

REPORT ON BOILERS.

No. 84062

Received at London Office

Date of writing Report 12-4-1929 When handed in at Local Office 16-4-1929 Port of

NEWCASTLE-ON-TYNE

No. in Survey held at Jarrow Date, First Survey 22 Nov. 128 Last Survey 8 April 1929

Sup on the S.S. "STANASFALT" (Number of Visits 29) Gross 2224.34 Tons Net 1328.6

Master Built at Hebburn By whom built Palmers Co. Ltd. Yard No. 989 When built 1929

Engines made at Jarrow By whom made Palmers Co. Ltd. Engine No. 989 When made 1929

Boilers made at " By whom made " Boiler No. 989 When made 1929

Nominal Horse Power 136 Owners Balisch Amerikanische Petroleum Import Gesellschaft Port belonging to Danzig

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel The Steel Company of Scotland (Letter for Record \$)

Total Heating Surface of Boilers 2218 Is forced draught fitted YES Coal or Oil fired OIL

No. and Description of Boilers 1 S.E. MULTITUBULAR Working Pressure 180 LBS

Tested by hydraulic pressure to 320 LBS Date of test 12.2.29 No. of Certificate 328 Can each boiler be worked separately -

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

Area of each set of valves per boiler per Rule 17.0 as fitted 19.24 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 2' 6" Is oil fuel carried in the double bottom under boilers NO

Smallest distance between shell of boiler and tank top plating 1' 0" Is the bottom of the boiler insulated YES

Largest internal dia. of boilers 14' 0 3/4 Length 11' 9" Shell plates: Material STEEL Tensile strength 29 - 33 TONS

Thickness 1 1/8 Are the shell plates welded or flanged NO Description of riveting: circ. seams end DRL inner -

Long. seams TRDBS Diameter of rivet holes in circ. seams 5/16 long. seams 3/8 Pitch of rivets 3.758 8.25

Percentage of strength of circ. end seams plate 65.0% rivets 50.8% Percentage of strength of circ. intermediate seam plate - rivets -

Percentage of strength of longitudinal joint plate 85.6% rivets 88.7% combined 88.9% Working pressure of shell by Rules 181 LBS

Thickness of butt straps outer 7/8 inner 1 No. and Description of Furnaces in each Boiler 3 DEIGHTON SECTION 30.f.

Material STEEL Tensile strength 26 - 30 TONS Smallest outside diameter 3' 2 1/2

Length of plain part top 10 1/2 bottom 10 1/2 Thickness of plates crown 1/2 bottom 1/2 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 3/32 Pitch of stays 2 1/2 x 20

How are stays secured DOUBLE NUTS & WASHERS Working pressure by Rules 181 LBS

End plates: Material front STEEL back " Tensile strength 26 - 30 TONS Thickness 15/16 27/32

Span pitch of stay tubes in nests 10 5/8 Pitch across wide water spaces 1' 2 1/4 Working pressure front 191 LBS back 185 LBS

End plates to combustion chamber tops: Material STEEL Tensile strength 29 - 33 TONS Depth and thickness of girder

centre 9' x 1 1/8 Length as per Rule 2' 7 5/8 Distance apart 9' No. and pitch of stays

each 2 @ 10 Working pressure by Rules 182 LBS Combustion chamber plates: Material STEEL

Tensile strength 26 - 30 TONS Thickness: Sides 11/16 Back 21/32 Top 11/16 Bottom 11/16

Pitch of stays to ditto: Sides 10 1/2 x 8 1/2 Back 9' x 9 1/4 Top 9' x 10 Are stays fitted with nuts or riveted over NUTS

Working pressure by Rules 180 LBS Front plate at bottom: Material STEEL Tensile strength 26 - 30 TONS

Thickness 15/16 Lower back plate: Material STEEL Tensile strength 26 - 30 TONS Thickness 7/8

Pitch of stays at wide water space D = 18.75 Are stays fitted with nuts or riveted over NUTS

Working Pressure 185 LBS Main stays: Material STEEL Tensile strength 28 - 32 TONS

At body of stay, or Over threads 3 3/4 No. of threads per inch 6 Area supported by each stay 4.30

Working pressure by Rules 187 LBS Screw stays: Material STEEL Tensile strength 26 - 30 TONS

At turned off part, or Over threads 1 5/8 No. of threads per inch 9 Area supported by each stay 83.25



Working pressure by Rules **183 LBS** Are the stays drilled at the outer ends **No** Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part, } 2'' \\ \text{Over threads } 1\frac{7}{8}'' \end{array} \right.$

No. of threads per inch **9** Area supported by each stay **107.53** & **132.234** Working pressure by Rules **198 - 187 LBS**

Tubes: Material **STEEL** External diameter $\left\{ \begin{array}{l} \text{Plain } 3'' \\ \text{Stay } 3'' \end{array} \right.$ Thickness $\left\{ \begin{array}{l} 8 \text{ LSC} \\ 5/16'' \text{ , } 3/8'' \end{array} \right.$ No. of threads per inch **9**

Pitch of tubes **4 1/4" x 4 1/4"** Working pressure by Rules **250 LBS** Manhole compensation: Size of opening shell plate **16" x 20"** Section of compensating ring **2' 11 1/2" x 2' 8 1/2" x 1 1/8"** No. of rivets and diameter of rivet holes **40 @ 1 1/4"**

Outer row rivet pitch at ends **8 3/4"** Depth of flange if manhole flanged **4 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 **-** 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 **SMOKE TUBE** Manufacturers of $\left\{ \begin{array}{l} \text{Tubes } \text{North Eastern Marine Eng. Co. Ltd.} \\ \text{Steel } \text{Mild} \end{array} \right.$

Number of elements **46** Material of tubes **STEEL** Internal diameter and thickness of tubes **19 7/8" , 3/8" thick**

Material of headers **STEEL** Tensile strength **-** Thickness **7/8"** Can the superheater be shut off and the boiler be worked separately **YES** Is a safety valve fitted to every part of the superheater which can be shut off from the boiler **YES**

Area of each safety valve **1.7671** Are the safety valves fitted with easing gear **YES** Working pressure as per Rules **180 LBS** Pressure to which the safety valves are adjusted **183 LBS** Hydraulic test pressure tubes **-** castings **-** and after assembly in place **540 LBS** Are drain cocks or valves fitted to free the superheater from water where necessary **YES**

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with **YES**

Palmer Shipbuilding & Iron Co., Ltd.
The foregoing is a correct description,
N. Brown Manufacturer
Manager, Engine Dept.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building } \left\{ \begin{array}{l} \text{During erection on board vessel - -} \end{array} \right. \end{array} \right.$

See Index Report Are the approved plans of boiler and superheater forwarded herewith **Yes.** (If not state date of approval.)

Total No. of visits **-**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **This boiler has been built under Special Survey, the materials and workmanship are good.**

Survey Fee £ **See Index 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 **TUE. 28 APR 1929** **TUE. 28 MAY 1929**

Assigned **See Index Report attached** **WED. 22 MAY 1929**

