

Chapter 296-104 WAC

BOARD OF BOILER RULES—SUBSTANTIVE

<p>WAC 296-104-001 296-104-010 296-104-015 296-104-017 296-104-018 296-104-019 296-104-020 296-104-021 296-104-025 296-104-030 296-104-035 296-104-040 296-104-045 296-104-050 296-104-060 296-104-065 296-104-100 296-104-102 296-104-105 296-104-110 296-104-115 296-104-125 296-104-130 296-104-135 296-104-140 296-104-145 296-104-150 296-104-151 296-104-155 296-104-160 296-104-165 296-104-170 296-104-180 296-104-200 296-104-205 296-104-210 296-104-215</p>	<p>Administration—To what do these rules apply? Administration—What are the definitions of terms used in this chapter? Administration—When and where are the board meetings held? Administration—How are rules affected if other rules are invalidated? Administration—How are rules interpreted and revised? Administration—How are Washington state specials and extensions of inspection frequencies for boilers and pressure vessels obtained? 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DISPOSITION OF SECTIONS FORMERLY
CODIFIED IN THIS CHAPTER

296-104-002	Approval by director. [Approval, filed 3/23/60.] Repealed by 99-22-026, filed 10/26/99, effective 11/26/99. Statutory Authority: RCW 70.79.030 and 70.79.040.		recodified as § 296-104-256, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-260, filed 10/16/96, effective 11/16/96. Statutory Authority: Chapter 70.79 RCW. 89-15-025 (Order 89-05), § 296-104-260, filed 7/13/89, effective 8/13/89; Part IV, § 13, filed 3/23/60.] Repealed by 06-24-042, filed 11/30/06, effective 1/1/07. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350.
296-104-055	Administration—What are the examination fees? [Statutory Authority: RCW 70.79.030, 70.79.040, 70.79-150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 03-12-051, § 296-104-055, filed 5/30/03, effective 6/30/03; 02-12-021, § 296-104-055, filed 5/28/02, effective 6/28/02; 01-12-034, § 296-104-055, filed 5/29/01, effective 6/29/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-055, filed 10/26/99, effective 11/26/99. Statutory Authority: RCW 70.79.040. 93-12-014, § 296-104-055, filed 5/21/93, effective 6/21/93. Statutory Authority: RCW 70.79.030 and 70.79.330. 82-24-025 (Order 82-36), § 296-104-055, filed 11/23/82, effective 1/1/83; Order 74-37, § 296-104-055, filed 11/8/74; Part II, § 8, filed 3/23/60.] Repealed by 04-01-194, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW.	296-104-260	Installation—Clearance front, back and sides. [Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-260, filed 10/16/96, effective 11/16/96. Statutory Authority: Chapter 70.79 RCW. 89-15-025 (Order 89-05), § 296-104-260, filed 7/13/89, effective 8/13/89; Part IV, § 13, filed 3/23/60.] Decodified and amended by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-256.
296-104-107	Inspection—Which unfired pressure vessels in places of public assembly are subject to these rules? [Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-107, filed 9/30/97, effective 10/31/97.] Repealed by 99-22-026, filed 10/26/99, effective 11/26/99. Statutory Authority: RCW 70.79.030 and 70.79.040.	296-104-265	Installation—What control and limit devices are required on boilers? [Statutory Authority: RCW 70.79-030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-265, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-265, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-265, filed 10/28/98, effective 11/28/98; 97-20-109, § 296-104-265, filed 9/30/97, effective 10/31/97. Statutory Authority: RCW 70.79.240. 88-01-064 (Order 87-25), § 296-104-265, filed 12/17/87; Part IV, § 14, filed 3/23/60.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-300.
296-104-120	Inspection—Condemned boilers or unfired pressure vessel. [Statutory Authority: RCW 70.79.040. 91-11-107, § 296-104-120, filed 5/22/91, effective 6/22/91; Part III, § 5, filed 3/23/60.] Repealed by 95-19-058, filed 9/15/95, effective 10/16/95. Statutory Authority: RCW 70.79.030 and 70.79.040.	296-104-270	Installation—What are the requirements for an explosion door? [Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-270, filed 9/30/97, effective 10/31/97; Part IV, § 15, filed 3/23/60.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-295.
296-104-195	Pressure vessel clearances. [Statutory Authority: RCW 70.79.040. 90-04-009, § 296-104-195, filed 1/26/90, effective 2/26/90.] Repealed by 96-21-081, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.030 and 70.79.040.	296-104-273	Installation—Pressure vessel clearances. [Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-273, filed 10/16/96, effective 11/16/96.] Decodified and amended by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79-030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-260.
296-104-201	Inspection of systems—Standard for water chillers. [Statutory Authority: RCW 70.79.030. 80-14-015 (Order 80-12), § 296-104-201, filed 9/23/80.] Repealed by 86-01-088 (Order 85-26), filed 12/19/85. Statutory Authority: RCW 70.79.040 and 70.79.050.	296-104-275	Inspection of systems—Hydro-pneumatic tanks. [Part IV, § 16, filed 3/23/60.] Repealed by 78-03-057 (Order 78-3), filed 2/22/78. Statutory Authority: RCW 70.79.030.
296-104-225	Inspection of systems—Reinstalled boiler or unfired pressure vessel. [Part IV, § 6, filed 3/23/60.] Repealed by 96-21-081, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.030 and 70.79.040.	296-104-280	Inspection of systems—Electric steam generators. [Part IV, § 17, filed 3/23/60.] Repealed by 78-03-057 (Order 78-3), filed 2/22/78. Statutory Authority: RCW 70.79-030.
296-104-240	Construction—When are piping components considered unfired pressure vessels? [Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-240, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-240, filed 10/16/96, effective 11/16/96; Part IV, § 9, filed 3/23/60.] Repealed by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW.	296-104-285	Unfired pressure vessels in places of public assembly. [Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-285, filed 2/22/78.] Repealed by 99-08-049, filed 4/1/99, effective 5/2/99. Statutory Authority: RCW 70.79.030 and 70.79.040.
296-104-250	Inspection of systems—Hot water heating systems. [Part IV, § 11, filed 3/23/60.] Repealed by 78-03-057 (Order 78-3), filed 2/22/78. Statutory Authority: RCW 70.79.030.	296-104-300	Installation—When do I need to provide platforms around boilers? [Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-300, filed 9/30/97, effective 10/31/97; Part V, § 1, filed 3/23/60.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79-040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as 296-104-307.
296-104-256	Installation—What inspections are required for reinstalled standard boilers or unfired pressure vessels? [Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-256, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-256, filed 10/16/96, effective 11/16/96.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-273.	296-104-305	Installation—How many exits are required in boiler rooms? [Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-305, filed 9/30/97, effective 10/31/97; Part V, § 2, filed 3/23/60.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as 296-104-310.
296-104-256	Installation—What are the required clearances for boilers? [Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-256, filed 12/24/03, effective 1/24/04; 02-23-036, amended and		

- 296-104-307 Installation—What safety pressure relief devices are required on boilers and pressure vessels? [Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-307, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.-030 and 70.79.040. 98-22-024, § 296-104-307, filed 10/28/98, effective 11/28/98.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as 296-104-316.
- 296-104-310 Installation—Where should the discharge from safety valves, blow offs and drains be directed? [Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-310, filed 10/28/98, effective 11/28/98; 97-20-109, § 296-104-310, filed 9/30/97, effective 10/31/97; Part V, § 3, filed 3/23/60.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-320.
- 296-104-310 Installation—How many exits are required in boiler rooms? [Statutory Authority: RCW 70.79.030, 70.79.-040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, recodified as § 296-104-310, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-305, filed 9/30/97, effective 10/31/97; Part V, § 2, filed 3/23/60.] Repealed by 09-12-033, filed 5/27/09, effective 6/30/09. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350.
- 296-104-315 New installations—Blow off tanks. [Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-315, filed 2/22/78; Part V, § 4, filed 3/23/60.] Repealed by 89-15-025 (Order 89-05), filed 7/13/89, effective 8/13/89. Statutory Authority: Chapter 70.79 RCW.
- 296-104-320 Installation—What are the requirements for underground installations? [Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-320, filed 9/30/97, effective 10/31/97; Part V, § 5, filed 3/23/60.] Decodified by 02-23-036, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.-030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. Recodified as RCW 296-104-265.
- 296-104-400 Existing installations—Stamping of existing boilers and unfired pressure vessels. [Statutory Authority: RCW 70.79.040. 90-20-029, § 296-104-400, filed 9/24/90, effective 10/25/90; Part VI, § 1, filed 3/23/60.] Repealed by 97-20-109, filed 9/30/97, effective 10/31/97. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-410 Existing installations—Noncode steel heating boilers. [Part VI, § 3, filed 3/23/60.] Repealed by 97-20-109, filed 9/30/97, effective 10/31/97. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-415 Existing installations—Noncode cast iron boilers. [Part VI, § 4, filed 3/23/60.] Repealed by 97-20-109, filed 9/30/97, effective 10/31/97. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-500 Nonnuclear repairs. [Statutory Authority: RCW 70.79.-040. 93-12-014, § 296-104-500, filed 5/21/93, effective 6/21/93; 92-11-070, § 296-104-500, filed 5/20/92, effective 6/20/92. Statutory Authority: RCW 70.79.-030. 86-04-059 (Order 86-01), § 296-104-500, filed 2/4/86. Statutory Authority: RCW 70.79.030 and 70.79.330. 84-21-012 (Order 84-20), § 296-104-500, filed 10/5/84; Part VII, § 1, filed 3/23/60.] Repealed by 94-21-002, filed 10/5/94, effective 11/5/94. Statutory Authority: RCW 70.79.040.
- 296-104-501 Nonnuclear alterations. [Statutory Authority: RCW 70.79.040. 93-12-014, § 296-104-501, filed 5/21/93, effective 6/21/93; 92-11-070, § 296-104-501, filed 5/20/92, effective 6/20/92. Statutory Authority: RCW 70.79.030. 86-04-059 (Order 86-01), § 296-104-501, filed 2/4/86.] Repealed by 94-21-002, filed 10/5/94, effective 11/5/94. Statutory Authority: RCW 70.79.-040.
- 296-104-505 Repairs—Repairs by fusion welding. [Part VII, § 2, filed 3/23/60.] Repealed by 94-21-002, filed 10/5/94, effective 11/5/94. Statutory Authority: RCW 70.79.040.
- 296-104-525 Repairs—Hydrostatic pressure tests. [Part VII, § 6, filed 3/23/60.] Repealed by 98-22-024, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-530 Repairs—Can air or vapor testing be performed? [Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-530, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.040. 92-11-070, § 296-104-530, filed 5/20/92, effective 6/20/92; Part VII, § 7, filed 3/23/60.] Repealed by 04-01-194, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW.
- 296-104-600 General requirements—Conditions not covered by these rules. [Part VIII, § 1, filed 3/23/60.] Repealed by 98-22-024, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-800 Inspection of systems subject to radioactivity. [Statutory Authority: RCW 70.79.240. 88-01-064 (Order 87-25), § 296-104-800, filed 12/17/87.] Repealed by 98-22-024, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-801 Nuclear repairs/replacement. [Statutory Authority: RCW 70.79.040. 91-11-106, § 296-104-801, filed 5/22/91, effective 6/22/91.] Repealed by 98-22-024, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.030 and 70.79.040.
- 296-104-805 Nuclear repairs—Safety devices. [Statutory Authority: RCW 70.79.040. 91-11-106, § 296-104-805, filed 5/22/91, effective 6/22/91.] Repealed by 98-22-024, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.030 and 70.79.040.

WAC 296-104-001 Administration—To what do these rules apply? The following rules and regulations apply to all boilers and unfired pressure vessels except those exempt under RCW 70.79.080. Boilers and unfired pressure vessels listed under RCW 70.79.090 are exempt from inspection and fees, but shall comply with all rules for construction, installation, repairs and general requirements.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-001, filed 10/26/99, effective 11/26/99; Promulgation, filed 3/23/60.]

WAC 296-104-010 Administration—What are the definitions of terms used in this chapter? "**Agriculture purposes**" shall mean any act performed on a farm in production of crops or livestock, and shall include the storage of such crops and livestock in their natural state, but shall not be construed to include the processing or sale of crops or livestock.

"**Attendant**" shall mean the person in charge of the operation of a boiler or unfired pressure vessel.

"**Automatic operation of a boiler**" shall mean automatic unattended control of feed water and fuel in order to maintain the pressure and temperature within the limits set. Controls must be such that the operation follows the demand without interruption. Manual restart may be required when the burner is off because of low water, flame failure, power failure, high temperatures or pressures.

"**Board of boiler rules**" or "**board**" shall mean the board created by law and empowered under RCW 70.79.010.

"**Boiler and unfired pressure vessel installation/reinstallation permit**," shall mean a permit approved by the chief inspector before starting installation or reinstallation of any boiler and unfired pressure vessel within the jurisdiction of Washington.

Owner/user inspection agency's, and Washington specials are exempt from "boiler and unfired pressure vessel installation/reinstallation permit."

"Boilers and/or unfired pressure vessels" - below are definitions for types of boilers and unfired pressure vessels used in these regulations:

- **"Condemned boiler or unfired pressure vessel"** shall mean a boiler or unfired pressure vessel that has been inspected and declared unsafe or disqualified for further use by legal requirements and appropriately marked by an inspector.
- **"Expansion tank"** shall mean a tank used to absorb excess water pressure. Expansion tanks installed in closed water heating systems and hot water supply systems shall meet the requirements of ASME Section IV, HG-709.
- **"Hot water heater"** shall mean a closed vessel designed to supply hot water for external use to the system. All vessels must be listed by a nationally recognized testing agency and shall be protected with an approved temperature and pressure safety relief valve and shall not exceed any of the following limits:
 - * Pressure of 160 psi (1100 kpa);
 - * Temperature of 210 degrees F (99°C).
 Additional requirements:
 - * Hot water heaters exceeding 120 gallons (454 liters) must be ASME code stamped;
 - * Hot water heaters exceeding 200,000 BTU/hr (58.58 kw) input must be ASME code stamped.
- **"Low pressure boiler"** shall mean a steam boiler operating at a pressure not exceeding 15 psig or a boiler in which water is heated and intended for operation at pressures not exceeding 160 psig or temperatures not exceeding 250 degrees F by the direct application of energy from the combustion of fuels or from electricity, solar or nuclear energy. Low pressure boilers open to atmosphere and vacuum boilers are excluded.
- **"Nonstandard boiler or unfired pressure vessel"** shall mean a boiler or unfired pressure vessel that does not bear marking of the codes adopted in WAC 296-104-200.
- **"Power boiler"** shall mean a boiler in which steam or other vapor is generated at a pressure of more than 15 psig for use external to itself or a boiler in which water is heated and intended for operation at pressures in excess of 160 psig and/or temperatures in excess of 250 degrees F by the direct application of energy from the combustion of fuels or from electricity, solar or nuclear energy.
- **"Reinstalled boiler or unfired pressure vessel"** shall mean a boiler or unfired pressure vessel removed from its original setting and reset at the same location or at a new location without change of ownership.
- **"Rental boiler"** shall mean any power or low pressure heating boiler that is under a rental contract between owner and user.
- **"Second hand boiler or unfired pressure vessel"** shall mean a boiler or unfired pressure vessel of which both the location and ownership have changed after primary use.
- **"Standard boiler or unfired pressure vessel"** shall mean a boiler or unfired pressure vessel which bears the marking of the codes adopted in WAC 296-104-200.
- **"Unfired pressure vessel"** shall mean a closed vessel under pressure excluding:
 - * Fired process tubular heaters;
 - * Pressure containers which are integral parts of components of rotating or reciprocating mechanical devices where the primary design considerations and/or stresses are derived from the functional requirements of the device;
 - * Piping whose primary function is to transport fluids from one location to another;
 - * Those vessels defined as low pressure heating boilers or power boilers.
- **"Unfired steam boiler"** shall mean a pressure vessel in which steam is generated by an indirect application of heat. It shall not include pressure vessels known as evaporators, heat exchangers, or vessels in which steam is generated by the use of heat resulting from the operation of a processing system containing a number of pressure vessels, such as used in the manufacture of chemical and petroleum products, which will be classed as unfired pressure vessels.

"Certificate of competency" shall mean a certificate issued by the Washington state board of boiler rules to a person who has passed the tests as set forth in WAC 296-104-050.

"Certificate of inspection" shall mean a certificate issued by the chief boiler inspector to the owner/user of a boiler or unfired pressure vessel upon inspection by an inspector. The boiler or unfired pressure vessel must comply with rules, regulations, and appropriate fee payment shall be made directly to the chief boiler inspector.

"Code, API-510" shall mean the Pressure Vessel Inspection Code of the American Petroleum Institute with addenda and revisions, thereto made and approved by the institute which have been adopted by the board of boiler rules in accordance with the provisions of RCW 70.79.030.

"Code, ASME" shall mean the boiler and pressure vessel code of the American Society of Mechanical Engineers with addenda thereto made and approved by the council of the society which have been adopted by the board of boiler rules in accordance with the provisions of RCW 70.79.030.

"Code, NBIC" shall mean the National Board Inspection Code of the National Board of Boiler and Pressure Vessel Inspectors with addenda and revisions, thereto made and approved by the National Board of Boiler and Pressure Vessel Inspectors and adopted by the board of boiler rules in accordance with the provisions of RCW 70.79.030.

"Commission" shall mean an annual commission card issued to a person in the employ of Washington state, an insurance company or a company owner/user inspection agency holding a Washington state certificate of competency which authorizes them to perform inspections of boilers and/or unfired pressure vessels.

"Department" as used herein shall mean the department of labor and industries of the state of Washington.

"Director" shall mean the director of the department of labor and industries.

"Domestic and/or residential purposes" shall mean serving a private residence or an apartment house of less than six families.

"Existing installations" shall mean any boiler or unfired pressure vessel constructed, installed, placed in operation, or contracted for before January 1, 1952.

"Inspection certificate" see "certificate of inspection."

"Inspection, external" shall mean an inspection made while a boiler or unfired pressure vessel is in operation and includes the inspection and demonstration of controls and safety devices required by these rules.

"Inspection, internal" shall mean an inspection made when a boiler or unfired pressure vessel is shut down and handholes, manholes, or other inspection openings are open or removed for examination of the interior. An external ultrasonic examination of unfired pressure vessels less than 36" inside diameter shall constitute an internal inspection.

"Inspector" shall mean the chief boiler inspector, a deputy inspector, or a special inspector.

- **"Chief inspector"** shall mean the inspector appointed under RCW 70.79.100 who serves as the secretary to the board without a vote.
- **"Deputy inspector"** shall mean an inspector appointed under RCW 70.79.120.
- **"Special inspector"** shall mean an inspector holding a Washington commission identified under RCW 70.79.130.

"Nationwide engineering standard" shall mean a nationally accepted design method, formulae and practice acceptable to the board.

"Operating permit" see "certificate of inspection."

"Owner" or **"user"** shall mean a person, firm, or corporation owning or operating any boiler or unfired pressure vessel within the state.

"Owner/user inspection agency" shall mean an owner or user of boilers and/or pressure vessels that maintains an established inspection department, whose organization and inspection procedures meet the requirements of a nationally recognized standard acceptable to the department.

"Place of public assembly" or **"assembly hall"** shall mean a building or portion of a building used for the gathering together of 50 or more persons for such purposes as deliberation, education, instruction, worship, entertainment, amusement, drinking, or dining or waiting transportation. This shall also include child care centers (those agencies which operate for the care of thirteen or more children), public and private hospitals, nursing and boarding homes.

"Special design" shall mean a design using nationwide engineering standards other than the codes adopted in WAC 296-104-200 or other than allowed in WAC 296-104-230.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and 2009 c 90. 10-06-049, § 296-104-010, filed 2/24/10, effective 4/1/10. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-12-015, § 296-104-010, filed 5/27/08, effective 6/30/08; 06-24-042, § 296-104-010, filed 11/30/06, effective 1/1/07. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-010, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-010, filed 12/24/03, effective 1/24/04; 02-23-036, § 296-104-010, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-010, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-010, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-010, filed 10/26/99, effective 11/26/99; 98-22-024, § 296-104-010, filed 10/28/98, effective 11/28/98; 96-21-081, § 296-104-010, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-010, filed 10/5/94, effective 11/5/94; 93-12-014, § 296-104-010, filed 5/21/93, effective 6/21/93; 92-11-070, § 296-104-010, filed 5/20/92, effective 6/20/92. Statutory Authority: RCW 70.79.240. 88-01-064 (Order 87-25), § 296-104-010, filed 12/17/87. Statutory Authority: RCW 70.79.040 and 70.79.050. 86-01-088 (Order 85-

(2/24/10)

26), § 296-104-010, filed 12/19/85; Order 72-11, § 296-104-010, filed 7/7/72; Part I, filed 3/23/60.]

WAC 296-104-015 Administration—When and where are the board meetings held? The board of boiler rules shall hold its regular meetings in February, May, September and November of each year. The time, place, and date of each regular meeting shall be set by the department, approved by the board chair and published annually. Special meetings may be called by the chair.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-015, filed 5/27/09, effective 6/30/09. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-015, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-015, filed 9/15/95, effective 10/16/95. Statutory Authority: RCW 70.79.040. 91-11-107, § 296-104-015, filed 5/22/91, effective 6/22/91. Statutory Authority: RCW 70.79.050. 90-07-082, § 296-104-015, filed 3/21/90, effective 4/21/90. Statutory Authority: RCW 70.79.040 and 70.79.050. 86-01-088 (Order 85-26), § 296-104-015, filed 12/19/85; Order 72-11, § 296-104-015, filed 7/7/72.]

WAC 296-104-017 Administration—How are rules affected if other rules are invalidated? Should any section, subsection, sentence, clause, phrase, provision or exemption of these rules be declared unconstitutional or invalid for any reason, such invalidity shall not affect the remaining portion or provisions.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-017, filed 10/28/98, effective 11/28/98.]

WAC 296-104-018 Administration—How are rules interpreted and revised? Stakeholder requests for clarifications and interpretations of these rules shall be made to the chief inspector in writing upon the form furnished by the chief inspector located on the boiler program web site. Interpretations will be brought to the board in the same manner if the inquirer is aggrieved by the interpretation of the chief inspector (RCW 70.79.360). For board consideration the form must be submitted to the department of labor and industries forty-five days prior to the board of boiler rules meeting date. Forms may also be requested by contacting the department.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-018, filed 5/27/09, effective 6/30/09; 07-11-137, § 296-104-018, filed 5/22/07, effective 6/30/07; 05-22-092, § 296-104-018, filed 11/1/05, effective 1/1/06. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-018, filed 10/26/99, effective 11/26/99. Statutory Authority: RCW 70.79.040. 92-11-070, § 296-104-018, filed 5/20/92, effective 6/20/92.]

WAC 296-104-019 Administration—How are Washington state specials and extensions of inspection frequencies for boilers and pressure vessels obtained? Stakeholders may request a Washington state special or an extension of inspection frequencies for boilers and pressure vessels by submitting a written request to the board of boiler rules. The request shall be in writing upon the appropriate form furnished by the chief inspector located on the boiler program web site. These requests shall be submitted to the department of labor and industries forty-five days prior to the board of boiler rules meeting date.

(1) Washington state specials may be granted for boilers and pressure vessels that meet the requirements of RCW

70.79.060, WAC 296-104-205, 296-104-210, and 296-104-220.

(2) Extension of inspection frequencies may be granted for boilers and pressure vessels that meet the requirements of RCW 70.79.240 and 70.79.260.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-019, filed 5/27/09, effective 6/30/09.]

WAC 296-104-020 Administration—What are the filing requirements for boilers and unfired pressure vessels before their installation/reinstallation? A "boiler and pressure vessel installation/reinstallation permit," as defined in WAC 296-104-010 shall be submitted by the owner or designee on a form approved by the chief inspector.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-020, filed 5/27/09, effective 6/30/09. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-020, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-020, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-020, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-020, filed 9/15/95, effective 10/16/95; Order 74-37, § 296-104-020, filed 11/8/74; Part II, § 1, filed 3/23/60.]

WAC 296-104-021 Administration—What is the registration requirement for new standard boilers and unfired pressure vessels? Manufacturers' data report for new "standard boilers and unfired pressure vessels" shall be registered with the National Board of Boiler and Pressure Vessel Inspectors.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-021, filed 11/13/02, effective 12/14/02.]

WAC 296-104-025 Administration—What are the notification requirements following an accident involving a boiler or pressure vessel? When an accident occurs which renders a boiler or unfired pressure vessel inoperative, the owner or user shall notify the chief inspector, and submit a detailed report of the accident. In cases of accidents, such as explosions or those resulting in personal injury, notice to the chief inspector shall be given immediately by telephone or electronic means designed to assure its earliest possible receipt. Neither the boiler or unfired pressure vessel nor any parts thereof shall be removed or disturbed before an inspection has been made by the chief inspector, or his designee except for the purpose of saving life or limiting consequential damage. The inspector making the investigation and inspection shall report to the chief inspector as soon as possible. The boiler or pressure vessel owner shall be responsible for all costs of the department's investigation.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-025, filed 10/26/99, effective 11/26/99; 96-21-081, § 296-104-025, filed 10/16/96, effective 11/16/96; 95-19-058, § 296-104-025, filed 9/15/95, effective 10/16/95; Part II, § 2, filed 3/23/60.]

WAC 296-104-030 Administration—What is the penalty for operation of unsafe boilers or unfired pressure vessels? In the event that a boiler or unfired pressure vessel is unsafe to operate, the inspection certificate shall be suspended. Any person, firm, partnership, or corporation causing such objects to be operated under pressure without a

valid certificate of inspection shall be in violation of RCW 70.79.320 and subject to the penalties specified in WAC 296-104-701.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-030, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-030, filed 9/15/95, effective 10/16/95; Part II, § 3, filed 3/23/60.]

WAC 296-104-035 Administration—What are conflicts of interest for inspectors? Inspectors commissioned by the state of Washington shall not engage in the sale of any service, article, or device or promote any other activity for personal gain relating to boilers or unfired pressure vessels or their appurtenances.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-035, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-035, filed 9/15/95, effective 10/16/95; Part II, § 4, filed 3/23/60.]

WAC 296-104-040 Administration—When should inspectors submit inspection reports and on what forms? Inspectors shall submit reports of inspections of boilers and unfired pressure vessels on appropriate forms or media approved by the chief inspector. Routine reports of inspections shall be submitted within thirty days of inspection. Reports of reinspection after suspension of an inspection certificate shall be submitted by an inspector as soon as notice of corrective action has been received.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-040, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-040, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-040, filed 9/15/95, effective 10/16/95; Order 74-37, § 296-104-040, filed 11/8/74; Part II, § 5, filed 3/23/60.]

WAC 296-104-045 Administration—What are the insurance companies' responsibilities? All insurance companies shall notify the chief inspector within thirty days of all boiler and/or unfired pressure vessel risks written, canceled, not renewed or suspended. Special inspectors shall perform all in-service inspections of boilers and unfired pressure vessels insured by their employer.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-045, filed 12/1/08, effective 1/1/09. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-045, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-045, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-045, filed 9/15/95, effective 10/16/95; Part II, § 6, filed 3/23/60.]

WAC 296-104-050 Administration—What are the requirements for a boiler inspector? Application for examination for a Washington state certificate of competency shall be in writing upon a form to be furnished by the chief inspector stating the school and education of the applicant, a list of employers, period of employment and position held with each employer. Applications containing willful falsification or untruthful statements shall be rejected.

In order to qualify as a prospective inspector, an applicant shall meet the minimum requirements as set forth in the national board's "Rules for Commissioned Inspectors," NB263, Revision 17 (02/07) or API-510 (ninth edition), as appropriate.

If the applicant's history and experience meet with the approval of the chief inspector based on the board of boiler rules approved criteria, the candidate shall be given the Washington state examination. If the applicant is accepted on the merits of these examinations or as provided for in WAC 296-104-065, and the applicant is in possession of a national board commission or API-510 certification, as appropriate, a Washington state certificate of competency will be issued by the chief inspector.

For those applicants sitting for the national board examination in conjunction with the Washington state examination, a certificate of competency will be issued by the chief inspector upon receipt of a valid national board commission.

Examinations shall be held at locations and times when considered necessary by the chief inspector. The examinations may be offered four times each year, namely, the first Wednesday and following Thursday of the months of March, June, September and December. Special examinations may be held when considered necessary by the chief inspector.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-12-015, § 296-104-050, filed 5/27/08, effective 6/30/08. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-050, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-050, filed 12/24/03, effective 1/24/04; 02-23-036, § 296-104-050, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-050, filed 10/26/99, effective 11/26/99. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-050, filed 10/5/94, effective 11/5/94. Statutory Authority: Chapter 70.79 RCW. 89-15-025 (Order 89-05), § 296-104-050, filed 7/13/89, effective 8/13/89. Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-050, filed 2/22/78; Part II, § 7, filed 3/23/60.]

WAC 296-104-060 Administration—When shall an inspectors' Washington state commission be issued, suspended, or revoked? The chief inspector shall issue a commission as a deputy or special inspector in accordance with RCW 70.79.120 and 70.79.130.

The deputy inspector commission shall be held by the chief inspector. The deputy inspector commission shall be valid for one year and may be renewed annually at the request of the chief inspector. The special inspector commission shall be held at the home office of the employing company and shall be valid for one year and may be renewed annually at the request of the employing company. Inspectors shall carry identifying commission cards while they are inspecting. The state or employing company shall return the commission and the identifying commission card at once to the chief inspector when the inspector to whom the commission was issued is no longer in its employ, or at the request of the chief inspector.

An inspector's commission may be suspended or revoked in accordance with RCW 70.79.180.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-060, filed 12/24/03, effective 1/24/04; 02-23-036, § 296-104-060, filed 11/13/02, effective 12/14/02; 02-12-021, § 296-104-060, filed 5/28/02, effective 6/28/02; 01-24-061, § 296-104-060, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-060, filed 10/26/99, effective 11/26/99. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-060, filed 10/5/94, effective 11/5/94. Statutory Authority: RCW 70.79.030 and 70.79.330. 82-24-025 (Order 82-36), § 296-104-060, filed 11/23/82, effective 1/1/83; Order 74-37, § 296-104-060, filed 11/8/74; Part II, § 9, filed 3/23/60.]

(2/24/10)

WAC 296-104-065 Administration—How should an inspector obtain a Washington state commission? A commission as a deputy inspector of boilers and/or unfired pressure vessels may be issued by the chief inspector to an inspector complying with WAC 296-104-065 (1) or (4). Upon the request of a boiler insurance company authorized to insure and insuring against loss from explosion of boilers and/or unfired pressure vessels in this state, or a company with an owner/user inspection agency, a commission as a special inspector of boilers and/or unfired pressure vessels shall be issued by the chief inspector to an inspector in the employ and supervision of such company provided the inspector has had the experience prescribed in chapter 70-79 RCW and complies with one of the following:

(1) Passed an examination covering the Washington state boilers and unfired pressure vessels law, chapters 70.79 RCW and 296-104 WAC; and holds a national board commission.

(2) Is certified by the American Petroleum Institute in accordance with API-510 for pressure vessel inspection, having passed an examination covering the Washington state boilers and unfired pressure vessels law, chapters 70.79 RCW and 296-104 WAC.

(3) Is certified by the American Petroleum Institute in accordance with API-510 for pressure vessel inspection, and specifically and temporarily in the direct employ of an owner/user inspection agency as set forth in RCW 70.79.130. This inspector shall be exempted from the state examination requirement in WAC 296-104-065(2).

(4) Is an inspector holding the national board "A" endorsement and performs shop inspections only. This inspector shall be exempt from the exam requirement set forth in WAC 296-104-065(1).

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-065, filed 12/24/03, effective 1/24/04; 01-24-061, § 296-104-065, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-065, filed 10/26/99, effective 11/26/99; 96-21-081, § 296-104-065, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-065, filed 10/5/94, effective 11/5/94. Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-065, filed 2/22/78; Order 74-37, § 296-104-065, filed 11/8/74; Part II, § 10, filed 3/23/60.]

WAC 296-104-100 Inspection—How often must boilers and unfired pressure vessels be inspected? In accordance with RCW 70.79.080, 70.79.090, and 70.79.240 the following inspection requirements shall apply:

(1) **Power boilers** shall be inspected:

(a) Externally while under pressure - Annually.

(b) Internally and externally while not under pressure - Annually, except as noted in the following paragraph.

A power boiler in a national board accredited owner-user inspection program may have the internal inspection intervals extended by the owner-user inspection organization to five years maximum under the following conditions:

(i) The boiler water treatment and specific chemical limits are prescribed and monitored by an individual or company that specializes in the water treatment field;

(ii) Nondestructive examination (NDE) is performed along with the internal inspections;

(iii) The boiler is monitored within a manned operating facility;

(iv) Inspection, maintenance, and water treatment records are maintained;

(v) There is sufficient inspection history for the boiler or a boiler in similar service to justify the increase in the inspection interval; and

(vi) This provision shall not apply to a black liquor recovery boiler or any boiler with an unsuitable corrosion rate, remaining life, and/or repair history.

(2) **Organic vapor boilers** shall be inspected:

(a) Externally while under pressure - Annually.

(b) Internally and externally while not under pressure - Biennially.

(3) **Low pressure boilers** shall be inspected:

(a) Externally while in operation and under pressure - Biennially.

(b) Internally while not under pressure (except where construction does not permit an internal) - Every fourth year.

(c) Internally, all steam heating boilers will have as a minimum, an internal of their low water fuel cut off - Biennially.

(d) Internally, none required for nonvapor boilers using glycol, or adequately treated with corrosion inhibitor.

(4) **Hot water heaters** shall be inspected:

(a) Externally - Biennially.

(b) Internally - None required.

(5) **Unfired pressure vessels** shall be inspected:

(a) Externally - Biennially.

(b) Internally:

(i) When subject to corrosion and construction permits - Biennially. Vessels in an owner-user inspection program may follow intervals established by the NBIC or API-510 ninth edition with addenda.

(ii) Pulp or paper dryer rolls may be inspected on a five-year basis in accordance with TAPPI TIP 0402-16 2001 edition, provided the owner has established a written inspection program accepted by the inspector that meets the minimum requirements of TAPPI TIP 0402-16 2001 edition.

(iii) Vessels not subject to corrosion do not require an internal.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and 2009 c 90. 10-06-049, § 296-104-100, filed 2/24/10, effective 4/1/10. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-100, filed 5/27/09, effective 6/30/09; 08-12-015, § 296-104-100, filed 5/27/08, effective 6/30/08. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-100, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-100, filed 12/24/03, effective 1/24/04; 01-24-061, § 296-104-100, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-100, filed 10/26/99, effective 11/26/99; 98-22-024, § 296-104-100, filed 10/28/98, effective 11/28/98; 95-19-058, § 296-104-100, filed 9/15/95, effective 10/16/95. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-100, filed 10/5/94, effective 11/5/94; Part III, § 1, filed 3/23/60.]

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, con-

struction, electrical, undefined industrial standards, etc.), for which other regulatory agencies have authority and responsibility to oversee.

(1) The standard for inspection of nonnuclear boilers, unfired pressure vessels, and safety devices is the National Board Inspection Code (NBIC), 2007 edition Part 2, with addenda, excluding Section 6 Supplements 2, 5, 6, and 7 which may be used as nonmandatory guidelines. This code may be used on or after the date of issue and becomes mandatory twelve months after adoption by the board as specified in RCW 70.79.050(2).

(2) The standard for inspection of historical steam boilers of riveted construction preserved, restored, or maintained for hobby or demonstration use, shall be Appendix "C" of the National Board Inspection Code (NBIC) 2004 edition with 2006 addenda.

(3) 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.

(4) 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, ninth edition, with addenda. This code may be used on or after the date of issue.

(5) TAPPI TIP 0402-16, dated 2006 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.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-102, filed 12/1/08, effective 1/1/09; 05-22-092, § 296-104-102, filed 11/1/05, effective 1/1/06. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-102, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-102, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-102, filed 10/26/99, effective 11/26/99; 98-22-024, § 296-104-102, filed 10/28/98, effective 11/28/98; 96-21-081, § 296-104-102, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-102, filed 10/5/94, effective 11/5/94.]

WAC 296-104-105 Inspection—How much time is required for notification of an internal inspection? Seven days will be considered sufficient notification. The owner or user shall prepare each boiler and unfired pressure vessel for internal inspection and shall prepare for and apply a hydrostatic pressure test whenever necessary on the date specified by the inspector.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-105, filed 12/1/08, effective 1/1/09. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-105, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-105, filed 9/15/95, effective 10/16/95; Part III, § 2, filed 3/23/60.]

WAC 296-104-110 Inspection—What will be done when boilers or unfired pressure vessels are deemed unsafe or defective? Upon inspection of a boiler or unfired pressure vessel or appurtenances, if an inspector finds hazardous conditions such that it is unsafe to operate under pressure, remedial action shall be initiated at once. A red tag indicating "unsafe - do not use" shall be attached to the principle

operating control and the owner or user advised that further operation is prohibited until specified repairs or other action are taken. The chief inspector shall be notified immediately, followed by a report on the condition. Any certificate in force is considered suspended. When reinspection establishes that necessary repairs have been made or corrective action taken so that the boiler or unfired pressure vessel is safe to operate, a report of reinspection shall be submitted to the chief inspector. The certificate of inspection will then be reinstated or a new certificate issued as appropriate.

If other defects, but not unsafe conditions, are found, a routine inspection report containing a noncompliance report shall be submitted to the chief inspector. The owner or user shall be allowed to operate the object for a period as specified by the inspector so long as corrective action is completed in the allotted time.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-110, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-110, filed 9/15/95, effective 10/16/95; Part III, § 3, filed 3/23/60.]

WAC 296-104-115 Inspection—What will be done when defective conditions are concealed by covering? If upon an external inspection there is evidence of a leak or crack, enough of the covering of the boiler or unfired pressure vessel shall be removed to satisfy the inspector in order to determine the safety of the boiler or unfired pressure vessel. If the covering cannot be removed at the time, the inspector may order the operation of the boiler or unfired pressure vessel stopped until such time as the covering can be removed and proper examination made.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-115, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-115, filed 9/15/95, effective 10/16/95; Part III, § 4, filed 3/23/60.]

WAC 296-104-125 Inspection—What are the requirements for obtaining a certificate of inspection? Before a certificate of inspection as defined in RCW 70.79.290 is issued, a boiler or unfired pressure vessel must be inspected by an inspector and have all necessary permits. In addition, the owner or user shall pay the fees scheduled in WAC 296-104-700 directly to the chief inspector. The inspection process is not complete until the certificate of inspection is posted.

If the owner or user of each boiler or unfired pressure vessel required to be inspected refuses to allow an inspection to be made, or refuses to pay the above fee, the certificate of inspection shall be suspended by the chief inspector until the owner or user complies with the requirements.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-125, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-125, filed 10/26/99, effective 11/26/99; Part III, § 6, filed 3/23/60.]

WAC 296-104-130 Inspection—When are inspection certificates valid? An inspection certificate, issued in accordance with RCW 70.79.290, shall be valid until expiration unless some defect or condition affecting the safety of the boiler or unfired pressure vessel is disclosed or the conditions of RCW 70.79.300 apply.

(2/24/10)

When an agreement exists between the state and the city jurisdictions of Spokane or Seattle, the certificates for portable boilers and unfired pressure vessels will be considered valid.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-130, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-130, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-130, filed 9/15/95, effective 10/16/95; Part III, § 7, filed 3/23/60.]

WAC 296-104-135 Inspection—What are the requirements for restamping of boilers and unfired pressure vessels? When the stamping on a boiler or unfired pressure vessel becomes indistinct the inspector shall instruct the owner or user to have it restamped. Request for permission to restamp the boiler or unfired pressure vessel shall be made to the chief inspector and proof of the original stamping shall accompany the request. Restamping authorized by the chief inspector shall be done only in the presence of an inspector, and shall be identical with the original stamping except that it will not be required to restamp the code symbol. Notice of completion of such restamping shall be filed with the chief boiler inspector by the inspector who witnessed the restamping of the boiler or unfired pressure vessel together with a facsimile of the stamping applied.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-135, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-135, filed 9/15/95, effective 10/16/95; Part III, § 8, filed 3/23/60.]

WAC 296-104-140 Inspection—How should a state stamp be applied? Upon completion of the installation, all boilers and unfired pressure vessels shall be inspected by an inspector as defined in WAC 296-104-010. At the time of this inspection, each boiler or unfired pressure vessel shall be marked with a serial number of the state of Washington followed by the letter "W." The marking should be conspicuously located and as close as possible to the boiler or unfired pressure vessel nameplate.

Washington special numbers when assigned by the chief inspector shall be a serial number of the state of Washington followed by the letters "WS."

All rental boilers used in the state of Washington shall be marked with the serial number of the state of Washington followed by the letters "WR." This will indicate that the boiler is a rental unit.

The state of Washington markings, numbers and letters, referenced above, shall not be less than 5/16 inches in height and shall not be concealed by lagging or paint and shall be exposed at all times.

[Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-140, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-140, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-140, filed 10/26/99, effective 11/26/99; 96-21-081, § 296-104-140, filed 10/16/96, effective 11/16/96; 95-19-058, § 296-104-140, filed 9/15/95, effective 10/16/95; Order 73-1, § 296-104-140, filed 3/22/73; Part III, § 9, filed 3/23/60.]

WAC 296-104-145 Inspection—How are groups of vessels operating as a single unit classified? A group of unfired pressure vessels operating as a single unit such as the vessels in a refrigeration system, evaporators, ironers and

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paper machines shall have an individual state serial number marked on each boiler or unfired pressure vessel. The marking should be conspicuously located and as close as possible to the boiler or unfired pressure vessel nameplate. The certificate of inspection fee shall be as outlined in WAC 296-104-700, for each vessel of the system.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-145, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-145, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-145, filed 9/15/95, effective 10/16/95; Part III, § 10, filed 3/23/60.]

WAC 296-104-150 Inspection—How are unfired steam boilers classified? Unfired steam boilers as defined in WAC 296-104-010 operating at pressures of 50 psi or more shall be inspected as power boilers. Unfired steam boilers operating at less than 50 psi shall be inspected as unfired pressure vessels.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-150, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-150, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-150, filed 9/15/95, effective 10/16/95; Part III, § 11, filed 3/23/60.]

WAC 296-104-151 Inspection—What are the requirements for rental boilers? Every rental boiler used in the state of Washington will have an internal inspection as defined in WAC 296-104-010 witnessed by an inspector once a year. An external inspection as defined in WAC 296-104-010 shall be witnessed by an inspector at each and every rental location before being placed into service. Rental boilers shall also meet the requirements of WAC 296-104-300.

A rental boiler, which has never been in rental service in the state of Washington, shall meet the requirements of WAC 296-104-273. Each inspection will be reported to the state of Washington in accordance with WAC 296-104-040, and a copy of this report will be posted on the rental boiler.

It is the responsibility of the rental boiler owner to arrange for all required inspections.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-151, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-151, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-151, filed 10/26/99, effective 11/26/99; 96-21-081, § 296-104-151, filed 10/16/96, effective 11/16/96.]

WAC 296-104-155 Inspection—What preparations are necessary prior to internal inspections? The owner or user has the responsibility to prepare a pressure-retaining item for internal inspection. Requirements of occupational safety and health regulations (federal, state, local, or other), as well as the owner or user's own safety program and the safety program of the inspector's employer are applicable. In the absence of such rules, prudent and generally accepted engineering safety procedures satisfactory to the inspector shall be employed by the owner or user.

The owner or user shall prepare a boiler for internal inspection in the following manner or as required by the inspector:

(1) Water shall be drawn off and the boiler thoroughly washed (when a boiler is being prepared for internal inspection,

the water should not be withdrawn until it has been sufficiently cooled).

(2) All manhole and handhole plates and wash-out plugs and water column connections shall be removed, the furnace and combustion chambers thoroughly cooled and cleaned.

(3) All grates of internally fired boilers shall be removed.

(4) At each annual inspection brickwork shall be removed as required by the inspector in order to determine the condition of the boiler headers, drums, furnace, supports, or other parts.

(5) The steam gauge shall be removed for testing or evidence of testing shown.

(6) Any leakage of steam or water into the boiler shall be prevented by either disconnecting the pipe or block valve at the most convenient point or installing isolation blinds. The owner or user must ensure that an effective energy isolation program (lock out and/or tag out) is in place and in effect that will prevent the unexpected energizing, start up, or release of stored energy.

The inspector shall determine that a safe atmosphere exists before entering the boiler or pressure-retaining item.

(7) The low water cutout shall be disassembled to such a degree as the inspector shall require.

(8) Pressure relief devices shall be removed and tested if required by the inspector.

Unfired pressure vessels shall be prepared for internal inspection to the extent deemed necessary by the inspector.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-12-015, § 296-104-155, filed 5/27/08, effective 6/30/08. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-155, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-155, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-155, filed 9/15/95, effective 10/16/95; Part III, § 12, filed 3/23/60.]

WAC 296-104-160 Inspection—What happens if a boiler or unfired pressure vessel is improperly prepared for inspection? If a boiler or unfired pressure vessel has not been properly prepared for an internal inspection, or the owner or user fails to comply with the requirements for hydrostatic test as set forth in these rules, the inspector may decline to make the inspection or test and the certificate of inspection shall be withheld until the owner or user complies with the requirements.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-160, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-160, filed 9/15/95, effective 10/16/95; Part III, § 13, filed 3/23/60.]

WAC 296-104-165 Inspection—When should coverings be removed for inspection? If the boiler or unfired pressure vessel is jacketed such that the longitudinal seams of shells, drums, or domes cannot be seen, or if pertinent information cannot be determined by other means, the following may be ordered by the inspector: Enough of the jacketing, setting wall, or other form of casing or housing shall be removed so that information necessary to determine the safety of the boiler or unfired pressure vessel can be obtained to the satisfaction of the inspector.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-165, filed 10/26/99, effective 11/26/99; 95-19-058, § 296-104-165, filed 9/15/95, effective 10/16/95; Part III, § 14, filed 3/23/60.]

WAC 296-104-170 Inspection—When are shop inspections required? Shop inspections shall be as required in the standards of construction as adopted in WAC 296-104-200. Only inspectors and supervisors of inspectors holding a national board commission with the appropriate endorsements shall make shop inspections in this state.

Upon request from a boiler or pressure vessel manufacturer holding an ASME Certificate of Authorization within the jurisdiction, the department may provide inspection services as required by the ASME Code. The manufacturer receiving such inspection services shall reimburse the department for the time and expenses in accordance with the fee schedule established in WAC 296-104-700.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and 2009 c 90. 10-06-049, § 296-104-170, filed 2/24/10, effective 4/1/10. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 06-24-042, § 296-104-170, filed 11/30/06, effective 1/1/07. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-170, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-170, filed 10/26/99, effective 11/26/99; 96-21-081, § 296-104-170, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.040. 90-20-029, § 296-104-170, filed 9/24/90, effective 10/25/90. Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-170, filed 2/22/78; Part III, § 15, filed 3/23/60.]

WAC 296-104-180 Inspection—How are radioactive systems inspected? An alternative means of inspection is allowed when a pressure vessel has radioactive contamination that would not allow entering for visual inspection. The inspector and owner shall work out a program of nondestructive examination that shall ascertain the condition of the vessel to assure its integrity.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-180, filed 10/28/98, effective 11/28/98.]

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, 2007 edition, with addenda Sections I, III, IV, VIII, Division 1, 2, 3, X, XII;
- (2) ASME PVHO-1 2007 Safety Standard for Pressure Vessels for Human Occupancy; 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 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 on issue and that subsequent addenda 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.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-200, filed 5/27/09, effective 6/30/09; 08-24-072, § 296-104-200, filed 12/1/08, effective 1/1/09; 08-12-015, § 296-104-200, filed 5/27/08, effective 6/30/08; 06-24-042, § 296-104-200, filed 11/30/06, effective 1/1/07; 05-22-092, § 296-104-200, filed

(2/24/10)

11/1/05, effective 1/1/06. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-200, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-200, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-200, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-200, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-200, filed 10/28/98, effective 11/28/98; 97-20-109, § 296-104-200, filed 9/30/97, effective 10/31/97; 96-21-081, § 296-104-200, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.040. 93-12-014, § 296-104-200, filed 5/21/93, effective 6/21/93; 92-11-070, § 296-104-200, filed 5/20/92, effective 6/20/92; 91-11-107, § 296-104-200, filed 5/22/91, effective 6/22/91; 90-04-009, § 296-104-200, filed 1/26/90, effective 2/26/90. Statutory Authority: RCW 70.79.040 and 70.79.050. 86-01-088 (Order 85-26), § 296-104-200, filed 12/19/85. Statutory Authority: RCW 70.79.030 and 70.79.330. 84-11-016 (Order 84-09), § 296-104-200, filed 5/10/84; 82-24-025 (Order 82-36), § 296-104-200, filed 11/23/82, effective 1/1/83. Statutory Authority: RCW 70.79.030. 82-05-003 (Order 82-2), § 296-104-200, filed 2/4/82; 81-12-012 (Order 81-10), § 296-104-200, filed 5/28/81; 81-01-114 (Order 80-28), § 296-104-200, filed 12/24/80; 80-05-065 (Order 80-7), § 296-104-200, filed 4/23/80; 79-05-054 (Order 79-7), § 296-104-200, filed 4/30/79; 78-10-096 (Order 78-19), § 296-104-200, filed 10/3/78; Order 77-23, § 296-104-200, filed 11/8/77; Order 77-9, § 296-104-200, filed 5/26/77; Order 75-35, § 296-104-200, filed 10/29/75; Order 74-37, § 296-104-200, filed 11/8/74; Order 73-1, § 296-104-200, filed 3/22/73; Order 72-17, § 296-104-200, filed 9/28/72; Order 72-11, § 296-104-200, filed 7/7/72; Part IV, § 1, filed 3/23/60.]

WAC 296-104-205 Construction—What are the requirements for nonstandard new construction? Those boilers and unfired pressure vessels that are exempted by the codes adopted in WAC 296-104-200 due to volume, temperature or pressure requirements, and are not to be constructed to those codes, must be certified to a nationally recognized testing agency or constructed to WAC 296-104-230. See WAC 296-104-316 for safety pressure relief devices.

Other boilers and unfired pressure vessels that are not to be constructed to the codes adopted in WAC 296-104-200 may be treated as special designs at the discretion of the board. Nonstandard construction shall not be permitted to avoid standard construction.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-205, filed 5/27/09, effective 6/30/09. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 01-24-061, § 296-104-205, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-205, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-205, filed 10/16/96, effective 11/16/96; Part IV, § 2, filed 3/23/60.]

WAC 296-104-210 Construction—What are the requirements for construction of boilers and unfired pressure vessels of special design? Boilers and unfired pressure vessels of special design require a special certificate granted by the board of boiler rules. At a minimum the following information shall be supplied to obtain board approval for special designs: Construction drawings, design calculations, material specifications, and a Washington state professional engineer's evaluation of the design. Upon board approval a Washington special number will be assigned by the chief inspector. The installation will be subject to the regular inspections required by WAC 296-104-100 and any additional conditions as required by the board.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 05-22-092, § 296-104-210, filed 11/1/05, effective 1/1/06. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter

70.79 RCW. 00-21-024, § 296-104-210, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-210, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.040 and 70.79.050. 86-07-064 (Order 86-02), § 296-104-210, filed 3/19/86; Order 73-1, § 296-104-210, filed 3/22/73; Part IV, § 3, filed 3/23/60.]

WAC 296-104-215 Construction—What are the requirements to use nonstandard boilers and unfired pressure vessels constructed prior to January 1, 1952?

Nonstandard boilers and unfired pressure vessels constructed prior to January 1, 1952, may be used provided they have not been moved from their original setting since January 1, 1952.

[Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-215, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-215, filed 9/30/97, effective 10/31/97; 96-21-081, § 296-104-215, filed 10/16/96, effective 11/16/96; Part IV, § 4, filed 3/23/60.]

WAC 296-104-220 Construction—What are the requirements to use nonstandard second hand boilers and unfired pressure vessels?

Nonstandard second hand boilers and unfired pressure vessels constructed after January 1, 1952, cannot be used in this state without prior approval of the board of boiler rules. At a minimum the following information shall be supplied to obtain board approvals: Construction drawings, photographs, operating and inspection history, design calculations, and a Washington state professional engineer's evaluation of the design and present condition. Upon board approval a Washington special number will be assigned by the chief inspector. The installation will be subject to the regular inspections required by WAC 296-104-100 and any additional conditions as required by the board.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 05-22-092, § 296-104-220, filed 11/1/05, effective 1/1/06. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-220, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-220, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.240. 88-01-064 (Order 87-25), § 296-104-220, filed 12/17/87; Part IV, § 5, filed 3/23/60.]

WAC 296-104-230 Construction—What are the testing requirements for new boilers or unfired pressure vessels exempted from code requirements for volume, pressure or temperature?

Boilers or unfired pressure vessels that are not required by the codes adopted in WAC 296-104-200 to be built to those codes (except those exempted in the RCWs), shall be tested as follows:

One boiler or unfired pressure vessel of each design and size taken from the manufacturer's stock at random, shall be subjected to a hydrostatic test of twice the rated maximum allowable working pressure in the presence of an inspector holding a national board commission. The boiler or unfired pressure vessel shall withstand the hydrostatic pressure test without leaks and without exceeding 80% of the boiler or unfired pressure vessel material's yield strength. Samples shall be taken from the longitudinal seam and tests made as outlined in Section IX ASME Code for root and face bends and reduced tensile coupons. Upon successfully passing the above tests, the maximum allowable working pressure will be allowed for all boilers or unfired pressure vessels constructed to identical specifications. The company name, serial num-

ber, maximum allowable working pressure, and energy input (if applicable) shall be stamped or marked in a permanent manner on each boiler or unfired pressure vessel. A retest shall be made at the inspector's discretion or by the request of the chief inspector. Any unfired pressure vessels containing water and an air cushion designed for less than 300 psi and 210 degree F, in use prior to January 1, 1997, may be accepted by hydrostatically testing them to twice their maximum allowable working pressure.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-230, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-230, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-230, filed 10/16/96, effective 11/16/96; Order 74-37, § 296-104-230, filed 11/8/74; Part IV, § 7, filed 3/23/60.]

WAC 296-104-235 Construction—What are the requirements for code exempted boiler and unfired pressure vessel safety relief valves?

The boilers and unfired pressure vessels covered by WAC 296-104-230 shall be protected by the installation of ASME Code relief valves with trial levers, set pressure not to exceed the boiler's or the unfired pressure vessel's design pressure. Relief valves shall be installed on top of the boiler or the unfired pressure vessel or on outlet piping as close as possible to the boiler or unfired pressure vessel, with a minimum of fittings and no valves intervening. The outlet of the relief valve shall be run full size to a safe place and shall not induce stress on the valve.

[Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-235, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-235, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-235, filed 2/22/78; Part IV, § 8, filed 3/23/60.]

WAC 296-104-245 Construction—Combustible fluid heaters.

Steam or hot water combustible fluid heaters shall be so designed and constructed that in the event of failure of any part, the combustible fluid cannot enter the boiler water.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-245, filed 10/16/96, effective 11/16/96. Statutory Authority: RCW 70.79.030. 78-03-057 (Order 78-3), § 296-104-245, filed 2/22/78; Part IV, § 10, filed 3/23/60.]

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.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 06-24-042, § 296-104-255, filed 11/30/06, effective 1/1/07. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-255, filed 10/16/96, effective 11/16/96; Part IV, § 12, filed 3/23/60.]

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.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, amended and recodified § 296-104-260, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-273, filed 10/16/96, effective 11/16/96.]

WAC 296-104-265 Installation—What are the requirements for unfired pressure vessels installed underground? Unfired pressure vessels installed underground shall comply with the following requirements:

(1) A pit with concrete or masonry sides and floor shall enclose the underground portion of the unfired pressure vessel.

(2) Pit covers shall be removable.

(3) Clearances shall be as required by WAC 296-104-260.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-265, filed 12/24/03, effective 1/24/04; 02-23-036, recodified as § 296-104-265, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-320, filed 9/30/97, effective 10/31/97; Part V, § 5, filed 3/23/60.]

WAC 296-104-271 Installation—How does an owner, user, or installer obtain a variance from clearances? Variances from WAC 296-104-255, 296-104-256, 296-104-260, and 296-104-265 may be requested. The variance request shall be in writing on an appropriate form approved by the chief inspector, and shall specify how equivalent safety is to be maintained. The chief inspector may grant the variance provided that safety and accessibility for inspections are acceptable.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-271, filed 11/13/02, effective 12/14/02.]

(2/24/10)

WAC 296-104-273 Installation—What inspections are required for reinstalled standard boilers or unfired pressure vessels? When a stationary standard boiler or unfired pressure vessel is moved and reinstalled it must be inspected and documented on the inspection report by an inspector. The following will be required:

(1) An installation permit must be submitted in accordance with WAC 296-104-020.

(2) The fittings and appurtenances must comply with the latest codes adopted in WAC 296-104-200. For automatically fired boilers, fuel controls and other limit devices as listed in WAC 296-104-303 shall be provided.

(3) For any boiler or unfired pressure vessel not currently registered with the department, the following are required unless waived by the inspector:

(a) A hydrostatic or pressure test as prescribed in the original code of construction.

(b) An internal inspection.

(c) An operational test.

(d) Any repairs deemed necessary.

(e) A complete history of inspection, operation and repairs/alterations.

(f) Additional examination or nondestructive testing.

(g) A written evaluation by a professional engineer knowledgeable with boilers and pressure vessels, an ASME certificate holder, or a National Board R certificate holder.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 09-12-033, § 296-104-273, filed 5/27/09, effective 6/30/09. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, recodified as § 296-104-273, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-256, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030 and 70.79.040. 96-21-081, § 296-104-256, filed 10/16/96, effective 11/16/96.]

WAC 296-104-295 Installation—What are the requirements for an explosion door? Provide substantial deflectors to divert the blast when explosion doors are located within seven feet of the firing floor or an operating platform.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, recodified as § 296-104-295, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-270, filed 9/30/97, effective 10/31/97; Part IV, § 15, filed 3/23/60.]

WAC 296-104-300 Installation—What control and limit devices are required on automatically fired boilers prior to June 1989? All automatically fired steam, vapor, or hot water boilers except boilers having a constant attendant who has no other duties while the boiler is in operation, shall be equipped with:

(1) An automatic low-water fuel cutoff; and

(2) An automatic water feeding device.

(3) All devices shall be designed so that they may be readily tested at frequent intervals.

[Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-300, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-300, filed 12/24/03, effective 1/24/04; 02-23-036, recodified as § 296-104-300, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-265, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-265, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and

70.79.040. 98-22-024, § 296-104-265, filed 10/28/98, effective 11/28/98; 97-20-109, § 296-104-265, filed 9/30/97, effective 10/31/97. Statutory Authority: RCW 70.79.240. 88-01-064 (Order 87-25), § 296-104-265, filed 12/17/87; Part IV, § 14, filed 3/23/60.]

WAC 296-104-301 Installation—What control and limit devices are required on automatically fired boilers after June 1989? In addition to those requirements listed in WAC 296-104-300, the following are also required:

(1) All boilers that are automatically fired low pressure steam heating boilers, small power boilers, and power steam boilers without a constant attendant who has no other duties shall be equipped with:

(a) Two high steam pressure limit controls, the highest of which shall be provided with a manual reset.

(b) Two low-water fuel cutoffs, one of which shall be provided with a manual reset device and independent of the feed water controller.

(c) Coil type flash steam boilers may use two high-temperature limit controls, one of which shall have a manual reset. This is instead of the low-water fuel cutoff.

(d) All control and limit devices shall be independently connected and electrically wired in series.

(2) All automatically fired hot water supply, low-pressure hot water heating boilers, and power hot water boilers shall be equipped with:

(a) Two high-temperature limit controls, the highest of which shall be provided with a manual reset.

(b) One low-water fuel cutoff with a manual reset and independent of the feed water controller.

(c) For coil type hot water boilers a low-water flow limit control installed in the circulating water line may be used instead of a low-water fuel cutoff.

(d) All control and limit devices shall be independently connected and electrically wired in series.

[Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-301, filed 10/19/04, effective 1/1/05.]

WAC 296-104-302 Installation—What fuel controls are required on automatically fired boilers after December 1998? In addition to those requirements listed in WAC 296-104-301, the following are also required with regard to installations or refits of gas, oil, or combinations of gas or oil:

(1) All boilers installed or refitted after December 1998, shall be equipped with suitable primary (flame safeguards) safety controls, safety limit switches, and burners or electrical elements as required by a nationally or internationally recognized standard.

(2) The symbol of the certifying organization that has investigated such equipment as having complied with a nationally or internationally recognized standard shall be affixed to the equipment and shall be considered evidence that the unit was manufactured in accordance with that standard. A certifying organization is one that provides uniform testing, examination, and listing procedures under established, nationally or internationally recognized standards, and that is acceptable to the authorities having jurisdiction.

(3) These devices shall be installed in accordance with jurisdictional requirements, manufacturer's recommendations, and/or industry standards as applicable.

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[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-302, filed 12/1/08, effective 1/1/09; 05-22-092, § 296-104-302, filed 11/1/05, effective 1/1/06. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-302, filed 10/19/04, effective 1/1/05.]

WAC 296-104-303 Installation—What control and limit devices are required on automatically fired boilers after December 2004? In addition to those requirements listed in WAC 296-104-302, the following are also required with regard to installations or refits of gas, oil, or combinations of gas or oil:

(1) A manually operated remote shutdown switch or circuit breaker should be located just outside the boiler room door and marked for easy identification. Consideration should be given to the type and location of the switch to safeguard against tampering. If the boiler room door is on the building exterior, the switch should be located just inside the door. If there is more than one door to the boiler room, there should be a switch located at each door.

(2) A means shall be provided for testing the operation of hot water heating boiler low-water fuel cutoff(s) without resorting to draining the entire system. Such means shall not render the device(s) inoperable. If the means temporarily isolates the device from the boiler during testing, it shall automatically return to its normal position.

[Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-303, filed 10/19/04, effective 1/1/05.]

WAC 296-104-307 Installation—When are platforms around boilers required? Provide platforms allowing safe access to each boiler, when the controls, valves, manholes, or casing openings are over ten feet above the floor.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-307, filed 12/24/03, effective 1/24/04; 02-23-036, recodified as § 296-104-307, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-300, filed 9/30/97, effective 10/31/97; Part V, § 1, filed 3/23/60.]

WAC 296-104-316 Installation—What safety pressure relief devices are required on boilers and unfired pressure vessels? All boiler and unfired pressure vessels shall be safeguarded by safety valves, safety relief valves, or rupture discs as specified in the ASME Code. As an alternative they may be safeguarded by a fail safe pressure relief control system that is evaluated by a professional engineer knowledgeable with boilers and pressure vessels, licensed by the state of Washington, and accepted by the chief inspector.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-316, filed 12/24/03, effective 1/24/04; 02-23-036, recodified as § 296-104-316, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-307, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-307, filed 10/28/98, effective 11/28/98.]

WAC 296-104-320 Installation—Where should the discharge from safety pressure relief devices, blow offs and drains be directed? Discharge from safety pressure relief devices, blow offs and drains shall be directed to a safe point of discharge to prevent injury to personnel and prop-

(2/24/10)

erty. Discharge lines from boilers, accumulators, or headers, with a capacity of 1,000 pounds of steam per hour or more, shall be directed outside of the building.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-320, filed 12/24/03, effective 1/24/04; 02-23-036, recodified as § 296-104-320, filed 11/13/02, effective 12/14/02. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-310, filed 10/28/98, effective 11/28/98; 97-20-109, § 296-104-310, filed 9/30/97, effective 10/31/97; Part V, § 3, filed 3/23/60.]

WAC 296-104-325 Installation—What are the requirements for boiler and unfired pressure vessel supports? Each boiler or unfired pressure vessel shall be supported by masonry or structural supports of sufficient strength and rigidity to safely support the vessel and its contents. There shall be no excessive vibration in either the vessel or its connecting piping.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-325, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-325, filed 9/30/97, effective 10/31/97; Part V, § 6, filed 3/23/60.]

WAC 296-104-330 Installation—What are the relief or safety valve requirements when pressure reducing valves are used? (1) Where pressure reducing valves are used, one or more relief or safety valve(s) and pressure gauge(s) shall be provided on the low pressure side of the reducing valve. The relief or safety valve(s) shall be located as close as possible to the reducing valve. The combined discharge capacity of the relief valves shall be such that the pressure rating of the lower pressure piping or equipment shall not be exceeded in case the reducing valve sticks open. Discharge lines shall comply with WAC 296-104-320.

(2) The use of hand-controlled bypasses around reducing valves is permissible. The bypass shall not be greater in capacity than the reducing valve unless the piping or equipment is adequately protected by a relief valve(s) or meets the requirements of the high pressure system.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-12-015, § 296-104-330, filed 5/27/08, effective 6/30/08. Statutory Authority: RCW 70.79.030 and 70.79.040. 97-20-109, § 296-104-330, filed 9/30/97, effective 10/31/97; Part V, § 7, filed 3/23/60.]

WAC 296-104-405 Existing installation—How can the maximum allowable working pressure be established for nonstandard boilers or unfired pressure vessels? The maximum allowable working pressure MAWP of cylindrical components under internal pressure shall be established as follows:

(1) For nonstandard steel low pressure steam heating boilers the MAWP shall be computed from the formula in subsection (5) of this section not exceeding 15 psi steam.

(2) For nonstandard steel low pressure water heating boilers the MAWP shall be computed from the formula in subsection (5) of this section not exceeding 30 psi.

(3) For nonstandard cast iron low pressure steam heating boilers the MAWP shall not exceed 15 psi steam.

(4) For nonstandard cast iron low pressure water heating boilers the MAWP shall not exceed 30 psi.

(2/24/10)

(5) For boilers and unfired pressure vessels not listed above, where the original code of construction is unknown, the following formula will be used.

$$\frac{TS \times t \times E}{R \times FS} = MAWP$$

- TS = Tensile Strength in psi as given in ASME Code, when material cannot be identified use 55,000 for steel and 45,000 for wrought iron.
- t = thickness in inches of the thinnest part determined by actual measurement.
- E = efficiency of longitudinal joint or ligament, whichever is the least, determined by the rules and formula in the ASME Code. When construction methods are not known welded joint efficiency will be 70%.
- R = radius of largest course in inches.
- FS = Factor of Safety, for boilers shall be a minimum of 5. For boilers with a longitudinal lap seam it shall be a minimum 8. Boilers with a longitudinal lap seam, unless granted a special permit, may only be used at a maximum of 15 psi provided they have passed inspection. The minimum for unfired pressure vessels shall be 4 when less than 20 years old, 4 1/2 when over 20 years old.

[Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-405, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-405, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-405, filed 10/28/98, effective 11/28/98; 97-20-109, § 296-104-405, filed 9/30/97, effective 10/31/97; Part VI, § 2, filed 3/23/60.]

WAC 296-104-502 Repairs—What is the standard for nonnuclear repairs and alterations? The standard for repairs/alterations is:

(1) National Board Inspection Code (NBIC), 2007 edition Part 3, with addenda, excluding Section 6 Supplements 2, 5, 6, and 7 which may be used as nonmandatory guidelines.

(2) The standard for repair of historical boilers or riveted construction preserved, restored, or maintained for hobby or demonstration use, shall be Appendix C of the National Board Inspection Code (NBIC) 2004 edition with 2006 addenda.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-502, filed 12/1/08, effective 1/1/09; 06-24-042, § 296-104-502, filed 11/30/06, effective 1/1/07. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-502, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 02-23-036, § 296-104-502, filed 11/13/02, effective 12/14/02; 01-24-061, § 296-104-502, filed 11/30/01, effective 12/31/01. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-502, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-22-026, § 296-104-502, filed 10/26/99, effective 11/26/99; 98-22-024, § 296-104-502, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.040. 94-21-002, § 296-104-502, filed 10/5/94, effective 11/5/94.]

WAC 296-104-503 Repairs—What are the requirements for nonnuclear boilers and unfired pressure vessel repairs and alterations? Repairs and alterations to nonnuclear boilers and pressure vessels shall be made in accordance

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with the rules of the National Board Inspection Code (NBIC) as adopted in WAC 296-104-502(1). Additionally, repairs and alterations to nonstandard boilers and pressure vessels, as addressed in WAC 296-104-215, must be authorized by the chief inspector.

Repairs and alterations may be made by an organization in possession of a valid Certificate of Authorization for use of the "R" symbol stamp, issued by the national board provided such repairs/alterations are within the scope of authorization.

Owner/user special inspectors may only accept repairs and alterations to boilers and unfired pressure vessels operated by their respective companies per RCW 70.79.130.

Documentation of repairs and alterations, in accordance with the requirements of the National Board Inspection Code (NBIC) as adopted in WAC 296-104-502(1), shall be submitted to the department.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-503, filed 12/1/08, effective 1/1/09.]

WAC 296-104-510 Repairs—When a lap seam crack is discovered along a riveted longitudinal joint on a boiler or unfired pressure vessel, what action is required and what repairs are allowed? A "lap seam crack" is a crack found in a riveted lap seam, extending parallel to the longitudinal joint and located either between or adjacent to rivet holes. Repairs to a "lap seam crack" on a shell or drum of any boiler or unfired pressure vessel is not allowed. The shell or drum of any boiler or unfired pressure vessel in which a lap seam crack is discovered shall be immediately discontinued from use.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-510, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-510, filed 10/28/98, effective 11/28/98; Part VII, § 3, filed 3/23/60.]

WAC 296-104-515 Repairs—Do riveted repairs to boilers and unfired pressure vessels require prior approval? Yes, riveted repairs to boilers and unfired pressure vessels requires prior approval by the chief inspector.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-515, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-515, filed 10/28/98, effective 11/28/98. Statutory Authority: RCW 70.79.030. 86-04-059 (Order 86-01), § 296-104-515, filed 2/4/86. Statutory Authority: RCW 70.79.030 and 70.79.330. 84-21-012 (Order 84-20), § 296-104-515, filed 10/5/84; Part VII, § 4, filed 3/23/60.]

WAC 296-104-520 Repairs—What are the requirements for repair of nonnuclear safety devices? (1) The resetting, repairing, and restamping of safety valves and relief valves shall be done by a qualified valve repair organization holding a valid "VR" Certificate of Authorization issued by the National Board of Boiler and Pressure Vessel Inspectors. ASME valve manufacturers holding a valid "V," "HV," and "UV" Certificate(s) of Authorization may also do this work provided they also have a valid "VR" Certificate of Authorization issued by the national board.

(2) With jurisdictional approval, boiler and pressure vessel owners/users, may authorize external adjustments to bring

their installed safety valves and relief valves, back to the stamped set pressure when performed by the owner/user's trained, qualified, regular, and full-time employees. Refer to Supplement 7.10 of the National Board Inspection Code as referenced in WAC 296-104-502(1) for guidelines regarding training, documentation, and the implementation of a quality system for the owner/user employees. All such external adjustments shall be resealed with a metal tag showing the identification of the organization making the adjustments and the date. If any valve repairs are required, they shall be done by a qualified "VR" certificate holder.

(3) Repairing of noncode relief or safety valves shall not be allowed, except as specified below. Noncode liquid relief valves installed prior to 1-1-85 shall be repaired by an organization holding a valid "VR" Certificate of Authorization, but need not be stamped.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-24-072, § 296-104-520, filed 12/1/08, effective 1/1/09; 06-24-042, § 296-104-520, filed 11/30/06, effective 1/1/07. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-520, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-520, filed 12/24/03, effective 1/24/04. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-520, filed 10/28/98, effective 11/28/98; Part VII, § 5, filed 3/23/60.]

WAC 296-104-535 Repairs—What are the requirements for nuclear repairs/replacement? (1) Repairs/replacement to all nuclear components, appurtenances, and their supports shall conform to the rules contained in the ASME Section XI Code. The ASME Section XI Code edition and addenda shall be as specified in the owner in-service inspection program plan.

(2) Where a repair/replacement is performed, a report as required by ASME Section XI Code, signed by the owner and the Authorized Nuclear In-service Inspector (ANII) shall be submitted to the jurisdiction.

[Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-535, filed 10/28/98, effective 11/28/98.]

WAC 296-104-540 Repairs—What are the requirements for nuclear repairs of safety devices? All nuclear pressure retaining items shall be safe-guarded by safety devices, as specified in the ASME Section III, Division 1, Class 1, 2, and 3.

(1) The resetting, repair, and restamping of these safety devices shall be performed only by organizations holding a valid National Board "NR" and "VR" Certificate of Authorization to repair ASME Section III Code safety devices. An owner's ASME Section XI program may be used in lieu of a "NR" Certificate of Authorization for repair activities of the owner's valves. The repair work shall be documented on the applicable NR-1/NVR-1 form or on an owner's NIS-2 form. All repair/replacement activities performed under the "NR" Certificate of Authorization or owner's Section XI Repair program must be in accordance with the provisions of the NBIC, ASME Section XI, and the rules of the jurisdiction.

(2) External adjustments or repair activities performed by the owner shall be resealed with a metal tag showing the identification of the organization and the date.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 07-24-057, § 296-104-540, filed 12/4/07, effective 1/1/08.]

tive 1/4/08; 06-24-042, § 296-104-540, filed 11/30/06, effective 1/1/07. Statutory Authority: RCW 70.79.030 and 70.79.040. 98-22-024, § 296-104-540, filed 10/28/98, effective 11/28/98.]

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.

Boiler and pressure vessel installation/reinstallation permit (excludes inspection and certificate of inspection fee): \$50.00.

Certificate of inspection fees: For objects inspected, the certificate of inspection fee per object is \$20.70.

Hot water heaters per RCW 70.79.090, inspection fee: \$6.50.

Heating boilers:		
Cast iron—All sizes	Internal \$34.80	External \$27.80
All other boilers less than 500 sq. ft.		\$27.80
500 sq. ft. to 2500 sq. ft.	\$69.40	\$34.80
Each additional 2500 sq. ft. of total heating surface, or any portion thereof	\$27.80	\$13.70
Power boilers:	Internal	External
Less than 100 sq. ft.	\$34.80	\$27.80
100 sq. ft. to less than 500 sq. ft.	\$42.10	\$27.80
500 sq. ft. to 2500 sq. ft.	\$69.40	\$34.80
Each additional 2500 sq. ft. of total heating surface, or any portion thereof	\$27.80	\$13.70
Pressure vessels:		
Square feet shall be determined by multiplying the length of the shell by its diameter.		
	Internal	External
Less than 15 sq. ft.	\$27.80	\$20.70
15 sq. ft. to less than 50 sq. ft.	\$41.30	\$20.70
50 sq. ft. to 100 sq. ft.	\$48.10	\$27.80
For each additional 100 sq. ft. or any portion thereof	\$48.10	\$13.70
Nonnuclear shop inspections, field construction inspections, and special inspection services:		
For each hour or part of an hour up to 8 hours		\$42.10
For each hour or part of an hour in excess of 8 hours		\$62.80
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		\$62.80
For each hour or part of an hour in excess of 8 hours		\$98.20
Nonnuclear triennial shop survey and audit:		
When state is authorized inspection agency:		
For each hour or part of an hour up to 8 hours		\$42.10

For each hour or part of an hour in excess of 8 hours	\$62.80
When insurance company is authorized inspection agency:	
For each hour or part of an hour up to 8 hours	\$62.80
For each hour or part of an hour in excess of 8 hours	\$98.20

Examination fee: A fee of \$77.70 will be charged for each applicant sitting for an inspection examination(s).

Special inspector commission: An initial fee of \$26.30 and an annual renewal fee of \$10.50 along with an annual work card fee of \$15.80.

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 \$390.50 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.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and 2009 c 90. 10-06-049, § 296-104-700, filed 2/24/10, effective 4/1/10. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 08-12-015, § 296-104-700, filed 5/27/08, effective 6/30/08; 07-11-137, § 296-104-700, filed 5/22/07, effective 6/30/07; 06-12-032, § 296-104-700, filed 5/31/06, effective 7/1/06; 05-12-028, § 296-104-700, filed 5/24/05, effective 6/30/05. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-700, filed 10/19/04, effective 1/1/05; 04-13-044, § 296-104-700, filed 6/10/04, effective 6/30/04. Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, 70.79.350, and chapter 70.79 RCW. 04-01-194, § 296-104-700, filed 12/24/03, effective 1/24/04; 03-12-051, § 296-104-700, filed 5/30/03, effective 6/30/03; 02-23-036, § 296-104-700, filed 11/13/02, effective 12/14/02; 02-12-021, § 296-104-700, filed 5/28/02, effective 6/28/02; 01-24-061, § 296-104-700, filed 11/30/01, effective 12/31/01; 01-12-034, § 296-104-700, filed 5/29/01, effective 6/29/01. Statutory Authority: RCW 70.79.-030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-700, filed 10/10/00, effective 11/13/00. Statutory Authority: RCW 70.79.030 and 70.79.040. 99-08-049, § 296-104-700, filed 4/1/99, effective 5/2/99; 98-09-064, § 296-104-700, filed 4/20/98, effective 5/21/98. Statutory Authority: RCW 70.79.040. 93-12-014, § 296-104-700, filed 5/21/93, effective 6/21/93. Statutory Authority: RCW 70.79.030 and 70.79.330. 84-21-012 (Order 84-20), § 296-104-700, filed 10/5/84; 84-11-016 (Order 84-09), § 296-104-700, filed 5/10/84; 82-24-025 (Order 82-36), § 296-104-700, filed 11/23/82, effective 1/1/83; Order 77-23, § 296-104-700, filed 11/8/77; Emergency Order 77-22, § 296-104-700, filed 11/8/77.]

WAC 296-104-701 What are the civil penalties? (1)

An owner, user, or operator of a boiler or pressure vessel that violates a provision of chapter 70.79 RCW, or of the rules adopted under that chapter, is liable for a civil penalty based on the following schedule.

Operating under pressure a boiler or pressure vessel which the department has condemned, has issued a red tag or has suspended the inspection certificate:

First offense	\$150.00
Second offense	\$300.00
Each additional offense	\$500.00

Each day of such unlawful operation shall be deemed a separate offense.

Operating under pressure a boiler or pressure vessel without a valid inspection certificate:

First offense	\$50.00
Second offense	\$100.00
Each additional offense	\$200.00

Each day of such unlawful operation shall be deemed a separate offense.

Installation of a boiler or pressure vessel without meeting prior filing requirements of WAC 296-104-020:

First offense	\$100.00
Second offense	\$200.00
Each additional offense	\$500.00

Performing a repair to a boiler or pressure vessel, involving welding to a pressure retaining part, without meeting requirements of WAC 296-104-502:

First offense	\$150.00
Second offense	\$300.00
Each additional offense	\$500.00

Performing an alteration to a boiler or pressure vessel without meeting requirements of WAC 296-104-502:

First offense	\$150.00
Second offense	\$300.00
Each additional offense	\$500.00

Performing resetting, repair or restamping of safety valves, safety relief valves, or rupture discs, without meeting requirements of WAC 296-104-520:

First offense	\$150.00
Second offense	\$300.00
Each additional offense	\$500.00

Failure of owner to notify chief inspector in case of accident which serves to render a boiler or unfired pressure vessel inoperative, as required by WAC 296-104-025:

Each offense	\$100.00
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Failure to comply with a noncompliance report requirement:

Within 90 days	\$100.00
Within 91-180 days	\$250.00
Within 181-270 days	\$400.00
Within 271-360 days	\$500.00

(2) The inspection agency responsible for the inservice inspector of a boiler or unfired pressure vessel that violates a provision of chapter 296-104 WAC, or the rules adopted

under that chapter, is liable for a civil penalty based on the following schedule.

Failure to file a report of inspection per WAC 296-104-040:

Each offense	\$50.00
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Failure to apply a state serial number per WAC 296-104-140:

Each offense	\$50.00
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Failure to attach a "Red TAG" per WAC 296-104-110:

Each offense	\$50.00
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Each object (boiler or unfired pressure vessel) is considered a separate offense.

(3) The department shall by certified mail notify a person of its determination that the person has violated this section.

(4) Any person aggrieved by an order or act under the boiler and unfired pressure vessels law or under the rules and regulations may appeal to the board of boiler rules. This appeal shall be filed within twenty days after service of the notice of the penalty to the assessed party by filing a written notice of appeal with the chief boiler inspector per RCW 70.79.361.

(5) Each day that a violation occurs will be a separate offense. A violation will be a second or additional offense only if it occurs within one year from the first violation.

[Statutory Authority: RCW 70.79.030, 70.79.040, 70.79.150, 70.79.290, 70.79.330, and 70.79.350. 05-22-092, § 296-104-701, filed 11/1/05, effective 1/1/06. Statutory Authority: Chapter 70.79 RCW. 04-21-069, § 296-104-701, filed 10/19/04, effective 1/1/05. Statutory Authority: RCW 70.79.030, 70.79.040 and chapter 70.79 RCW. 00-21-024, § 296-104-701, filed 10/10/00, effective 11/13/00. Statutory Authority: Chapter 70.79 RCW. 87-12-003 (Order 87-10), § 296-104-701, filed 5/21/87.]