thickness: Sides 1 1/16" ✓ Back 39/64 ✓ Top 43/64 ✓ Bottom 13/16" ✓
 Pitch of stays to ditto: Sides 9" x 9" ✓ Back 9 3/8" x 8 1/4" ✓ Top 9" x 8 3/8" ✓ Are stays fitted with nuts or riveted over nuts ✓
 Working pressure by Rules 203 lb. ✓ Front plate at bottom: Material Steel ✓ Tensile strength 26/30 ton
 Thickness 7/8" ✓ Lower back plate: Material Steel ✓ Tensile strength 26/30 ton Thickness 27/32" ✓
 Pitch of stays at wide water space 14" x 8 1/4" ✓ Are stays fitted with nuts or riveted over nuts ✓
 Working Pressure 205 lb. ✓ Main stays: Material Steel ✓ Tensile strength 28/32 ton
 Diameter At body of stay, 2 7/8" ✓ No. of threads per inch 6 Area supported by each stay 288 sq"
 Working pressure by Rules 212 lb. ✓ Screw stays: Material Steel ✓ Tensile strength 26/30 ton
 Diameter At turned off part, 1 3/4" ✓ No. of threads per inch 9 Area supported by each stay 88 1/2 sq"



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Working pressure by Rules 204 lb. Are the stays drilled at the outer ends h Margin stays: Diameter { At turned off part, or Over threads 1 7/8"
 No. of threads per inch 9 Area supported by each stay 96 1/2 sq. in. Working pressure by Rules 221 lb.
 Tubes: Material iron External diameter { Plain 2 1/2" Stay 2 1/2", 2 3/4" Thickness { 7/16", 5/16" No. of threads per inch 9
 Pitch of tubes 2 7/8" x 3 7/8" Working pressure by Rules 230 lb. Manhole compensation: Size of opening in
 end shell plate 16" x 12" Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓
 Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged 3 1/16" Steam Dome: Material ✓
 Tensile strength ✓ Thickness of shell ✓ Description of longitudinal joint ✓
 Diameter of rivet holes ✓ Pitch of rivets ✓ Percentage of strength of joint ✓
 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 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 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 FOR

ALEXANDER STEPHEN & SONS, LIMITED.

The foregoing is a correct description,

Alex. MacLellan Director/Manufacturer.

Dates of Survey { During progress of work in shops - - }
 while building { During erection on board vessel - - }

See Accompanying machy Report

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) Yes.

Total No. of visits 46

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

See also Accompanying Machinery Report.

These boilers have been built under Special Survey, in accordance with the Rules. The materials and workmanship are good. They have been properly fitted on board, and their safety valves adjusted under steam.

Survey Fee ...

Travelling Expenses (if any) £

When applied for,

192

When received,

192

A. Campbell for R. Rae

Robert Rae

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **GLASGOW**

23 JUL 1929

Assigned See Accompanying machy Report.



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