

# REPORT ON BOILERS.

No. 45594

Received at London Office 28 APR 1926

Date of writing Report 21 April 1926 When handed in at Local Office 26 April 1926 Port of Glasgow

No. in Reg. Book. Survey held at Glasgow Date, First Survey 18-1-26 Last Survey 19-4-1926

on the Steam Tug "Chantice" (Number of Visits 26) Tons {Gross Net

Master Built at Leith By whom built Crown Agents for the Colonies

Engines made at Leith By whom made G & R Smith Ltd Engine No. 247 When made 1926

Boilers made at Glasgow By whom made The Forth S.B. & E.C. (1921) Ltd Boiler No. 1865 When made 1926

Nominal Horse Power of Boilers 127 Owners Crown Agents for the Colonies Port belonging to

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

Manufacturers of Steel The Steel Co of Scotland Ltd (Letter for Record S)

Total Heating Surface of Boilers 1910 sq. ft. Is forced draught fitted Coal or Oil fired

No. and Description of Boilers One Cyl. Mult. Single End. Working Pressure 130 lb

Tested by hydraulic pressure to 245 lb Date of test 19.4.26 No. of Certificate 17103 Can each boiler be worked separately

Area of Firegrate in each Boiler 57.75 sq. ft. No. and Description of safety valves to each boiler

Area of each set of valves per boiler Pressure to which they are adjusted 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

Smallest distance between shell of boiler and tank top plating Is the bottom of the boiler insulated

Largest internal dia. of boilers 14'-6" Length 10'-6" Shell plates: Material S. Tensile strength 28/32 T.

Thickness 7/8 Are the shell plates welded or flanged No. Description of ricing: circ. seams end L.D.R.

long. seams DBS/TR. Diameter of ricket holes in circ. seams 1 1/2 long. seams 1 5/16 Pitch of rickets 3/4

Percentage of strength of circ. end seams plate 69.25 rivets 45.3 Percentage of strength of circ. intermediate seam plate rivets

Percentage of strength of longitudinal joint plate 86.2 rivets 88.3 combined 90.3 Working pressure of shell by Rules 131 lb

Thickness of butt straps outer 11/16 inner 13/16 No. and Description of Furnaces in each Boiler 3. Dryton

Material S. Tensile strength 26/30 T. Smallest inside diameter 42 7/8

Length of plain part top bottom Thickness of plates crown 7/16 bottom Description of longitudinal joint Weld

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 146 lb

End plates in steam space: Material S. Tensile strength 26/30 T. Thickness 1" Pitch of stays 20 1/2 x 18 1/2

How are stays secured D.N.W. Working pressure by Rules 131 lb

Tube plates: Material front S. back S. Tensile strength 26/30 T. Thickness 13/4

Mean pitch of stay tubes in nests 14 1/4 x 9 1/2 Pitch across wide water spaces 14 1/2 Working pressure front 137 lb back 130 lb

Girders to combustion chamber tops: Material S. Tensile strength 28/32 T. Depth and thickness of girder

at centre 6 1/2 x 1 1/2 Length as per Rule 29 1/16 Distance apart 9 1/4 No. and pitch of stays

in each 2 @ 9 1/2 Working pressure by Rules 134 lb Combustion chamber plates: Material S

Tensile strength 26/30 T. Thickness: Sides 19/32 Back 9/16 Top 19/32 Bottom 19/32

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

Working pressure by Rules 134 lb Front plate at bottom: Material S. Tensile strength 26/30 T. Thickness 25/32

Lower back plate: Material S. Tensile strength 26/30 T. Thickness 23/32

Pitch of stays at wide water space 14 1/2 x 8 1/2 Are stays fitted with nuts or riveted over Nuts

Working Pressure 138 lb Main stays: Material S. Tensile strength 28/32 T.

Diameter At body of stay, 2 5/8 Over threads, 2 5/8 No. of threads per inch 8 Area supported by each stay 379 sq. in.

Working pressure by Rules 131 lb Screw stays: Material S. Tensile strength 26/30 T. Area supported by each stay 87.87 sq. in.

Diameter At turned off part, 1 1/2 Over threads, 1 1/2 No. of threads per inch 9



Working pressure by Rules 144 lb Are the stays drilled at the outer ends No Margin stays: Diameter 5/8" At turned off part or Over threads  
 No. of threads per inch 9 Area supported by each stay 104.12 sq. in. Working pressure by Rules 147 lb.  
 Tubes: Material I. External diameter 3 1/2" Plain Stay Thickness 9/16" W.C. No. of threads per inch 9  
 Pitch of tubes 4 3/4" x 4 3/4" Working pressure by Rules 137 lb. Manhole compensation: Size of opening in shell plate 18 1/4" x 14 3/4" Section of compensating ring 15 1/4" x 7/8" No. of rivets and diameter of rivet holes 36 - 1 1/16"  
 Outer row rivet pitch at ends 7 5/8" Depth of flange if manhole flanged 3 1/4" Steam Dome: Material Iron  
 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 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 23 inclusive for boilers been complied with \_\_\_\_\_

The foregoing is a correct description,  
 FOR THE FORTH SHIPBUILDING & ENGINEERING CO. (LINDSAY BURNET'S BOILER WORKS) Snclair Couper Manufacturer.

Dates of Survey During progress of work in shops - - - 1926 Jan 18 21 22 24 Feb 2 4 8 10 12 Are the approved plans of boiler and superheater forwarded herewith Yes (If not state date of approval.)  
while building During erection on board vessel - - - 16 19 24 Mar 1 2 6 10 12 16 19 23 25 Apr 6 9 13 15 19 Total No. of visits 26

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) This boiler has been constructed under special survey in accordance with the Rules. The materials and workmanship employed in its manufacture are sound and good. It will be fitted on board the vessel at Leith.

A.L.  
21/4/26

Survey Fee ... .. £ 12 : 14 : 0 ✓  
 Travelling Expenses (if any) £ - : \_\_\_\_\_  
 When applied for, 21/4/1926  
 When received, 26/4/1926

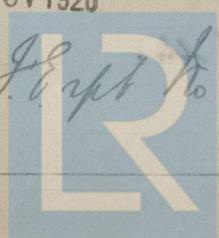
W. Lane  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute GLASGOW 27 APR 1926

NOV. 16 NOV 1926

Assigned TRANSMIT TO LONDON

See Lth. Report No 17032



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