



Department of Consumer
and Business Services

2024 Oregon Boiler and Pressure Vessel Specialty Code (OBPVSC) Adoption

Purpose of the rule:

This rule adopts the 2024 Oregon Boiler and Pressure Vessel Specialty Code (OBPVSC). The 2024 OBPVSC is based on the 2023 edition of the National Boiler Inspection Code, with Oregon specific amendments, and incorporates updated editions of the American Society of Mechanical Engineers (ASME) and National Fire Protection Association's (NFPA) minimum safety standards for boilers, pressure vessels, pressure piping, parts, items, and repair and alteration procedures.

Citation:

Amends OAR 918-225-0430

This rule is effective Oct. 1, 2024.

Background:

At the March 5, 2024, meeting, the Board of Boiler Rules selected a code review committee to review the base code, public proposals, Oregon amendments, alternate methods, and code interpretations. The Oregon Boiler and Pressure Vessel Specialty Code Review Committee completed an analysis of the 2024 OBPVSC, existing Oregon code amendments, statewide interpretations, and alternate method rulings at its meeting on May 9, 2024. On May 9, 2024, the committee finalized its recommendation for the board. On June 4, 2024, the Board of Boiler Rules approved the review committee's recommendation, served as a Rulemaking Advisory Committee to discuss the potential fiscal and racial equity implications of code adoption, and forwarded the proposed rules for the 2024 OBPVSC to the division administrator for rulemaking and subsequent adoption. A public hearing was held on Aug. 20, 2024, at 9:30 a.m. Public testimony could also be submitted in writing until Aug. 23, 2024, at 5 pm. The division did not receive any public testimony.

Summary:

Amends OAR 918-225-0430, "Adopted Oregon Boiler and Pressure Vessel Specialty Code"

- Changes year of the new Boiler Specialty Code from 2021 to 2024.
- Changes code effective date from Oct. 1, 2021, to Oct. 1, 2024.
- Changes the edition of the National Boiler Inspection Code from 2021 to 2023.
- Changes the edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code from 2021 to 2023.
- Changes the edition of the ASME B31.1 and 31.3 from 2020 to 2024.
- Changes the edition of the ASME B31.5 from 2019 to 2022.
- Changes the edition of the ASME B31.9 from 2020 to 2023.
- Changes the edition of the NFPA 85 from 2019 to 2023.
- Changes the edition of the ASME CSD-1 from 2018 to 2023.
- Changes the edition of the ASME PVHO-1 from 2019 to 2023.

Contact:

If you have questions or need further information, contact Tom Clark, Chief Boiler Inspector, at 971-209-9082 or Thomas.G.Clark@dcbs.oregon.gov.



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PERMANENT ADMINISTRATIVE ORDER

BCD 12-2024

CHAPTER 918

DEPARTMENT OF CONSUMER AND BUSINESS SERVICES

BUILDING CODES DIVISION

FILED

09/30/2024 4:25 PM
ARCHIVES DIVISION
SECRETARY OF STATE
& LEGISLATIVE COUNSEL

FILING CAPTION: Corrected: Adopts the 2024 Oregon Boiler and Pressure Vessel Specialty Code

EFFECTIVE DATE: 10/01/2024

AGENCY APPROVED DATE: 09/27/2024

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AMEND: 918-225-0430

NOTICE FILED DATE: 07/29/2024

RULE SUMMARY: Adopts the 2024 Oregon Boiler and Pressure Vessel Specialty Code

CHANGES TO RULE:

918-225-0430

Adopted Oregon Boiler and Pressure Vessel Specialty Code ¶¶

(1) The Oregon Boiler and Pressure Vessel Specialty Code is adopted and amended by reference. Any matters included in the referenced publications below that are in conflict with Oregon Revised Statutes or Oregon Administrative Rules are superseded by the applicable statute or rule. All remaining parts or application of the code or standard remain in effect. Items which are superseded by applicable statute or rule include but are not limited to: licensing or certification requirements; inspection schedules and requirements; quality assurance or quality control procedures or requirements; structures or equipment maintenance requirements; matters covered by federal or state law; and matters that conflict with other specialty codes or publications adopted by the department. Any matters included in the referenced publications below which are beyond the scope of the State Building Code as defined in ORS Chapter 455 are not adopted or enforced as part of the Oregon Boiler and Pressure Vessel Specialty Code. ¶¶

(2) Effective October 1, 2024, the 2024 Oregon Boiler and Pressure Vessel Specialty Code consists of the following minimum safety standards for boilers, pressure vessels, pressure piping, parts, items, and repair and alteration procedures: ¶¶

(a) ORS 480.510 to 480.670 and OAR chapter 918, division 225; ¶¶

(b) The 2021 edition of the National Board Inspection Code ANSI/NB 23, including Parts 1, 2, 3 and 4, as amended by the division in Table 2-B; ¶¶

(c) The 2021 edition of the American Society of Mechanical Engineers (ASME), Boiler and Pressure Vessel Code, Section I; Section II, Parts A, B, C, and D; Section IV; Section V; Section VIII, Division 1, 2, and 3; Section IX; Section X; and Section XIII only; ¶¶

(d) The 2004 edition of the ANSI/ASME B31.1 Power Piping Code; ¶¶

(e) The 2002 edition of the ANSI/ASME B31.3 Process Piping Code; ¶¶

(f) The 2002 edition of the ANSI/ASME B31.5 Refrigeration Piping Code; ¶¶

(g) The 2003 edition of the ANSI/ASME B31.9 Building Service Piping Code; ¶¶

(h) The 2003 edition of NFPA 85, Boiler and Combustion Systems Hazards Code; ¶¶

- (i) The ~~2021~~ edition of ASME, CSD-1, Controls and Safety Devices for Automatically Fired Boilers; and¶
 - (j) The ~~2019~~23 edition of ASME PVHO-1, Safety Standard for Pressure Vessels for Human Occupancy.¶
 - (3) The standards and requirements applicable to boiler and pressure vessel business and trade licenses, as well as inspector certifications, issued by the Building Codes Division are established in ORS Chapters 455 and 480, and OAR chapter 918, divisions 30, 90, and 225.
- Statutory/Other Authority: ORS 455.020, ORS 480.550, ORS 480.545
Statutes/Other Implemented: ORS 480.550, ORS 480.545, ORS 480.560

RULE ATTACHMENTS MAY NOT SHOW CHANGES. PLEASE CONTACT AGENCY REGARDING CHANGES.

**Table 2-B
Effective Oct. 1, 2024**

Oregon Amendments to the 2023 edition of the National Board Inspection Code (NBIC) ANSI/NB 23 for the 2024 Oregon Boiler and Pressure Vessel Specialty Code (OBPVSC).

For the purpose of identifying Oregon amendments to the NBIC – “OBPVSC” followed by a code section denotes an Oregon amendment to that section of code. Amendments may either be additions of code language developed by Oregon, or the deletion of NBIC code language. Language contained in the NBIC not listed in this table has not been amended by Oregon.

PART 1—Installation

OBPVSC 1.4.5	Boiler installation report. <u>Not adopted.</u>
OBPVSC 1.6.1	<p>Supports, foundations, and settings.</p> <p>Each boiler, potable water heater, thermal fluid heater and pressure vessel and the associated piping must be safely supported. Design of supports, foundations, and settings shall consider vibration (including seismic where necessary), movement (including thermal expansion and contraction), grounding/bonding to minimize electrolytic corrosion and loadings (including the weight of the fluid in the system during a pressure test) in accordance with jurisdictional requirement, manufactures recommendations, and/or other industry standards, as applicable.</p> <p><u>Note: These provisions apply in addition to provisions of the Oregon Electrical Specialty Code.</u></p>
OBPVSC 1.6.3	<p>Exit. For exiting requirements, see Chapter 10 of the Oregon Structural Specialty Code.</p> <p>Two means of exit shall be provided for boiler rooms exceeding 500 sq. ft. (46.5 sq. m) floor area and containing one or more boilers having a combined fuel capacity of 1,000,000 Btu/hr (293 kW) or more (or equivalent electrical heat input). Each elevation shall be provided with at least two means of exit, each to be remotely located from the other. A platform at the top of a single boiler is not considered an elevation.</p>
OBPVSC 1.6.4	Ladders and Runways. See Oregon Administrative Rules, Chapter 437, Division 2.
OBPVSC 1.6.6	<p>Ventilation and Combustion Air.</p> <p><u>Note: These provisions apply in addition to provisions of the Oregon Mechanical Specialty Code.</u></p>
OBPVSC 1.6.9	Carbon Monoxide (CO) Detector/Alarm. <u>Not adopted.</u>
OBPVSC 2.3.3(a)	<p>Clearances.</p> <p>a) Boiler installations shall allow for normal operation, maintenance, and inspections. There shall be at least 36 in. (915 mm) of clearance on each side of the boiler to enable access for maintenance and/or inspection activities. Boilers operated in battery shall not be installed closer than 48 inches from each other, <u>except boilers that operate at up to 2,000,000 btu may be installed according to manufacturer’s instructions.</u></p>
OBPVSC 2.10.6	Boiler Installation Report. <u>Not adopted.</u>
OBPVSC 3.3.4(a)	<p>Clearances. Heating boilers shall have a minimum distance of at least 36 in. (914 mm) between the top of the boiler and any overhead structure and at least 36 in. (914mm) between all sides of the heating boiler and adjacent walls, structures or other equipment; <u>except that heating boilers exceeding 2,000,000 btu and operated in battery shall be installed a minimum of 48 inches from each other, and heating boilers that operate at or below 2,000,000 btu may be installed according to manufacturer’s instructions.</u> Heating boilers having manholes shall have at least 84 in. (2135 mm) of clearance between the manhole opening and any wall, ceiling, piping, or other equipment that may prevent a person from entering the heating boiler. Alternative clearances in accordance with the manufacturer’s recommendations are subject to acceptance by the Jurisdiction.</p>
OBPVSC 3.10.3	Boiler installation report. <u>Not adopted.</u>
OBPVSC 4.3.2(a)	<p>Clearances.</p> <p>a) All pressure vessel installations must allow sufficient clearance for normal operation, maintenance, and inspection (internal and external).</p> <p><u>When making an installation or adding insulation, the name plate and pressure relief device data plates shall be available for review.</u></p>

OBPVSC 4.3.3	Piping. Piping loads on the vessel nozzles shall be considered. Piping loads include weight of the pipe, weight of the contents of the pipe, expansion of the pipe from temperature and pressure changes (wind and seismic loads). The effects of piping vibration on the vessel nozzles shall also be considered. <u>Installation shall be in accordance with the Oregon Boiler and Pressure Vessel Specialty Code.</u>
OBPVSC Supplement 3	Installation of Liquid Carbon Dioxide Storage Vessels. <u>Not adopted.</u>
PART 2—Inspection	
OBPVSC 1.5.2.1	Inspection Planning. <u>Note: Minimum inspection frequencies are established in OAR 918-225-0570.</u>
OBPVSC 1.7	<u>Scrapping Pressure – Retaining Items.</u> <u>Note: Code nameplates or stamping shall be defaced or clearly marked when a pressure-retaining item is scrapped.</u> <u>The code nameplate or stamping shall be left in place in order to maintain traceability.</u>
OBPVSC 2.3.6.6	Transport Tanks. <u>Not adopted.</u>
OBPVSC 2.3.6.11	Inspection of Vessels for Pressures at and Above 10,000 psi. b) The Inspector shall verify the following requirements as part of the inspection: 1) Records of cycles are being kept, where vessels are constructed for a set number of cycles;...
OBPVSC 2.5.7.2	Testing and Operational Inspection of Non-Reclosing Pressure Relief Devices with Pins or Bars. <u>Note: Maintenance and testing of non-reclosing pressure relief devices should be performed by competent personnel or licensed technicians.</u>
OBPVSC 4.2.1	Visual. c) Remote Visual Inspection is an acceptable method of visual examination if the process is agreed upon by the owner and acceptable to the Inspector and Jurisdiction, if required. <u>(Items 1-6 are not adopted)</u> 7) All equipment used must produce results acceptable to the Inspector.
OBPVSC Supplement 6	Continued Service and Inspection of DOT Transport Tanks. <u>Not adopted.</u>
OBPVSC Supplement 7	Inspection of Pressure Vessels in Liquefied Petroleum Gas Service. <u>Not adopted.</u>
OBPVSC Supplement 12	Inspection of Liquid Carbon Dioxide Storage Vessels. <u>Not adopted.</u>
PART 3—Repairs and Alterations	
OBPVSC 3.4.1	Re-rating. <u>De-rating (a reduction of the Maximum Allowable Working Pressure (MAWP)) of boilers or pressure vessels shall be considered an alteration and be performed in accordance with the requirements of NBIC Part 3, Section 3.4.</u>
PART 4—Pressure Relief Devices	
OBPVSC 3.2.5.2	Testing and Operational Inspection of Non-Reclosing Pressure Relief Devices (PRD) with Pins or Bars <u>Note: Maintenance and testing of non-reclosing pressure relief devices should be performed by competent personnel or licensed technicians.</u>