

# REPORT ON BOILERS.

No. 58190

24 MAR 1937

Received at London Office

Date of writing Report 19 20 When handed in at Local Office 3 10 37 Port of Glasgow

No. in Reg. Book Survey held at Glasgow Date, First Survey 7.10.36 Last Survey 8th March 1937

on the Boiler No. 4975 for Steaming crane Manchester (Number of Visits 16) Tons {Gross Net

Master Built at By whom built Yard No. When built

Engines made at By whom made Engine No. When made

Boilers made at Glasgow By whom made Jas. Neilson & Son Boiler No. 4975 When made 1937

Nominal Horse Power Owners Port belonging to

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

Manufacturers of Steel Colvilles Ltd. (Letter for Record S)

Total Heating Surface of Boilers 969 Is forced draught fitted Coal or Oil fired

and Description of Boilers One Single ended Cylinder return tube Working Pressure 130 lbs.

ted by hydraulic pressure to 245 lbs. Date of test 8.3.37 No. of Certificate 19921 Can each boiler be worked separately

a of Firegrate in each Boiler 40 No. and Description of safety valves to each boiler 2 spring loaded

a of each set of valves per boiler per Rule 8.30 Pressure to which they are adjusted 130 Are they fitted with easing gear Yes

use of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Uest 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 10'-4" Length 10'-8" Shell plates: Material Steel Tensile strength 28-32 tons

Thickness 1 1/16" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R. Lap inter. 3"

long. seams T.R.D.B.S. Diameter of rivet holes in {circ. seams 15/16" long. seams 15/16" Pitch of rivets { 5 5/8"

Percentage of strength of circ. end seams {plate 68.7 rivets 54.7 Percentage of strength of circ. intermediate seam {plate 83.5 rivets 123.6

Percentage of strength of longitudinal joint {plate 83.5 rivets 123.6 combined 81-6 Working pressure of shell by Rules 134 lbs.

Thickness of butt straps {outer 9/16" inner 1 1/16" No. and Description of Furnaces in each Boiler 2 Corrugated Morrison Section

Material Steel Tensile strength 26-30 tons Smallest outside diameter 37"

Length of plain part {top 7 7/8" bottom 13 1/16" Thickness of plates {crown 7 7/8" bottom 13 1/16" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 168 lbs.

End plates in steam space: Material Steel Tensile strength 26-30 tons Thickness 7 7/8" Pitch of stays 18 1/2"

How are stays secured Double nuts & loose washers Working pressure by Rules 131 lbs.

Tube plates: Material {front Steel back " Tensile strength { 26-30 tons Thickness { 7/8" 3/4"

Mean pitch of stay tubes in nests 10.9" Pitch across wide water spaces 14 3/4" Working pressure {front 131 lbs. back 169 lbs.

Girders to combustion chamber tops: Material Steel Tensile strength 28-32 tons Depth and thickness of girder

at centre 7" 2 @ 1 1/16" Length as per Rule 27" Distance apart 11" No. and pitch of stays

in each 2 @ 8" Working pressure by Rules 142 lbs. Combustion chamber plates: Material Steel

Tensile strength 26-30 tons Thickness: Sides 19/32" Back 17/32" Top 19/32" Bottom 19/32"

Pitch of stays to ditto: Sides 8" x 8" Back 7.2" x 8 1/4" Top 11" x 8" Are stays fitted with nuts or riveted over Yes

Working pressure by Rules 131 lbs. Front plate at bottom: Material Steel Tensile strength 26-30 tons

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 13/16"

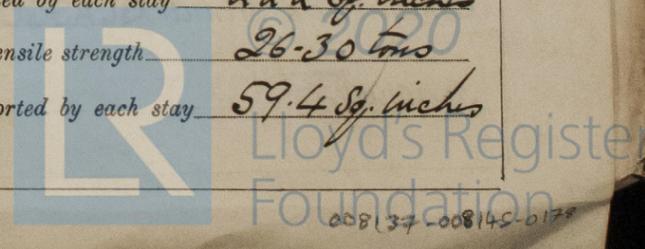
Pitch of stays at wide water space 14 3/4" Are stays fitted with nuts or riveted over Yes

Working Pressure 149 lbs. Main stays: Material Steel Tensile strength 28-32 tons

Diameter {At body of stay, 2 1/4" or 6 No. of threads per inch 6 Area supported by each stay 222 Sq. inches

Working pressure by Rules 156 lbs. Screw stays: Material Steel Tensile strength 26-30 tons

Diameter {At turned off part, 1 1/4" or 9 No. of threads per inch 9 Area supported by each stay 59.4 Sq. inches



Working pressure by Rules 134 lb Are the stays drilled at the outer ends No. Margin stays: Diameter <sup>At turned off part,</sup> 1/2" or <sup>Over threads</sup> 1/2"

No. of threads per inch 9 Area supported by each stay 76.5 sq inches Working pressure by Rules 163 lb

Tubes: Material steel External diameter <sup>Plain</sup> 3 3/4" Thickness <sup>10-L.S.G.</sup> 5/16" No. of threads per inch 9

Pitch of tubes 4 3/8" x 4 1/4" Working pressure by Rules 130 lb. Manhole compensation: Size of opening 6 2 @ 1 5/16"

shell plate 16" x 12" Section of compensating ring 7" x 1" No. of rivets and diameter of rivet holes 6 2 @ 1 5/16"

Outer row rivet pitch at ends 5 3/4" Depth of flange if manhole flanged 3" M'Neil 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> \_\_\_\_\_ <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 from the boiler or worked separately \_\_\_\_\_

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,  
*James Neilson* Works Manager

Dates of Survey <sup>During progress of work in shops - -</sup> 1936 Oct.: 7. 15. 23 Nov.: 9. 16. 19. 25 Are the approved plans of boiler and superheater forwarded herewith Yes  
<sup>while building</sup> <sup>During erection on board vessel - - -</sup> Dec.: 2. 9. 22 (1937) Jan.: 12 Feb.: 2. 6. 11. 22 (If not state date of approval.)  
Mar.: 8 Total No. of visits 16

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.) This boiler has been built under survey in accordance with the Rules and approved plan. The materials and workmanship are good. The boiler is intended for a 250 ton floating crane for The Manchester Canal. Building at Messrs Werf Gusto's Yard (No. 716)

NOTE. This boiler was approved for Messrs Wilson Boilermakers Ltd. Glasgow under job No. 5904 and afterwards transferred and built by their associated company Messrs Jas. Neilson & Son Glasgow under job No. 4  
20/3/37

Survey Fee ... .. £ 6 : 10 : 0 When applied for, 23 MAR 1937  
 Travelling Expenses (if any) £ : : : When received, 19

Received per Secretary's letter 16-4-37

*G. E. Murdoch*  
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute **GLASGOW 23 MAR 1937**

Assigned **TRANSMIT TO LONDON**

FRI 6 AUG 1937



© 2020  
 Lloyd's Register  
 Foundation