

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 Reg. Book. 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. Gutchoffenhutten 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
rivetsPercentage 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 2 5/32" ✓
bottom 3 3/32" ✓

Description of longitudinal joint Weld ✓

Dimensions of stiffening rings on furnace or c.c. 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.

Front plate at bottom: Material Steel ✓

Tensile strength 26 - 30 tons

Thickness 1" ✓

Lower back plate: Material Steel

Tensile strength 26 - 30 tons

Thickness 2 1/32" ✓

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, 3 1/2" ✓
or
Over threads

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, 1 5/8" ✓
or
Over threads

No. of threads per inch 9 ✓

Area supported by each stay 81 sq. in.

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

1925.
Dates of Survey $\left\{ \begin{array}{l} \text{During progress of} \\ \text{work in shops} \end{array} \right. \text{ May 5, Apr. 2, 7, 16, 22, 28, 30, May 4, 15, 28, Jun 11, } ^\circ$ Are the approved plans of boiler and superheater forwarded herewith Yes
while building $\left\{ \begin{array}{l} \text{During erection on} \\ \text{board vessel} \end{array} \right. \text{ 19, July 1, 7, 9, 17, 28, 30, Aug. 6, 11, 14, 19, 27, Sep. 4, } ^\circ$ (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,
When received,

10 FEB. 1926

30/3 1926 *Polson & Co.*

Thomas Napier

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 28 FEB. 1930

Assigned

See Bul SE 40631

TUE. 4 MAR 1930

TUE. 11 MAR 1930

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Foundation