

REPORT ON BOILERS.

No. 544

Received at London Office - 6 MAR 1944

of writing Report Feb. 8 1944 When handed in at Local Office 19 Port of Saint John, N. B.
 Dec. 11 6,30; in Survey held at Saint John, N. B. Date, First Survey Sept. 18, 1943 Last Survey Dec. 8 19 43.
 Oct. 5, 9, Book. on the twin screw steamer "RIDING MOUNTAIN PARK" (ex dredge "FIELDING") (Number of Vis 62) Tons Gross 1854
 Built at Sorel, P. Q. By whom built Canadian Government Yard No. When built 1905
 Lines made at Toronto, Canada By whom made Polson Iron Works Engine No. -- When made 1905
 Boilers made at Glasgow, Scotland By whom made Anderson, Lyall & Co. Boiler No. -- When made 1905
 Main Horse Power 66 - 132 Owners Park Steamship Co. Port belonging to Montreal

MULTITUBULAR BOILERS—MAIN, ~~AUXILIARY~~ OR ~~DONKEY~~

Designed for 180 lb.

Manufacturers of Steel Not known (Letter for Record r)
 Heating Surface of Boilers 3030 sq. ft. ✓ Is forced draught fitted No ✓ Coal or Oil fired Coal ✓
 and Description of Boilers 2 single ended multitubular ✓ Working Pressure 160 lbs. per sq. inch
 Tested by hydraulic pressure to 360 lbs. per sq. inch Date of test 21/11/42 No. of Certificate ? Can each boiler be worked separately Yes ✓
 Area of Firegrate in each Boiler 57.75 sq. ft. No. and Description of safety valves to each boiler 1 twin Marine type High Lift 2 1/2" dia. ea.
 Area of each set of valves per boiler {per Rule 10.809" ✓ Pressure to which they are adjusted 160 lbs. per sq. in. Are they fitted with easing gear Yes ✓
 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 12" Is oil fuel carried in the double bottom under boilers No
 Smallest distance between shell of boiler and tank top plating 1'-9" Is the bottom of the boiler insulated Yes ✓
 Largest internal dia. of boilers 12'-9" ✓ Length 11 ft. ✓ Shell plates: Material O.H. Steel ✓ Tensile strength 60,000 to 65,000 lbs. ✓
 Thickness 1 1/4" ✓ Are the shell plates welded or flanged flanged ✓ Description of riveting: circ. seams {end double ✓
 Seams treble 0.85 Diameter of rivet holes in {circ. seams 1 1/4" ✓ Pitch of rivets {7-8/8"; 3 1/2"; 2-5/32". 8 19/64
 Percentage of strength of circ. end seams {plate --- rivets --- Percentage of strength of circ. intermediate seam {plate --- rivets ---
 Percentage of strength of longitudinal joint {plate --- rivets --- Working pressure of shell by Rules ---
 Thickness of butt straps {outer 1-3/16" ✓ No. and Description of Furnaces in each Boiler Three Morrison Corrugated ✓
 Material O.H. Steel ✓ Tensile strength 60,000 to 65,000 lbs. Smallest outside diameter 37-3/8" 31 3/8
 Thickness of plates {crown 9/16" ✓ Description of longitudinal joint Lap weld
 Dimensions of stiffening rings on furnace or c.c. bottom --- Working pressure of furnace by Rules ---
 Plates in steam space: Material O.H. Steel Tensile strength 60,000 to 65,000 lbs. Thickness 1 1/2" ✓ Pitch of stays 15" x 12 1/2" ✓
 Are stays secured inside and outside nuts ✓ Working pressure by Rules ---
 Plates: Material {front O.H. Steel ✓ Tensile strength 60,000 to 65,000 lbs. Thickness 13/16" ✓
 {back O.H. Steel ✓ Tensile strength 60,000 to 65,000 lbs. Thickness 3/4" ✓
 Pitch of stay tubes in nests 8-3/8" ✓ Pitch across wide water spaces 12 1/4" x 8 1/4" Working pressure {front ---
 {back ---
 Boilers to combustion chamber tops: Material O.H. Steel ✓ Tensile strength 60,000 to 65,000 lbs. Depth and thickness of girder
 Centre 7 1/2" x 15/16" ✓ Length as per Rule 31" 29 3/4 Distance apart 7-3/8" centre to centre No. and pitch of stays
 Each 3 at 8 1/2" 6 1/2 Working pressure by Rules --- Combustion chamber plates: Material O.H. Steel ✓
 Tensile strength 60,000 to 65,000 lbs. Thickness: Sides 1 1/2" 5/2 Back 1 1/2" Top 1 1/2" Bottom 5/8" ✓
 Thickness of stays to ditto: Sides 8" x 6 1/2" ✓ Back 8" x 6-3/8" ✓ Top 8" x 7-3/8" ✓ 2" stay nuts inside & outside
 Working pressure by Rules --- Are stays fitted with nuts or riveted over 1-5/8" stay nuts inside riveted outside
 Front plate at bottom: Material O.H. Steel Tensile strength 60,000 to 65,000 lbs. Thickness 3/4" ✓
 Lower back plate: Material O.H. Steel Tensile strength 60,000 to 65,000 lbs. Thickness 3/4" ✓
 Thickness of stays at wide water space 13" (8") x 6-3/8" Are stays fitted with nuts or riveted over 1-5/8" stay nuts inside riveted outside ✓
 Working Pressure --- Main stays: Material O.H. Steel Tensile strength 60,000 to 65,000 lbs.
 At body of stay, meter {Over threads 3-19/32" and 2-7/8" ✓ No. of threads per inch 8 ✓ Area supported by each stay
 Working pressure by Rules --- Screw stays: Material O.H. Steel Tensile strength 60,000 to 65,000 lbs.
 At turned off part, meter {Over threads 2" and 1-5/8" ✓ No. of threads per inch 9 ✓ Area supported by each stay

Working pressure by Rules ☐ Are the stays drilled at the outer ends ☒ No ☒ Margin stays: Diameter ☐ At turned off part, ☐ Over threads 1-5/8" ☒

No. of threads per inch 9 ☒ Area supported by each stay ☐ Working pressure by Rules ☐

Tubes: Material ☒ O.H. Steel ☒ External diameter ☐ Plain ☐ Stay 3 ☒ Thickness ☐ 8 W.G. ☒ No. of threads per inch 9 ☒

Pitch of tubes 4-1/8" and 4-3/16" ☒ Working pressure by Rules ☐ Manhole compensation: Size of opening in shell plate 15" x 11" ☒ Section of compensating ring 1-3/8" ☒ No. of rivets and diameter of rivet holes ☒ 28 - 1-3/8" dia.

Outer row rivet pitch at ends ☐ Depth of flange if manhole flanged 2-7/8" ☒ 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 ☐ Manufacturers of ☐ Tubes ☐ 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 ☐ 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,

Manufacturer.

Dates of Survey ☒ During progress of work in shops ☒ 1942: Sept. 18, 22; Oct. 1, 6, 8, 17, 21, 26, 27, 29, 31; Nov. 7, 9, 11, 22, 17; 1943: Jan. 11, 20, 22, 28, 29; Feb. 1, 8, 16, 25; Mar. 2, 4, 10, 11, 15, 17, 22, 26; Apr. 1, 9, 30; June 1, 16, 23, 24; July 1; Aug. 23, 26, 30; Sept. 14, 30; Oct. 5, 9, 15, 19, 21; Nov. 15, 20, 22, 24, 25; Dec. 2, 6, 8.

Are the approved plans of boiler and superheater forwarded herewith ☒ N.Yk. (If not state date of approval.) 16/3/43.

Total No. of visits 62

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.) These boilers, port and starboard, have been generally examined internally and externally throughout, along with their mountings, doors and fastenings, and found or placed in good condition and generally in accordance with the Rules and approved plans, during the reconstruction of the vessel at the yard of St. John Drydock and Shipbuilding Co. Ltd., Saint John, N.B., and materials and workmanship are of good quality.

During the examination of boilers, test holes were drilled at various parts of the boiler shell and combustion chambers and the thickness of metal gauged at these points was found satisfactory. At this time it was found impossible to obtain evidence of the testing of steel used in the construction of the boilers and steel cuttings were taken from the boiler shell and subjected to an analysis test a certificate of same being attached to this Report.

The boilers were tested hydrostatically at 360 lbs per sq. inch pressure and found tight. The boiler safety valves were adjusted under steam pressure of 160 lbs. per square inch and found satisfactory.

On completion of Sea Trials the boilers were opened up and examined internally with their doors and fastenings, which were found satisfactory.

Survey Fee \$90.00 : When applied for, Feb. 3 19 44

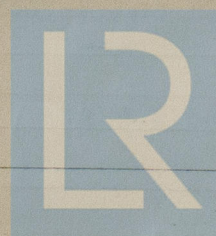
Travelling Expenses (if any) £ : : When received, 19

(Included with Mch. Rpt)

J. B. Mc Gee.
Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **FRI. 21 APR 1944**

Assigned *see minute on J.E. Rpt.*



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