

# REPORT ON BOILERS.

Received at London Office **3 NOV 1943**

Date of writing Report **2 NOV 1943** When handed in at Local Office **2 NOV 1943** Port of **NEWCASTLE-ON-TYNE**

No. in Reg. Book **37280** Survey held at **Wallsend.** Date, First Survey **4<sup>th</sup> June, 1942** Last Survey **22<sup>nd</sup> Sept. 1943**

on the **SS. "Empire Camp"** (Number of Visits **49**) Tons { Gross **7017** Net **4758**

Built at **Sunderland** By whom built **Short Bros Ltd.** Yard No. **477** When built **1943**

Engines made at **Wallsend.** By whom made **Ch. S. Marine Eng Co (1938) Ltd** Engine No. **3050** When made **1943**

Boilers made at **"** By whom made **"** Boiler No. **3041** When made **1943**

Nominal Horse Power **"** Owners **Ministry of War Transport.** Port belonging to **Sunderland.**

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

Manufacturers of Steel **Steel Co of Scotland Ltd** (Letter for Record **S**)

Total Heating Surface of Boilers **2416.** Is forced draught fitted **Yes** Coal or Oil fired **Coal**

No. and Description of Boilers **1 Aux SB.** Working Pressure **220**

Tested by hydraulic pressure to **380** Date of test **28.4.43** No. of Certificate **1044** Can each boiler be worked separately **Yes**

Area of Firegrate in each Boiler **55.** No. and Description of safety valves to each boiler **1 Double improved high lift**

Area of each set of valves per boiler { per Rule **6.42.** as fitted **7.94.** Pressure to which they are adjusted **225** Are they fitted with easing gear **Yes**

In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **Yes**

Smallest distance between boilers or uptakes and bunkers or woodwork **Yes** Is oil fuel carried in the double bottom under boilers **No**

Smallest distance between shell of boiler and tank top plating **Yes** Is the bottom of the boiler insulated **No**

Largest internal dia. of boilers **15-0 1/16"** Length **11-8 1/32"** Shell plates: Material **S** Tensile strength **29-33**

Thickness **1 1/32"** Are the shell plates welded or flanged **No** Description of riveting: circ. seams { end **DR** inter. **Yes**

long. seams **TR. DR S** Diameter of rivet holes in { circ. seams **1 1/2"** long. seams **1 1/2"** Pitch of rivets { **4 1/2"** **10 3/8"**

Percentage of strength of circ. end seams { plate **63.6** rivets **46.2** Percentage of strength of circ. intermediate seam { plate **85.5** rivets **86.2** combined **88.3**

Percentage of strength of longitudinal joint { plate **85.5** rivets **86.2** combined **88.3**

Thickness of butt straps { outer **1 1/8"** inner **1 1/4"** No. and Description of Furnaces in each Boiler **3 cf.**

Material **S** Tensile strength **26-30** Smallest outside diameter **5-9 3/4"**

Length of plain part { top **Yes** bottom **Yes** Thickness of plates { crown **1 1/16"** bottom **1 1/16"** Description of longitudinal joint **weld**

Dimensions of stiffening rings on furnace or c.c. bottom **Yes**

End plates in steam space: Material **S** Tensile strength **26-30** Thickness **1 1/32"** Pitch of stays **19 3/4" x 19 5/8"**

How are stays secured **Double nuts.**

Tube plates: Material { front **S** back **S** Tensile strength { **26-30.** Thickness { **1 1/16"** **2 1/32"**

Mean pitch of stay tubes in nests **9 5/16"** Pitch across wide water spaces **14 x 8 1/4"**

Girders to combustion chamber tops: Material **S** Tensile strength **28-32.** Depth and thickness of girder at centre **10 1/2" x 1 1/16" Dble.** Length as per Rule **33 17/32"** Distance apart **9 1/4"** No. and pitch of stays in each **3 @ 8"**

Combustion chamber plates: Material **S**

Tensile strength **26-30** Thickness: Sides **1 1/16"** Back **1 1/16"** Top **1 1/16"** Bottom **7/8"**

Pitch of stays to ditto: Sides **9 1/4" x 8"** Back **9 1/4" x 8"** Top **9 1/4" x 8"** Are stays fitted with nuts or riveted over **nuts**

Front plate at bottom: Material **S** Tensile strength **26-30.**

Thickness **1 5/16"** Lower back plate: Material **S** Tensile strength **26-30** Thickness **2 1/32"**

Pitch of stays at wide water space **14" x 8"** Are stays fitted with nuts or riveted over **nuts**

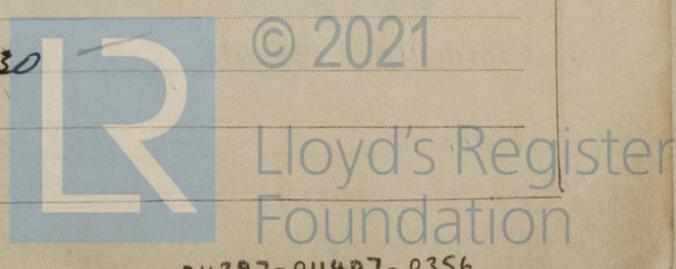
Main stays: Material **S** Tensile strength **28-32.**

Diameter { At body of stay, or Over threads **3 1/4"** No. of threads per inch **6**

Screw stays: Material **S** Tensile strength **26-30**

Diameter { At turned off part, or Over threads **1 3/4"** No. of threads per inch **9.**

This report also sent on the part of the ship.



Are the stays drilled at the outer ends NO Margin stays: Diameter { At turned off part, 1 7/8 or Over threads 1 7/8 }  
 No. of threads per inch 9  
 Tubes: Material SD Steel External diameter { Plain 3 Stay 3 } Thickness { 8 W.G. } No. of threads per inch 9  
 Pitch of tubes 4 1/4" x 4 1/8" Manhole compensation: Size of opening in shell plate NONE Section of compensating ring \_\_\_\_\_ No. of rivets and diameter of rivet holes \_\_\_\_\_  
 Outer row rivet pitch at ends \_\_\_\_\_ Depth of flange if manhole flanged \_\_\_\_\_ Steam Dome: Material NONE  
 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 \_\_\_\_\_ Thickness of crown \_\_\_\_\_ No. and diameter of stays \_\_\_\_\_ Inner radius of crown \_\_\_\_\_  
 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 NONE Manufacturers of { Tubes Steel forgings 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 \_\_\_\_\_  
 Pressure to which the safety valves are adjusted \_\_\_\_\_ Hydraulic test pressure: tubes \_\_\_\_\_ forgings and 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

**THE NORTH EASTERN MARINE ENGINEERING CO. (1938) LTD.**

The foregoing is a correct description,

*John Neill*

Manufacturer.

Similar boilers 11.10.41

Dates of Survey { During progress of work in shops - - - }  
 { During erection on board vessel - - - }

*See Machy Rpt.*

Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

Is this Boiler a duplicate of a previous case \_\_\_\_\_ If so, state Vessel's name and Report No. \_\_\_\_\_

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.) *This boiler has been constructed under special survey in accordance with the Requirements of the Rules the Approved Plan & the Specification. The materials & workmanship are good.*

*The boiler proved sound & tight under hydraulic test & satisfactory under steam.*

Survey Fee ... .. £ See Machy Report } When applied for, \_\_\_\_\_ 19 \_\_\_\_\_  
 Travelling Expenses (if any) £ \_\_\_\_\_ } When received, \_\_\_\_\_ 19 \_\_\_\_\_

*R Moffitt*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute TUES, 16 NOV 1943

Assigned see minute on J.E. Rpt.



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