Building Codes Division

Working with Oregonians to ensure safe building construction while supporting a positive business climate.

Notice of Public Hearing

October 21, 2008

Adoption of the 2008 Boiler and Pressure Vessel Specialty Code

Opportunity for public input:

Those who would like to provide public testimony may attend a public hearing on October 21, 2008 at 10:00 a.m. The hearing will be located at the Building Codes Division, Conference Room A. Written comments may also be submitted to the contact below. The last day to submit written comments is 5:00 p.m. October 24, 2008.

Live broadcast via the internet:

To view the public hearing live, click on "View live meetings"

Purpose of the rule:

These proposed rules adopt model codes and standards with Oregon amendments for the safe installation and operation of boilers and pressure vessels in Oregon. Adoption of these codes and standards are necessary to protect the public and property in Oregon by ensuring safe construction, installation, maintenance and repair of boilers and pressure vessels.

If adopted, these rules and the codes would become effective January 1, 2009.

Citation:

Amend: OAR 918-225

History:

From May 1 to June 15, 2008, the division accepted code amendment proposals. The Boiler Code Review Committee met one time on August 18, 2008. The committee reviewed the proposed code amendments to the various minimum safety standards and made a recommendation to the board.
The Boiler and Pressure Vessel Specialty Code includes the following codes with Oregon amendments:

- 2007 ASME Boiler and Pressure Vessel Code
- 2007 ANSI/ASME B31.1 Power Piping Code
- 2006 ANSI/ASME B31.3 Process Piping Code
- 2006 ANSI/ASME B31.5 Refrigeration Piping Code
- 2004 ANSI/ASME B31.9 Building Service Piping Code
- 2007 National Board Inspection Code ANSI/NB 23
- 2007 NFPA 85 Boiler and Combustion Systems Hazards Code
- 2006 ASME CSD-1 Controls and Safety Devices for Automatically Fired Boilers

The Board of Boiler Rules, at its September 9, 2008 meeting, considered and approved the recommendations made by the code review committee and forwarded the proposed rules and codes to public hearing and subsequent adoption.

Contact:

If you have questions or need further information, please contact Hearing Officer Mike Graham at 503-373-7499, or Mike.D.Graham@state.or.us .

Secretary of State

NOTICE OF PROPOSED RULEMAKING HEARING*

A Statement of Need and Fiscal Impact accompanies this form.

Department of Consumer and Business Services, Building Codes Division			918
Agency and Division			Administrative Rules Chapter Number
Shauna M. Parker	PO Box 14470, Salem, OR 97309		(503) 373-7438
Rules Coordinator	Address		Telephone

RULE CAPTION

Adopts the 2008 Oregon Boiler and Pressure Vessel Specialty Code.

Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.

October 21, 2008	10:00 a.m.	1535 Edgewater Street NW, Salem, OR 97304	Mike Graham
Hearing Date	Time	Location	Hearings Officer

Auxiliary aids for persons with disabilities are available upon advance request.

RULEMAKING ACTION

Secure approval of new rule numbers (Adopted or Renumbered rules) with the Administrative Rules Unit prior to filing.

ADOPT:

AMEND: 918-225

REPEAL:

RENUMBER:

AMEND & RENUMBER:

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

Other Auth.:

Stats. Implemented: ORS 480.545 & 480.550

RULE SUMMARY

The proposed rules adopt minimum safety standards for the safe installation and operation of boilers and pressure vessels in Oregon by adopting provisions of national boiler and pressure vessel model codes and standards. The proposed rules adopt the model codes and standards with additional Oregon amendments that will be referred to as the 2008 Oregon Boiler and Pressure Vessel Specialty Code.

The Agency requests public comment on whether other options should be considered for achieving the rule's substantive goals while reducing the negative economic impact of the rule on business.

Friday, October 24, 2008 at 5:00 p.m.

Last Day for Public Comment (Last day to submit written comments to the Rules Coordinator)

	Mark Long	
Signature	Printed name	Date

*Hearing Notices published in the Oregon Bulletin must be submitted by 5:00 pm on the 15th day of the preceding month unless this deadline falls on a weekend or legal holiday, upon which the deadline is 5:00 pm the preceding workday. ARC 920-2005

Secretary of State

STATEMENT OF NEED AND FISCAL IMPACT

A Notice of Proposed Rulemaking Hearing or a Notice of Proposed Rulemaking accompanies this form.

Department of Consumer and Business Services, Building Codes Division 918

Agency and Division Administrative Rules Chapter Number

Adopts the 2008 Oregon Boiler and Pressure Vessel Specialty Code.

Rule Caption (Not more than 15 words that reasonably identifies the subject matter of the agency's intended action.)

In the Matter of: Amending OAR 918-225

Statutory Authority: ORS 455.020, 480.545 & 480.550

Other Authority:

Stats. Implemented: ORS 480.545 & 480.550

Need for the Rule(s): The division adopts national model building codes and standards in order to protect public safety by ensuring the safe construction, installation, maintenance and repair of boilers and pressure vessels. Codes and standards must be updated to reflect technological changes and industry practices.

Documents Relied Upon, and where they are available: Boiler Code Review Committee minutes from August 18, 2008; Board of Boiler Rules minutes from September 9, 2008; and draft rules are available from the division's rules coordinator located at 1535 Edgewater Street NW, Salem, Oregon 97304 and are available on the division's Web site at: www.bcd.oregon.gov .

Fiscal and Economic Impact: The division has determined that these proposed changes will not have any fiscal or economic impact on state agencies, units of local government, the public, or small businesses. Oregon amendments were added for clarity and increased public safety but are not expected to impose additional costs.

Statement of Cost of Compliance:

1. Impact on state agencies, units of local government and the public (ORS 183.335(2)(b)(E)):
Based on the information available to the division, the division has determined that these proposed rules will have no foreseeable significant fiscal impact on state agencies, units of local governments, or the public outside of the obtaining new code books and training.

2. Cost of compliance effect on small business (ORS 183.336):

a. Estimate the number of small businesses and types of business and industries with small businesses subject to the rule:
There are approximately 350 boiler businesses licensed in the state of Oregon, however the division is unable to determine how many of these licensed boiler businesses are small businesses. Boiler and pressure vessel installation and repair businesses may be impacted by the proposed changes to the Oregon Boiler and Pressure Vessel Specialty Code.

b. Projected reporting, recordkeeping and other administrative activities required for compliance, including costs of professional services:
The proposed rules do not impose any additional reporting, record keeping, or administrative requirements on small businesses.

c. Equipment, supplies, labor and increased administration required for compliance:
The proposed rules do not impose any additional requirements on equipment, supplies, labor, or increased administration for small businesses.

How were small businesses involved in the development of this rule? Small businesses were represented on the rulemaking advisory committee and the Board of Boiler Rules, both of which reviewed these rules on August 18, 2008 and September 9, 2008, respectively.

Administrative Rule Advisory Committee consulted?: Yes
If not, why?:

	Mark Long	
Signature	Printed name	Date

Boiler Code Adoption
Draft 8-21-08

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**~~ **2007 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**~~ **2007 Edition of the ANSI/ASME B31.1 Power Piping Code**.

(4) The ~~**2004**~~ **2006 Edition of the ANSI/ASME B31.3 Process Piping Code**.

(5) The ~~**2001**~~ **2006 Edition of the ANSI/ASME B31.5 Refrigeration Piping Code**.

(6)The ~~**1996**~~**2004 Edition of the ANSI/ASME B31.9 Building Service Piping Code**.

(7) The ~~**2004**~~**2007 Edition of the National Board Inspection Code ANSI/NB 23, including Parts 1, 2 and 3, with Oregon amendments**;

(8) The ~~**2004**~~ **2007 Edition of NFPA 85**, **Boiler and Combustion Systems Hazards Code**; and

(9) The ~~**2004**~~**2006 Edition of ASME CSD-1**, **Controls and Safety Devices for Automatically Fired Boilers**.

[Publications: Publications referenced are available 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

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, 2009, the 2007 Edition of the National Board Inspection Code ANSI/NB 23, part 1 is amended in Oregon as provided in Table 2-B.

~~(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.~~

NOTE: Table 2-B is available on the division's Web site at <insert link here>.

[Publications: Publications referenced are available 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

Table 2-B
Oregon amendments to the 2007 Edition of the
National Board Inspection Code ANSI/NB 23, part 1

Section 1.3, amended by adding new subsection (d)	**(d) This code applies to all new installations and is recommended for retrofit installations.**
Section 2.3.3 (a), amended	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, **except boilers that operate at up to 2,000,000 btu may be installed according to manufacturer's instructions**.
Section 2.4.1, amended	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. **All boiler room doors that do not lead to an exit must be clearly labeled "not an exit."**
Section 2.4.2, amended by adding new subsection (e)	**(e) See, Appendix A.**
Section 2.5.4, amended	**(1) These provisions apply in addition to provisions of the Oregon Mechanical Specialty Code.** (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	*Concerns Boiler Installation Reports*
Section 3.3.4(a), amended	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; **except that boilers operated in battery may be installed within 48 inches from each other, and boilers that operate at up to 2,000,000 btu may be installed according to manufacturer's instructions.** 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, amended	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. **All boiler room doors that do not lead to an exit must be clearly labeled "not an exit."**
Section 3.4.2, amended by adding new subsection (e)	**(e) See, Appendix A.**
Section 3.5.3(b), amended	A manually operated remote shutdown switch or circuit breaker shall be located just outside the boiler room door and marked for easy identification; **or, alternatively, the switch or circuit breaker shall be located in accordance with ASME CSD-1.** Consideration should also be given to the type and location of the switch to safeguard against tampering.
Section 3.7.1(b), not adopted	*Concerns external-type oil heaters*
Section 4.3.2(a), amended	All pressure vessel installations must allow sufficient clearance for normal operation, maintenance, and inspection (internal and external). **Installations must also allow accessibility to name plate data plates and safety relief valve data plates. Insulation must not cover data plates**
Section 4.3.3, amended	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. **Installation shall be in accordance with the Oregon Boiler Specialty Code, which includes the ASME B 31 Piping Codes.**
Section 4.4.1, amended	Steam drums of unfired steam boilers shall be provided with **at least one** 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), amended	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; **see, ASME, Section 8.**
Section 4.6(b), not adopted	*Concerns pressure vessel testing and acceptance*

Table 1-B, Oregon Amendments

Appendix A, added	**Appendix A-** **See Oregon Administrative Rules Chapter 437 Division 002:** **http://www.sos.state.or.us/archives/rules/OARS_400/OAR_437/437_tofc.html** **For additional Oregon OSHA requirements: http://www.cbs.state.or.us/osha**