

**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 Chapter 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(1).

(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) "Installer," as used in the boiler or pressure vessel laws and rules, means the person making the water, steam, air, refrigerant or other product piping connection to the boiler or pressure vessel. A person who transports or merely positions the boiler or pressure vessel is not an "installer." An electrician making electrical connections is not an "installer."

(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(10).

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

(20) "Quantity," to determine inspection fees at cost, means six or more vessels.

(21) "Related Appurtenance" is defined in ORS 480.515(11).

(22) "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.

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

(24) "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.

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

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

(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.

[Publications: Publications referenced are available for review at the division. See division website for information on purchasing publications.]

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

## 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

### **918-225-0405**

#### **Pressure Vessels for Beverage Service**

**Repealed** BCD 7-2007, f. 7-13-07, cert. ef. 9-1-07

## **Part III — Codes and Vessel Operations**

### **Subpart A — Codes**

#### **918-225-0430**

##### **Adopted Oregon Boiler and Pressure Vessel Specialty Code**

The **Oregon Boiler and Pressure Vessel Specialty Code** containing the minimum safety standards for boilers, pressure vessels, pressure piping, nuclear components, parts, items, and repair and alteration procedures follow :

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

(2) The **Boiler and Pressure Vessel Code of The American Society of Mechanical Engineers (ASME), 2004 Edition** as published, including Section I; Section II, Parts A, B,C and D; Section IV; Section V; Section VI; Section VII; Section VIII, Division 1, 2 and 3; Section IX; and Section X.

(3) The **2004 Edition** of the **ANSI/ASME B31.1 Power Piping Code**.

(4) The **2004 Edition** of the **ANSI/ASME B31.3 Process Piping Code**.

(5) The **2001 Edition** of the **ANSI/ASME B31.5 Refrigeration Piping Code**.

(6) The **1996 Edition** of the **ANSI/ASME B31.9 Building Service Piping Code**.

(7) The **2004 Edition** of the **National Board Inspection Code ANSI/NB 23**;

(8) The **2004 Edition of NFPA 85, Boiler and Combustion Systems Hazards Code**; and

(9) The **2004 Edition of ASME CSD-1, Controls and Safety Devices for Automatically Fired Boilers**.

[Publications: Publications are available for review at the division. See division website for information on purchasing publications.]

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

#### **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 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, 2007, the following sections of the Boiler and **Pressure Vessel Code of The American Society of Mechanical Engineers (ASME), 2004 Edition**, are amended to adjust Oregon boiler code provisions that are in conflict with national standards:

(a) Section IV, "Rules for Construction of Heating Boilers."

(b) Section V, "Nondestructive Examination."

(c) Section VI, "Recommended Rules for the Care and Operation of Heating Boilers."

(d) Section VII, "Recommended Guidelines for the Care of Power Boilers."

(e) Section VIII, Divisions 1, 2 and 3, "Rules for Construction of Pressure Vessels."

(f) Section IX, "Qualification Standard for Welding and Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators."

(g) Section X, "Fiber-Reinforced Plastic Pressure Vessels."

(3) Effective June 15, 2007, addenda to the **2004 Edition of the ANSI/ASME B31.1 Power Piping Code**, designated **ASME B31.1b (2006)**, are adopted.

(4) Effective June 15, 2007, addenda to the **2004 Edition of the National Board Inspection Code (NBIC)**, designated ANSI/NB-23 (2006), are adopted.

[Publications: Referenced publications are available for review at the division. See division website for information on purchasing publications.]

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. 06-08-07, cert. ef. 06-15-07

### **Subpart B — Vessel Operations**

#### **918-225-0450**

##### **Manufacturer's Data Reports**

(1) Except as provided in section (3) of this rule, 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) 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.

(3) 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

#### **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 minimum inspection schedule:

- (1) Power boilers must be inspected:
  - (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:

(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 externally every three years.

(6) 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:

(a) Internally -- subject to section (11) of this rule; and

(b) Externally -- every six years.

(7) 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:

(a) Internally -- subject to section (11) of this rule; and

(b) Externally every six years.

(8) Pressure vessels, not classified in sections (5), (6), and (7) of this rule, and subject to internal corrosion or erosion must be inspected:

(a) Internally -- every two years, subject to section (11) of this rule; and

(b) Externally -- every two years.

(9) Unfired pressure vessels, not classified in sections (5), (6) and (7) of this rule, and not subject to internal corrosion must be inspected externally -- every two years.

(10) 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.

(11) The inspector may waive an internal inspection, under sections (5), (6) and (7) 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.

(12) 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.

(13) Failure to comply with sections (1) through (12) of this rule may cause inspections to be performed by a deputy inspector per ORS 480.570(5) as directed by the chief inspector.

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

### 918-225-0580

#### Pressure Vessels for Beverage Service

Repealed BCD 7-2007, f. 7-13-07, cert. ef. 9-1-07

## Part V — Fees and Permits

### Subpart A — Permits

#### 918-225-0600

##### Permits

The **Boiler and Pressure Vessel Law** authorizes three general permits:

(1) An installation, alteration or repair permit is required under ORS 480.630, before installing, altering or repairing a nonexempt boiler or pressure vessel.

(2) An operating permit is required, under ORS 480.585, before placing a nonexempt vessel into operation. The permit is issued to the responsible party to operate a certain type of boiler or pressure vessel for a specified period of time. The permit remains in effect and valid if the permitted vessel is removed and replaced in-kind. "Replacement in-kind" means the replacement vessel is of the same type and same permit code as the original vessel. The responsible party must notify the Division when replacing a permitted vessel. Operating permits are not transferable to a new responsible party.

(3) A special permit is required, under ORS 480.600(2), for a vessel inspected by a special inspector, as provided in ORS 480.570. When a vessel that has a special permit is found to be in violation of the minimum safety standards, as defined in ORS 480.515, an operating permit under section (2) of this rule, is required.

(4) 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.

(5) No permit is required for shop inspections of vessels manufactured or to be installed in this state under ORS 480.570(2)(a). A permit is required, however, under section (1) of this rule, for vessel installation.

Stat. Auth.: ORS 480.545, 480.585, 480.595, 480.600 & 480.630

Stats. Implemented: ORS 480.570, 480.585, 480.595, 480.600 & 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

### 918-225-0605

#### Installation, Alteration and Repair Permit Procedures

The following permit procedures are established for installation, alteration or repair of boilers, pressure vessels or pressure piping systems by licensed contractors.

(1) Obtaining permits. Permit application forms for installation, alteration or repair of boilers, pressure vessels or pressure piping systems must be prepaid. Prenumbered permit application forms may be purchased individually or in bulk, from the Building Codes Division upon payment of \$16.50 for each form.

(2) Prepaid permit application forms do not authorize work until the contractor provides the required information to the division for review and approval. Prior to beginning the intended installation, repair or alteration, the contractor shall notify the deputy or special inspector who will inspect the work. Work shall not begin until the inspector has reviewed and approved the work to be performed.

(3) Filing and processing of permits.

(a) Prenumbered permit applications can be sent to the Building Codes Division Salem office, by mail or by facsimile transmission, or by any other method that delivers the permit application or a facsimile of the application to the division.

(b) The applicant may request approval notification, such as by mail, collect delivery by courier or facsimile transmission, and where the authorization should be delivered.

(c) Upon processing, the notification of approval or denial shall be shown on the permit application. The expenses of delivery other than by mail or facsimile transmission shall be prepaid or sent collect to the person requesting the delivery mode. The approval or denial shall be delivered to the applicant following the instructions provided. If no return instructions are received, the notification shall be by mail.

(4) Upon receipt of permit approval:

(a) The signed approval or facsimile transmittal showing an authorized signature shall be posted at the job site before beginning the work; or

(b) The approved permit number shall be posted at the job site and signed by the contractor.

(5) A permit issued under this rule is not transferable.

(6) This rule does not change the provisions for emergency permits in ORS 480.630(7). It is recommended, but not required, that emergency permits be reviewed and coordinated with the inspector responsible to inspect the completed work.

Stat. Auth.: ORS 480.630

Stats. Implemented: ORS 480.630

Hist.: BCD 10-1995, f. & cert. ef. 8-25-95; BCD 18-1997, f. 12-3-97, cert. ef. 1-1-98; BCD 36-2000, f. 12-29-00, cert. ef. 1-1-01; BCD 12-2008, f. 6-30-08, cert. ef. 7-1-08

### Subpart B -- Fees for Permits and Inspections

#### 918-225-0610

##### Fees for Permits and Inspections

(1) Purpose and Scope of Rules. This rule sets permit and inspection fees.

(2) Authority for Action:

(a) ORS 480.595 authorizes the Board to establish boiler permit fees.

(3) ORS 480.607 authorizes establishment of fees and increases up to ten percent on fees set by ORS 480.595(3) and (4), 480.600(2), and 480.630(4) and (6).

(4) Other license fees are authorized by ORS 480.630.

(5) Permit fees generally under ORS 480.595 are established:

(a) Effective January 1, 2002, under ORS 480.595(3) and 480.607, operating permit fees, are:

(A) Boilers of 15 horsepower or less, \$71.50;

(B) Boilers greater than 15 horsepower to 100 horsepower, \$93.50;

(C) Boilers greater than 100 horsepower to 500 horsepower, \$110;

(D) Boilers greater than 500 horsepower, \$121;

(E) Cast iron boilers, \$71.50;

(F) Pressure vessels having a product volume of 20 cubic feet or less, \$60.50;

(G) Pressure vessels having a product volume greater than 20 cubic feet, \$82.50.

(b) The reinspection fee provided in ORS 480.595(4) shall be charged at the rate of \$66 per hour for travel and inspection time to defray the cost of a reinspection when deviations from the minimum safety standards are found during any inspection.

(6) The special permit fee set out in ORS 480.600(2) is \$27.50.

(7) Miscellaneous fees under ORS 480.605:

(a) The fees for shop inspection service provided in ORS 480.605(1) and witnessing hydrostatic or other tests under ORS 480.605(3) are:

(A) Hourly charges for travel and inspection, \$66;

(B) Hourly charge for travel and inspections before 8 a.m., after 5 p.m., on weekends and holidays, \$99.

(b) In addition to the hourly charge the actual cost of meals and lodging are also charged.

Stat. Auth.: ORS 480.545, 480.595, 480.600, 480.605, 480.607 & 480.630

Stats. Implemented: ORS 580.595, 480.600, 480.605, 480.607 & 480.630

Hist.: DC 17, f. 7-31-72, ef. 8-15-72; DC 19, f. 6-21-73, ef. 7-1-73; DC 8-1980, f. & ef. 7-1-80; DC 1-1981, f. & ef. 1-22-81; Renumbered from 814-025-0025; BCA 8-1990, f. 4-18-90, cert. ef. 5-1-90; BCA 13-1990, f. & cert. ef. 6-6-90; BCA 20-1991(Temp), f. & cert. ef. 6-14-91; BCA 30-1991, f. & cert. ef. 9-9-91; BCA 36-1993, f. 12-30-93, cert. ef. 1-1-94; Renumbered from 918-225-0050; BCD 10-1996(Temp), f. & cert. ef. 7-1-96; BCD 28-1996, f. & cert. ef. 12-6-96; 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 13-2002, f. 6-28-02, cert. ef. 7-1-02; BCD 17-2002(Temp), f. & cert. ef. 7-19-02 thru 1-14-03; BCD 31-2002, f. 12-20-02 cert. ef. 1-1-03; BCD 31-2005, f. 12-30-05, cert. ef. 1-1-06; BCD 14-2007, f. 12-28-07, cert. ef. 1-1-08

### Subpart C — Volume Inspections

#### 918-225-0620

##### Inspection Fees at Cost — Notification

Vessels will not be treated as available for inspection at the same location according to ORS 480.600(1) unless the owner or user notifies the authorized inspector in writing at least 30 days prior to the beginning of the inspection period. If notification is not received, regular permit fees shall be charged.

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

#### 918-225-0630

##### Special Fee for Operating Permits

(1) Persons apply for “at-cost” permit fees pursuant to ORS 480.600(1) shall provide supporting information for estimated inspection and travel time.

(2) 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

### 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 C -- Revocation of Certification**

#### **918-225-0680**

#### **Suspension or Revocation of a Deputy or Special Inspector's Certificate of Competency**

**Repealed** BCD 13-2006, f. 9-20-06, cert. ef. 10-01-06

#### **918-225-0685**

#### **Suspension of a Business or Individual License or Certification**

**Repealed** BCD 13-2006, f. 9-20-06, 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)