

REPORT ON BOILERS.

No. 30488

Date of writing Report

192

When handed in at Local Office

23 OCT. 1930

Received at London Office

24 OCT 1930

Port of SUNDERLAND.No. in
eg. Book.Survey held at SUNDERLAND.

Date, First Survey

Last Survey 22 Oct 1930on the S.S. "TOLWORTH."

(Number of Visits

Tons

Gross

Net

Master

Built at BURNTISLAND.By whom built BURNTISLAND S.B. Co. LD. Yard No. 165. When built 1930Engines made at SUNDERLAND.By whom made N.E. MARINE ENGS. Co. LD.Engine No. 2770 When made 1930.Boilers made at SUNDERLAND.By whom made N.E. MARINE ENGS. Co. LD.Boiler No. 2770 When made 1930.Nominal Horse Power 156.Owners WANDSWORTH, WIMBLEDON & EPPOM GAS Co.Port belonging to LONDON.

MULTITUBULAR BOILERS MAIN, AUXILIARY, OR DONKEY.

Manufacturers of Steel THYSSEN STEEL Co. MULHEIM, RUHR. 2 STEEL Co. OF SCOTLAND.

(Letter for Record (S).

Total Heating Surface of Boilers 2730 sq ftIs forced draught fitted No.Coal or Oil fired Coal.No. and Description of Boilers 1. S.B.Working Pressure 180 lbs.Tested by hydraulic pressure to 320 lbs. Date of test 9-9-30. No. of Certificate 4119. Can each boiler be worked separately ✓Area of Firegrate in each Boiler 73 sq ft No. and Description of safety valves to each boiler 2 SPRING LOADED.Area of each set of valves per boiler per Rule 17.5 sq ft Pressure to which they are adjusted 185 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 2'-6"Is oil fuel carried in the double bottom under boilers No 2B.Smallest distance between shell of boiler and floor 1'-10"Is the bottom of the boiler insulated No.Largest internal dia. of boilers 16'-0 1/32" Length 11'-0" Shell plates: Material STEEL Tensile strength 29/32 Tms.Thickness 1 1/4" Are the shell plates welded or flanged No. Description of riveting: circ. seams end D. R. LAP.Long. seams T. R. D. B. STAP. Diameter of rivet holes in circ. seams 1 5/8" Pitch of rivets 4"Percentage of strength of circ. end seams plate 67 Percentage of strength of circ. intermediate seam plate 42.4Percentage of strength of longitudinal joint plate 85.7 Working pressure of shell by Rules 180.7 lbs.Thickness of butt straps outer 3/32" No. and Description of Furnaces in each Boiler 4 CORRUG. DEIGHTON SECTION.Material STEEL Tensile strength 26/30 Tms. Smallest outside diameter 3'-2 1/4"Length of plain part top 1/2" Thickness of plates bottom 1/2" Description of longitudinal joint WELD.Dimensions of stiffening rings on furnace or c.c. bottom ✓ Working pressure of furnace by Rules 188 lbs.End plates in steam space: Material STEEL Tensile strength 26/30 Tms. Thickness 1 3/8" Pitch of stays 22 1/2" x 20 1/2"How are stays secured DOUBLE NUTS. Working pressure by Rules 187.3 lbs.Tube plates: Material STEEL Tensile strength 26/30 Tms. Thickness 15/16"Lean pitch of stay tubes in nests 10.25° Pitch across wide water spaces 14 1/2" x 8 3/4" Working pressure front 210 lbsGirders to combustion chamber tops: Material STEEL Tensile strength 28/32 Tms. Depth and thickness of girder back 191 lbs.Centre 8 5/8" x 2" Length as per Rule 32" Distance apart 12 1/8" No. and pitch of staysEach 3 at 7 3/8" Working pressure by Rules 183.5 lbs. Combustion chamber plates: Material STEEL.Tensile strength 26/30 Tms. Thickness: Sides 23/32" Back 23/32" Top 23/32" Bottom 15/16"Pitch of stays to ditto: Sides 10" x 10" Back 10 1/2" x 9 1/2" Top 12 1/8" x 7 3/8" 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 Tms.Thickness 15/16" Lower back plate: Material STEEL Tensile strength 26/30 Tms. Thickness 7/8"Pitch of stays at wide water space 14 1/2" x 9 1/2" Are stays fitted with nuts or riveted over NUTS.Working Pressure 209 lbs. Main stays: Material STEEL Tensile strength 28/32 Tms.Diameter At body of stay, 3 3/8" No. of threads per inch 6 Area supported by each stay 472.3 sq inWorking pressure by Rules 181 lbs. Screw stays: Material STEEL Tensile strength 26/30 Tms.Diameter At turned off part, 1 3/4" No. of threads per inch 9 Area supported by each stay 99.75 sq in

Working pressure by Rules 180 lbs. Are the stays drilled at the outer ends No. Margin stays: Diameter 2" ^{At turned off part.} _{or} ^{Over threads}

No. of threads per inch 9 Area supported by each stay 118.75 sq. in. Working pressure by Rules 208 lbs.

Tubes: Material STEEL External diameter 3 1/4" Thickness 8 w.g. No. of threads per inch 9

Pitch of tubes 4 1/2" x 4 3/8" Working pressure by Rules 230, 212, 206 lbs. Manhole compensation: Size of opening 16" x 12"

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" 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 ✓

stays ✓ Inner radius of crown ✓ Working pressure by Rules ✓ Diameter of rivet holes and ✓

How connected to shell ✓ Size of doubling plate under dome ✓ of rivets in outer row in dome connection to shell ✓

Type of Superheater

Number of elements ✓ Material of tubes ✓ Manufacturers of ✓ Tubes ✓ Steel castings ✓ Internal diameter and thickness of tubes ✓

Material of headers ✓ Tensile strength ✓ Thickness ✓ Can the superheater be shut off ✓

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 ✓ Working pressure as ✓

Rules ✓ Pressure to which the safety valves are adjusted ✓ Hydraulic test press ✓

tubes ✓ castings ✓ and after assembly in place ✓ Are drain cocks or valves ✓

to free the superheater from water where necessary ✓

Have all the requirements of Sections 14 to 22 inclusive for boilers been complied with Yes.

FOR THE NORTH EASTERN MARINE ENGINEERING CO. LTD.
The foregoing is a correct description,

John Neill

Manufact

Dates of Survey During progress of work in shops - - Please see Mech. Rpt. Are the approved plans of boiler and superheater forwarded herewith (If not state date of approval.)

while building During erection on board vessel - - - Total No. of visits ✓

GENERAL REMARKS

(State quality of workmanship, opinions as to class, &c.) The Boiler of this Vessel has been built under Special Survey. The materials and Workmanship are good. On completion it was satisfactorily fitted in the vessel, and examined under a full head of steam. The safety valves were adjusted under steam, and accumulation found to be satisfactory.

For Notation see Machinery Report.

Survey Fee

Travelling Expenses (if any)

When applied for,

When received,

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J. D. Smith

Engineer Surveyor to Lloyd's Register of Shipping

Committee's Minute

TUE. 28 OCT 1930

Assigned

See F.E. Rpt.



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