

REPORT ON BOILERS.

No. 98381

RETAIN

PR - 3 1940

Received at London Office

Date of writing Report

19

When handed in at Local Office

1/4

1940

Port of

NEWCASTLE ON-TYNE

No. in Reg. Book.

Wallsend on Tyne

Date, First Survey

28 July

Last Survey

29 March

1940

3861 on the

SS 'CONFIELD'

(Number of Visits)

Gross Tons
Net

Master Built at Sunderland By whom built J.D. Thompson & Sons Ltd No. 597 When built

Engines made at Wallsend on Tyne By whom made N.E. Marine Eng Co (1938) Ltd Engine No. 2956 When made 1940

Boilers made at " By whom made " Boiler No. 2956 When made 1940

Nominal Horse Power Owners 'Confield' S.S. Co Ltd Port belonging to Newcastle

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Colvilles Ltd. (Letter for Record S ✓)

Total Heating Surface of Boilers 4260 sq ft. Is forced draught fitted yes ✓ Coal or Oil fired coal ✓

No. and Description of Boilers 2 S.B. Working Pressure 220 ✓

Tested by hydraulic pressure to 380 Date of test 30.11.39 No. of Certificate 833 Can each boiler be worked separately yes ✓

Area of Firegrate in each Boiler 42 sq ft. No. and Description of safety valves to each boiler 1 Double ✓

Area of each set of valves per boiler {per Rule 10.2, as fitted 11.88} 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 ✓

Smallest distance between boilers or uptakes and bunkers or woodwork 1'-10" Is oil fuel carried in the double bottom under boilers no ✓

Smallest distance between shell of boiler and tank top plating 2'-8" Is the bottom of the boiler insulated yes ✓

Largest internal dia. of boilers 14'-0 9/32" Length 12'-4 1/2" Shell plates: Material S Tensile strength 29-33 ✓

Thickness 1 23/64 Are the shell plates welded or flanged no ✓ Description of riveting: circ. seams {end J.R., inter. ✓}

long. seams U.R. D.B.S. (5 rivets) Diameter of rivet holes in {circ. seams 1 7/16, long. seams 1 3/8} Pitch of rivets {4, 9 7/16} ✓

Percentage of strength of circ. end seams {plate 64, rivets 47.5} Percentage of strength of circ. intermediate seam {plate, rivets ✓}

Percentage of strength of longitudinal joint {plate 85.4, rivets 86.1, combined 88} Working pressure of shell by Rules 222 ✓

Thickness of butt straps {outer 1 1/16, inner 1 3/16} No. and Description of Furnaces in each Boiler 3 cf ✓

Material S Tensile strength 26-30 Smallest outside diameter 3'-4" ✓

Length of plain part {top, bottom ✓} Thickness of plates {crown 9/8, bottom ✓} Description of longitudinal joint weld ✓

Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 228 lbs ✓

End plates in steam space: Material S Tensile strength 26-30 Thickness 1 7/32 Pitch of stays 25 x 19" ✓

How are stays secured D.N. & thin washers. Working pressure by Rules 224, 19 1/16 ✓

Tube plates: Material {front S, back S} Tensile strength {26-30} Thickness {27 3/32 ✓}

Mean pitch of stay tubes in nests 9.4" Pitch across wide water spaces 14 1/2 x 7 1/2 Working pressure {front 227, back 292} ✓

Girders to combustion chamber tops: Material S Tensile strength 29-33 Depth and thickness of girder

at centre 11 1/2 x 1" (double) Length as per Rule 3'-10 1/2 Distance apart 8 1/2" No. and pitch of stays

in each 3 @ 10 3/4 Working pressure by Rules 230 Combustion chamber plates: Material S

Tensile strength 26-30 Thickness: Sides 29 3/32 Back 3/4 Top 29 3/32 Bottom 29 3/32 ✓

Pitch of stays to ditto: Sides 10 3/4 x 8 15/16 Back 9 7/8 x 9 Top 10 3/4 x 8 1/2 Are stays fitted with nuts or riveted over nuts ✓

Working pressure by Rules 221 Front plate at bottom: Material S Tensile strength 26-30

Thickness 19 1/16 Lower back plate: Material S Tensile strength 26-30 Thickness 19 1/16

Pitch of stays at wide water space 14 1/2 x 9 7/8 Are stays fitted with nuts or riveted over nuts ✓

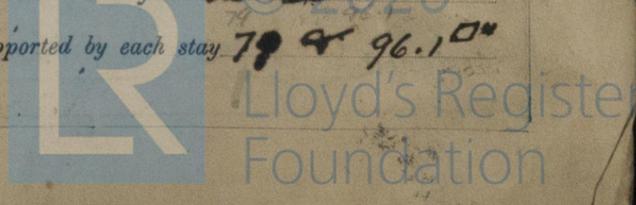
Working Pressure 238 Main stays: Material S Tensile strength 28-32

Diameter {At body of stay, or Over threads} 3 1/2 No. of threads per inch 6 Area supported by each stay 475 sq in ✓

Working pressure by Rules 227 Screw stays: Material S Tensile strength 26-30 2020

Diameter {At turned off part, or Over threads} 1 7/8 & 2 No. of threads per inch 9 Area supported by each stay 79 & 96.1 sq in ✓

W373-0214



Working pressure by Rules **259** Are the stays drilled at the outer ends **no** Margin stays: Diameter ^{At turned off part,} _{or} ^{Over threads} **2 1/2** ✓
 No. of threads per inch **9** Area supported by each stay **109.5** Working pressure by Rules **260** ✓
 Tubes: Material **S.D. Steel** External diameter ^{Plain} **2 1/2** ✓ Thickness ^{8 W.G.} **7/16 + 3/8** ✓ No. of threads per inch **9** ✓
 Pitch of tubes **3 3/8 x 3 3/4** ✓ Working pressure by Rules **246** Manhole compensation: Size of opening in shell plate ✓ Section of compensating ring ✓ No. of rivets and diameter of rivet holes ✓
 Outer row rivet pitch at ends ✓ Depth of flange if manhole flanged **4 3/8 + 3 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 **N.E. MARINE, Combustion Chamber** Manufacturers of **Stewarts & Lloyds**
 Number of elements **26** Material of tubes **S.D. Steel** Internal diameter and thickness of tubes **1.023 x 7 W.G.**
 Material of headers **S.D. Steel** Tensile strength **26-28** ✓ Thickness **1"** ✓ Can the superheater be shut off and the boiler be worked separately **no** 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 **3.14** ✓ Are the safety valves fitted with casing gear **yes** Working pressure as per Rules **220 lbs.** Pressure to which the safety valves are adjusted **225 lbs.** Hydraulic test pressure: tubes **1500 lbs.** ^{headers} **660 lbs.** _{forgings and castings} and after assembly in place **440 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.**

The foregoing is a correct description,
 THE NORTH EASTERN MARINE ENGINEERING CO. (1900) LTD.
 John Neill Manufacturer.

Dates of Survey ^{During progress of work in shops - -} _{while building} ^{During erection on board vessel - - -} **See Mch report.** Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.) **Yes**
 Total No. of visits

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

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) **The main boilers & Superheater of this vessel have been made under special survey in accordance with the approved plans & the requirements of the Rules. The materials & workmanship are good. The installation proved satisfactory under hydraulic test & on examination under full working conditions**

Survey Fee ... £ **See Mch Rpt.** When applied for, 19
 Travelling Expenses (if any) £ **See Mch Rpt.** When received, 19

R. Moffatt
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute

Assigned

FRI 12 APR 1940

See Std. F.C. 32840



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