

Rpt. 5a.

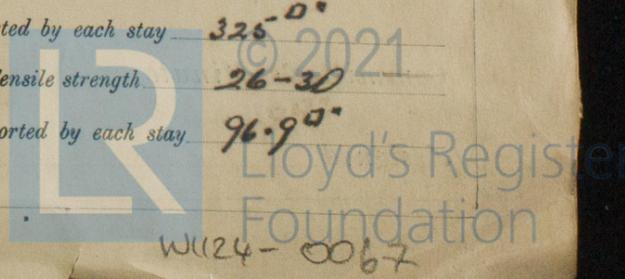
REPORT ON BOILERS.

No. 98187

Date of writing Report 19 When handed in at Local Office 19 JAN 1940 Received at London Office JAN 22 1940
 Port of NEWCASTLE-ON-TYNE
 No. in Reg. Book. 38284 Survey held at Wallsend on Tyne Date, First Survey 15.5.39 Last Survey 10-1-1940
 Supp. on the SS "BEECHWOOD" (Number of Visits) Tons ^{Gross} _{Net}
 Master Built at Sunderland By whom built Sir J. Laing Sons Ltd Yard No. 727 When built
 Engines made at Wallsend By whom made N.E. MAR. ENG. CO (1938) Ltd Engine No. 2940 When made 1940
 Boilers made at By whom made Boiler No. 2940 When made 1940
 Nominal Horse Power Owners J. J. Jacobs & Co Ltd. Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Steel Company & Scotland Ltd. (Letter for Record S.)
 Total Heating Surface of Boilers 3840 sq. ft. Is forced draught fitted yes Coal or Oil fired coal
 No. and Description of Boilers 2 SB. Working Pressure 220
 Tested by hydraulic pressure to 380 Date of test 30.10.39 No. of Certificate 830 Can each boiler be worked separately yes
 Area of Firegrate in each Boiler 41 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 2'-8" Is oil fuel carried in the double bottom under boilers no
 Smallest distance between shell of boiler and tank top plating 2'-6" Is the bottom of the boiler insulated yes
 Largest internal dia. of boilers 13'-6 3/8" Length 12'-4 1/2" Shell plates: Material S Tensile strength 29-33
 Thickness 1 7/16" Are the shell plates welded or flanged no Description of riveting: circ. seams ^{end} DR. _{inter.}
 long. seams T.R. D.B.S. (5 rivets) Diameter of rivet holes in ^{circ. seams} 1 3/8" _{long. seams} 1 7/8" Pitch of rivets 9 1/2"
 Percentage of strength of circ. end seams ^{plate} 65 _{rivets} 44.8 Percentage of strength of circ. intermediate seam ^{plate} _{rivets}
 Percentage of strength of longitudinal joint ^{plate} 85.5 _{rivets} 88.5 Working pressure of shell by Rules 222
 Thickness of butt straps ^{outer} 1 1/8" _{inner} No. and Description of Furnaces in each Boiler 3 cf.
 Material S Tensile strength 26-30 Smallest outside diameter 3'-2 7/16"
 Length of plain part ^{top} _{bottom} Thickness of plates ^{crown} 1 9/16" _{bottom} 1 1/2" Description of longitudinal joint weld.
 Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 224
 End plates in steam space: Material S Tensile strength 26-30 Thickness 1 1/4" Pitch of stays 19 3/8" x 16 3/4"
 How are stays secured D.V. Working pressure by Rules 222
 Tube plates: Material ^{front} S _{back} S Tensile strength 26-30 Thickness 1 5/16" 1 3/16"
 Mean pitch of stay tubes in nests 9" Pitch across wide water spaces 14 1/2" x 7 1/4" Working pressure ^{front} 230 _{back} 293
 Girders to combustion chamber tops: Material S Tensile strength 29-33 Depth and thickness of girder
 at centre 11 3/4" x 1" double Length as per Rule 3'-10 1/2" Distance apart 8 5/16" No. and pitch of stays
 in each 3 @ 10 3/4" Working pressure by Rules 229 Combustion chamber plates: Material S
 Tensile strength 26-30 Thickness: Sides 2 5/32" Back 1 3/16" Top 2 5/32" Bottom 2 5/32"
 Pitch of stays to ditto: Sides 10 3/4" x 8 1/2" Back 11 1/2" x 8 7/16" Top 10 3/4" x 8 15/16" Are stays fitted with nuts or riveted over nuts
 Working pressure by Rules 220 Front plate at bottom: Material S Tensile strength 26-30
 Thickness 1 9/16" Lower back plate: Material S Tensile strength 26-30 Thickness 3 1/32"
 Pitch of stays at wide water space 14 1/2" x 11 1/2" Are stays fitted with nuts or riveted over nuts
 Working Pressure 226 Main stays: Material S Tensile strength 28-32
 Diameter ^{At body of stay,} 3 _{or} No. of threads per inch 6 Area supported by each stay 325 sq. in.
 Working pressure by Rules 240 Screw stays: Material S Tensile strength 26-30
 Diameter ^{At turned off part,} 1 7/8" _{or} No. of threads per inch 9 Area supported by each stay 96.9 sq. in.



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Working pressure by Rules **220** Are the stays drilled at the outer ends **no** Margin stays: Diameter **2" x 2 1/2"**
 No. of threads per inch **9** Area supported by each stay **101 x 129 sq"** Working pressure by Rules **244 & 220**
 Tubes: Material **S.D. Steel** External diameter **2 1/2"** Thickness **8 S.W.G.** No. of threads per inch **9**
 Pitch of tubes **4" x 3 7/8"** Working pressure by Rules **255** 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 **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 **✓**
 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 **N.E. Marine Combustion Chamber** Manufacturers of **Tubes Tubes Ltd.**
Steel forgings Headers - Stewart & Lloyd
Steel castings
 Number of elements **26** Material of tubes **S.D. Steel** Internal diameter and thickness of tubes **1.023" 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 sq"** 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 forgings and castings 660 lbs. 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. (1938) LTD.
John Neill Manufacturer.

Dates of Survey **During progress of work in shops - - -** Are the approved plans of boiler and superheater forwarded **✓**
while building **During erection on board vessel - - -** **See Machinery Report** (If not state date of approval) **22.5.39 - 22.6.39**
 Total No. of visits **2**

Is this Boiler a duplicate of a previous case **yes**. If so, state Vessel's name and Report No. **"Argyll" Nwe Rpt 98087**

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)
 The two main boilers & superheaters have been made & installed under Special Survey in accordance with the Approved Plans & the Requirements of the Rules.

The materials & workmanship are good & the boilers & superheaters were found satisfactory under hydraulic tests & under working conditions

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

B. Elliott
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute
 Assigned **See Std. G.C. 32788**

