

**DIVISION 225
BOILERS AND PRESSURE VESSELS**

Part 1 — Administrative Requirements

918-225-0220

Reasonable Notice to Interested Parties

Prior to the adoption, amendment or repeal of any rule, the Board of Boiler Rules and the Building Codes Division shall give notice of the proposed adoption, amendment or repeal:

(1) In the Secretary of State's Bulletin referred to in ORS 183.360, at least 21 days prior to the effective date.

(2) By mailing a copy of the notice to persons on the Board of Boiler Rules' mailing list established pursuant to ORS 183.335 and OAR 918-001-0210.

Stat. Auth.: ORS 185.335

Stats. Implemented: ORS 183.335

Hist.: DC 92, f. & ef. 7-19-77; Renumbered from 814-025-0000; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94;

Renumbered from 918-225-0000

918-225-0240

Definitions

As used in OAR 918, division 225, unless the context requires otherwise:

(1) "Agricultural Purposes" means:

(a) Sowing, tending, and harvesting of products of the soil grown under natural conditions;

(b) Raising of poultry or fowl;

(c) Pasturage or raising of livestock or other animals; or

(d) Original processing of the farm product, but not the processing of the product of a different operator, or reprocessing work as freezing, canning, or packing if performed substantially for commercial purposes.

(2) "Available" to determine inspection fees at cost, means the vessels must be due for inspection in the year the notification is applicable, and must all be ready for inspection at the time designated by the inspector.

(3) "Board" is defined in ORS 480.515(2).

(4) "Boiler Room" means any enclosed room or designated space within a building, intended by design or by usage to contain a boiler that is connected and available for use. A boiler located in an area not meeting the definition of "boiler room" under OAR 918-225-0465 shall apply to any space within 20 feet of any burner.

(5) "Building Service Piping" means piping systems operating at or less than 150 psig steam; and water at or less than 160 psig and 250° F as described in ANSI/ASME Standard B31.9.

(6) "Chief Inspector" means the inspector appointed by the director pursuant to ORS 480.565(1).

(7) "Farm" means an area of land:

(a) Located in a rural district;

(b) Of sufficient size to generally be considered as a farm in its locale; and

(c) Devoted primarily to tillage and raising crops under natural conditions, or to raising animals, fowl, or poultry.

(8) "Emergency" as used in ORS 480.630(6) means an unplanned circumstance requiring immediate repair, installation, replacement, or shutdown because of risk to health, life, or property.

(9) "Hobby" or "Demonstration" means recreational or other noncommercial use.

(10) "Immediate Safety Hazard" means hazardous conditions exist requiring immediate correction to a boiler, pressure vessel, or pressure piping system to preserve the safety of people or property.

(11) "Installation" means, but is not limited to, permanently placing in its final operating position, assembling, or connecting a boiler, pressure vessel, boiler controls, or related appurtenances for service or use. Installation includes, but is not limited to, connecting water, steam, air, refrigerant, fuel source, or other product piping to or from a boiler or pressure vessel. Merely transporting, moving or temporarily positioning a boiler or pressure vessel is not an installation. For the purposes of these rules, an electrical power supply connection to a boiler or pressure vessel is not an installation.

(12) "National Board" means the National Board of Boiler and Pressure Vessel Inspectors.

(13) "Operating" means any vessel connected and ready for service.

(14) "Person" means any individual, partnership, corporation, association, governmental subdivision, or public or private organization of any character.

(15) "Place of Public Assembly" means a building used or held for use, in whole or in part, for worship; health treatment; rest, recuperation, or retirement living; child care nurseries or institutions; public meetings; education; instruction; entertainment; eating; recreation; or awaiting transportation.

(16) "Pressure Piping" means piping systems and components under the scope of ASME B31.1, B31.3, B31.5, and B31.9.

(17) "Pressure Relief Valve" means a valve activated by inlet static pressure which opens in proportion to the increase in pressure over the opening pressure range. Only ASME approved valves are allowed under the boiler rules.

(18) "Pressure Vessel" is defined in ORS 480.515(12).

(19) "Process Piping Inspector" means the owner's inspector, for the inspection of ASME B31.3 Process Piping, Category "M" fluid service only.

(20) "Psig" means pounds per square inch gauge pressure.

(21) "Related Appurtenance" is defined in ORS 480.515(13).

(22) "Repair" means:

(a) Welded or Riveted Repairs, meaning welding or riveting within or on the pressure boundaries of a boiler, pressure vessel or related appurtenance to restore the vessel or appurtenance to a safe and satisfactory operating condition, or any work that might impair the integrity of the pressure retaining item;

(b) Non-welded Major Repairs, meaning work performed on a boiler or pressure vessel and its related appurtenances by non-welded means to restore the vessel or appurtenance to a safe and satisfactory operating condition, including but not limited to the replacement of burners, tubes and cast iron sections; and

(c) Minor Repairs, meaning the non-welded replacement of safety devices, including but not limited to, low water cut-offs, pressure relief valves, safety valves, safety switches, rupture discs, high pressure or temperature limits, low pressure or temperature limits, fuel train components, flame detectors, flame safeguards, heat exchanger elements, and burner components.

(23) "Safety Valve" means a valve activated by inlet static pressure and characterized by rapid opening or pop action. Only ASME approved valves are allowed under the boiler rules.

(24) "Same Location," to determine inspection fees at cost, means that all vessels are within 2,000 feet of one another.

(25) "Service of Process" means deposit in the U.S. mail a copy of a notice addressed to the respondent at the respondent's last known address.

(26) "Single Family Dwelling" means a one-family dwelling structure.

(27) "Structure" means a building or shed with a roof and enclosed on the sides 75 percent or more.

(28) "Traction Boiler" means a boiler constructed before January 1, 1961, designed to operate or pull equipment, or to convert steam power into a flywheel energy driving apparatus such as a thresher, road roller, or grinding equipment.

(29) "Vessel That is Considered Subject to Corrosion or Erosion" means the vessel contains or is intended to contain contents having a corrosive or erosive effect on any portion of the vessel. The use of glass linings leaves a vessel subject to corrosion unless all portions of the vessel are impervious to the corrosive or erosive effects of the contents.

Stat. Auth.: ORS 455.030 & 480.545

Stats. Implemented: ORS 480.525, 480.545, 480.550, 480.560 & 480.565

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 3-1982, f. & ef. 2-3-82; DC 1-1984, f. & ef. 1-5-84; BCA 4-1989, f. & cert. ef. 4-17-89; Renumbered from 814-025-0003; BCA 4-

1989, f. & cert. ef. 4-17-89; BCA 5-1991, f. & cert. ef. 3-15-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0005; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 4-2003, f. & cert. ef. 3-14-03; BCD 17-2005(Temp), f. & cert. ef. 7-12-05 thru 9-30-05; BCD 20-2005, f. 9-15-05, cert. ef. 10-1-05; BCD 14-2007, f. 12-28-07 cert. ef. 1-1-08; BCD 9-2009, f. 12-30-09, cert. ef. 1-1-10; BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

Part II — Exemptions

918-225-0300

Fired Water Heaters

Fired water heaters used exclusively for heating water for swimming pools or spas are considered pool boilers and are exempt from the requirements of ORS 480.510 to 480.665 if:

(1) Units are equipped with a flow switch or pressure switch set at a minimum of 1-1/2 psig;

(2) No intervening stop valves are installed on the discharge side of the unit;

(3) Discharge piping is not reduced from the engineered sizing of the fired heater;

(4) All units are equipped with an ASME-approved pressure relieving device set at 50 psig or lower;

(5) The unit has a maximum of ten gallons capacity contained within the unit; and

(6) The burner is wired in series with the circulating pump.

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 7-1986, f. & ef. 5-5-86; DC 3-1987, f. & ef. 2-18-87; Renumbered from 814-025-0038; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0065

918-225-0310

Refrigerant Piping Systems; Components

(1) The requirements of OAR 918-225-0430(5) shall be enforced under this rule for all refrigerant piping systems consisting of welded, brazed or mechanically assembled piping and piping fittings exceeding 2 inches NPS, and containing any refrigerant chemical rated as other than A-1 or B-1 by the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE 34) as adopted by the **Oregon Mechanical Specialty Code**.

(2) One and two-family dwelling units and air conditioning refrigeration systems used solely for human comfort are exempt from this rule.

(3) All refrigeration piping system requirements other than those regulated by this rule are subject to the **Oregon Mechanical Specialty Code**.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.550

Stats. Implemented: ORS 480.550

Hist.: BCD 35-2000, f. 12-29-00, cert. ef. 7-1-01

918-225-0315

Process Piping Systems, Scope and Purpose

(1) For the purposes of the **Oregon Boiler and Pressure Vessel Specialty Code**, the requirements of OAR 918-225-0430(4) shall be applied to only Category “M” fluid service process piping systems, as described in **ASME B31.3, Appendix “M,”** Guide to Classifying Fluid Service. For the purposes of these rules, “process piping systems” consists of welded, brazed, mechanically or chemically assembled piping listed as Category “M” by the owner. Process piping systems begin at the first, flanged, screwed or circumferential joint outside the supply or source to the destination excluding manufactured packaged components. Process piping does not include liquefied petroleum gas piping.

(2) For the purposes of these rules, seismic provisions and additional requirements associated with process piping systems classified as Category “M” fluid service and the structure to which these systems are attached, shall be regulated and inspected under the provisions of the **Oregon Structural Specialty Code**.

(3) Businesses and owner-users installing process piping classified as Category “M” fluid service must meet the requirements under OAR 918-225-0640, 918-225-0720, 918-225-0730 and 918-225-0740 as appropriate. Individuals installing Category M fluid service process piping must be licensed under OAR 918-225-0691 on or before July 1, 2003, unless they meet the requirements of these rules under OAR 918-225-0720 or owner-users under 918-225-0740.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545, 480.565, 480.605, 480.607 & 480.647

Stats. Implemented: ORS 480.545, 480.565, 480.605, 480.607 & 480.647

Hist.: BCD 4-2003, f. & cert. ef. 3-14-03

918-225-0320

Refrigerant or Air Conditioning Pressure Vessels

(1) Refrigerant or air conditioning pressure vessels containing three cubic feet, or less, volume of non-corrosive gases are exempt from ORS 480.510 to 480.665 if the pressure vessel is manufactured in accordance with the **Boiler and Pressure Vessel Code, (ASME Section VIII, Division I)**, and registered with

the National Board of Boiler and Pressure Vessel Inspectors as required by OAR 918-225-0450(1).

(2) The installation and operation of these vessels are covered by the **Oregon Mechanical Specialty Code** or mechanical aspect of the **One and Two Family Dwelling Specialty Code**.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 26-1978, f. 9-21-78, ef. 10-1-78; DC 2-1985, f. & ef. 1-4-85; Renumbered from 814-025-0042; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0080

918-225-0330

Exemption of Unfired Pressure Vessels with an Inside Diameter of Six Inches and Less

(1) Vessels with an inside diameter or cross section diagonal not exceeding six inches, equipped with an approved pressure relieving device are exempt from ORS 480.510 to 480.665.

(2) No limitations are placed on length of vessel or pressure.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 18-1980, f. & ef. 8-22-80; BCA 2-1988, f. & cert. ef. 2-22-88; Renumbered from 814-025-0043; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0085

918-225-0340

Pressure Containing Parts of Piping Components

The following are exempt from the requirements of ORS 480.510 to 480.665:

(1) Pressure containers which are integral parts or components of rotating or reciprocating mechanical devices, including but not limited to pumps, compressors, turbines, generators, engines and hydraulic or pneumatic cylinders where the primary design considerations or stresses are derived from the functional requirements of the device.

(2) Pressure containing parts of other components, including but not limited to strainers and devices which do mixing, separating, snubbing, distributing and metering or controlling flow, where the parts are generally recognized as piping components or accessories.

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: BCA 1-1991, f. 1-18-91, cert. ef. 1-31-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0093

918-225-0345

Domestic Tankless Water Heater Definition

For the purpose of ORS 480.525(1)(c), "domestic" means a water heater designed to create hot water instantaneously on demand without the use of a storage tank located within and serving a single Residential Group R dwelling unit or sleeping unit as defined in the Oregon Structural Specialty Code.

Stat. Auth.: ORS 455.030

Stats. Implemented: Chapter 386 (2007 OR Laws)

Hist.: BCD 15-2007, f. 12-28-07, cert. ef. 1-1-08

918-225-0350

Hot Water Storage Tanks

Hot water supply storage tanks heated by steam or any indirect means not exceeding any of the following are exempt from ORS 480.510 to 480.665:

- (1) A heat input of 200,000 Btu/hr;
- (2) A water temperature of 210°F;
- (3) A nominal water containing capacity of 120 gallons; or
- (4) A maximum working pressure of 150 pounds per square inch gauge pressure.

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: BCA 1-1991, f. 1-18-91, cert. ef. 1-31-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0094

918-225-0360

Exemption of Certain Pressure Vessels

Pressure vessels for cold water storage, water filter, water softener, or hydro-pneumatic service, and equipped with an ASME approved pressure/temperature relieving device set at a maximum pressure of 300 psig and a maximum temperature of 210°F., except those pressure vessels connected to an outside air supply, are exempt from the Boiler and Pressure Vessel Law under ORS 480.525(1).

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 5-1982, f. & ef. 2-3-82; DC 21-1983, f. & ef. 9-29-83; BCA 6-1987, f. & ef. 8-24-87; BCA 3-1989, f. & cert. ef. 2-8-89; Renumbered from 814-025-0047; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0095; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98

918-225-0365

Exemption of Certain Miniature Boilers

A miniature boiler used commercially is exempt from the requirements of ORS 480.510 to 480.665, provided the boiler:

- (1) Does not have more than 1.5 cubic feet of steam space;
- (2) Is operated at not more than 30 pounds per square inch;
- (3) Has a safety valve set at or below 30 pounds per square inch; and
- (4) Meets the safety standards adopted by any of the following laboratories as of December 23, 1994:
 - (a) Underwriters Laboratories, Inc;
 - (b) Edison Testing Labs;
 - (c) Italian Instituto Superiore Per La Prevenzione E La Sicurezza Del Lavoro (ISPESL) also known as the "Italian National Standard"; or
 - (d) Technischer Uberwachungsverein (TUV) also known as the "German National Standard."

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: BCD 15-1994, f. & cert. ef. 6-14-94; BCD 29-1994, f. & cert. ef. 12-23-94

918-225-0370

Coil-Type Water Boilers

Coil-type water boilers, where the water can flash into steam when released directly to the atmosphere through a manually operated nozzle, are exempt from ORS 480.510 to 480.665 if the following conditions are met:

- (1) There is no drum, header, or other steam space;
- (2) No steam is generated within the coil;
- (3) Tubing outside diameter does not exceed one inch;
- (4) Pipe size does not exceed NPS 3/4;
- (5) Nominal water capacity does not exceed six gallons;
- (6) Water temperature does not exceed 350° F;
- (7) Adequate safety relief valves and controls are provided.

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: BCA 19-1991(Temp), f. 6-14-91, cert. ef. 6-15-91; BCA 30-1991, f. & cert. ef. 9-9-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0096

918-225-0380

Refrigeration Chillers

(1) Waterside vessels of refrigeration chillers are exempt under ORS 480.510 to 480.665 if:

- (a) The design pressure does not exceed 300 pounds per square inch gauge, the temperature does not exceed 210°F., and the system includes an ASME-approved relieving device set at a maximum working pressure of 300 pounds per square inch gauge at 210°F;

(b) The refrigerant side is built in accordance with the minimum safety standards and equipped with an ASME-approved relieving device set at or below the maximum working pressure and temperature as specified on the nameplate for the vessel; and

(c) All installations of refrigeration chillers comply with ORS 480.630.

(2) Systems connected to an outside heat energy source shall not be exempt from ORS 480.510 to 480.665.

(3) If any of the limitations in section (1) of this rule are exceeded, the chiller must comply with the minimum safety standards.

(4) This exemption does not apply to systems using ammonia as a refrigerant.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 20-1985(Temp), f. & ef. 9-20-85; DC 5-1986, f. & ef. 3-7-86; Renumbered from 814-025-0049; BCA 4-1990, f. & cert. ef. 2-6-90; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0115

918-225-0390

Hobby Miniature Steam Boilers

(1) Steam boilers of a miniature model locomotive, boat, tractor, or stationary engine are exempt from ORS 480.510 to 480.665 if:

(a) Constructed and maintained for hobby use, and not for commercial use;

(b) Has an inside diameter not to exceed 12 inches and having a grate area not to exceed 1-1/2 square feet;

(c) Has working pressure not to exceed 100 psi;

(d) Equipped with an ASME-approved safety valve of adequate capacity, together with a water level indicator and a pressure gauge;

(e) The boiler is inspected and approved by the Division prior to initial operation; and

(f) The boiler is found by the Division to be substantially in accordance with the minimum safety standards for material, design, and fabrication in existence at the time the boiler was manufactured.

(2) This exemption continues as long as:

(a) There is no explosion;

(b) No alteration or repair is made to the boiler affecting its strength or safety.

(3) If alteration or repair is made, the boiler must be requalified for the exemption.

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 18(Temp), f. & ef. 3-26-73; DC 24, f. 11-15-73, ef. 12-11-73; Renumbered from 814-025-0095; BCA 36-

1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0205; BCD 16-1998, f. 9-30-98, cert. ef. 10-1-98

918-225-0400

Traction Boilers

A traction boiler built prior to 1961 may be operated for hobby or demonstration purposes only if it complies with the following safety standards and requirements:

(1) Before initial operation, the boiler is thoroughly inspected by the Division and evaluated for safety. The selection of appropriate test equipment and procedures shall be at the Division's discretion and at the expense of the owner or user of the boiler. Approval for operation may be conditioned upon passing one or more of the following:

(a) Non-destructive examination equipment such as radiography, ultrasonic thickness testing and magnetic particle, or liquid penetrant process;

(b) Drilling or trepanning of material;

(c) Removal of rivets;

(d) Exposure of all joints and surfaces for visual examination.

(2) An annual opening permit is required. Each traction boiler shall be inspected internally and externally annually and given a hydrostatic test equal to its operating pressure. During the hydrostatic test there shall be no evidence of distortion or leakage in any of the pressure retaining boundaries or appurtenances. The safety valve shall be tested at the time of the external inspection.

(3) Each traction boiler must have an approved safety valve set to relieve at or below the maximum allowable working pressure. To be approved the safety valve shall be ASME Code stamped and National Board rated.

(4) The maximum allowable working pressure shall be calculated using a factor of Safety of 6 and using formula in the minimum safety standards in OAR 918-255-0430(1).

(5) The maximum allowable working pressure of any lap seam traction boiler with a diameter not exceeding 36 inches shall be determined by the Division after appropriate tests. The maximum working pressure shall not exceed 100 psi.

(6) Any repairs by welding or riveting to traction boilers shall be made by shops or contractors possessing a National Board repair symbol stamp. The repair shall be subject to the approval of the Division before and after the repair is made.

(7) Traction boilers operated subject to this rule shall be used for "Hobby or Demonstration" purposes only.

Stat. Auth.: ORS 480.560

Stats. Implemented: ORS 480.560

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; Renumbered from 814-025-0100; BCA 5-1991, f. & cert. ef. 3-15-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0210; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98

Part III — Codes and Vessel Operations

Subpart A — Codes

918-225-0430

Adopted Oregon Boiler and Pressure Vessel Specialty Code

(1) Effective January 1, 2012 the **Oregon Boiler and Pressure Vessel Specialty Code** consists of the following minimum safety standards for boilers, pressure vessels, pressure piping, parts, items, and repair and alteration procedures:

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

(b) The **Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers (ASME), 2010 Edition** as published, including Section I; Section II, Parts A, B, C, and D; Section IV; Section V; Section VIII, Division 1, 2, and 3; Section IX; and Section X only;

(c) The **2010 Edition of the ANSI/ASME B31.1 Power Piping Code**;

(d) The **2010 Edition of the ANSI/ASME B31.3 Process Piping Code**;

(e) The **2010 Edition of the ANSI/ASME B31.5 Refrigeration Piping Code**;

(f) The **2011 Edition of the ANSI/ASME B31.9 Building Service Piping Code**;

(g) The **2011 Edition of the National Board Inspection Code ANSI/NB 23**, including Parts 1, 2, and 3, with Oregon amendments;

(h) The **2011 Edition of NFPA 85, Boiler and Combustion Systems Hazards Code**; and;

(i) The **2009 Edition of ASME, CSD-1, Controls and Safety Devices for Automatically Fired Boilers**.

(2) Notwithstanding any licensing or certification provisions contained in the model codes adopted in subsection (1) of this section for inclusion in the **Oregon Boiler and Pressure Vessel Specialty Code**, the standards and requirements applicable to boiler and pressure vessel business and trade licenses, as well as inspector certifications, issued by the Building Codes Division are established in ORS chapters 455 and 480, and OAR chapter 918, divisions 30, 90, and 225.

[Publications: Publications referenced are available for review from the agency.]

Stat. Auth.: ORS 455.020, 480.545 & 480.550
 Stats. Implemented: ORS 480.545, 480.550 & 480.560
 Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 19, f. 6-21-73, ef. 7-1-73; DC 27(Temp), f. & ef. 12-31-73; DC 33, f. 5-6-74,

ef. 5-25-74; DC 38(Temp), f. & ef. 11-1-74; DC 50, f. 7-2-75, ef. 7-25-75; DC 89, f. & ef. 6-2-77; DC 93, f. & ef. 7-19-76; DC 1-1978, f. 1-5-78, ef. 1-15-78; DC 4-1980, f. & ef. 5-30-80; DC 6-1982, f. & ef. 2-4-82; DC 23-1982, f. & ef. 11-9-82; DC 18-1983, f. & ef. 8-11-1983; DC 21-1983, f. & ef. 9-29-83; DC 1-1984, f. & ef. 1-5-84; DC 18-1984, f. & ef. 5-9-84; DC 36-1984, f. & ef. 12-4-84; DC 16-1985, f. & ef. 7-1-85; DC 6-1986, f. & ef. 5-5-86; DC 2-1987, f. & ef. 2-18-87; BCA 5-1987, f. & ef. 8-24-87; BCA 15-1988, f. & cert. ef. 11-16-88; BCA 25-1989, f. & cert. ef. 7-27-89; Renumbered from 814-025-0006; BCA 5-1990, f. & cert. ef. 2-6-90; BCA 26-1990, f. & cert. ef. 10-30-90; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0015; BCD 17-1996, f. & cert. ef. 9-17-96; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 13-2002, f. 6-28-02, cert. ef. 7-1-02; BCD 17-2005(Temp), f. & cert. ef. 7-12-05 thru 9-30-05; BCD 20-2005, f. 9-15-05, cert. ef. 10-1-05; BCD 16-2006, f. 12-29-06, cert. ef. 1-1-07; BCD 33-2008, f. 12-31-08, cert. ef. 1-1-09; BCD 21-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0435

Amendments to the Oregon Boiler and Pressure Vessel Specialty Code

(1) The **Oregon Boiler and Pressure Vessel Specialty Code** is adopted and amended pursuant to OAR chapter 918, division 8. Amendments adopted for inclusion into the **Oregon Boiler and Pressure Vessel Specialty Code** are placed in this rule.

(2) Effective January 1, 2012, the **2011 Edition of the National Board Inspection Code ANSI/NB 23, part 1** is amended in Oregon as provided in [Table 2-B](#).

[Publications: Publications referenced are available for review from the agency.]

Stat. Auth.: ORS 455.020, 480.545 & 480.550
 Stats. Implemented: ORS 480.545 & 480.550

Hist.: BCD 16-2006, f. 12-29-06, cert. ef. 1-1-07; BCD 6-2007, f. 6-8-07, cert. ef. 6-15-07; BCD 33-2008, f. 12-31-08, cert. ef. 1-1-09; BCD 21-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0445

Other Installation Standards

(1) Boilers or pressure vessels not designed or constructed in accordance with the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers (ASME) may be installed in Oregon if the boiler or pressure vessel was designed or constructed in accordance with the applicable standards issued by one of the following organizations:

- (a) British Standards Institute;
- (b) Canadian Standards Association;
- (c) European Committee for Standardization; or

(d) Syndicat National de la Chaudronnerie de la Tuyauterie & de la Maintenance Industrielle (SNCT).

(2) Boilers and pressure vessels constructed in accordance with the standards listed in (1)(a) through (d) of this rule must:

(a) Have controls and safety devices that are comparable to the controls and safety devices outlined in ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers, including, but not limited to, data plates and warning labels that are written in English;

(b) Be fitted with pressure relief valves that are built to ASME standards; and,

(c) Be installed, operated, maintained, and repaired in accordance with the provisions of ORS 480.510 to 480.670 and these rules.

Stat. Auth.: ORS 480.545 & 480.560

Stats. Implemented: ORS 480.545 & 480.560

Hist.: BCD 32-2008, f. 12-31-08, cert. ef. 1-1-09

Subpart B — Vessel Operations

918-225-0450

Manufacturer's Data Reports

(1) For new boilers or pressure vessels built to ASME or Canadian Standards Association standards, a Manufacturer's Data Report shall be filed with the National Board of Boiler and Pressure Vessel Inspectors before installing any new boiler or pressure vessel subject to installation inspection in Oregon. A copy of the filing is provided to the chief inspector by the National Board of Boiler and Pressure Vessel Inspectors when the boiler is to be installed in Oregon.

(2) For new boilers or pressure vessels not built to ASME or Canadian Standards Association standards, that are approved for installation in Oregon through administrative rule or an alternate method ruling, shall require manufacturer's construction specifications that are comparable to a Manufacturer's Data Report and that are written in English, to be filed with the division before installation.

(3) A Manufacturer's Data Report shall be filed with the chief inspector before installing any new unfired miniature pressure vessel or used boiler or pressure vessel subject to installation inspection in Oregon.

(4) This rule does not apply to cast iron boilers.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 19, f. 6-21-73, ef. 7-1-73; DC 2-1982, f. & ef. 2-3-82; DC 21-1984, f. & ef. 5-15-84; DC 32-1984, f. & ef. 10-19-84; Renumbered from 814-025-0008; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0020; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 31-2008, f. 12-31-08, cert. ef. 1-1-09

918-225-0460

Reporting of Accidents and Conditions of Use

(1) Any accident, which includes an explosion, fire or major failure of a vessel or a related appurtenance shall be reported to the chief inspector by telephone or FAX, or both, at the Building Codes Division within 24 hours of the occurrence by:

(a) Vessel owner, whether legal or equitable;

(b) Vessel user, whether agent of the owner or independent thereof;

(c) Deputy and special inspectors; or

(d) Any person licensed or certified under ORS 480.630.

(2) The chief inspector shall cause an immediate inspection of the vessel reported under section (1) of this rule.

(3) Neither the vessel, nor its related appurtenances, shall be changed, altered, repaired or moved (except to give emergency aid or assistance to injured persons), before a deputy or special inspector has been notified of the nature, extent and cause of the accident. The deputy or special inspector shall, at that time, make a determination whether repairs may be undertaken and by what method. The vessel owner or user shall keep any damaged parts of the vessel available, until the inspection required by section (2) of this rule has been made.

(4) Reports made under section (1) of this rule shall not relieve any person from the requirements of an inspection as provided by section (2) of this rule.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 3-1981, f. & ef. 1-23-81; Renumbered from 814-025-0071; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0160

918-225-0465

Boiler Room Usage

(1) Every boiler room shall be maintained for exclusive use of boilers and associated systems, equipment and machinery. Storage of non-boiler-related machinery, equipment or materials in a boiler room is prohibited. Flammable liquid or gas containers shall not be placed or stored in a boiler room.

(2) Boiler water treatment chemicals, boiler maintenance or repair tools and equipment and boiler record-keeping materials are exempted from section (1) of this rule.

(3) Boiler rooms shall be maintained in an orderly manner. Lighting shall be provided and maintained in accordance with **Table 220-3(a)** of the **Electrical Specialty Code** adopted in OAR 918-305-0100. Trash receptacles containing combustible materials shall be of the self-closing type.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01

918-225-0470

Boiler Operation

The owner-user of a boiler, designed for operation at or above 15 psi steam; or 160 psi or 250 F. water shall insure that all boiler control and safety devices are thoroughly inspected and tested at regular intervals consistent with the provisions of OAR 918-225-0560 and 918-225-0570. A daily record of boiler operation, tests, inspections, maintenance and feed water treatment shall be maintained in or near the boiler room and shall be available for examination by any deputy or special inspector. The record shall include the name and signature of the person assigned responsibility for boiler operations.

(1) A person suitably trained in boiler operation and control must be assigned responsibility for the boiler and shall be in close proximity of the boiler whenever it is in operation. While in operation, the boiler may not be left unattended for any period longer than the response time described in section (3) of this rule.

(2) Each boiler must be equipped with an alarm which operates at the lowest permissible water level or highest permissible operating temperature. The alarm must be audible to the person responsible for operation of the boiler at any time the boiler is in operation. The person must be able to respond to a boiler fault within the response time described in section (3) of this rule. At least one low water control device designed to shut down the boiler when activated, must require manual resetting before the boiler may be restarted.

(3) Response time for a boiler subject to this rule shall be the time required to lower the water level from the normal operating level to the minimum allowable level when the boiler is firing at the maximum rate and the feed water is shut off; or to raise the operating pressure or temperature of a water boiler to the maximum allowable rating.

(4) Boilers using solid fuel not in suspension shall have fuel and water control devices approved by the chief inspector, and in case of feed water failure shall be equipped with a means to effectively reduce or eliminate fuel heat input to the boiler.

(5) Miniature boilers built to **ASME Section I, part PMB** are exempt from this rule. Boilers of historical design, operated for hobby use only, are exempt from section (2) of this rule.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 24-1982, f. & ef. 11-16-82; Renumbered from 814-025-0085; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0190; BCD 4-1995, f. & cert. ef. 3-15-95; BCD 13-1995, f. & cert. ef. 9-15-95; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01

918-225-0510

Installation of Buried Vessels

Under no circumstances shall any pressure vessel subject to the Boiler and Pressure Vessel Laws and these rules be buried underground or located in an inaccessible place. Where necessary to install a vessel underground, it shall be enclosed in a concrete or masonry pit with removable cover so that inspection of entire shell and heads of the vessel can be made.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 92, f. & ef. 7-19-77; DC 10-1983, f. & ef. 4-28-83; Renumbered from 814-025-0046; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0105

Part IV — Inspection Requirements

Subpart A — Powers of Special Inspector

918-225-0540

Scope of Special Inspector's Authority

(1) General inspection requirements are in ORS 480.560.

(2) The type of inspections a special inspector can do is set out in ORS 480.570.

(3) The special inspector's enforcement powers are in ORS 480.660.

(4) Appeals from special inspector actions are under ORS 480.660(4).

Stat. Auth.: ORS 480.560, 480.570 & 480.660

Stats. Implemented: ORS 480.560, 480.570 & 480.660

Hist.: BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94

Subpart B — Responsibility of Inspectors

918-225-0560

Responsibility of Inspectors

(1) All deputy and special inspectors shall perform boiler, pressure vessel and pressure piping inspections in accordance with the **Boiler and Pressure Vessel Specialty Code** adopted in OAR 918-225-0430 and the following requirements of the division:

(a) For new boilers, the inspector shall verify that the controls and safety devices required by ASME CSD-1 or other construction codes are installed and function as designed in accordance with manufacturer's instructions;

(b) External boiler inspections shall be performed with the boiler in normal operation. The inspector shall examine all controls, safety devices, water columns and gauge glasses for evidence of tampering and shall verify that all testing has been performed to ensure proper functioning;

(c) Internal boiler inspections shall be performed in a thorough and complete manner. Manways and other inspection openings necessary to perform a particular inspection shall be removed for access to the boiler internals. Water columns, feed water controllers and feed piping shall be inspected internally. The inspector shall visually examine pressure boundary retaining devices, boiler refractory, hangers, clips, boiler tubes and headers and drum internals for damage, corrosion, overheating, welded repairs, feed water treatment or any detrimental conditions;

(d) The inspector shall explain to the owner or user that any boiler, pressure vessel or pressure piping deficiency requires correction under the **Oregon Boiler Specialty Code**. The inspector shall require conditions not hazardous to health or safety to be corrected within 30 days. The inspector shall require conditions hazardous to health or safety to be corrected prior to operating the equipment. The owner or user of the equipment may apply to the chief inspector for extension of the 30-day correction requirement; and

(e) All inspectors witnessing installation, repair or alteration of boilers, pressure vessels or pressure piping shall verify that the contractor and workers performing the work are appropriately licensed and hold valid permits as required by ORS 480.630.

(2) Failure to comply with subsections (1)(a) through (e) of this rule, or failure of an owner or user to perform a required deficiency correction may cause additional inspections to be performed per ORS 480.570 as directed by the chief inspector.

(3) The responsibilities of process piping inspectors are located in OAR 918-225-0562.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 455.030 & 480.545
 Stats. Implemented: ORS 480.545, 480.555, 480.560, 480.565 & 480.570
 Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 37-1984, f. & ef. 12-4-84; Renumbered from 814-025-0020; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0045; BCD 26-1998, f. 12-30-98, cert. ef. 1-1-99; BCD 4-2003, f. & cert. ef. 3-14-03; BCD 17-2005(Temp), f. &

cert. ef. 7-12-05 thru 9-30-05; BCD 20-2005, f. 9-15-05, cert. ef. 10-1-05

918-225-0562

Process Piping Inspector Responsibilities

(1) The process piping inspector shall:

(a) Inspect the Category "M" fluid service process piping to the extent necessary to be satisfied that it conforms to all applicable examination requirements of **ASME B31.3**;

(b) Verify that all required examinations and testing have been completed; and

(c) Complete and sign division-supplied forms and provide them to the authority having jurisdiction, the division and the registered owner a summary report of the inspections on at least a quarterly basis including information showing who did the inspections.

(2) A certified process piping inspector may delegate inspection responsibility only to other persons when the process piping inspector has:

(a) Provided the name or list of names of the delegates to the authority having jurisdiction and the division; and

(b) Determined the person to whom an inspection function is delegated is qualified to perform that function.

(3) The division may review inspection and installation activities as necessary to determine compliance and may assess an hourly review fee as appropriate.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.565

Stats. Implemented: ORS 480.565

Hist.: BCD 6-2003, f. 3-14-03, cert. ef. 7-1-03

918-225-0565

Reporting of Immediate Hazards to Health or Safety

Deputy and special inspectors shall report immediate hazards to health or safety concerning boilers or pressure vessels to the chief inspector immediately by telephone and also that a notice of defective condition was issued and that the hazardous operations were stopped.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 11-1985, f. & ef. 5-22-85; BCA 4-1988, f. & cert. ef. 2-22-88; Renumbered from 814-025-0070; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0155; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98 Renumbered from 918-225-0800

Subpart C — Timing of Inspections**918-225-0570****Boiler and Pressure Vessel Inspection Schedules**

Unless the division grants special permission, all inspectors must comply with the following inspection schedule:

- (1) Power boilers must be inspected, at minimum:
 - (a) Internally – every year, when physical construction of the boiler allows; and
 - (b) Externally – every year, while under pressure.
- (2) Cast iron boilers must be inspected externally – every two years, while under pressure.
- (3) Low pressure steam boilers must be inspected, at minimum:
 - (a) Internally – every two years, when physical construction of the boiler allows; and
 - (b) Externally – every two years, while under pressure.
- (4) Hot water heating and hot water supply boilers must be inspected:
 - (a) Internally – every six years, when physical construction of the boiler allows; and
 - (b) Externally – every two years, while under pressure.
- (5) Pressure vessels containing anhydrous ammonia intended for use as fertilizer must be inspected, at minimum, externally every three years.
- (6) Portable pressure vessels, mounted on a motorized vehicle and containing only air, not exceeding 5 cubic feet in volume and operated at gauge pressures of not more than 200 pounds per square inch must be inspected, at minimum:
 - (a) Internally – every four years, subject to section (14) of this rule; and
 - (b) Externally – every four years.
- (7) Fixed pressure vessels, containing only air, not located at a place of public assembly, not exceeding 20 cubic feet in volume, and operated at gauge pressures of not more than 200 pounds per square inch must be inspected, at minimum:
 - (a) Internally – every six years, subject to section (14) of this rule; and
 - (b) Externally – every six years.
- (8) Co₂ vessels and hydro-pneumatic pressure vessels, used for beverage service, not exceeding 20 cubic feet in volume, and operated at gauge pressures of not more than 300 pounds per square inch must be inspected, at minimum:
 - (a) Internally – every six years, subject to section (14) of this rule; and
 - (b) Externally every six years.
- (9) Pressure vessels, not classified in sections (5), (6), (7), and (8) of this rule, and subject to internal corrosion or erosion must be inspected, at minimum:
 - (a) Internally – every two years, subject to section (14) of this rule; and

(b) Externally – every two years.

(10) Unfired pressure vessels, not classified in sections (5), (6), (7), (8), (11), and (12) of this rule, and not subject to internal corrosion must be inspected, at minimum, externally – every-four years.

(11) Unfired pressure vessels not subject to internal corrosion but containing a substance which, if it were to leak, might cause serious irreversible harm to a person must be inspected, at minimum:

(a) Internally – every two years, subject to section (14) of this rule; and

(b) Externally – every two years.

(c) A substance “might cause serious irreversible harm” if the substance’s Material Safety Data Sheet describes serious health or physical risks caused by short-term exposure to the substance.

(12) Unfired pressure vessels not subject to internal corrosion that are located at a place of public assembly and are not classified in section (8) of this rule must be inspected, at minimum:

(a) Internally – every two years, subject to section (14) of this rule; and

(b) Externally – every two years.

(13) Pressure piping systems containing refrigerants, steam, or pressurized condensate: Inspection during fabrication, installation, repair, or alteration for verification of compliance with material, welding, brazing, and structural support requirements. The inspector may require other tests to verify quality of weldments. This rule does not apply to welded repair of pressure piping under OAR 918-225-0720.

(14) The inspector may waive an internal inspection, under section (6), (7), (8), (9), (11), or (12) of this rule if the inspector believes from alternate inspection methods an internal inspection is not necessary to verify the safe condition of the vessel.

(15) An inspector may require additional internal or external inspections, or tests, other than those required in this rule, if the inspector has reason to believe that the boiler or pressure vessel does not meet minimum safety standards.

(16) Failure to comply with sections (1) through (15) of this rule may cause inspections to be performed by a deputy inspector per ORS 480.570(6) as directed by the chief inspector.

NOTE: The information in this rule is summarized in [Table 1-B](#), Boiler and Pressure Vessel Inspection Cycles.

Stat. Auth.: ORS 480.545, 480.550, 480.560
 Stats. Implemented: ORS 480.545, 480.550, 480.560
 Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 12-1980, f. & ef. 9-12-80; BCA 1-1987, f. & ef. 7-1-87; Renumbered from 814-025-0075; BCA 22-1992(Temp), f. 12-15-92, cert. ef. 1-1-93; BCA 4-1993, f. & cert. ef. 4-5-93; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-

0175; BCD 18-1996, f. & cert. ef. 9-17-96; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 15-2006, f. 12-29-06, cert. ef. 1-1-07; BCD 7-2007, f. 7-13-07, cert. ef. 9-1-07; BCD 29-2008, f. 12-31-08, cert. ef. 1-1-09; BCD 21-2011, f. 12-30-11, cert. ef. 1-1-12

Part V -- Fees and Permits

918-225-0600

Permits

(1) Except as otherwise provided in this rule, an installation permit is required before installing, altering, or repairing a nonexempt boiler or pressure vessel.

(2) Notwithstanding section (1) of this rule:

(a) An installation permit is not required for minor repairs performed under a minor repair permit in accordance with OAR 918-225-0606 to 918-225-0618.

(b) An installation permit is not required for minor repairs or non-welded major repairs to a pressure vessel containing liquefied petroleum gas that is under the jurisdiction of the State Fire Marshal.

(c) If the installation, alteration, or repair will be performed by the owner of the boiler or pressure vessel or an employee of the owner, an installation permit is only required if the boiler or pressure vessel is located in a structure that:

(i) Is classified as an Education Group "E" Occupancy under the Oregon Structural Specialty Code;

(ii) Is classified as an Institutional Group "I-2" Occupancy under the Oregon Structural Specialty Code; or

(iii) Has an occupant load greater than 100, as calculated under the Oregon Structural Specialty Code.

(d) Notwithstanding subsection (c) of this rule, an installation permit is not required for a boiler or pressure vessel that is installed, altered, or repaired by its owner or an employee of its owner in a location that is staffed 24 hours a day, seven days a week, by individuals knowledgeable in the operation and maintenance of the boiler or pressure vessel.

(3) An operating permit or a temporary operation authorization is required before placing a nonexempt vessel into operation.

(4) An installation permit fee includes two inspections of the boiler or pressure vessel. An operating permit fee includes one external inspection of the boiler or pressure vessel and one internal inspection when both are required. If an inspection is scheduled, and the inspector is at the site but the boiler or pressure vessel is not ready or cannot be accessed, the rescheduled inspection will be at an additional cost. The fee for such inspections is the hourly rate specified in ORS 480.605.

(5) Permits to operate boilers or pressure vessels shall be issued periodically according to vessel type,

based on the schedule established by the division in [Table 1-A](#).

(6) Operating and installation permit fees are as shown in [Table 3-B](#).

(7)(a) Operating permit fees not received within 90 days of the billing date may be considered delinquent and subject to a late penalty of double the fee amount. It is the equipment owner's responsibility to maintain a current operating permit. This responsibility includes notifying the division of address and other billing information changes. Late penalties may only be waived under exceptional circumstances.

(b) All waiver requests must be submitted in writing and must clearly state the reason for the request. A waiver may be granted for all or part of the additional fee.

(8) Where an installation permit is required, the equipment owner or, if the work will be performed by a contractor, the contractor, must acquire the installation permit prior to beginning the intended installation, repair, or alteration, and notify the deputy or special inspector who will inspect the work. Work may not begin until the inspector has reviewed and approved the work to be performed.

(a) The installation permit must be posted at the job site before beginning the work.

(b) This rule does not change the provisions for emergency permits in ORS 480.630(6). It is recommended, but not required, that emergency permits be reviewed and coordinated with the inspector responsible for inspecting the completed work.

(c) Commissioning of a boiler by a commissioning agent or manufacturer's representative does not require a separate installation permit.

(9) An installation permit or operating permit issued under this rule is not transferable.

(10) An installation permit automatically expires 18 months from the date of issuance unless the installation, alteration, or repair begins before the end of the 18th month.

(a) The holder of an un-expired installation permit may submit a written request for an unconditional six-month extension of the expiration date. The division may not extend an installation permit more than twice.

(b) An expired installation permit may not be extended or renewed. A new application and fee will be required. The division will not refund the fees for an expired installation permit.

(c) Fees for installation permits are non-refundable.

NOTE: Boiler and Pressure Vessel Operating Permit Periods can be found in [Table 1A](#) and Boiler and Pressure Vessel Permit Fees can be found in [Table 3-B](#).

Stat. Auth.: ORS 480.585, 480.595, & 480.605

Stats. Implemented: ORS 480.585, 480.595, 480.605, & 480.630

Hist.: BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 14-2007, f. 12-28-07 cert. ef. 1-1-08; BCD 9-2009, f. 12-30-09, cert. ef. 1-1-10; BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0606**Issuance and Purchase of Minor Repair Permits**

(1) Beginning January 15, 2012, the Building Codes Division will issue minor repair permits in lots of five at a cost of \$175 per lot. Each lot of minor repair permits is valid for one year from the date of purchase.

(2) The following persons may purchase minor repair permits:

(a) Contractors holding a verified Construction Contractors Board license and a valid boiler contractor license under ORS 480.630; or

(b) Owners of boilers and pressure vessels and their designated representatives.

(3) Minor repair permits are not transferable.

Stat. Auth.: ORS 480.595, 455.154 & 455.155

Stats. Implemented: ORS 480.595, 455.154 & 455.155

Hist.: BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0609**Use of Minor Repair Permits**

(1) Only those minor repairs described in OAR 918-225-0612 may be performed under a minor repair permit.

(2) A minor repair permit authorizes work on a single boiler or pressure vessel. Multiple minor repairs may be performed under a minor repair permit provided that each minor repair is completed within the five day period that begins when the first minor repair is completed.

(3) All work performed under a minor repair permit must conform to the Oregon Boiler and Pressure Vessel Specialty Code.

(4) An individual performing work under a minor repair permit must:

(a) Hold the appropriate license, if required, under ORS 480.630 and OAR 918-225-0691 for the type of work performed;

(b) Fill out the information required on the minor repair permit; and

(c) Post the minor repair permit in a secure and visible location near the site of the repair.

(5) Within five business days of work being completed, the purchaser of the minor repair permit is responsible for ensuring that all work that was performed under the minor repair permit is recorded in the manner approved by the division.

[Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.595, 455.154 & 455.155

Stats. Implemented: ORS 480.595, 455.154 & 455.155

Hist.: BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0612**Scope of Work Allowed under Minor Repair Permit**

(1) Only minor repairs may be performed under a minor repair permit. Minor repairs include, but are not limited to, the non-welded replacement of the following:

(a) Low water cut-off;

(b) Pressure relief valve;

(c) Safety valve;

(d) Safety switch;

(e) Rupture disc;

(f) High pressure or temperature limit;

(g) Low pressure or temperature limit;

(h) Fuel train component;

(i) Flame detector;

(j) Flame safeguard;

(k) Heat exchanger element; and

(l) Burner components.

(2) Nothing in this rule prohibits purchasing an installation permit to ensure that a minor repair will be individually inspected.

(3) A minor repair permit is not required for minor repairs made to pressure vessels containing liquefied petroleum gas that are under the jurisdiction of the State Fire Marshal.

Stat. Auth.: ORS 480.595, 455.154 & 455.155

Stats. Implemented: ORS 480.595, 455.154 & 455.155

Hist.: BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0615**Inspection of Minor Repair Permits**

(1) The division will randomly inspect at least one permit from each lot of minor repair permits

(2) The division will initially select one minor repair permit from each lot for inspection. If the division determines that the work done under the first permit does not comply with the Oregon Boiler and Pressure Vessel Specialty Code, the division will inspect a second permit from the same lot. If the division determines that the work done under the second permit is also non-compliant, the division will individually inspect all remaining permits from the same lot.

(3) The purchase price for each lot of minor repair permits includes the fee for one inspection. The division will charge for any additional inspections at its hourly inspection rate.

(4) If the division determines that work performed under a minor repair permit did not comply with the Oregon Boiler and Pressure Vessel Specialty Code, the division will require corrections to bring the boiler or

pressure vessel into code compliance. Such corrections may not be performed under a minor repair permit. Installation permit and inspection requirements apply.

(5) Work performed under a minor repair permit that is not randomly inspected in accordance with this rule will be inspected during the boiler or pressure vessel's next regularly scheduled inspection.

Stat. Auth.: ORS 480.595, 455.154 & 455.155
Stats. Implemented: ORS 480.595, 455.154 & 455.155
Hist.: BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0618

Misuse of Minor Repair Permits

(1) An individual performing work under a minor repair permit misuses the minor repair permit if the work performed does not conform to the Oregon Boiler and Pressure Vessel Specialty Code.

(2) The purchaser of a lot of minor repair permits misuses minor repair permits if:

(a) Two or more repairs performed under the lot do not conform to the Oregon Boiler and Pressure Vessel Specialty Code; or

(b) In the case of a purchaser who has purchased and used ten or more lots of minor repair permits, more than 5% of all repairs performed under minor repair permits issued to the purchaser did not conform to the Oregon Boiler and Pressure Vessel Specialty Code.

(3) If the division determines that a person or entity has misused minor repair permits, the division may immediately suspend that person or entity from purchasing, using, or performing work under minor repair permits for not less than one year. In the case of a purchaser, the period of suspension may be extended until all unused minor repair permits have been returned to the division.

(4) Violations of the minor repair permit rules may also be subject to civil penalties and license revocations.

Stat. Auth.: ORS 480.595, 455.154 & 455.155
Stats. Implemented: ORS 480.595, 455.154 & 455.155
Hist.: BCD 36-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0620

Bulk Rate Permits

(1) Bulk rate permits may be granted if there is a quantity of either six (6) or more boilers or six (6) or more pressure vessels at the same location.

(2) To obtain bulk rate permits, the owner or user must make a written request to the division at least 30 days before the expiration of existing operating permits.

(3) If a bulk rate site requires two or more inspections during an inspection cycle, the division may rescind bulk rate permits and charge the full operating permit fees, as provided in [Table 3-B](#). Inspection cycles are listed in [Table 1-B](#).

Stat. Auth.: ORS 480.600
Stats. Implemented: ORS 480.600
Hist.: DC 17-1982, f. 7-31-72, ef. 8-15-72; Renumbered from 814-025-0050; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0120; BCD 9-2009, f. 12-30-09, cert. ef. 1-1-10; BCD 21-2011, f. 12-30-11, cert. ef. 1-1-12

918-225-0630

Special Fee for Dryer Permits

The operating permit fee for dryer rolls for a paper machine is \$5.50 per roll, if the machine is under the inspection requirements of ORS 480.600(2).

Stat. Auth.: ORS 480.600
Stats. Implemented: ORS 480.600
Hist.: DC 10-1981, f. & ef. 7-6-81; Renumbered from 814-025-0051; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0125; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 9-2009, f. 12-30-09, cert. ef. 1-1-10

Part VI – Certification

Subpart A -- Licenses and Certificates; Fees

918-225-0640

Business and Trade License Fees

(1) Licenses required by ORS 480.630 shall be issued by the division to applicants who meet the requirements for the license and apply as established in OAR division 30.

(2) For applications received by the division prior to May 15, 2008 the application fee for a business license shall be \$165 and the application fee for a trade license shall be \$27.50. Any license issued prior to May 15, 2008 expires on July 1, 2008.

(3) The following fees apply for a three-year license term as established in OAR 918-030-0220:

(a) Boiler business license application and renewal fees - \$495

(b) Class 1 and 6 boiler trade license application and renewal fees - \$82.50

(c) Class 2, Class 3, Class 4, Class 5, Class 5A and 5-B boiler trade license fees:

(A) Application fee - \$82.50

(B) Renewal fee - \$112.50, which includes a \$30 fee to track continuing education under ORS 480.545 and OAR 918-225-0670.

Stat. Auth.: ORS 455.117, 480.545, 480.630
Stats. Implemented: ORS 480.630
Hist.: BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 16-2006(Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06; BCD 13-2006, f. 9-29-06, cert. ef. 10-1-06; BCD 17-2007, f. 12-28-07, cert. ef. 1-1-08

918-225-0650**Practical Experience Requirement**

Inspectors shall have at least the following practical experience in activities listed by ORS 480.565(1):

- (1) Chief Inspector, ten years experience;
- (2) Deputy or Special Inspector, experience required by the bylaws of the National Board for a commission as a National Board Inspector.

Stat. Auth.: ORS 480.565

Stats. Implemented: ORS 480.565

Hist.: BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94

918-225-0660**Certification of Special Inspectors**

(1) An application for special inspector certification shall be filed by an employer described in ORS 480.565(3) using forms provided by the division and submitting the appropriate application fee.

(2) The person to be certified shall meet the experience requirements in OAR 918-225-0650 and shall have passed the National Board of Boiler and Pressure Vessel Inspectors Examination.

(3) An examination covering the Oregon Boiler and Pressure Vessel Law, ORS 480.510 to 480.990 and OAR chapter 918, division 225, the **National Board Inspection Code** and **ASME CSD-1** shall be given by the chief inspector to all special inspector applicants.

(4) Special inspector certifications shall be renewed annually, by paying a renewal fee of \$25 prior to January 1 of each year.

(5) When a special inspector leaves the employment of the employer covered by ORS 480.565, the employer shall notify the division and return the special inspector certification.

(6) Process piping inspectors shall be certified pursuant to OAR 918-225-0665.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 455.030 & 480.545

Stats. Implemented: ORS 480.565

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 27(Temp), f. & ef. 12-31-73; DC 33, f. 5-6-74, ef. 5-25-74; Renumbered from 814-025-0065; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0135; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 4-2003, f. & cert. ef. 3-14-03; BCD 17-2005(Temp), f. & cert. ef. 7-12-05 thru 9-30-05; BCD 20-2005, f. 9-15-05, cert. ef. 10-1-05

918-225-0665**Certification of Process Piping Inspectors**

(1) Applicants for process piping inspector shall submit an application on division-supplied forms along with a \$110 application fee. The applicant shall pass a division-approved examination on the substance and

requirements of **ASME B31.3**, related standards and administrative rules.

(2) Applicants shall demonstrate to the satisfaction of the division not less than 10 years experience in the design, fabrication or inspection of industrial process piping. Each 20 percent of satisfactorily completed work toward an engineering degree recognized by the Accreditation Board for Engineering and Technology shall be considered equivalent to one year of experience, up to five years total.

(3) The board may consider other experience and education to determine if the experience is equivalent to the requirements in this rule.

(4) Process piping inspector certificate of competency shall be renewed annually. The annual renewal fee shall be \$27.50.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545, 480.565, 480.605, 480.607 & 480.647

Stats. Implemented: ORS 480.545, 480.565, 480.605, 480.607 & 480.647

Hist.: BCD 4-2003, f. & cert. ef. 3-14-03

Subpart B – Boiler Inspector Examination and Certification Fees

918-225-0670**Fees for Inspector Examination, Certification and Renewal**

(1) Fee for each National Board examination, \$165.

(2) Fee for Certificate of Competency Examination, \$110.

(3) Fee for annual renewal of Certificate of Competency, \$27.50.

(4) Fee to administer continuing education program to be added to the cost of annual renewals of certified individuals, \$10.

(5) Fee to prepare and provide continuing education programs, \$66 per hour or part thereof.

Stat. Auth.: ORS 480.605

Stats. Implemented: ORS 480.605

Hist.: DC 27(Temp), f. & ef. 12-31-73; DC 33, f. 5-6-74, ef. 5-25-74; Renumbered from 814-025-0016; BCA 5-1991, f. & cert. ef. 3-15-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0040; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 2-2003, f. & cert. ef. 2-3-03; BCD 13-2006, f. 9-29-06, cert. ef. 10-01-06

Subpart D — Licensing of Employees of Businesses**918-225-0691****Boiler, Pressure Vessel and Pressure Piping Installation, Alteration or Repair Licensing Requirements**

Persons installing, altering or repairing boilers and pressure vessels shall be licensed under these rules and may only work within the scope of their license.

(1) Persons desiring to obtain a license under these rules shall:

(a) Meet the qualifications for that license;

(b) Apply as established by the division in OAR division 30.

(2) Definitions. For the purpose of this rule:

(a) "Direct Supervision" means the person supervised is in the physical presence of a qualified licensed person at the job site and the person doing the supervision is directly assigned to monitor and direct the activities of the person supervised. Direct supervision must be on a ratio of one qualified licensed person to one trainee/helper.

(b) "Qualified Licensed Person" means a person who holds a Class 2, 3, 4, 5, 5-A or 5-B license and is authorized to do the work involved without supervision;

(c) "Supervision" means the individual person assigned to perform supervision under sections 6, 7 and 10 of this rule is directly and specifically assigned to monitor and direct the activities of the person being supervised. Both the person performing supervision and those being supervised shall be prepared to identify each other.

(3) Class 1 Trainee/Helper License. A person holding this license may install, alter or repair boilers, pressure vessels and pressure piping providing the work is of a mechanical nature only. Work performed shall be under the direct supervision of a qualified licensed person. No ASME Code welding is permitted. There are no minimum qualifications required for applicants to obtain this license.

(4) Class 2 Pressure Vessel Installer License. A person holding this license may install or repair unfired pressure vessels by any non-welded method of attachment.

(a) There are no minimum qualifications required to obtain this license. Applicants shall pass an examination testing the applicant's knowledge of the Boiler and Pressure Vessel Law, ORS 480.510 to 480.665; OAR chapter 918, division 225; and American Society of Mechanical Engineers, Boiler and Pressure Vessel Code, Section VIII, Division 1, General Requirements.

(b) Persons who install refrigeration process equipment assembled and sold as a modular unit by the manufacturer and who do not attach piping to a pressure vessel during the installation are exempt from this rule. To qualify for this exemption, the attachment shall be made by any method other than fusion welding.

(5) Class 3 Building Service Mechanic License. A person holding this license may install or repair boilers (including boiler and non-boiler external piping) and unfired pressure vessels by a non-welded method of attachment. Applicants shall:

(a) Have at least 2,000 hours of experience installing and repairing boilers verified as established in OAR division 30;

(b) Pass an examination testing the applicant's knowledge of:

(A) Boiler and Pressure Vessel Laws, ORS 480.510 to 480.665; OAR chapter 918, division 225; and the general requirements of the **American Society of Mechanical Engineers, Boiler and Pressure Vessel Code, Sections I, IV, VI, VII and VIII, and CSD-1;**

(B) The State of Oregon Boiler Safety Program Study Guide;

(C) Building Service Systems (Hydronics) for boilers and related appurtenances, **American Society of Mechanical Engineers/ASME B31.1 Power Piping and B31.9 Building Service Piping;** and

(D) Structural and mechanical blueprints with the ability to interpret specifications.

(6) Class 4 Boilermaker License. A person holding this license may install, alter or repair boilers and pressure vessels (excluding non-boiler external piping) by welding or other methods of attachment. Applicants shall:

(a) Have 2,000 hours of experience doing welding and 2,000 hours of experience doing non-welding applications involving boilers or pressure vessels. Experience must be verified as established in OAR division 30; the verification must cover welding and non-welding applications separately; and

(b) Pass an examination testing the applicant's knowledge of:

(A) Boiler and Pressure Vessel Laws, ORS 480.510 to 480.665; OAR chapter 918, division 225; and the general requirements of the **American Society of Mechanical Engineers, Boiler and Pressure Vessel Code, Sections I, II, IV, V, VI, VII, VIII and IX, CSD-1, B31.1 and B31.9;**

(B) General boilermaker skills and procedures;

(C) Blueprint reading, layout and shop mathematics;

(D) Interpreting plans and specifications covering installation, alteration, repair, fabrication and erection of boilers and pressure vessels;

(E) Welding process, metallurgy and other procedures particularly applicable to boilers and pressure vessels; and

(F) The State of Oregon Boiler Safety Program Study Guide.

(c) Class 4 Boilermakers may also perform the scope of work allowed under section (7) of these rules providing;

(A) Work may only be done under the supervision of a qualified licensed person under section (7) of these rules; and

(B) Prior to any welding, the individual must qualify to supervisor's employer's welding procedures.

(7) Class 5 Pressure Piping Mechanic License. A person holding this license may:

(a) Fabricate, install, alter and repair pressure piping; and

(b) Install boilers and pressure vessels by attachment of piping connections;

(c) Install, assemble and repair cast iron sectional boilers.

(A) Applicants shall have a minimum of 2,000 hours of experience performing pipe-welding or brazing on **ASME B31** pressure piping and 2,000 hours of experience performing work on pressure piping and boilers. Experience must be verified as established in OAR division 30; and

(B) Pass an examination testing the applicant's knowledge of:

(i) **American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Sections I, II, IV, V, VI, VII, VIII, IX, CSD-1 and B31 Pressure Piping;**

(ii) Structural and mechanical blueprints with the ability to interpret specifications;

(iii) Pressure piping systems and controls;

(iv) Boiler and Pressure Vessel Laws, ORS 480.510 to 480.665 and OAR chapter 918, division 225;

(v) The State of Oregon Boiler Safety Program Study Guide; and

(vi) Welding and brazing processes, heat treatment, metallurgy and other procedures applicable to pressure piping systems.

(d) Class 5 Pressure Piping Mechanics may also perform the scope of work allowed under section (6) of these rules providing;

(A) Work may only be done under the supervision of a qualified licensed person under section (6) of these rules; and

(B) Prior to any welding, the individual must qualify to supervisor's employer's welding procedures.

(8) Class 5-A Process Piping Mechanic License. A person holding this license may fabricate, install, alter or repair **B31.3** process piping. Applicants shall:

(a) Have a minimum of 2,000 hours of experience performing pipe-welding or brazing on B31.3 process piping and 2,000 hours of experience performing work on pressure piping. Experience must be verified as established in OAR division 30; and

(b) Pass an examination testing the applicant's knowledge of:

(A) **American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section B31.3;**

(B) Structural and mechanical blueprints with the ability to interpret specifications;

(C) Pressure piping controls;

(D) Boiler and Pressure Vessel Laws, ORS 480.510 to 480.665 and OAR chapter 918, division 225; and

(E) Welding, brazing, chemical bonding procedures, heat treatment, metallurgy and other procedures applicable to pressure piping systems.

(9) Class 5-B Refrigeration Piping Mechanic License. A person holding this license may fabricate, install, alter or repair **B31.5** refrigeration piping. Applicants shall:

(a) Have a minimum of 2,000 hours of experience performing pipe-welding or brazing on B31.5 refrigeration piping and 2,000 hours of experience performing work on pressure piping. Experience must be verified as established in OAR division 30; and

(b) Pass an examination testing the applicant's knowledge of:

(A) **American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section B31.5;**

(B) Structural and mechanical blueprints with the ability to interpret specifications;

(C) Pressure piping controls;

(D) Boiler and Pressure Vessel Laws, ORS 480.510 to 480.665 and OAR chapter 918, division 225; and

(E) Welding, brazing, heat treatment, metallurgy and other procedures applicable to pressure piping systems.

(10) Class 6 Welder License. A person holding this license may weld on boilers, pressure vessels or pressure piping while employed by an approved welding employer. Work may only be performed under the supervision of a person certified under sections (6) through (9) of this rule as applicable. More than one welder may be supervised by one appropriately qualified licensed person under this license.

(a) A Class 6 Welder may also perform the scope of work under section (3) of this rule providing the work performed is under the direct supervision of a qualified licensed person under sections (4) through (9) of these rules.

(b) Applicants shall be qualified as a welder in accordance with the **American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section IX, Part QW**. The employer shall attest in writing that the applicant is qualified under that code section and is currently qualified to that employer's welding procedures. This written statement is not transferable to another employer.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545, 480.630, 183.335

Stats. Implemented: ORS 480.630, 183.335

Hist.: BCD 7-2003, f. 3-14-03, cert. ef. 7-1-03; BCD 13-2003, f. 6-26-03, cert. ef. 7-1-03; BCD 3-2004(Temp), f. & cert. ef. 3-8-04 thru 9-3-04; BCD 9-2004, f. 6-21-04, cert.

ef. 7-1-04; BCD 10-2006(Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06; BCD 11-2006, f. & cert. ef. 9-5-06; BCD 13-2006, f. 9-29-06, cert. ef. 10-01-06

Subpart E — Contractor Responsibilities

918-225-0700

Responsibility of Boiler Contractors

(1) Persons licensed by the division for the business of installing, repairing or altering boilers, pressure vessels or pressure piping must correct any condition or deficiency resulting from installations, repairs or alterations, which are determined by any deputy, special inspector or process piping inspector to be a violation of the minimum safety standards of the **Oregon Boiler and Pressure Vessel Specialty Code**.

(2) Contractors must prepare and submit any documentation required by construction codes, repair and alteration standards or the authority having jurisdiction.

(3) Boiler contractors are directly responsible for assuring that all persons they employ have correct certification and are properly supervised in the installation, repair or alteration of boilers, pressure vessels or pressure piping systems. Supervisors of persons holding a Class 1 or Class 6 certification must meet the requirements of OAR 918-225-0691.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 6-2003, f. 3-14-03, cert. ef. 7-1-03; BCD 4-2007, f. 3-30-07, cert. ef. 4-1-07

Part VII — Code Welding Requirements

Subpart A — Owners-Users

918-225-0720

Welding Requirements for Owner-Users

(1) An owner-user may use its own employees to repair or install boilers, pressure vessels or pressure piping, provided it develops, certifies and maintains a welding program meeting the requirements of the **Boiler Specialty Code (ASME Section IX, Part QW)**.

(2) The owner-user's welding program shall be reviewed for conformance with welding program requirements by the authorized inspector performing welding inspections.

(3) The owner-user is responsible for the use of proper materials when doing code repairs.

(4) Prior to welding on code materials, the owner-user shall notify a deputy, special inspector or process

piping inspector who will review the proposed work and who will inspect the work when it is completed.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545 & 480.647

Stats. Implemented: ORS 480.545 & 480.647

Hist.: BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 16-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 6-2003, f. 3-14-03, cert. ef. 7-1-03

Subpart B — Businesses that Do Welding

918-225-0730

Requirements for Businesses Doing Welding or Brazing

All persons in the business of installing, altering or repairing boilers, pressure vessels, or pressure piping shall develop and maintain a quality control system before doing welding or brazing:

(1) Boilers and pressure vessels. For welding on a boiler, boiler external piping as defined by ORS 480.515 and pressure vessels, the person shall develop and maintain a quality control system under the "R" Stamp requirements of the **National Board Inspection Code**.

(2) Pressure piping. For welding or brazing on pressure piping, the person shall develop and maintain a quality control system under either Section (1) of this rule or under OAR 918-225-0740.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.545 & 480.647

Stats. Implemented: ORS 480.545 & 480.647

Hist.: BCA 6-1990, f. & cert. ef. 3-13-90; BCA 24-1991(Temp), f. 7-3-91, cert. ef. 7-1-91; BCA 30-1991, f. & cert. ef. 9-9-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0195; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 16-1998, f. 9-30-98, cert. ef. 10-1-98; BCD 35-2000, f. 12-29-00, cert. ef. 7-1-01

918-225-0740

Quality Control System for Pressure Piping; Oregon "O" Certificate of Authorization

(1) This rule contains procedures for persons to develop and qualify a quality control system for welding or brazing on pressure piping other than boiler external piping.

(2) An application for approval of a quality control system shall include one copy of a proposed quality control manual. The manual shall include the elements described by the Building Codes Division Sample Quality Control Manual provided to the applicant as a

guide. A Quality Control Manual will be reviewed and the applicant billed at board-established shop inspection rates.

(3) If welding, brazing, mechanical or chemical assembly will occur on Category M fluid service process piping, the quality control manual shall include processes and procedures demonstrating compliance with **ASME B31.3**. The registered business or owner-user shall ensure that the process piping inspector provides and updates a list of persons to whom the inspector has delegated responsibility under OAR 918-225-0562.

(4) After acceptance of the proposed quality control system, the applicant must demonstrate practical application of the system and the proficiency of the persons doing welding or brazing. The applicant shall provide the facilities, equipment and materials for the demonstration.

(5) The Certificate of Authorization issued to a successful applicant expires three years from date of issue. The same procedures for qualifying shall be followed for renewal. Copies of the manual do not need to be resubmitted if the only change is the effective date.

[Publications: Publications referenced are available from the agency.]

Stat. Auth.: ORS 480.647

Stats. Implemented: ORS 480.647

Hist.: BCA 24-1991(Temp), f. 7-3-91, cert. ef. 7-1-91; BCA 30-1991, f. & cert. ef. 9-9-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0196; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 35-2000, f. 12-29-00, cert. ef. 7-1-01; BCD 13-2002, f. 6-28-02, cert. ef. 7-1-02; BCD 6-2003, f. 3-14-03, cert. ef. 7-1-03

Subpart C — Safety and Safety Relief Valves

918-225-0745

Contractor Registration

(1) All persons in the business of assembling, repairing or adjusting safety or safety relief valves shall adopt a quality control system under the “VR” Symbol Stamp of the National Board.

(2) An owner-user may use its own employees to repair or adjust safety or safety relief valves for its own use, provided it adopts a quality control system under the “VR” Symbol Stamp requirements of the National Board.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98

Part IX — Insured Vessels

918-225-0780

Filing of Insurance Notices

Insurance companies shall notify the Division within 30 days of providing insurance, cancellation or suspension of insurance, or nonrenewal of insurance regarding boilers or pressure vessels. This notice shall be on a Division-approved form and shall use Oregon State Numbers to designate the boilers or pressure vessels involved.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 92, f. & ef. 7-19-77; Renumbered from 814-025-0066; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0140

918-225-0800

Reporting of Immediate Hazards to Health or Safety

Special inspectors shall report immediate hazards to health or safety concerning insured vessels to the chief inspector immediately by telephone and also advise whether a notice of defective condition was issued and whether operations were stopped.

Stat. Auth.: ORS 480.545

Stats. Implemented: ORS 480.545

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 11-1985, f. & ef. 5-22-85; BCA 4-1988, f. & cert. ef. 2-22-88; Renumbered from 814-025-0070; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0155

TABLE 1-A**BOILER & PRESSURE VESSEL OPERATING PERMIT PERIODS**

1-year operating permit	Power boilers
2-year operating permit	Cast iron boilers Low pressure steam boilers Hot water heating & supply boilers Air tanks (greater than 20cf, 200 psi) CO2 tanks (greater than 20cf, 300 psi) CO2 tanks (20cf, 300 psi or less, located in places of public assembly) Unfired pressure vessels (not classified in OAR 918-225-0570(5), (6) and (7))
3-year operating permit	Anhydrous ammonia pressure vessels for farm use
5-year operating permit	Fixed air tanks (20 cf, 200 psi or less) CO2 tanks (20cf, 300 psi or less, not located in places of public assembly)

Table 1-B**BOILER & PRESSURE VESSEL INSPECTION CYCLES**

1-year inspection cycle	Power boilers, internally and externally
2-year inspection cycle	Cast iron boilers, externally Low pressure steam boilers, internally and externally Hot water heating and hot water supply boilers, externally Pressure vessels subject to internal corrosion or erosion, internally (may be waived) and externally Pressure vessels not subject to internal corrosion or erosion but containing a hazardous substance, internally (may be waived) and externally Pressure vessels not subject to internal corrosion or erosion but located in a place of public assembly, internally (may be waived) and externally
3-year inspection cycle	Pressure vessels containing anhydrous ammonia for use as fertilizer
4-year inspection cycle	Portable pressure vessels, mounted on a motorized vehicle and containing only air (5 cf or less, 200 psi or less); internally (may be waived) and externally Pressure vessels not subject to internal corrosion or erosion, internally (may be waived) and externally
6-year inspection cycle	Hot water heating and hot water supply boilers, internally (when physical construction of the boiler allows) Fixed pressure vessels, containing only air (not in public assembly; 20 cf and 200 psi or less), internally (may be waived) and externally

Table 2-B

**Oregon Amendments to the 2011 Edition of the
National Board Inspection Code ANSI/NB 23, part 1**

Section 1.3,	<u>(d) This code applies to all new installations and is recommended for retrofit installations.</u>
Section 2.3.3 (a)	Boiler installations shall allow for normal operation, maintenance, and inspections. There shall be at least 36 in. (915 mm) of clearance on each side of the boiler to enable access for maintenance and/or inspection activities. Boilers operated in battery shall not be installed closer than 48 inches from each other, <u>except boilers that operate at up to 2,000,000 btu may be installed according to manufacturer's instructions.</u>
Section 2.4.1	Two means of exit shall be provided for boiler rooms exceeding 500 sq. ft. (46.5 sq. m) floor area and containing one or more boilers having a combined fuel capacity of 1,000,000 Btu/hr (293 kW) or more. Each elevation shall be provided with at least two means of exit, each to be remotely located from the other. A platform at the top of a single boiler is not considered an elevation. <u>All boiler room doors that do not lead to an exit must be clearly labeled "not an exit."</u>
Section 2.4.2	<u>(e) See, Appendix A.</u>
Section 2.5.3.2(a)	A manually operated remote shutdown switch or circuit breaker shall be located just outside the boiler room door and marked for easy identification; <u>or, alternatively, the switch or circuit breaker shall be located in accordance with ASME CSD-1.</u> Consideration should also be given to the type and location of the switch to safeguard against tampering.
Section 2.5.4	<u>(1) These provisions apply in addition to provisions of the Oregon Mechanical Specialty Code.</u> (a) The boiler room shall have an adequate air supply to permit clean safe combustion, minimize soot formation, and maintain a minimum of 19.5% oxygen in the air of the boiler room. The combustion and ventilation air should be supplied by either an unobstructed air opening or by power ventilation or fans. (b)
Section 2.10.6	Not adopted
Section 3.3.4(a)	Heating boilers shall have a minimum distance of at least 36 in. (914 mm) between the top of the boiler and any overhead structure and at least 36 in. (914mm) between all sides of the heating boiler and adjacent walls, structures or other equipment; <u>except that heating boilers exceeding 2,000,000 btu and operated in battery shall be installed a minimum of 48 inches from each other, and heating boilers that operate at or below 2,000,000 btu may be installed according to manufacturer's instructions.</u> Heating boilers having manholes shall have at least 84 in. (2135 mm) of clearance between the manhole opening and any wall, ceiling, piping, or other equipment that may prevent a person from entering the heating boiler.
Section 3.4.1	Two means of exit shall be provided for boiler rooms exceeding 500 sq. ft. (46.5 sq. m) floor area and containing one or more boilers having a combined fuel capacity of 1,000,000 Btu/hr (293 kW) or more. Each elevation shall be provided with at least two means of exit, each to be remotely located from the other. A platform at the top of a single boiler is not considered an elevation. <u>All boiler room doors that do not lead to an exit must be clearly labeled "not an exit."</u>
Section 3.4.2	<u>(e) See, Appendix A.</u>
Section 3.5.3(b)	A manually operated remote shutdown switch or circuit breaker shall be located just outside the boiler room door and marked for easy identification; <u>or, alternatively, the switch or circuit breaker shall be located in accordance with ASME CSD-1.</u> Consideration should also be given to the type and location of the switch to safeguard against tampering.
Section 3.7.1(b)	Not adopted
Section 4.3.2(a)	All pressure vessel installations must allow sufficient clearance for normal operation, maintenance, and inspection (internal and external). <u>Installations must also allow accessibility to name plate data plates and safety relief valve data plates. Insulation</u>

	<u>must not cover data plates</u>
Section 4.3.3	Piping loads on the vessel nozzles shall be considered. Piping loads include weight of the pipe, weight of the contents of the pipe, expansion of the pipe from temperature and pressure changes (wind and seismic loads). The effects of piping vibration on the vessel nozzles shall also be considered. <u>Installation shall be in accordance with the Oregon Boiler Specialty Code, which includes the ASME B 31 Piping Codes.</u>
Section 4.4.1	Steam drums of unfired steam boilers shall be provided with <u>at least one</u> level indicating device. Direct level indicating devices should be connected to a single water column or connected directly to the drum, and the connections and pipe shall not be less than NPS ½ (DN 15). Indirect level indicating devices acceptable to the jurisdiction may be used.
Section 4.5.4(b)	If an additional hazard can be created by exposure of a pressure vessel to fire or other unexpected sources of external heat, supplemental pressure relief devices shall be installed to provide any additional capacity that should be required; <u>see, ASME, Section 8.</u>
Section 4.6(b)	Not adopted
Appendix A	<u>Appendix A-</u> <u>See Oregon Administrative Rules Chapter 437 Division 002:</u> http://www.sos.state.or.us/archives/rules/OARS_400/OAR_437/437_tofc.html <u>For additional Oregon OSHA requirements: http://www.orosha.org</u>

Table 3-B**BOILER & PRESSURE VESSEL PERMIT FEES****Installation Permit Fees:**

Boilers	\$175.00
Pressure Vessels	\$125.00
Beverage Service Tanks	\$50.00
Installation permit fee for insurance-inspected site	\$40.00

Operating Permit Fees:

Boilers on a 1-year inspection cycle	\$110.00
Boilers on a 2-year inspection cycle	\$110.00
Pressure vessels on a 2-year or 4-year inspection cycle	\$100.00
Pressure vessels on a 6-year inspection cycle	\$100.00
Boiler bulk rate permits (each)	\$75.00
Pressure vessels bulk rate permits (each)	\$75.00
Operating permit fee for insurance-inspected site	\$40.00

Other related fees:

Reinspection fee	\$75.00
Boiler or pressure vessel plans or data submission fee	\$78.00
Hourly rate for other inspections not listed above	\$75.00