

**Agenda
Item
VI.B.**

State of Oregon

Board memo

Building Codes Division

June 3, 2008

To: Board of Boiler Rules
From: Jim Denno, Manager, Statewide Services
Subject: Pressure vessel inspection frequency rules

Discussion:

In 2005, the division's boiler program was independently audited to determine possible program improvements. One audit recommendation was to reconsider the frequency of pressure vessel inspections, in order to ensure that the division is using its inspection resources most effectively. An effective use of inspectors concentrates maximum inspection resources on vessels that pose greater life safety hazards and fewer resources on inspecting vessels that pose lesser risks.

In keeping with these objectives, an advisory committee was formed to consider the issue. The committee has met on a number of occasions, the most recent being November 2007 and January 2008. Based upon the committee's recommendations the division has developed the attached proposed rule amendments. If the board approves these rules, they would be effective October 2008.

Alternatives:

1. Approve the proposed pressure vessel inspection frequency rule amendments
2. Disapprove and offer further direction to division

Recommendation:

Approve the proposed rule amendments for subsequent public hearing and adoption to be effective October 1, 2008 provided no substantial changes occur.

PRESSURE VESSEL INSPECTION FREQUENCY RULE

DRAFT- May 16, 2008

DIVISION 225 BOILERS AND PRESSURE VESSELS

Part IV -- Inspection Requirements Subpart C -- Timing of Inspections

OAR 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) The following pressure vessels must be inspected every two years: accumulators; chlorinating tanks; condenser receivers; deaerating tanks; digesters; direct contact heaters; evaporators; peelers; reactor vessels; retorts; pressure vessels containing ammonia, except those classified in section (5) of this rule; pressure vessels containing liquid hydrogen or liquid nitrogen; and, methane or nitrogen storage tanks.

~~(6)~~(7) Fixed pressure vessels, containing only air, not located at a place of public assembly, not exceeding 20 cubic feet in volume, and operated at gauge pressures of not more than 200 pounds per square inch must be inspected:

- (a) Internally -- subject to section ~~(11)~~**(12)** of this rule; and
- (b) Externally -- every six years.

~~(7)~~**(8)** Co2 vessels and hydro-pneumatic pressure vessels, used for beverage service, not exceeding 20 cubic feet in volume, and operated at gauge pressures of not more than 300 pounds per square inch must be inspected:

- (a) Internally – subject to section ~~(11)~~**(12)** of this rule; and
- (b) Externally every six years.

~~(8)~~**(9)** Pressure vessels, not classified in sections (5), ~~(6)~~, and ~~(7)~~ **through (8)** of this rule, and subject to internal corrosion or erosion must be inspected:

- (a) Internally -- every ~~two~~ **four** years, subject to section ~~(11)~~**(12)** of this rule; and
- (b) Externally -- every ~~two~~ **four** years.

~~(9)~~**(10)** Unfired pressure vessels, not classified in sections (5), ~~(6)~~, and ~~(7)~~ **through (8)** of this rule, and not subject to internal corrosion must be inspected externally – every ~~two~~ **four** years.

~~(10)~~**(11)** 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)~~**(12)** The inspector may waive an internal inspection, under sections ~~(5)~~, ~~(6)~~ and ~~(7)~~; **through (9)** 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)~~**(13)** 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 **may** ~~does~~ not meet minimum safety standards.

~~(13)~~**(14)** Failure to comply with sections (1) through ~~(12)~~**(13)** 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