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**Building Codes Division**

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

**Notice of Adopted Rules**

*September 5, 2006*

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**Boiler & Pressure Vessel Class 5  
Licensing Rule**

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**Purpose of the rule:**

This rule clarifies the experience requirements for Class 5 Pressure Piping Mechanic license applicants.

**Effect of the rule:**

This rule allows applicants for the Class 5 Pressure Piping Mechanic license to count brazing experience as qualifying experience for licensure.

**Citation:**

Amends OAR 918-225-0691

**Contact:**

If you have questions or need further information, please contact Mike Graham, Chief Boiler Inspector, at [mike.d.graham@state.or.us](mailto:mike.d.graham@state.or.us), or 503-559-0843.



## DIVISION 225

### BOILERS AND PRESSURE VESSELS

#### Subpart C - 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 16-2006(Temp), f. 6-30-06, cert. ef. 7-1-06 thru 12-28-06