



Department
of Commerce

Division of Industrial Compliance

Historical Boiler Licensing Board

Mission of the Historical Boiler Licensing Board:

The Historical Boiler Licensing Board ensures public safety through the adoption of rules governing the criteria that inspectors of historical boilers utilize in determining the safe operation of historical boilers. In addition, the board approves historical boiler operator courses and issues operator licenses to those individuals qualified to operate historical boilers in public.

Ohio Administrative Code 1301:3-4-Historical Boiler Rules

<http://codes.ohio.gov/oac/1301%3A3-4>



Next Board Meeting

March 28, 2018
10 a.m.
Superintendent's Conf. Rm.
6606 Tussing Road
Columbus, OH 43068

2016 Stats:

- 3 historical boiler inspections
- 36 historical boiler inspections are due
- 6 new historical boiler licenses
- 127 active historical boiler operators (up 12 from March, 2015)
- 680 historical boiler licensed operators (up 11 from 2015)



Meet Board Member - John Leck

John C. Leck began serving on the Ohio Historical Boiler Licensing Board in 2016. He, his wife and four children live in Tuscarawas County, where he works as a facilities engineer. John has been actively involved in the antique steam engine hobby for nearly 20 years. As the owner of three steam traction engines, he has developed a significant amount of experience in historical boiler operation, maintenance and restoration. His technical knowledge, coupled with his many associations with others involved in the antique steam engine hobby, keep him at the forefront of current issues pertaining to historical boilers. John enjoys being a liaison between the Ohio Department of Commerce and the many hobbyists in the northeast region of the state who take a serious interest in keeping this area of agricultural and industrial history alive in a safe manner.

Professional Development:

Courses outlined have been approved by HBLB.

Hocking Valley Steam Course (OH)

Robert Baughman—740-753-1916

“The Boss” (Northeast OH)

Joseph Harrison—330-340-9703

Todd Young—419-281-9935

Carriage Hill Farms (Western OH)

Doug Haus—937-275-5012

Bennett Restoration

Jerrod Bennett—419-789-6781

University of Rollag (MN)

WMSTR Secretary—701-212-2034

Somerset Steam & Gas Association (VA)

Dennis Rupert—517-398-0152

Wisconsin Historical Steam Engine

Association

Marshall Deets—608-882-9052

Heritage Park of North Iowa

Jerred Ruble—jerred.ruble@gmail.com

Central States Threshermen’s Reunion

School (IL)

Doug Smith—317-341-4987

*This list may not include all courses in Ohio. For a complete list, please visit our webpage at <http://www.com.ohio.gov/dico/HBLB.aspx>



New HBLB Website:

The Historical Boiler Licensing Board has a new page on the Ohio Department of Commerce's website:

<http://www.com.ohio.gov/dico/HBLB.aspx>

Please visit the Board's new page and let us know your thoughts.

“There are three things in life that people like to stare at: a flowing stream, a crackling fire and a Zamboni clearing the ice.” Charlie Brown, cartoon character

Public Meeting Notices

Public meeting notices can be found on the Ohio Department of Commerce website. It is located toward the end of the page under News & Reports, Latest Updates.

<http://www.com.ohio.gov>

Historical Boiler Licensing Board Members:

James Lashaway—Chairman
Richard Oeder
Bruce Babcock
Homer “Dan” Rufener
Kim Besecker
John Leck
John Sharier

State Inspectors:
Bill Glover, 419-512-1904
william.glover@com.state.oh.us

Don Frymyer, 513-505-9576
donald.frymyer@com.state.oh.us

Leakage Through Fusible Plugs

Section 1 of the ASME Boiler and Pressure Vessel Code specifies that the tin in a fusible plug “... shall be carefully alloyed to the casing. A test shall be made to determine that the fusible metal is not loose in the plug.

This stipulation was made after it was learned that when the filling in a plug was not carefully alloyed, or tinned, water from the boiler could leak through the plug between the filling and the casing. When this happened, the water would evaporate on the fire side of the plug and leave a deposit of minerals in the cavity at that end. In the 1930s, the Steamboat Inspection Service, now known as the U. S. Coast Guard, determined that such a deposit of minerals could prevent the molten tin in a fusible plug from escaping and was known to have resulted in multiple fatalities from low water explosions of steamboat boilers.

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Leakage Through Fusible Plugs: (continued)

The danger of leakage through fusible plugs still exists today. Figure 1 shows two fusible plugs that were found to be leaking. The plug on the right was installed in a steam traction engine, and was removed after the owner experienced water dripping on him when working in the firebox. This plug replaced a previous one that was removed for the same reason. The bore of the casing had been only partially tinned. The plug on the left shows another fusible plug that was removed from a locomotive for the same reason. This plug shows no signs of having been tinned. These two plugs are from two different manufacturers.

Following a major investigation in 1930, the Steamboat Inspection Service concluded:

“As a result of this investigation it was established that an appreciably large number, possibly 10 per cent, of plugs in service may have deteriorated after six or more months service in such a manner that they probably would not function if called upon to do so.” ... “If there is at any time any evidence of a leak, the plug should be immediately replaced.”

Their conclusions included a recommendation that an impact test be used to evaluate the tightness of the filling in a plug. This test, shown in Figure 2, could be as simple as “... striking the small end with a punch and hammer.” But to ensure greater uniformity, they recommended dropping a 2-pound weight through a distance of 6-inches onto the small end of the filling. The device for doing this is shown in Figure 3. It is not known what test the manufacturers are using today. The A. S. M. E. Code does not include any mandatory requirements for the construction of use of fusible plugs.

The Board agrees with the findings of the Steamboat Inspection Service’s stipulation from 1930, and advises, *“If there is at any time any evidence of a leak, the plug should be immediately replaced.”* A simple impact test, prior to installation, might also be a good idea.

Any leaking fusible plug should be brought to the attention of the state inspector or a member of the board.



Figure 1



Figure 2



Figure 3