

REPORT ON BOILERS.

No. 80093

Filed 1926

Received at London Office

NEWCASTLE-ON-TYNE.

Date of writing Report 8-2-1926 When handed in at Local Office 9-2-1926 Port of

No. in Survey held at Hebburn Date, First Survey 7th Oct. 1925 Last Survey 2-2-1926

(Number of Visits 7) Tons {Gross Net

on the Palmer's S.B. & I. Co. Ltd No. 1058 for the James Dredging Co. Ltd.

Master Built at Zolt-Bommel, Holland By whom built J. Meyers S.B. Co Yard No. 500 When built 1926

Engines made at Newbury By whom made Plenty & Son Ltd. Engine No. 2266 When made 1918

Boilers made at Hebburn By whom made Palmer's S.B. & Iron Co. Ltd Boiler No. 1058 When made 1926

Nominal Horse Power 18 Owners James Dredging Co. Ltd. Port belonging to Hendon.

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Mannesmannrohren. Werke Abt Schulz Knaack, Huckingen (Letter for Record S)

Heating Surface of Boilers 887 sq. ft Is forced draught fitted No Coal or Oil fired Coal

Description of Boilers One cyl. (S.E.) Multi. Working Pressure 140 lbs.

Tested by hydraulic pressure to 260 lbs. Date of test 28/1/26 No. of Certificate 9968 Can each boiler be worked separately Only one

Area of Firegrate in each Boiler 30 sq. ft. No. and Description of safety valves to each boiler 1. Spring loaded.

Number of each set of valves per boiler as fitted 25 Pressure to which they are adjusted to 140 lbs. Are they fitted with easing gear Yes
by cross, plain or attached better.

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

Least distance between boilers or uptakes and bunkers or woodwork Over 30" Is oil fuel carried in the double bottom under boilers No

Least distance between shell of boiler and tank top plating No tank. Is the bottom of the boiler insulated ✓

Least internal dia. of boilers 10' 6" Length 10' Shell plates: Material steel Tensile strength 28-32 tons

Thickness 23/32" Are the shell plates welded or flanged No Description of riveting: circ. seams {end D.R.L. inter. 3 3/4"

Material D.R. D.B.S. Diameter of rivet holes in {circ. seams 1" long. seams 1 3/16" Pitch of rivets {plate 5 3/4" rivets 5 3/4"

Percentage of strength of circ. end seams {plate 69% rivets 55.1% Percentage of strength of circ. intermediate seam {plate 85.86% rivets 96.6% combined 89.3%

Working pressure of shell by Rules 145 lbs.

Number of butt straps {outer 23/32" inner 23/32" No. and Description of Furnaces in each Boiler Two, corrugated

Material Steel Tensile strength 26-30 tons Smallest outside diameter 3' 0 5/8"

Thickness of plates {crown 7/16" bottom 7/16" Description of longitudinal joint Weld

Working pressure of furnace by Rules 140 lbs.

Stays in steam space: Material Steel Tensile strength 26-30 tons Thickness 29/32" Pitch of stays 13" x 24"

Stays secured Double nuts, washers Working pressure by Rules 153 lbs.

Material {front Steel back Steel Tensile strength {26-30 tons Thickness {29/32" 9/16" 11/16" Working pressure {front 142 lbs. back 142 lbs.

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

Material 8" x 4" Length as per Rule 2' 6 1/2" Distance apart 9' No. and pitch of stays

Working pressure by Rules 193 lbs. Combustion chamber plates: Material Steel

Strength 26-30 tons Thickness: Sides 9/16" Back 9/16" Top 9/16" Bottom 3/4"

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

Working pressure by Rules 142 lbs. Front plate at bottom: Material Steel Tensile strength 26-30 tons.

Material 29/32" Lower back plate: Material Steel Tensile strength 26-30 tons Thickness 29/32"

Stays at wide water space 14" x 9" Are stays fitted with nuts or riveted over Nuts

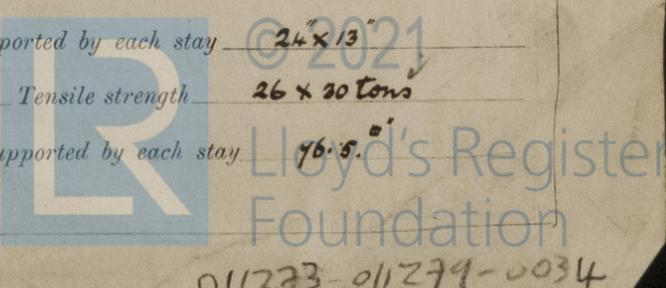
Pressure 142 lbs. Main stays: Material Steel Tensile strength 28-32 tons

At body of stay, 2 1/2" No. of threads per inch 6 Area supported by each stay 24" x 13"

Over threads. Working pressure by Rules 142 lbs. Screw stays: Material Steel Tensile strength 26 x 30 tons

At turned off part, 1 1/2" No. of threads per inch 9 Area supported by each stay 76.5"

Over threads.



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Working pressure by Rules 164 lbs^2 Are the stays drilled at the outer ends 70 Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 1\frac{5}{8} \\ \text{Over threads } 1\frac{5}{8} \end{array} \right.$

No. of threads per inch 9 Area supported by each stay 76.5 Working pressure by Rules 194 lbs^2

Tubes: Material *Iron* External diameter $\left\{ \begin{array}{l} \text{Plain } 3\frac{1}{2} \\ \text{Stay } 3\frac{1}{2} \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 9 \text{ W.G.} \\ \frac{5}{16} + \frac{1}{4} \end{array} \right.$ No. of threads per inch 9

Pitch of tubes $4\frac{1}{2}$ Working pressure by Rules 165 lbs^2 Manhole compensation: Size of opening in shell plate 20×16 Section of compensating ring $2'9" \times 2'5" \times \frac{3}{4}$ No. of rivets and diameter of rivet holes $36 @ 1"$

Outer row rivet pitch at ends $6\frac{1}{2}$ Depth of flange if manhole flanged $3\frac{1}{2}$ 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

How connected to shell Inner radius of crown Working pressure by Rules

of rivets in outer row in dome connection to shell Size of doubling plate under dome Diameter of rivet holes and pitch

Type of Superheater

Number of elements Material of tubes Manufacturers of $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$ Internal diameter and thickness of tubes

Material of headers Tensile strength Thickness Can the superheater be shut off and the boiler be worked separately

Area of each safety valve Is a safety valve fitted to every part of the superheater which can be shut off from the boiler 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 Shipbuilding & Iron Co., Ltd.
J. Cameron
Manager, Habburn Boiler Shop & Foundry

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops} \\ \text{while building} \end{array} \right.$ $\left\{ \begin{array}{l} \text{1925} \\ \text{Oct. 7, 23, Nov. 9, Dec. 21, Jan. 5, 25} \end{array} \right.$ Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits 7

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 £ 5 : 18 : 0

Travelling Expenses (if any) £ : :

When applied for, $10 \text{ FEB } 1926$

When received, $26/3/1926$

Thomas Napier
 Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

FRI. 27 AUG 1926

TUES. 7 SEP 1926

Assigned

see Not No 15497



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 Lloyd's Register
 Foundation

Rpt. Date of
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 Recd. And. L
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