

## REPORT ON BOILERS.

No. 80093

11 Feb 1926

Received at London Office

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

NEWCASTLE-ON-TYNE.

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

on the Palmers S.B. &amp; I. Co. Ltd No. 1058 for the James Dredging Co. Ltd. (Number of Visits 7) Tons { Gross Net

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

Engines made at Newburn By whom made Henty & Son Ltd Engine No. 2266 When made 1918

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

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

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

Manufacturers of Steel Mannesmannrohren. Werke Akt. Schulz Knaack, Hückingen (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

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

Pressure of each set of valves per boiler { per Rule. c as fitted 25 lb. Pressure to which they are adjusted to 140 lbs. Are they fitted with easing gear Yes

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 1/4" ✓

Shell plates: Material steel Tensile strength 28-32 tons

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.

No. and Description of Furnaces in each Boiler Two, corrugated

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.

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

Working pressure { front 142 lbs. back

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

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 1/4" Back 9" x 8 1/4" Top 9" x 8 1/4" 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

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"

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 16" x 5"

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Working pressure by Rules 164 lbs. Are the stays drilled at the outer ends No Margin stays: Diameter { At turned off part, 1 5/8" Over threads 1 5/8" Working pressure by Rules 194 lbs.  
No. of threads per inch 9 Area supported by each stay 76.5" Thickness { 9 W.G. No. of threads per inch 9  
Tubes: Material Iron External diameter { Plain 3 1/2" Stay 3 1/2" Manhole compensation: Size of opening in  
Pitch of tubes 4 1/2" Working pressure by Rules 165 lbs. No. of rivets and diameter of rivet holes 36 @ 1"  
shell plate 20 x 16 Section of compensating ring 2' 9" x 2' 5" x 3/4" Steam Dome: Material  
Outer row rivet pitch at ends 6 1/2" Depth of flange if manhole flanged 3 1/2" Description of longitudinal joint  
Tensile strength Thickness of shell Percentage of strength of joint { Plate Rivets  
Diameter of rivet holes Pitch of rivets Thickness of crown No. and diameter of  
Internal diameter Working pressure by Rules Working pressure by Rules  
stays Inner radius of crown Diameter of rivet holes and pitch  
How connected to shell Size of doubling plate under dome  
of rivets in outer row in dome connection to shell

Type of Superheater

Number of elements Material of tubes Manufacturers of { Tubes Steel castings 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,  
J. Cameron  
Manager, Habburn Boiler Shop & Foundry

Dates of Survey { During progress of work in shops - - - 1925 Oct. 7, 23, Nov. 9, Dec. 21, Jan. 5, 25. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)  
while building { During erection on board vessel - - - Feb. 2. 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 When applied for, 10 FEB 1926  
Travelling Expenses (if any) £ : : When received, 26/3/1926

Thomas Napier  
Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute FRI. 27 AUG 1926  
Assigned see Not 15497

TUES. 7 SEP 1926