

REPORT ON BOILERS.

No. 80092

11 FEB 1926

Received at London Office

Date of writing Report 8/2/26

When handed in at Local Office 9/2/26

Port of Newcastle-on-Tyne

No. in Surrey held at

Hebburn

Date, First Survey 5th May 1925 Last Survey 2 - 2 - 1926

on the Palmers S.B & J. Co's No 1050

(Number of Visits 40.)
Gross Tons
Net

Master - Built at Goolle By whom built Goolle S.B & Repair Co Ltd Yard No. 265 When built -

Engines made at - By whom made - Engine No. - When made -

Boilers made at Hebburn By whom made Palmers S.B & J. Co. Ltd Boiler No. 1050 When made 1926

Nominal Horse Power - Owners - Port belonging to -

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Messrs. Gutchoffenungshutte Abt Dahn, Oberhausen (Letter for Record S)

Total Heating Surface of Boilers 1780 sq. ft. Is forced draught fitted No Coal or Oil fired Coal

No. and Description of Boilers One cyl. multi, single ended Working Pressure 180 lbs. sq. in.

Tested by hydraulic pressure to 320 lbs. sq. in. Date of test 23/12/26 No. of Certificate 9963 Can each boiler be worked separately

Area of Firegrate in each Boiler 56.9 sq. ft. No. and Description of safety valves to each boiler -

Area of each set of valves per boiler {per Rule as fitted 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 13' 9" Length 10' 6" Shell plates: Material Steel Tensile strength 28 - 32 tons

Thickness 1 5/32" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R.-L. inter. -

long. seams T.R. D.B.S. Diameter of rivet holes in {circ. seams 1 3/16" long. seams 1 3/16" Pitch of rivets {3 5/8" 8 1/2"

Percentage of strength of circ. end seams {plate 67.4% rivets 81.3% Percentage of strength of circ. intermediate seam {plate rivets

Percentage of strength of longitudinal joint {plate 86% rivets 86.7% combined 90% Working pressure of shell by Rules 184 lbs. sq. in.

Thickness of butt straps {outer 1 5/32" inner 1 5/32" No. and Description of Furnaces in each Boiler Three plain Tensile strength 26 - 30 tons Smallest outside diameter 3' - 4"

Length of plain part {top 4' bottom 6' 5 3/4" Thickness of plates {crown 25/32" bottom 25/32" Description of longitudinal joint Welded

Dimensions of stiffening rings on furnace or c.e. bottom Working pressure of furnace by Rules 183 lbs. sq. in.

End plates in steam space: Material Steel Tensile strength 26 - 30 Thickness 1 3/32" Pitch of stays 24" x 19"

How are stays secured Double nuts and washers Working pressure by Rules 197 lbs. sq. in.

Tube plates: Material {front Steel back Steel Tensile strength {26 - 30 tons 26 - 30 tons Thickness {1" 3/4"

Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 14" x 9" Working pressure {front 180 lbs. sq. in. back 248 lbs. sq. in.

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

at centre 8 1/2" x 1 1/2" Length as per Rule 2' 4 1/2" Distance apart 9" No. and pitch of stays

in each 2 @ 9" Working pressure by Rules 201 lbs. sq. in. Combustion chamber plates: Material Steel Tensile strength 26 - 30 tons Thickness: Sides 2 1/32" Back 2 1/32" Top 2 1/32" Bottom 1"

Pitch of stays to ditto: Sides 9" x 9" Back 9" x 9" Top 9" x 9" Are stays fitted with nuts or riveted over Nuts Working pressure by Rules 186 lbs. sq. in.

Working pressure by Rules 193 lbs. sq. in. Front plate at bottom: Material Steel Tensile strength 26 - 30 tons Thickness 1"

Lower back plate: Material Steel Tensile strength 26 - 30 tons Thickness 3/32" Pitch of stays at wide water space 13 1/2" x 9" Are stays fitted with nuts or riveted over Nuts

Working Pressure 193 lbs. sq. in. Main stays: Material Steel Tensile strength 28 - 32 tons Diameter {At body of stay, or Over threads 3 1/2" No. of threads per inch 6 Area supported by each stay 456 sq. in.

Working pressure by Rules 204 lbs. sq. in. Screw stays: Material Steel Tensile strength 26 - 30 tons Diameter {At turned off part, or Over threads 1 5/8" No. of threads per inch 9 Area supported by each stay 81 sq. in.



Working pressure by Rules 183 lbs.^2 Are the stays drilled at the outer ends *No* Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. 1 \frac{7}{8}''$
 No. of threads per inch 9 Area supported by each stay 101 sq. in. Working pressure by Rules 209 lbs.^2
 Tubes: Material *Iron* External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. \left. \begin{array}{l} 3 \frac{1}{4}'' \\ 3 \frac{1}{2}'' \end{array} \right.$ Thickness $\left\{ \begin{array}{l} \text{No. 8. R.C.} \\ \frac{5}{16}'' + \frac{1}{16}'' \end{array} \right.$ No. of threads per inch 9
 Pitch of tubes $4 \frac{1}{2}''$ Working pressure by Rules 230 lbs.^2 Manhole compensation: Size of opening in
 shell plate $20' \times 16''$ Section of compensating ring $3' \times 3' 4'' \times 1 \frac{1}{16}''$ No. of rivets and diameter of rivet holes $32 @ 1 \frac{5}{16}''$
 Outer row rivet pitch at ends $9 \frac{1}{8}''$ Depth of flange if manhole flanged $3 \frac{1}{4}''$ Steam Dome: Material
 Tensile strength Thickness of shell Description of longitudinal joint
 Diameter of rivet holes Pitch of rivets Percentage of strength of joint $\left\{ \begin{array}{l} \text{Plate} \\ \text{Rivets} \end{array} \right.$
 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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$
 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

For Part *Shipping & Iron Co. Ltd.*
 The foregoing is a correct description,
A. Cameron
 Manager, *Habburn Boiler Shop & Manufacturer.*

1925.
 Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops} \end{array} \right. \left. \begin{array}{l} \text{May 5, Apr 27, 16, 22, 28, 30, May 4, 15, 28, Jun 11,} \\ \text{19, July 1, 7, 9, 17, 28, 30, Aug 6, 11, 14, 19, 29, Sep 4,} \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith *See Plan*
 while building $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel} \end{array} \right. \left. \begin{array}{l} \text{8, 16, 22, 24, 29, Oct 1, 7, 25, Nov 9, 19, 25, 27, Dec 1, 4, Jan 28, Feb 2,} \end{array} \right.$ (If not state date of approval.)
 Total No. of visits 40

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *This boiler was built under special survey, the material and workmanship found good.*

Survey Fee £ 11 : 14 :
 Travelling Expenses (if any) £ : :

When applied for, *10 FEB. 1926*
 When received, *30/3 1926* *Potter & K*

Thomas Napier
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 28 FEB. 1930

TUE. 4 MAR 1930

Assigned

See Hull Sl. 40631

TUE. 11 MAR 1930



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