

REPORT ON BOILERS.

No. 30283
8 FEB 1930

Received at London Office

Date of writing Report

192 When handed in at Local Office - 7 FEB. 1930

Port of Sunderland

No. in Survey held at Reg. Book.

Sunderland

Date, First Survey

Last Survey 3rd Feb 1930

(Number of Visits) Gross 4979
Tons Net 3003

on the

S.S. "WELLINGTON COURT"

Master Built at Sunderland By whom built Messrs Pickering & Son Yard No. 228 When built 1930
 Engines made at Sunderland By whom made Messrs N.E.M. Engineering Co. Ltd Engine No. 2692 When made 1930
 Boilers made at Sunderland By whom made Messrs N.E.M. Engineering Co. Ltd Boiler No. 2692 When made 1930
 Nominal Horse Power 437 Owners Haldin & Phillips Ltd Port belonging to London

MULTITUBULAR BOILERS—MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel Appleby Iron Co. & The Steel Co. of Scotland. (Letter for Record (r))

Total Heating Surface of Boilers 7401 sq. ft. Is forced draught fitted No. Coal or Oil fired Coal.

No. and Description of Boilers 3 S.E. Marine Type. 3 SB Working Pressure 180 lbs/sq. in.

Tested by hydraulic pressure to 320 lbs/sq. in. Date of test 14-11-29. No. of Certificate 4070 Can each boiler be worked separately Yes.

Area of Firegrate in each Boiler 60.7 sq. ft. No. and Description of safety valves to each boiler 2 - Spring loaded.

Area of each set of valves per boiler (per Rule 15.81 sq. in. as fitted 16.58 sq. in.) Pressure to which they are adjusted 185 lbs/sq. in. 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 3'-4" Is oil fuel carried in the double bottom under boilers No.

Smallest distance between shell of boiler and tank top plating 2'-0" Is the bottom of the boiler insulated No.

Largest internal dia. of boilers 15'-3 9/16" Length 11'-6" Shell plates: Material Steel Tensile strength 29/33 tons/sq. in.

Thickness 1 7/32" Are the shell plates welded or flanged No. Description of riveting: circ. seams end D.R. Lap.

long. seams T.R. D.B. Straps Diameter of rivet holes in circ. seams 1 1/4" Pitch of rivets 3 3/4" 8 13/16"

Percentage of strength of circ. end seams (plate 66.6, rivets 42.5) Percentage of strength of circ. intermediate seam (plate, rivets)

Percentage of strength of longitudinal joint (plate 85.81, rivets 84.95, combined 88.62) Working pressure of shell by Rules 180.5 lbs/sq. in.

Thickness of butt straps (outer 15/16", inner 1/16") No. and Description of Furnaces in each Boiler 3 - Corrugated Right Hand Section.

Material Steel Tensile strength 26/30 tons/sq. in. Smallest outside diameter 3'-8 3/8"

Length of plain part (top, bottom) Thickness of plates (crown 9/16", bottom) Description of longitudinal joint Weld.

Dimensions of stiffening rings on furnace or c.c. bottom Working pressure of furnace by Rules 183.8 lbs/sq. in.

End plates in steam space: Material Steel Tensile strength 26/30 tons/sq. in. Thickness 1 1/32" Pitch of stays 22 1/4" x 21"

How are stays secured Double Nuts Working pressure by Rules 180.9 lbs/sq. in.

Tube plates: Material (front Steel, back Steel) Tensile strength (26/30 tons/sq. in.) Thickness (7/8", 3/4")

Mean pitch of stay tubes in nests 10 1/2" Pitch across wide water spaces 14 1/2" x 9 1/8" Working pressure (front 186 lbs/sq. in., back 182 lbs/sq. in.)

Girders to combustion chamber tops: Material Steel Tensile strength 28/32 tons/sq. in. Depth and thickness of girder

at centre 8 3/8" x 15 1/16" Length as per Rule 2'-8 15/32" Distance apart 11 1/2" No. and pitch of stays

in each 2 - 10 1/8" Working pressure by Rules 186 lbs/sq. in. Combustion chamber plates: Material Steel

Tensile strength 26-30 tons/sq. in. Thickness: Sides 25/32" Back 25/32" Top 25/32" Bottom 25/32"

Pitch of stays to ditto: Sides 11 1/16" x 10 1/8" Back 11 5/8" x 10 1/8" Top 11 1/2" x 10 1/8" Are stays fitted with nuts or riveted over Nuts.

Working pressure by Rules 180.7 lbs/sq. in. (Sides) Front plate at bottom: Material Steel Tensile strength 26/30 tons/sq. in.

Thickness 7/8" Lower back plate: Material Steel Tensile strength 26/30 tons/sq. in. Thickness 29/32"

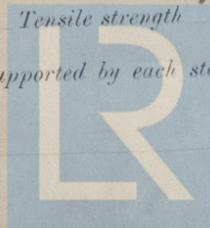
Pitch of stays at wide water space 14 3/4" x 10 1/8" Are stays fitted with nuts or riveted over Nuts.

Working Pressure 210 lbs/sq. in. Main stays: Material Steel Tensile strength 28/32 tons/sq. in.

Diameter (At body of stay, or Over threads) 3 1/8" No. of threads per inch 6 Area supported by each stay 467.25 sq. in.

Working pressure by Rules 182.9 lbs/sq. in. Screw stays: Material Gum Tensile strength 21 1/2 tons/sq. in. Min.

Diameter (At turned off part, or Over threads) 1 7/8" No. of threads per inch 9 Area supported by each stay 118.33 sq. in.



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Working pressure by Rules $180/16/15$ Are the stays drilled at the outer ends *No.* Margin stays: Diameter $\left\{ \begin{array}{l} \text{At turned off part,} \\ \text{or} \\ \text{Over threads} \end{array} \right. 2''$

No. of threads per inch *9.* Area supported by each stay 133.52 sq. in. Working pressure by Rules $184/16/15$

Tubes: Material *Seamless Steel* External diameter $\left\{ \begin{array}{l} \text{Plain} \\ \text{Stay} \end{array} \right. 3\frac{3}{4}''$ Thickness $5/16''$ *8 W.G.* No. of threads per inch *9.*

Pitch of tubes $4\frac{9}{16}'' \times 4\frac{9}{16}''$ Working pressure by Rules $182.195 \& 230$ Manhole compensation: Size of opening in shell plate $20'' \times 16''$ Section of compensating ring $12.75'' \times 1\frac{9}{32}''$ No. of rivets and diameter of rivet holes $32 - 1\frac{7}{16}''$

Outer row rivet pitch at ends $9\frac{1}{2}''$ Depth of flange if manhole flanged *H''* **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

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 $\left\{ \begin{array}{l} \text{Tubes} \\ \text{Steel castings} \end{array} \right.$

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 casing 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,
THE NORTH EASTERN MARINE ENGINEERING CO. LTD. Manufacturer.
John Neill Manager.

Dates of Survey $\left\{ \begin{array}{l} \text{During progress of work in shops - -} \\ \text{while building} \end{array} \right. \left\{ \begin{array}{l} \text{During erection on board vessel - - -} \end{array} \right.$ *Please see Mech. Rpt.* Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

Total No. of visits

GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.) *These Boilers have been built under Special Survey and the Materials and Workmanship are good. On completion they were satisfactorily fitted in the vessel, and the Safety Valves adjusted under steam. For recommendations regarding notation see Machinery Report.*

Survey Fee £ *Charged on Mech. Report.* When applied for, 192

Travelling Expenses (if any) £ When received, 192

Matthew Caldwell.
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 14 FEB. 1930**

Assigned

See other S.E. Rpt.



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