

WSR 24-12-068  
PERMANENT RULES  
DEPARTMENT OF

LABOR AND INDUSTRIES

(Board of Boiler Rules)

[Filed June 4, 2024, 10:06 a.m., effective July 5, 2024]

Effective Date of Rule: July 5, 2024.

Purpose: The purpose of this rule making is to adopt amendments to the boiler rules under chapter 296-104 WAC. The changes affect safety codes, installers, clearance requirements, and fees for boilers and pressure vessels. The amendments are needed to ensure the rules are consistent with national boiler and unfired pressure vessel safety standards and industry practice.

Adopted amendments to the chapter are as follows:

**WAC 296-104-020 Administration—What are the filing requirements for boilers and unfired pressure vessels before their installation/reinstallation?**

- Adds a new subsection that installers are responsible for correcting deficiencies found on initial permit inspection and paying subsequent inspection fees.
- Renumbers subsections and converts spelled numbers to numerals for formatting.

**WAC 296-104-102 Inspection—What are the standards for in-service inspection?**

- Removes the National Board Inspection Code (NBIC), current edition Part 4, Section 6, Supplement 3 from the nonmandatory guidelines for pressure relief devices for consistency with the code.

**WAC 296-104-200 Construction—What are the standards for new construction?**

- Adds new Section XIII from the 2023 edition of the American Society of Mechanical Engineers (ASME), to the standards for new construction of boilers and pressure vessels for consistency with the code.
- Converts a spelled number to a numeral for formatting.

**WAC 296-104-255 Installation—What are the required clearances for boilers?**

- Allows for clearances less than 18 inches for boilers when recommended by the manufacturer's instructions to provide better direction for clearances.
- Rearranges the existing requirements and renumbers subsections for formatting.

**WAC 296-104-260 Installation—What are the required clearances for unfired pressure vessels?**

- Adds a new exception that allows for side clearances less than 18 inches for pressure vessels when recommended by the manufacturer's instructions and it does not inhibit inspection, maintenance, or repair to provide better direction for clearances. This also includes:
  - Notating that exceptions must be documented in the state's jurisdictional database.

- o Clarifying the access requirements for manholes.

**WAC 296-104-700 What are the inspection fees—Examination fees—Certificate fees—Expenses?**

- Increases fees by the fiscal growth factor rate of 6.40 percent to support operating expenses for the boiler program.

Citation of Rules Affected by this Order: Amending WAC 296-104-020, 296-104-102, 296-104-200, 296-104-255, 296-104-260, and 296-104-700.

Statutory Authority for Adoption: Chapter 70.79 RCW, Boilers and unfired pressure vessels.

Adopted under notice filed as WSR 24-02-070 [and 24-09-062] on January 2, 2024 [and April 16, 2024].

A final cost-benefit analysis is available by contacting Meagan Edwards, Department of Labor and Industries, Field Services and Public Safety, P.O. Box 44400, Olympia, WA 98504-4400, phone 360-522-0125, fax 360-704-1980, email Meagan.Edwards@Lni.wa.gov, website <https://lni.wa.gov/licensing-permits/boilers/laws-rules>.

Number of Sections Adopted in Order to Comply with Federal Statute: New 0, Amended 0, Repealed 0; Federal Rules or Standards: New 0, Amended 0, Repealed 0; or Recently Enacted State Statutes: New 0, Amended 0, Repealed 0.

Number of Sections Adopted at the Request of a Nongovernmental Entity: New 0, Amended 0, Repealed 0.

Number of Sections Adopted on the Agency's own Initiative: New 0, Amended 6, Repealed 0.

Number of Sections Adopted in Order to Clarify, Streamline, or Reform Agency Procedures: New 0, Amended 0, Repealed 0.

Number of Sections Adopted using Negotiated Rule Making: New 0, Amended 0, Repealed 0; Pilot Rule Making: New 0, Amended 0, Repealed 0; or Other Alternative Rule Making: New 0, Amended 6, Repealed 0.

Date Adopted: June 4, 2024.

Tim Barker, Chair  
Board of Boiler Rules

**OTS-5060.3**

AMENDATORY SECTION (Amending WSR 18-01-113, filed 12/19/17, effective 1/31/18)

**WAC 296-104-020 Administration—What are the filing requirements for boilers and unfired pressure vessels before their installation/reinstallation?** (1) "Boiler/pressure vessel, water heater installation or reinstallation permit" shall mean a permit approved by the chief inspector and submitted by the installer prior to starting installation or reinstallation of any boiler/pressure vessel or water heater within the jurisdiction of Washington.

(2) The "installer" is any entity or person who physically or mechanically installs a boiler, pressure vessel or water heater that meets the in-service inspection requirements of this chapter. The in-

staller is responsible for the installation/reinstallation permit fee per WAC 296-104-700.

(3) If a nonconformance condition or deficiency is found on the initial permit inspection, the installer will be responsible for implementing immediate corrective action and any subsequent inspection fees after corrections per the fee schedule in WAC 296-104-700.

(4) The following pressure retaining items, as defined in WAC 296-104-010, require a boiler/pressure vessel and water heater installation or reinstallation permit:

- Expansion tanks;
- Historical boilers and unfired pressure vessels;
- Hot water heaters;
- Indirect water heaters;
- Jacketed steam kettles;
- Low pressure boilers;
- Nonstandard boilers and unfired pressure vessels;
- Pool heaters;
- Power boilers;
- Reinstalled boilers and unfired pressure vessels;
- Secondhand boilers and unfired pressure vessels;
- Standard boilers and unfired pressure vessels;
- Unfired pressure vessels;
- Unfired steam boilers.

~~((4))~~ (5) The installer shall notify the chief inspector utilizing the permit form to request a permit inspection not less than ~~((ten))~~ 10 working days prior to placing equipment in operation. Equipment shall not be operated other than for testing, prior to an inspection being conducted which finds the boiler or pressure vessel to be in compliance with this chapter.

~~((5))~~ (6) If an emergency installation (due to leakage, failure, etc.) situation occurs, the installer will notify the chief inspector within ~~((forty-eight))~~ 48 hours after installation, utilizing the permit form to request an immediate inspection of the installation.

~~((6))~~ (7) The installer may be subject to civil penalties per WAC 296-104-701 for failure to comply with the filing requirements of the installation permit.

AMENDATORY SECTION (Amending WSR 18-23-092, filed 11/20/18, effective 1/1/19)

**WAC 296-104-102 Inspection—What are the standards for in-service inspection?** Where a conflict exists between the requirements of the standards listed below and this chapter, this chapter shall prevail. The duties of the in-service inspector do not include the installation's compliance with other standards and requirements (environmental, construction, electrical, undefined industrial standards, etc.), for which other regulatory agencies have authority and responsibility to oversee.

(1) The standard for inspection of nonnuclear boilers and unfired pressure vessels is the National Board Inspection Code (NBIC), current edition Part 2, excluding Section 6, Supplements 1, 5, 6, and 7 which may be used as nonmandatory guidelines.

(2) The standard for installation, in-service inspection, and repair of pressure relief devices is the National Board Inspection Code (NBIC), current edition Part 4, excluding Section 6, Supplement((s)) 1 ((and 3)) which may be used as nonmandatory guidelines.

(3) The standard for inspection of historical steam boilers of riveted construction preserved, restored, or maintained for hobby or demonstration use, shall be Part 2, Section 6, Supplement 2 of the National Board Inspection Code (NBIC) current edition.

(4) The standard for inspection of nuclear items is ASME section XI. The applicable ASME Code edition and addenda shall be as specified in the owner in-service inspection program plan.

(5) Where a petroleum or chemical process industry owner/user inspection agency so chooses, the standard for inspection of unfired pressure vessels used by the owner shall be the API-510 Pressure Vessel Inspection Code, current edition. This code may be used on or after the date of issue.

(6) TAPPI TIP 0402-16, revised 2011 may be used for both pulp dryers and paper machine dryers when requested by the owner. When requested by the owner, this document becomes a requirement and not a guideline.

AMENDATORY SECTION (Amending WSR 13-10-018, filed 4/23/13, effective 6/1/13)

**WAC 296-104-200 Construction—What are the standards for new construction?** The standards for new construction are:

(1) ASME Boiler and Pressure Vessel Code, current edition, Sections I, III, IV, VIII, Division 1, 2, 3, X, XII, XIII;

(2) ASME PVHO-1 Safety Standard for Pressure Vessels for Human Occupancy, current edition; and

(3) Standards of construction approved by the chief inspector and meeting the National Board Criteria for Registration of Boilers, Pressure Vessels and Other Pressure Retaining Items.

These codes and standards may be used on or after the date of issue and become mandatory ((twelve)) 12 months after adoption by the board as specified in RCW 70.79.050(2). ASME Code Cases may be approved for use when accepted by the chief inspector. The board recognizes that the ASME Code states that new editions of the code become mandatory six months after the date of issue. For nuclear systems, components and parts the time period for addenda becoming mandatory is defined in the Code of Federal Regulations.

AMENDATORY SECTION (Amending WSR 06-24-042, filed 11/30/06, effective 1/1/07)

**WAC 296-104-255 Installation—What are the required clearances for boilers?** When boilers are replaced or new boilers installed in either existing or new buildings, a minimum top clearance as specified below shall be provided between the top of boiler proper and ceiling. Sufficient access must be provided for inspection, maintenance, operations, and repair. Required clearances shall be:

~~(1) ((Minimum clearance on top of power boilers having a steam generating capacity in excess of 5,000 pounds per hour or having a heating surface in excess of 1,000 sq. ft. or input in excess of 5,000,000 btu per hour shall be. . . . . 7 feet.~~

~~(2) Minimum clearance on top of low pressure heating boilers which exceed any one of the following limits: 5,000,000 btu input; 5,000 lbs. steam per hour capacity or 1,000 sq. ft. heating surface; and power boilers which do not exceed any of the following limits: 5,000,000 btu input; 5,000 lbs. steam per hour capacity or 1,000 sq. ft. heating surface; shall be. . . . . 3 feet.~~

~~(3) Minimum clearance on top of boilers which do not exceed the above limits and miniature boilers; shall be. . . . . 2 feet.~~

~~(4) Minimum clearance from manhole openings and any wall, ceiling, or piping that will prevent a person from entering the boiler shall be. . . . . 5 feet.~~

~~(5) Minimum clearances at sides, front and back wall shall be the manufacturers' recommendations, but in no case less than eighteen inches.) Minimum clearances at sides, front, and back wall shall be the manufacturers' service clearance recommendations. If no recommendations are stated by the manufacturer, then 18 inches shall be the minimum clearance.~~

(2) Minimum clearance from manhole openings and any wall, ceiling, or piping that will prevent a person from entering the boiler shall be. . . . . 5 feet.

(3) Minimum clearance on top of power boilers having a steam generating capacity in excess of 5,000 pounds per hour or having a heat surface in excess of 1,000 sq. ft. or input in excess of 5,000,000 btu per hour shall be. . . . . 7 feet.

(4) Minimum clearance on top of low pressure heating boilers which exceed any one of the following limits: 5,000,000 btu input; 5,000 lbs. steam per hour capacity or 1,000 sq. ft. heating surface; and power boilers which do not exceed any of the following limits: 5,000,000 btu input; 5,000 lbs. steam per hour capacity or 1,000 sq. ft. heating surface shall be. . . . . 3 feet.

(5) Minimum clearance on top of boilers which do not exceed the above limits and miniature boilers shall be. . . . . 2 feet.

AMENDATORY SECTION (Amending WSR 02-23-036, filed 11/13/02, effective 12/14/02)

**WAC 296-104-260 Installation—What are the required clearances for unfired pressure vessels?** When unfired pressure vessels are replaced or new vessels are installed in either existing or new buildings, ~~((manufacturers' recommendations shall be used, but in no case less than eighteen inches shall be provided between the top of the unfired pressure vessel and the ceiling and adjacent walls or other structures. All unfired pressure vessels having manholes shall have five feet clearance from manhole openings and any wall, ceiling, or piping that will prevent a person from entering the unfired pressure vessel))~~ clearances shall be provided to allow access for safe operation, inspection, maintenance, and/or repair. Passageways around all sides of pressure vessels shall have an unobstructed width of not less than 18 inches. Exception: Unfired pressure vessels may be installed with a side clearance of less than 18 inches if the lesser clearance

does not violate the manufacturer's installation instructions or inhibit inspection, maintenance, and/or repair. Any exception shall be notated in object comments in the jurisdictional database. All unfired pressure vessels having a manhole shall have five foot clearance at the manhole opening to allow an individual to have safe access to the inside of the vessel to perform inspection and/or maintenance.

AMENDATORY SECTION (Amending WSR 22-09-062, filed 4/19/22, effective 7/1/22)

**WAC 296-104-700 What are the inspection fees—Examination fees—Certificate fees—Expenses?** The following fees shall be paid by, or on behalf of, the owner or user upon the completion of the inspection. The inspection fees apply to inspections made by inspectors employed by the state.

The boiler and pressure vessel installation/reinstallation permit fee of (~~(\$69.60)~~) \$74.00 shall be paid by the installer, as defined in WAC 296-104-010.

Certificate of inspection fees: For objects inspected, the certificate of inspection fee per object is (~~(\$29.90)~~) \$31.80.

Hot water heaters per RCW 70.79.090, inspection fee: (~~(\$8.90)~~) \$9.40.

The department shall assess a (~~(\$7.30)~~) \$7.70 fee, per object, for processing of jurisdictional inspection reports to any authorized in-service inspection agency or inspector who does not file the report directly into the department's electronic inspection report system.

Heating boilers:	Internal	External
Cast iron—All sizes	( <del>(\$50.60)</del> ) <u>\$53.80</u>	( <del>(\$40.50)</del> ) <u>\$43.00</u>
All other boilers less than 500 sq. ft.	( <del>(\$50.60)</del> ) <u>\$53.80</u>	( <del>(\$40.50)</del> ) <u>\$43.00</u>
500 sq. ft. to 2500 sq. ft.	( <del>(\$101.30)</del> ) <u>\$107.70</u>	( <del>(\$50.60)</del> ) <u>\$53.80</u>
Each additional 2500 sq. ft. of total heating surface, or any portion thereof	( <del>(\$40.50)</del> ) <u>\$43.00</u>	( <del>(\$19.70)</del> ) <u>\$20.90</u>
Power boilers:	Internal	External
Less than 100 sq. ft.	( <del>(\$50.60)</del> ) <u>\$53.80</u>	( <del>(\$40.50)</del> ) <u>\$43.00</u>
100 sq. ft. to less than 500 sq. ft.	( <del>(\$61.30)</del> ) <u>\$65.20</u>	( <del>(\$40.50)</del> ) <u>\$43.00</u>
500 sq. ft. to 2500 sq. ft.	( <del>(\$101.30)</del> ) <u>\$107.70</u>	( <del>(\$50.60)</del> ) <u>\$53.80</u>
Each additional 2500 sq. ft. of total heating surface, or any portion thereof	( <del>(\$40.50)</del> ) <u>\$43.00</u>	( <del>(\$19.70)</del> ) <u>\$20.90</u>
Pressure vessels:		
Square feet shall be determined by multiplying the length of the shell by its diameter.	Internal	External
Less than 15 sq. ft.	( <del>(\$40.50)</del> ) <u>\$43.00</u>	( <del>(\$29.90)</del> ) <u>\$31.80</u>
15 sq. ft. to less than 50 sq. ft.	( <del>(\$60.10)</del> ) <u>\$63.90</u>	( <del>(\$29.90)</del> ) <u>\$31.80</u>
50 sq. ft. to 100 sq. ft.	( <del>(\$70.20)</del> ) <u>\$74.60</u>	( <del>(\$40.50)</del> ) <u>\$43.00</u>

For each additional 100 sq. ft. or any portion thereof	<del>(\$70.10)</del> \$74.50	<del>(\$19.70)</del> \$20.90
Nonnuclear shop inspections, field construction inspections, and special inspection services:		
For each hour or part of an hour up to 8 hours	<del>(\$61.30)</del>	\$65.20
For each hour or part of an hour in excess of 8 hours	<del>(\$91.60)</del>	\$97.40
Nuclear shop inspections, nuclear field construction inspections, and nuclear triennial shop survey and audit:		
For each hour or part of an hour up to 8 hours	<del>(\$91.60)</del>	\$97.40
For each hour or part of an hour in excess of 8 hours	<del>(\$143.50)</del>	\$152.60
Nonnuclear triennial shop survey and audit:		
When state is authorized inspection agency:		
For each hour or part of an hour up to 8 hours	<del>(\$61.30)</del>	\$65.20
For each hour or part of an hour in excess of 8 hours	<del>(\$91.60)</del>	\$97.40
When insurance company is authorized inspection agency:		
For each hour or part of an hour up to 8 hours	<del>(\$91.60)</del>	\$97.40
For each hour or part of an hour in excess of 8 hours	<del>(\$143.50)</del>	\$152.60

Examination fee: A fee of (~~(\$113.40)~~) \$120.60 will be charged for each applicant sitting for an inspection examination(s).

Special inspector commission: A fee of (~~(\$61.20)~~) \$65.10 for initial work card. A fee of (~~(\$38.00)~~) \$40.40 for annual renewal.

If a special inspector changes companies: A work card fee of (~~(\$61.20)~~) \$65.10.

Expenses shall include:

Travel time and mileage: The department shall charge for its inspectors' travel time from their offices to the inspection sites and return. The travel time shall be charged for at the same rate as that for the inspection, audit, or survey. The department shall also charge the current Washington office of financial management accepted mileage cost fees or the actual cost of purchased transportation. Hotel and meals: Actual cost not to exceed the office of financial management approved rate.

Requests for Washington state specials and extensions of inspection frequency: For each vessel to be considered by the board, a fee of (~~(\$571.90)~~) \$608.50 must be paid to the department before the board meets to consider the vessel. The board may, at its discretion, prorate the fee when a number of vessels that are essentially the same are to be considered.