

## REPORT ON BOILERS.

No. 83530

Received at London Office

24 NOV 1928

Date of writing Report 16-11-1928 When handed in at Local Office 21-11-1928 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at  
Reg. Book.

Jarrows

Date, First Survey 12 July 1928 Last Survey 13-11-1928

on the S.S. CREOLE BUENO

(Number of Visits) Gross 3126.5  
Tons Net 1645.97  
1636

Master Built at Hebburn By whom built Palmers Co. Ltd Yard No. 988 When built 1928

Engines made at Jarrows By whom made Palmers Co. Ltd Engine No. 988 When made 1928

Boilers made at By whom made Palmers Co. Ltd Boiler No. 988 When made 1928

Nominal Horse Power 288 Owners Sir Joseph Asherwood Ltd (Pros) Port belonging to Newcastle

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

Manufacturers of Steel The Steel Company of Scotland Ltd (Letter for Record S)

Total Heating Surface of Boilers 4808<sup>sq</sup> Is forced draught fitted YES Coal or Oil fired OIL

No. and Description of Boilers TWO SINGLE ENDED MULTITUBULAR 258 Working Pressure 180 LBS.

Tested by hydraulic pressure to 320 LBS Date of test 10/10/28, 17/10/28 No. of Certificate 308/9 Can each boiler be worked separately YES

Area of Firegrate in each Boiler No. and Description of safety valves to each boiler 2 SPRING LOADED

Area of each set of valves per boiler (per Rule 18.49<sup>sq</sup> as fitted 19.24<sup>sq</sup> Pressure to which they are adjusted 180 LBS Are they fitted with easing gear YES

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 1' 6" Is oil fuel carried in the double bottom under boilers No

Smallest distance between shell of boiler and tank top plating 2' 1 1/2" Is the bottom of the boiler insulated YES

Largest internal dia. of boilers 15' 0" Length 11' 6" Shell plates: Material STEEL Tensile strength 28 - 32 TONS

Thickness 1 1/4" Are the shell plates welded or flanged No Description of riveting: circ. seams D.R.L.  
long. seams T.R.D.B.S. Diameter of rivet holes in circ. seams 1 3/8" Pitch of rivets 3.954"  
long. seams 1 1/4" 8 1/8"

Percentage of strength of circ. end seams (plate 65.2% rivets 49.6% Percentage of strength of circ. intermediate seam (plate 85.6% rivets 87.1% combined 88.5% Working pressure of shell by Rules 183 LBS.

Thickness of butt straps (outer 3 1/2" inner 1 3/2" No. and Description of Furnaces in each Boiler 3 DEIGHTON SECTION 3 of

Material STEEL Tensile strength 26 - 30 TONS Smallest outside diameter 3' 7 5/8"

Length of plain part (top 10 1/2" bottom 10 1/2" Thickness of plates (crown 9/16" bottom 9/16" Description of longitudinal joint WELD

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 187 LBS.

End plates in steam space: Material STEEL Tensile strength 26 - 30 TONS Thickness 1 1/4" Pitch of stays 21" x 21"

How are stays secured NUTS & WASHERS Working pressure by Rules 182 LBS.

Tube plates: Material (front STEEL (back Tensile strength 26 - 30 TONS Thickness 1 5/8" 21 3/2"

Mean pitch of stay tubes in nests 9 3/8" Pitch across wide water spaces 1' 2" Working pressure (front 186 LBS (back 202 LBS

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

at centre 10" x 1 3/8" Length as per Rule 2' 10 1/2" Distance apart 10" No. and pitch of stays

in each 3 @ 8 3/4" Working pressure by Rules 182 LBS Combustion chamber plates: Material STEEL

Tensile strength 26 - 30 TONS Thickness: Sides 3/4" Back 3/4" Top 3/4" Bottom 3/4"

Pitch of stays to ditto: Sides 8 3/4" x 8 1/4" Back 9" x 8" Top 10" x 8 3/4" Are stays fitted with nuts or riveted over NUTS ON MARGINAL STAYS

Working pressure by Rules 182 LBS Front plate at bottom: Material STEEL Tensile strength 26 - 30 TONS

Thickness 1 5/16" Lower back plate: Material STEEL Tensile strength 26 - 30 TONS Thickness 29 3/32"

Pitch of stays at wide water space d = 19.5" Are stays fitted with nuts or riveted over NUTS

Working Pressure 184 LBS Main stays: Material STEEL Tensile strength 28 - 32 TONS

Diameter (At body of stay, or over threads 3 1/4" No. of threads per inch 6 Area supported by each stay 441<sup>sq</sup>

Working pressure by Rules 183 LBS 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 72.18<sup>sq</sup>



Working pressure by Rules  $211 \text{ LBS}^{\circ}$  / Are the stays drilled at the outer ends No / Margin stays: Diameter { At turned off part. - / Over threads  $1\frac{3}{4} \times 2$  /

No. of threads per inch 9 / Area supported by each stay  $99^{\circ} \times 123^{\circ} 5^{\circ}$  / Working pressure by Rules  $183 \times 201 \text{ LBS}^{\circ}$  /

Tubes: Material W. IRON / External diameter { Plain  $2\frac{1}{2}$  / Stay  $2\frac{1}{2}$  / Thickness  $\frac{9}{16}, \frac{3}{8}, \frac{5}{16}$  / No. of threads per inch 9 /

Pitch of tubes  $3\frac{3}{4} \times 3\frac{3}{4}$  / Working pressure by Rules  $230 \text{ LBS}^{\circ}$  / Manhole compensation: Size of opening in shell plate  $20' \times 16'$  / Section of compensating ring  $2' 11\frac{1}{2} \times 2' 8 \times 1\frac{1}{4}$  / No. of rivets and diameter of rivet holes  $40 @ 1\frac{1}{4}$  /

Outer row rivet pitch at ends  $8\frac{1}{16}$  / Depth of flange if manhole flanged  $4\frac{1}{2}$  / Steam Dome: Material - /

Tensile strength - / Thickness of shell - / Description of longitudinal joint - /

Diameter of rivet holes - / Pitch of rivets - / Percentage of strength of joint { Plate - / Rivets - /

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 - /

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 { Tubes - / Steel castings - /

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 22 inclusive for boilers been complied with YES

The foregoing is a correct description,  
Palmers Shipbuilding & Iron Co., Ltd. Manufacturer.

Dates of Survey { During progress of work in shops - - / while building { During erection on board vessel - - - /

See Inquiry Report

Are the approved plans of boiler and superheater registered herewith (If not state date of approval.) Yes.  
Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) These boilers have been built under Special Survey, the materials and workmanship are good.

Survey Fee ... £ See Inquiry Report When applied for, 192  
Travelling Expenses (if any) £ When received, 192

Thomas Napier

Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

FRI. 30 NOV 1928

TUE 18 DEC 1928

Assigned see Minute on  
Inve Rpt 83530 attached