

# REPORT ON BOILERS.

No. 132

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5. Writing Report 191 When handed in at Local Office 191 Port of **CLEVELAND, OHIO.**

in Survey held at **Buffalo N.Y.** Date, First Survey **July 2<sup>nd</sup> 1917** Last Survey **Nov. 24 1917**

Book. on the **Challambra** (Number of Visits ) Gross Tons } Net

Built at By whom built When built

By whom made When made

By whom made **Lake Erie Boiler Works** When made **1917**

Owners **Seattle Dry Dock Co** Port belonging to **Seattle Wash**

## WATER TUBULAR BOILERS—MAIN, AUXILIARY OR DONKEY.—Manufacturers of Steel **Lukens Steel Co**

Total Heating Surface of Boilers **538.5** Is forced draft fitted **—** No. and Description of Boilers **one**

Working Pressure **175** Tested by hydraulic pressure to **265** Date of test **24-11-17**

Can each boiler be worked separately **—** Area of fire grate in each boiler **—** No. and Description of valves to each boiler **—**

Area of each valve **—** Pressure to which they are adjusted **—**

Are they fitted with easing gear **—** In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler **—**

Least distance between boilers or uptakes and bunkers or woodwork **—** Mean dia. of boilers **7'0"** Length **8'0"**

Material of shell plates **OH Steel** Thickness  $\frac{21}{32}$  Range of tensile strength  $\frac{60000}{71680}$  Are the shell plates welded or flanged **No**

Kind of riveting: cir. seams **Lap Single R** long. seams **B-D-5** Diameter of rivet holes in long. seams  $\frac{17}{16}$  Pitch of rivets **7"**

Width of plates or width of butt straps **15"** Per centages of strength of longitudinal joint rivets **143.5** Working pressure of shell by rules **180**

Size of manhole in shell **2-11" X 15"** Size of compensating ring  $28\frac{1}{2} \times 32\frac{1}{2} \times \frac{11}{16}$  No. and Description of Furnaces in each boiler **1 Morrison**

Material **OH Steel** Outside diameter **42"** Length of plain part **—** Thickness of plates crown  $\frac{1}{2}$  bottom  $\frac{1}{4}$

Description of longitudinal joint **Welded** No. of strengthening rings **—** Working pressure of furnace by the rules **179** Combustion chamber

Material **OH Steel** Thickness: Sides  $\frac{19}{32}$  Back  $\frac{19}{32}$  Top  $\frac{19}{32}$  Bottom  $\frac{19}{32}$  Pitch of stays to ditto: Sides **7" X 7"** Back **7" X 7"**

If stays are fitted with nuts or riveted heads **riveted heads** Working pressure by rules **180** Material of stays **Iron** Diameter at largest part  $1\frac{3}{4}$  Area supported by each stay  $49"$  Working pressure by rules **180** End plates in steam space: Material **OH Steel** Thickness  $\frac{39}{64} + \frac{1}{4}$

How are stays secured **Over the Nuts** Working pressure by rules **181** Material of stays **Iron** Diameter at smallest part  $2\frac{3}{8}$

Area supported by each stay  $182\frac{1}{4}"$  Working pressure by rules **182** Material of Front plates at bottom **OH Steel** Thickness  $\frac{39}{64}$  Material of back plate **OH Steel** Thickness  $\frac{39}{64}$  Greatest pitch of stays **7" X 7"** Working pressure of plate by rules **180** Diameter of tubes **3"**

Material of tube plates **OH Steel** Thickness: Front  $\frac{39}{64}$  Back  $\frac{39}{64}$  Mean pitch of stays **8" X 8"** Pitch across wide spaces **12"** Working pressures by rules **210**

Girders to Chamber tops: Material **OH Steel** Depth and thickness of at centre  $5\frac{1}{2} \times (\frac{9}{8} \times 2)$  Length as per rule  $20\frac{1}{4}"$  Distance apart **7"** Number and pitch of Stays in each **2-7"**

Working pressure by rules **213** Superheater or Steam chest: how connected to boiler **—** Can the superheater be shut off and the boiler worked separately **—**

Diameter **—** Length **—** Thickness of shell plates **—** Material **—** Description of longitudinal joint **—** Diam. of rivet **—** Pitch of rivets **—** Working pressure of shell by rules **—** Diameter of flue **—** Material of flue plates **—** Thickness **—**

Are they fitted with easing gear **—** Distance between rings **—** Working pressure by rules **—** End plates: Thickness **—** How stayed **—**

Working pressure of end plates **—** Area of safety valves to superheater **—** Are they fitted with easing gear **—**

### VERTICAL DONKEY BOILER—

No. Description Manufacturers of steel

By whom made When made Where fixed Working pressure

Tested by hydraulic pressure to Date of test No. of Certificate Fire grate area Description of safety valves

Area of each Pressure to which they are adjusted If fitted with easing gear If steam from main boilers can enter donkey boiler

Dia. of donkey boiler Length Material of shell plates Thickness Range of tensile strength

Descrip. of riveting long. seams Dia. of rivet holes Whether punched or drilled Pitch of rivets

Per centage of strength of joint Rivets Plates Working pressure of shell by rules Thickness of shell crown plates

No. of Stays to do. Dia. of stays Diameter of furnace Top Bottom Length of furnace

Description of joint Working pressure of furnace by rules Thickness of furnace crown

Radius of do. Stayed by Diameter of uptake Thickness of uptake plates

The foregoing is a correct description,

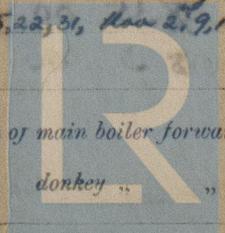
By **R. N. Wheaton Mgr** Manufacturer.

During progress of work in shops **July 2<sup>nd</sup>, 3, 4, 9, 12, Aug 2<sup>nd</sup>, 8, 15, 18, 21, 24, Sept 4, 7, 10, 15, 24, Oct 6, 10, 15, 22, 31, Nov 2, 9, 12, 24, Dec 1, 3, 8,**

Working pressure of end plates **—** Area of safety valves to superheater **—** Are they fitted with easing gear **—**

Is the approved plan of main boiler forwarded herewith **—**

" " " donkey " "



Lloyd's Register Foundation W592-0146

**GENERAL REMARKS** (State quality of workmanship, opinions as to class, &c.)

*This Boiler has been constructed under Special Survey.  
 The materials and workmanship employed in the construction are sound & good  
 & found satisfactory under test  
 This Boiler has been shipped to the Seattle Bay Dock Co, Seattle Washington  
 to be installed in Hull No. 2.*

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Certificate (if required) to be sent to

(The Surveys are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £	:	:	When applied for,
Special .. .. . £	:	:	.....19.....
Donkey Boiler Fee .. .. \$35 : 00	:	:	When received,
Travelling Expenses (if any) \$ 3 : 00	:	:	.....19.....

*J. W. Weddell W. V. Keatt*  
 Engineer Surveyor to Lloyd's Register of Shipping.

Committee's Minute **New York NOV 6 1918**  
 Assigned *See Seattle Rpt No 725*

