



# Boilers & Unfired Pressure Vessels

## Statutes and Regulations

April 2020

Labor Standards and Safety Division  
Mechanical Inspection



**ALASKA DEPARTMENT OF LABOR  
& WORKFORCE DEVELOPMENT**

*Jobs are Alaska's Future*

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Note to Readers: The statutes and administrative regulations listed in this publication were taken from the official codes, as of the effective date of the publication. However, there may be errors or omissions that have not been identified and changes that occurred after the publication was printed. **This publication is intended as an informational guide only and is not intended to serve as a precise statement of the statutes and regulations of the State of Alaska. To be certain of the current laws and regulations, please refer to the official codes.**

**ALASKA STATUTES**  
**TITLE 18, CHAPTER 60**  
**BOILERS AND UNFIRED PRESSURE VESSELS**

**Sec. 18.60.180. Regulations.**

The Department of Labor and Workforce Development shall formulate definitions and regulations for the safe and proper construction, installation, repair, use, and operation of boilers and for the safe and proper construction, installation, and repair of unfired pressure vessels. The definitions and regulations must be based upon and shall follow the generally accepted nationwide engineering standards, formulae, and practices established for boiler and unfired pressure vessel construction and safety. The Department of Labor and Workforce Development may adopt the existing published codification of these definitions and regulations, known as the Boiler Construction Code of the American Society of Mechanical Engineers, and may adopt the amendments and interpretations made and published by that society. The Department of Labor and Workforce Development shall adopt amendments and interpretations to the code immediately upon their adoption by the American Society of Mechanical Engineers so that the definitions and regulations at all times follow generally accepted nationwide engineering standards.

**Sec. 18.60.190. Effect of regulations.**

- (a) The regulations adopted by the Department of Labor and Workforce Development have the force and effect of law. However, the regulations applying to the construction of new boilers and unfired pressure vessels do not prevent their installation until the regulations become mandatory as provided in (b) of this section.
- (b) Amendments in the regulations are permissive immediately upon adoption and become mandatory 12 months after adoption.

**Sec. 18.60.200. New boilers and unfired pressure vessels.**

- (a) A power boiler, low pressure boiler, or unfired pressure vessel that does not conform to the regulations adopted by the Department of Labor and Workforce Development governing new construction and installation may not be installed and operated unless it is of special design or construction, and is not covered by the regulations, or is not in any way inconsistent with the regulations, in which case the Department of Labor and Workforce Development may issue a special installation and operating permit.
- (b) A person who installs a boiler or unfired pressure vessel shall notify the Department of Labor and Workforce Development of the installation, using a form provided by the department.

**Sec. 18.60.210. Exemptions.**

- (a) AS 18.60.180 - 18.60.390 do not apply to the following:
- (1) boilers and unfired pressure vessels under federal regulation;
  - (2) unfired pressure vessels meeting the requirements of the federal Department of Transportation for shipment of liquids or gases under pressure;
  - (3) air tanks located on vehicles operating under the regulations of another state authority and used for carrying passengers or freight;
  - (4) air tanks installed on the right-of-way of railroads and used directly in the operation of trains;
  - (5) unfired pressure vessels having a volume of five cubic feet or less or vessels having an inside diameter not exceeding six inches;
  - (6) unfired pressure vessels designed for a pressure not exceeding 15 pounds per square inch when not located in a place of public assembly;
  - (7) manually fired miniature boilers for model locomotive, boat, tractor, or stationary engines constructed or maintained as a hobby for exhibition use, having a volume less than five cubic feet and grate area less than two square feet and equipped with an American Society of Mechanical Engineers coded safety valve of adequate capacity and size, a water level indicator, and pressure gauge;
  - (8) except as provided in (c) of this section, antique manually fired boilers of locomotive, boat, tractor, or stationary engines constructed or maintained as a hobby and equipped with an American Society of Mechanical Engineers coded safety valve of adequate capacity and size;
  - (9) automatic utility hot water heaters that are used for space heating using the potable system, if the hot water heater
    - (A) is equipped with a safety relief valve and operational controls required by the latest Boiler Construction Code published by the American Society of Mechanical Engineers that has been adopted by the Department of Labor and Workforce Development under AS 18.60.180;
    - (B) contains only water;
    - (C) does not exceed 120 gallons in capacity, a water temperature of 210 degrees Fahrenheit, a pressure of 150 pounds of square inch gauge pressure, or a heat input of more than 200,000 BTU an hour; and

(D) contains a tempering valve that will regulate the outlet domestic water temperature at not more than 140 degrees Fahrenheit.

(b) The following boilers and unfired pressure vessels are exempt from the requirements of AS 18.60.320 - 18.60.360:

- (1) boilers and unfired pressure vessels located on farms and used solely for agricultural purposes;
- (2) steam and hot water heating boilers, used exclusively for heating purposes, that are located in private residences or in apartment houses of fewer than six families;
- (3) unfired pressure vessels containing only cold water under pressure for domestic supply purposes, including those containing air, the compression of which serves only as a cushion or airlift pumping system;
- (4) unfired pressure vessels containing liquefied petroleum gas;
- (5) unfired pressure vessels operating entirely full of water, and hot water supply boilers or domestic water heaters, if none of the following limitations is exceeded:
  - (A) a heat input of 200,000 British thermal units per hour (57,143 watts);
  - (B) a water temperature of 210 degrees Fahrenheit (99 degrees centigrade);
  - (C) a maximum water-containing capacity of 120 gallons (454.2 liters);
- (6) coil type boilers unless the water-containing capacity is six gallons (22.8 liters) or greater, the water temperature exceeds 350 degrees Fahrenheit (176.5 degrees centigrade), steam is generated in the coil, or the diameter of the tubing is greater than three-quarters of an inch (18.75 millimeters).

(c) Notwithstanding (a)(8) of this section, an antique manually fired boiler may not be used for exhibition purposes without a special operating permit issued by the Department of Labor and Workforce Development.

#### **Sec. 18.60.220. Duties of the Department of Labor and Workforce Development.**

The Department of Labor and Workforce Development shall

- (1) have all violators of AS 18.60.180 - 18.60.390 prosecuted;
- (2) issue, suspend, or revoke for cause, inspection certificates provided for in AS 18.60.390;
- (3) take action necessary for the enforcement of the laws and regulations governing

use of boilers and unfired pressure vessels;

- (4) keep a complete record of the type, dimensions, maximum allowable working pressure, age, condition, location, and date of the last recorded internal inspection of boilers and unfired pressure vessels to which AS 18.60.180 - 18.60.390 apply;
- (5) adopt regulations establishing reasonable fees for administering special inspector examinations and for processing applications for special inspector commissions; and
- (6) do acts necessary to carry out the purposes of AS 18.60.180 - 18.60.390.

**Sec. 18.60.230. Appointment of deputy inspectors.**

The Department of Labor and Workforce Development shall employ deputy inspectors who have passed the examination provided for in AS 18.60.290.

**Sec. 18.60.235. Approved inspectors.**

(a) In addition to the deputy inspectors employed under AS 18.60.230 and the special inspectors commissioned under AS 18.60.240, the commissioner of labor and workforce development may appoint an employee of the Department of Labor and Workforce Development as an approved inspector if the employee has completed training by the chief inspector and has passed an examination that has been approved by the director of the division of labor standards and safety to perform inspections under AS 18.60.180 - 18.60.395 of cast iron boilers and domestic hot water heaters. An employee does not have to pass the examination described in AS 18.60.290 in order to be appointed an approved inspector under this subsection.

(b) The inspection authority of an approved inspector appointed under (a) of this section is limited to performing the inspections described in (a) of this section.

**Sec. 18.60.240. Appointment and qualifications of special inspectors.**

In addition to the deputy boiler inspectors provided for in AS 18.60.230 and the approved inspectors appointed under AS 18.60.235 (a), the Department of Labor and Workforce Development shall, upon the request of a company authorized by the Department of Commerce, Community, and Economic Development under AS 21.09 to insure against loss from explosion of boilers and unfired pressure vessels as described in AS 21.12.070 (a)(7), or upon the request of a company operating unfired pressure vessels, issue to an inspector of the company a state commission as a special inspector. However, to be eligible for a commission as special inspector, a person must have passed the examination provided for in AS 18.60.290, or hold a certificate as an inspector of boilers from the National Board of Boiler and Pressure Vessel Inspectors.

**Sec. 18.60.250. Compensation for special inspectors prohibited.**

A special inspector is not entitled to any compensation or expenses from the state. A special inspector's commission is conditioned upon continuing in the employ of a boiler insurance company or a company operating unfired pressure vessels in this state and upon maintaining the

standards imposed by AS 18.60.180 - 18.60.390.

**Sec. 18.60.260. Duty of special inspectors.**

Each special inspector shall inspect all boilers and unfired pressure vessels insured or operated by the inspector's company. The owner and user of a boiler or unfired pressure vessel inspected by its special inspector is exempt from the payment of the inspection fees provided in AS 18.60.360.

**Sec. 18.60.270. Report of inspection; fee.**

(a) Each company employing a special inspector shall, within 15 days following each inspection for certification as required by AS 18.60.390 for a boiler or unfired pressure vessel, file a report of the inspection with the department.

(b) In addition, a special inspector shall file with the department a report of an inspection that discloses a condition dangerous to life or property in a boiler or unfired pressure vessel. The special inspector shall file the report within 15 days following the inspection.

(c) A company or special inspector who files a report under this section shall enter the report directly into the department's electronic inspection report system or submit the report to the department on a form provided by the department. The department shall charge a company or special inspector a fee of \$10 for filing a report if the company or special inspector does not file the report by entering the report directly into the department's electronic inspection report system.

(d) The department shall deposit the fees collected under (c) of this section in the building safety account created under AS 44.31.025.

(e) In this section, "department" means the Department of Labor and Workforce Development.

**Sec. 18.60.280. Right of inspection.**

(a) The Department of Labor and Workforce Development or a deputy or special inspector shall be given free access, during reasonable hours, to any premises where a boiler or unfired pressure vessel is being constructed, installed, or operated, for the purpose of determining whether the boiler or unfired pressure vessel is constructed, installed, and operated in accordance with AS 18.60.180 - 18.60.390.

(b) An approved inspector appointed under AS 18.60.235(a) has the right of access provided in (a) of this section, but only for the purpose of making the determinations described in (a) of this section for a cast iron boiler or domestic hot water heater.

**Sec. 18.60.290. Examination for deputy and special inspectors.**

The Department of Labor and Workforce Development shall give the examination for the

position of deputy inspector or special inspector using the standard National Board of Boiler and Pressure Vessel Inspectors examination. The examination shall be in writing. If an applicant fails to pass the examination, the applicant may appeal to the department for another examination, which shall be given by the department within the next calendar quarter. The applicant and the applicant's employer shall have access to the record of an applicant's examination.

**Sec. 18.60.300. Revocation or suspension of state commission.**

(a) The Department of Labor and Workforce Development may, after investigation, suspend or revoke a commission for (1) incompetence, (2) conviction of the crime of bribery under AS 11.56.100, receiving a bribe under AS 11.56.110, or perjury under AS 11.56.200, in connection with work as a special or deputy inspector, or (3) intentional falsification of any material matter or statement in the application or in an inspection report or in an administrative or judicial proceeding relating to the enforcement of AS 18.60.180 - 18.60.395. A person whose commission has been suspended or revoked may apply to the Department of Labor and Workforce Development for reinstatement. The department may refuse to reinstate a commission for a person whose license was suspended or revoked.

(b) A person whose commission has been suspended or revoked, or whose application for reinstatement has been denied, may appeal the suspension, revocation, or denial as provided in AS 18.60.370 and is entitled to be present and represented by counsel at the hearing.

**Sec. 18.60.310. Replacement of lost or destroyed certificate or commission.**

If a certificate or commission is lost or destroyed the Department of Labor and Workforce Development shall issue a new certificate or commission without another examination.

**Sec. 18.60.315. Inspection standards.**

Unless the Department of Labor and Workforce Development establishes by regulation a different edition, the most current edition of the National Board Inspection Code Manual for Boiler and Pressure Vessel Inspectors constitutes the minimum boiler and pressure vessel inspection standard of the state for boilers and pressure vessels after they have received their initial inspection certificates from the Department of Labor and Workforce Development. The Department of Labor and Workforce Development may adopt regulations for the maximum practical implementation of the manual and may grant an exception from a specific provision of the manual when the department determines that the implementation of the provision would be impractical.

**Sec. 18.60.320. Inspection of boilers and unfired pressure vessels.**

(a) Each boiler and unfired pressure vessel used or proposed to be used in the state except boilers or unfired pressure vessels exempt under AS 18.60.210 shall be inspected as to construction, installation, condition, and operation, as follows:

(1) power boilers and high pressure or high temperature water boilers shall be given a certificate inspection annually; the inspector may conduct an external inspection while

the boiler is under pressure or an internal inspection if warranted;

(2) low pressure steam or vapor heating boilers shall be given a certificate inspection biennially with an internal inspection every four years if its construction permits an internal inspection;

(3) hot water heating, hot water supply, and coil heating boilers shall be given a certificate inspection biennially with an internal inspection at the discretion of the inspector;

(4) each unfired pressure vessel shall be inspected internally and externally at intervals set by the Department of Labor and Workforce Development; an internal inspection of an unfired pressure vessel is not required if its contents are known to be noncorrosive to the material of which the shell, head, or fittings are constructed, either from the chemical composition of the contents or from evidence that the contents are adequately treated with a corrosion inhibitor, and if the vessel is constructed in accordance with

(A) regulations of the Department of Labor and Workforce Development, if any, in effect at the time of manufacture;

(B) standards set out in the American Society of Mechanical Engineers Boiler and Pressure Vessel Code in effect at the time of manufacture until September 6, 1981; or

(C) if the department adopts subsequent revisions of that code, the standards set out in those revisions as adopted by the department and in effect at the time of manufacture.

(b) A grace period of two months beyond periods specified in (a)(1) - (4) of this section may elapse between certificate inspections.

**Sec. 18.60.330. Rules of inspection.**

(a) Each inspection under AS 18.60.320 shall be made by a deputy inspector employed under AS 18.60.230, an approved inspector appointed under AS 18.60.235(a), or by a special inspector commissioned under AS 18.60.240.

(b) *[Repealed, Sec. 5 ch 37 SLA 1992].*

**Sec. 18.60.340. Inspection certificates.**

(a) If, upon inspection, a boiler or an unfired pressure vessel complies with the regulations of the Department of Labor and Workforce Development, the owner or user shall pay to the department a certificate fee to be established by regulation by the commissioner of labor and workforce development. The Department of Labor and Workforce Development shall issue to

the owner or user an inspection certificate showing the date of inspection and specifying the maximum pressure under which the boiler or unfired pressure vessel may be operated. The certificate shall be posted in a location convenient to the boiler or unfired pressure vessel.

(b) A company authorized by the Department of Commerce, Community, and Economic Development under AS 21.09 to insure boilers or unfired pressure vessels shall notify the Department of Labor and Workforce Development each time it discontinues the insurance for a boiler or unfired pressure vessel located in the state. The Department of Labor and Workforce Development shall terminate the inspection certificate and require a reinspection if the insurance was terminated because of a condition dangerous to life or property.

**Sec. 18.60.350. Suspension of inspection certificate.**

The Department of Labor and Workforce Development may suspend an inspection certificate when, in its opinion, the boiler or unfired pressure vessel for which it was issued cannot be operated without menace to the public safety, or when the boiler or unfired pressure vessel does not comply with the regulations. A special inspector has this same power to suspend an inspection certificate for an insured boiler or unfired pressure vessel or an unfired pressure vessel operated by the company employing the special inspector. Suspension of an inspection certificate continues in effect until reinstatement. A certificate may not be reinstated until the boiler or unfired pressure vessel conforms to the rules and regulations of the Department of Labor and Workforce Development.

**Sec. 18.60.360. Inspection fees.**

(a) The commissioner of labor and workforce development shall, by regulation, establish reasonable fees to be charged for the inspection of boilers and unfired pressure vessels. Separate fees may be established for external inspection, internal inspection, shop inspection, and hydrostatic tests, and fees may vary depending upon the rated power, heating surface area, or cross sectional area of boilers and unfired pressure vessels.

(b) The owner or user of a boiler or unfired pressure vessel that is inspected by a deputy inspector employed under AS 18.60.230 or an approved inspector appointed under AS 18.60.235(a) shall pay the department, upon completion of the inspection, the appropriate inspection fee established under (a) of this section.

(c) The Department of Labor and Workforce Development shall give an official receipt for an inspection fee collected under this section and shall transfer the amount of the fee to the Department of Revenue for deposit in the building safety account created under AS 44.31.025 in the state treasury.

(d) In this section, "fee" does not include the filing fee charged under AS 18.60.270(c).

**Sec. 18.60.370. Appeals.**

A person aggrieved by an order or act of a deputy inspector employed under AS 18.60.230 or an

approved inspector appointed under AS 18.60.235(a) may, within 15 days after notice of the order or act, appeal to the commissioner of labor and workforce development. The commissioner of labor and workforce development or the commissioner's designee shall hold a hearing within 30 days of the appeal but shall give at least 10 days' written notice of the hearing to all interested parties. Within 30 days after the hearing, the commissioner of labor and workforce development or the commissioner's designee shall issue an order approving or disapproving the order or act and shall give a copy of the order to all interested parties. Within 30 days after the order of the commissioner of labor and workforce development or the commissioner's designee, a person aggrieved may file an appeal in the superior court for review. The court shall summarily hear the appeal and may make an appropriate order or decree.

***Sec. 18.60.380. Creation of boiler fund. [Repealed, Sec. 3 ch 29 SLA 1968].***

Repealed or Renumbered

**Sec. 18.60.390. Inspection certificate required; penalty.**

A person may not operate a boiler or unfired pressure vessel under pressure without a valid inspection certificate as provided for in AS 18.60.180 - 18.60.390. The operation of a boiler or unfired pressure vessel without an inspection certificate, or at a pressure exceeding that specified in the inspection certificate, is a misdemeanor and the owner, user, or operator is punishable by a fine of not more than \$1,000 or by imprisonment for not more than six months, or by both. Each day of unlawful operation is a separate offense.

**Sec. 18.60.395. Licensing of boiler operators; fees.**

(a) The Department of Labor and Workforce Development shall adopt regulations for the licensing of boiler operators. The regulations must conform to the generally accepted nationwide standards and practices established for boiler operators. In addition to any requirements adopted by regulation under this subsection, a person applying for a license shall provide to the department, on the application, the person's social security number.

(b) Operators' licenses shall be provided in the following categories:

- (1) fireman - apprentice,
- (2) third class - boiler capacity not to exceed 3,500 pounds of steam an hour or 3,500,000 British thermal units per hour for high temperature or high pressure water boilers,
- (3) second class - boiler capacity not to exceed 100,000 pounds of steam an hour or 100,000,000 British thermal units per hour for high temperature or high pressure water boilers,
- (4) first class - unlimited.

- (c) This section does not require a person to be licensed in order to be a boiler operator.
- (d) Upon request, the department shall provide a social security number provided under (a) of this section to the child support services agency created in AS 25.27.010, or the child support enforcement agency of another state, for child support purposes authorized under law.
- (e) A person shall pay a nonrefundable application fee of \$200 when applying for a license as a boiler operator. Fees collected under this section shall be deposited in the building safety account created under AS 44.31.025.

# ALASKA ADMINISTRATIVE CODE

## TITLE 8, CHAPTER 80

### Article

1. Boiler and Pressure Vessel Construction Code. (8 AAC 80.010 - 8 AAC 80.060)
2. Operation Controls. (8 AAC 80.070 - 8 AAC 80.090)
3. Special Requirements for Alterations or Repair Authorization. (8 AAC 80.100 - 8 AAC 80.120)
4. Requirements for Boiler Operator License. (8 AAC 80.130)
5. General Provisions. (8 AAC 80.800 - 8 AAC 80.900)

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### Article 1

#### Boiler and Pressure Vessel Construction Code

### Section

10. Boiler and pressure vessel construction code.
15. Notification of installation.
20. Inspection fees.
30. Certificates of inspection.
40. Identification of special inspectors.
50. Boiler and pressure vessel inspection standards: installation; combination boiler-water heater units.
60. Inspection and stamping.

#### **8 AAC 80.010. Boiler and pressure vessel construction code.**

(a) The department adopts by reference the following sections and addenda in the 2013 edition of the American Society of Mechanical Engineers' *Boiler and Pressure Vessel Code* (ASME code) as interpreted as of July 1, 2013:

- (1) Section I, Rules for Construction of Power Boilers;
- (2) Section II, Materials;
- (3) Section IV, Rules for Construction of Heating Boilers;
- (4) Section V, Nondestructive Examination;
- (5) Section VI, Recommended Rules for Care and Operation of Heating Boilers;
- (6) Section VII, Recommended Guidelines for the Care of Power Boilers;

(7) Section VIII, Rules for Construction of Pressure Vessels;

(8) Section IX, Qualification Standard for Welding & Brazing Procedures, Welders, Brazers, and Welding and Brazing Operators;

(9) Section X, Fiber Reinforced Plastic Pressure Vessels.

(b) The department adopts by reference the American Petroleum Institute's *Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration*, 10<sup>th</sup> edition, May 2014, with Addendum 1, May 2017, and Addendum 2, March 2018 (API 510).

(c) Canadian registration number (CRN) vessels that are designed and constructed in conformance with the *ASME Code*, but do not bear the ASME symbol, will be approved for use upon receipt of the manufacturer's data sheet.

(d) A boiler or pressure vessel fabricated for installation in this state in accordance with AS 18.60.180 - 18.60.390 must bear a National Board of Boiler and Pressure Vessel Inspectors registration number. Cast iron heating boilers are exempt from the requirements of this subsection. (In effect before 7/28/59; am 4/22/73, Register 45; am 11/22/75, Register 56; am 6/11/78, Register 66; am 5/12/82, Register 82; am 6/21/84, Register 90; am 10/21/92, Register 124; am 12/17/99, Register 152; am 11/1/2000, Register 156; am 9/25/2002, Register 163; am 6/14/2006, Register 178; am 9/27/2008, Register 187; 10/16/2012, Register 204; am 10/23/2014, Register 212; am 4/24/2020, Register 234)

**Authority:** AS 18.60.180

**Editor's note:** The American Society of Mechanical Engineers' *Boiler and Pressure Vessel Code*, and the American Petroleum Institute's *Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration*, adopted by reference in 8 AAC 80.010, are available for public review at the Mechanical Inspection Section, Division of Labor Standards and Safety, Department of Labor and Workforce Development, 2151 Muldoon Rd., Suite 113, Anchorage, AK 99504; telephone (907) 269-4925, and may be obtained by contacting the American Society of Mechanical Engineers, Three Park Avenue, New York, NY 10016; telephone: (800) 843-2763; facsimile: (973) 882-1717; Internet address: <http://www.asme.org> or the American Petroleum Institute, 200 Massachusetts Avenue NW, Suite 1100, Washington DC 20001-5571; telephone (202) 682-8000.

As of Register 151 (October 1999), the regulations attorney made technical revisions under AS 44.62.125(b)(6) to reflect the name change of the Department of Labor to the Department of Labor and Workforce Development made by ch. 58, SLA 1999 and the corresponding title change of the commissioner of labor.

#### **8 AAC 80.015. Notification of installation.**

(a) A contractor or subcontractor who installs boilers or pressure vessels subject to state law must notify the department of any installation within 30 days of the installation. This notification

may be on the departmental preaddressed and preprinted form, or in the form of a letter; however, the notification must contain the following information:

- (1) date of installation;
- (2) name of the owner;
- (3) address of the owner;
- (4) address of the installation;
- (5) specific location of the boiler or vessel;
- (6) telephone contact number for the installer;
- (7) type of boiler or unfired vessel;
- (8) manufacturer's serial number or the National Board number;
- (9) British thermal unit input of the boiler or cubic foot volume of pressure vessel;
- (10) contractor's name and signature; and
- (11) contractor license number.

(b) The information shall be added to the department's data base for boilers and pressure vessels. The information shall appear on the inspector's overdue list until such time as the vessel is certified for service. (Eff. 10/21/92, Register 124)

**Authority:** AS 18.60.180                      AS 18.60.340

**8 AAC 80.020. Inspection fees.**

The owner or user of a boiler, unfired pressure vessel, refrigeration system, or shop that is inspected by a special inspector, chief inspector, approved inspector, or deputy inspector shall pay the department, upon completion of inspections and receipt of invoice, the following fees for inspection services:

- (1) high-pressure boilers with
  - A) under 250 square feet of heating surface:
    - (i) internal inspection - \$90;
    - (ii) external inspection - \$85; or

- (B) 250 - 750 square feet of heating surface:
  - (i) internal inspection - \$100;
  - (ii) external inspection - \$85; or
- (C) over 750 square feet of heating surface:
  - (i) Internal inspection - \$130;
  - (ii) external inspection - \$100;
- (2) low-pressure boilers with
  - (A) under 500 square feet of heating surface:
    - (i) internal inspection - \$80;
    - (ii) external inspection - \$65; or
  - (B) 500 square feet of heating surface or over:
    - (i) internal inspection - \$105;
    - (ii) external inspection - \$75;
- (3) cast iron and miniature boilers - \$65;
- (4) hot water supply boilers - \$55;
- (5) unfired pressure vessels and refrigeration systems - \$65;
- (6) shop and special inspections,
  - (A) \$150 per hour; and
  - (B) repealed 12/17/99;
  - (C) all transportation, travel, and actual expenses;
- (7) each certificate of inspection - \$60. (In effect before 7/28/59; am 11/22/75, Register 56; am 2/12/76, Register 57; am 3/29/78, Register 65; am 6/21/84, Register 90; am 7/1/84, Register 90; am 10/21/92, Register 124; am 12/17/99, Register 152; am 11/1/2000, Register 156; am 12/6/2003, Register 168; am 9/27/2008, Register 187; am 3/6/2016, Register 217)

**Authority:** AS 18.60.180

AS 18.60.340

AS 18.60.360

### **8 AAC 80.030. Certificates of inspection.**

(a) The expiration date of a certificate of inspection issued under AS 18.60.340 will be shown on the certificate. The certificate remains valid until its stated expiration date so long as there is no break in insurance coverage on the vessel for which the certificate was issued.

(b) An insurance carrier assuming coverage for a vessel shall, within 30 days after assuming coverage, provide the department with either a notice of insurance or an insurance binder indicating the effective date of coverage, the location of the vessel, and the state vessel number assigned to it. The carrier shall provide the department with a copy of its initial inspection report if the certificate is due to expire. If the vessel does not have a state vessel number assigned to it, the special inspector for the insurance carrier shall assign it a number. A certificate of inspection will be processed by the department upon receipt of these items.

(c) If the insurance coverage for a vessel is transferred from one insurance carrier to another, the insurance carrier dropping coverage of the vessel shall, within 20 days after the expiration of coverage, provide the department with a notice of cancellation of coverage, stating the location of the vessel, its assigned state vessel number and the reason for cancellation of coverage.

(d) If requested on the notice of insurance or the insurance binder submitted under (b) or (c) of this section by an insurance carrier assuming coverage of a vessel, the department will provide the carrier with an updated computer information sheet for the covered vessel. The sheet will include the date on which the field inspection report forms for the next regular inspection will be sent to the carrier and a description of the vessel.

(e) If a notice of cancellation under (c) of this section is received by the department, and a notice of insurance or insurance binder indicating continuing coverage is not received within 40 days after the cancellation date, the department will make an inspection if a certificate is due to expire.

(f) Vessels not covered by insurance or a department-approved owner or user program, will be inspected by the department. A certificate of inspection for a vessel will be issued if, after inspection, the vessel is found to meet the requirements of AS 18.60.180 and this chapter. (Eff. 5/24/78, Register 66; am 6/21/84, Register 90; am 10/21/92, Register 124)

**Authority:** AS 18.60.180

AS 18.60.340

### **8 AAC 80.040. Identification of special inspectors.**

An individual commissioned as a special inspector shall pay a fee of \$50 and obtain an identification card issued by the department. The identification card, issued for a one-year period, must be carried at all times when performing inspections within the state. An identification card

may be obtained in person at the Anchorage office of the department. Arrangements may be made in advance to obtain the identification card at any other office of the department by contacting the Anchorage office. The identification card must be returned to the department upon termination of employment. (Eff. 5/24/78, Register 66; am 6/21/84, Register 90; am 10/21/92, Register 124; am 12/17/99, Register 152; am 5/9/2018, Register 226)

**Authority:** AS 18.60.180                      AS 18.60.220                      AS 18.60.240

**8 AAC 80.050. Boiler and pressure vessel inspection standards: installation; combination boiler-water heater units.**

(a) The portion of the most current addition of the *National Board Inspection Code Manual for Boiler and Pressure Vessel Inspectors* addressing installation must be used as a guideline if the manufacturer's recommendation is not available.

(b) A combination boiler-water heater unit must comply with the standards of the most current edition of the *National Board Inspection Code Manual for Boiler and Pressure Vessel Inspectors* that are applicable to both boilers and water heaters, with the most stringent standard to be applied in the event of a conflict between standards. (Eff. 9/27/2008, Register 187)

**Authority:** AS 18.60.315

**8 AAC 80.060. Inspection and stamping.**

(a) Upon completion of installation, a boiler or unfired pressure vessel covered by AS 18.60.180 must be inspected by a deputy inspector or special inspector and identified by state vessel number assigned by the department.

(b) The state vessel number shall be affixed as follows:

(1) except as provided in (2) of this subsection, a steel boiler or unfired pressure vessel will be stamped, preferably on the nameplate, with at least five-sixteenths-inch numbers; the stamping must be plainly visible and easily read;

(2) paint marking pens may be used if they are designed to make notations that are permanent and readable; the state vessel number must be placed above or below the manufacturer's information nameplate;

(3) during the initial inspection and each subsequent periodic inspection,

(A) the responsible inspector shall affix an inspection tag provided by the department;

(B) the inspection tag must set out

(i) the state vessel number;

- (ii) the name of the responsible inspector
  - (iii) the responsible inspector's identification number as it appears on the card issued under 8 AAC 80.040, if the responsible inspector is a special inspector; and
  - (iv) the month and year in which the inspection was performed; and
- (C) the inspection tag must be replaced at each subsequent periodic inspection. (Eff. 6/21/84, Register 90; am 10/21/92, Register 124; am 10/16/2012, Register 204; am 4/24/2020, Register 234)

**Authority:** AS 18.60.180

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## **Article 2 Operation Controls**

### **Section**

- 70. Low-water fuel cutoff.
- 80. Pressure or temperature controls.
- 90. Blowdown tanks.

#### **8 AAC 80.070. Low-water fuel cutoff.**

- (a) An automatically fired steam boiler must be equipped with an automatic low-water fuel cutoff with manual reset.
- (b) An automatically fired hot water heating or hot water supply boiler that exceeds an input of 400,000 Btu per hour must be equipped with an automatic low-water fuel cutoff or a loss of flow switch, as appropriate for the heater or boiler. (Eff. 6/21/84, Register 90; am 12/17/99, Register 152, am 4/24/2020, Register 234)

**Authority:** AS 18.60.180

#### **8 AAC 80.080. Pressure or temperature controls.**

- (a) An automatically fired steam boiler must be protected by
  - (1) a high-limit safety control, set to prevent the pressure from exceeding the maximum allowable working pressure of the boiler; and
  - (2) an operating control designed to cut off the fuel supply if the pressure reaches an

operating limit; the operating limit must be less than the maximum allowable working pressure of the boiler.

- (b) An automatically fired hot water heating or hot water supply boiler must be protected by
  - (1) a high-limit safety control that is set to prevent the temperature from exceeding the marked maximum water temperature at the boiler outlet; and
  - (2) an operating control designed to cut off the fuel supply when the temperature reaches an operating limit; the operating limit must be less than the maximum water temperature of the boiler. (Eff. 6/21/84, Register 90; am 12/17/99, Register 152)

**Authority:** AS 18.60.180

**8 AAC 80.090. Blowdown tanks.**

Vented blowdown tanks must be designed for a minimum working pressure of 50 psi and be built in accordance with Section VIII of the *ASME Code*. If a blowdown tank is not vented, it must meet the requirements of the *ASME Code*, be manufactured to the maximum allowable working pressure of the boiler, and be equipped with a safety relief valve of capacity equal to that of the attached boiler. (Eff. 6/21/84, Register 90; am 12/17/99, Register 152)

**Authority:** AS 18.60.180

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**Article 3**  
**Special Requirements for Alterations or Repair Authorization**

**Section**

- 100. Authorization for safety valves.
- 110. Safety, safety relief, or relief valves.
- 120. Authorization for alterations or welded repair.

**8 AAC 80.100. Authorization for safety valves.**

- (a) A company that does not hold a "VR" stamp and has their employees repair, reset, or reseal ASME safety and safety relief valves must obtain a written authorization signed by the director. The authorization must be renewed every three years following the date of original issue. To obtain an authorization, the company must
  - (1) have a written quality control manual;
  - (2) have an approved safety relief valve test bench which has calibrated test gauges;
  - (3) possess a training certificate issued by a safety valve manufacturer, or an owner-

user; and

(4) have seals assigned only to those qualified to seal the safety valves.

(b) Repealed 12/17/99.

(c) A company in possession of a "VR" stamp issued by the NB must file its valid VR certification, its identification symbol, and a control copy of its quality system manual with the chief inspector in order to repair, reset, or reseal ASME safety and safety relief valves.

(d) Notwithstanding (a) of this section, on or after December 17, 2000, the department will not issue or renew letters of authorization as described in (a) of this section. To repair, reset, or reseal ASME safety and safety relief valves on or after December 17, 2000, the company must

(1) have a valid VR certification and make the filings described in (c) of this section;  
or

(2) hold a valid letter of authorization issued before December 17, 2000 under (a) of this section that has not expired. (Eff. 6/21/84, Register 90; am 10/21/92, Register 124; am 12/17/99, Register 152)

**Authority:** AS 18.60.180                      AS 18.60.315

**Editor's note:** For the purposes of 8 AAC 80, the Anchorage office of the Department of Labor and Workforce Development can be contacted at Mechanical Inspection, 3301 Eagle Street, Suite 302, Anchorage, Alaska 99510; phone: (907) 269-4925.

**8 AAC 80.110. Safety, safety relief, or relief valves.**

(a) When two or more boilers operating at different pressures and safety valve settings are interconnected, the lower-pressure boiler or interconnected piping must be equipped with safety valves of sufficient capacity to prevent overpressure.

(b) If in-service safety relief valve testing is impractical because a pressure vessel contains liquids or gases which are hazardous or costly, the testing may be performed at intervals not to exceed five years.

(c) An operator with a verified testing and inspection program, and certified under the standards of *Pressure Vessel Inspection Code: In-Service Inspection, Rating, Repair, and Alteration*, as published by the American Petroleum Institute, and adopted by reference in 8 AAC 80.010, may perform testing at intervals consistent with that standard. (Eff. 6/21/84, Register 90, am 4/24/2020, Register 234)

**Authority:** AS 18.60.180

**8 AAC 80.120. Authorization for alterations or welded repair.**

Alterations or welded repair on boilers and unfired pressure vessels must be performed

- (1) under the direct supervision of a special or deputy inspector; or
- (2) by a person in possession of a repair stamp issued by the NB, if that person
  - (A) submits a written quality-assurance system for acceptance by the chief inspector; to be accepted, the quality-assurance system must detail the personnel responsibilities and operating procedures for performing welded repair in accordance with the *ASME Code* or as defined in the *NBIC*;
  - (B) has available a copy of Section IX of the *ASME Code*, the sections of the *ASME Code* that are applicable to the vessel being worked on, and the *NBIC*; and
  - (C) has submitted a tracer number request form, paid the department a \$100 tracer tracking fee, and received a tracer number from the department's Anchorage office. (Eff. 6/21/84, Register 90; am 10/21/92, Register 124; am 12/17/99, Register 152; am 11/1/2000, Register 156; am 5/9/2018, Register 226)

**Authority:** AS 18.60.180

AS 18.60.315

AS 18.60.360

**Editor's note:** The tracer number request form prescribed in 8 AAC 80.120(2) is available by contacting the Department of Labor and Workforce Development, Mechanical Inspection Section, 1251 Muldoon Road, Suite 113, Anchorage, Alaska, 99504, or by calling (907) 269-4925.

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## Article 4 Requirements for Boiler Operator License

### Section

130. Requirements for boiler operator license.

#### **8 AAC 80.130. Requirements for boiler operator license.**

- (a) An applicant for a boiler operator license must submit documented proof, on a notarized form provided by the department or by notarized statements on letterhead stationery from employers, of qualifications for the respective license category as follows:
  - (1) fireman - no experience required;
  - (2) third class - at least

- (A) 40 hours of classroom training and three months' experience in the operation, maintenance, or repair of boilers; or
  - (B) six months' experience in the operation, maintenance, or repair of boilers;
- (3) second class - at least
- (A) six months' experience in the operation, maintenance, or repair of boilers in the size range of 3,500 pounds of steam an hour to 100,000 pounds of steam an hour while holding a third class license; or
  - (B) 12 months' experience in the operation, maintenance, or repair of boilers having a size equal to or greater than 100,000 pounds of steam an hour;
- (4) first class - at least
- (A) 12 months' experience in the operation, maintenance, or repair of boilers having a size equal to or greater than 100,000 pounds of steam an hour while holding a second class license; or
  - (B) 24 months' experience in the operation, maintenance, or repair of boilers having a size equal to or greater than 100,000 pounds of steam an hour.
- (b) An examination will be given upon approval of an application. If the applicant fails the examination, the applicant must wait 30 days before reexamination.
- (c) A license is valid for three years and is renewable upon request by contacting the Anchorage office of the department. (Eff. 6/21/84, Register 90; am 6/14/2006, Register 178; am 9/27/2008, Register 187; am10/16/2012, Register 204)

**Authority:** AS 18.60.180 AS 18.60.395

**Editor's note:** For the purposes of 8 AAC 80, the Anchorage office of the department can be contacted at Mechanical Inspection Section, Division of Labor Standards and Safety, Department of Labor and Workforce Development, 1251 Muldoon Rd., Suite 313, Anchorage, AK 99504; telephone: (907) 269-4925.

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## Article 5 General Provisions

### Section

700. Reporting of boiler or pressure vessel accidents.

- 800. Counting of time.
- 900. Definitions.

**8 AAC 80.700. Reporting of boiler or pressure vessel accidents.**

(a) An owner or operator shall report any accident that results in the injury of a person and that involves a boiler or pressure vessel, to the director in detail, within 48 hours from the time of the occurrence. If the deadline falls on a weekend or state holiday, the report must be made at the beginning of the next state working day. The report shall be in the form of a written narrative to the director.

(b) The owner of a boiler or pressure vessel shall immediately, by telephone or electronic mail, report to the department's mechanical inspection section any accident involving a boiler or pressure vessel that results in a fatality or an injury that requires a person to receive a doctor's care. If the section's office is closed, the owner shall notify the local police or local office of the Department of Public Safety, division of state troopers. On the next business day following the accident, the owner shall mail or send by electronic mail a written report of the accident to the department's mechanical inspection section. The scene of the accident must be secured and not disturbed to any greater extent than is necessary to prevent additional injuries and to remove the deceased or injured person. If, in order to secure the area, the device is removed from service, the department will conduct an immediate investigation. The device may not be repaired or operated until the investigation is completed. (Eff. 2/23/2011, Register 197)

**Authority:** AS 18.60.180 AS 18.60.0220

**8 AAC 80.800. Counting of time**

The department will consider days to be consecutive calendar days for the counting of time under 8 AAC 80.015 and 8 AAC 80.030. (Eff. 12/17/99, Register 152)

**Authority:** AS 18.60.180 AS 18.60.340

**8 AAC 80.900. Definitions**

(a) In this chapter and in AS 18.60.180 - 18.60.395, unless the context requires otherwise

(1) "alteration" means a change in any item described on the original manufacturer's data report which affects the pressure capability of a boiler or unfired pressure vessel, and includes, for example, a non-physical change such as an increase in the maximum allowable working pressure (internal or external) or design temperature of a boiler or unfired pressure vessel, and a reduction in minimum temperature such that additional mechanical tests are required;

(2) "ASME Code" means the *American Society of Mechanical Engineers Boiler and Pressure Vessel Code*, adopted by reference in 8 AAC 80.010;

(3) "boiler" means a closed vessel in which water or other vaporizing fluids are heated, steam is generated, steam is superheated, or a combination of these processes occurs, under pressure or vacuum, for use external to the vessel by the direct application of heat; "boiler" includes fired units for heating or vaporizing liquids other than water where these units are separate from processing systems and complete within themselves; "boiler" also means a

(A) power boiler - a boiler in which steam or other vapor is generated at a pressure of more than 15 psi for use external to itself;

(B) miniature boiler - a power boiler or high-temperature water boiler that does not exceed the following limits:

(i) 16 inches inside diameter of shell;

(ii) 20 square feet heating surface; this sub-subparagraph is not applicable to electric boiler;

(iii) five cubic feet gross volume exclusive of casing and insulation;  
and

(iv) 100 psi maximum allowable working pressure;

(C) waste heat boiler - an unfired pressure vessel or system of unfired pressure vessels intended for the purpose of producing and controlling an output of thermal energy;

(D) steam heating boiler - a boiler designed to convert water into steam that is supplied to an external space heating system;

(E) hot water heating boiler - a boiler designed to heat water for circulation through an external space heating system;

(F) hot water supply boiler - a boiler used to heat water for purposes other than space heating;

(G) portable boiler - a boiler which is primarily intended for temporary location and the construction and usage of which permits it to be readily moved from one location to another;

(H) electric boiler - a power boiler or a high-temperature water boiler in which the source of heat is electricity; and

(I) high-temperature water boiler - a water boiler intended for operation at pressures in excess of 160 psi or temperatures in excess of 250 degrees Fahrenheit;

- (4) "certificate of inspection" means a certificate issued by the department for the operation of a boiler or unfired pressure vessel, as required by AS 18.60.340 and 18.60.390;
- (5) "chief inspector" means the individual who is in charge of boiler and pressure vessel inspections in the mechanical inspection section of the division of labor standards and safety in the department;
- (6) "commissioner" means the commissioner of labor and Workforce Development;
- (7) "department" means the Alaska Department of Labor and Workforce Development;
- (8) "director" means the director of the labor standards and safety division of the department, or his or her designee;
- (9) "discharge capacity" means the discharge capacity of safety or safety relief valves in terms of Btu's or pounds per hour;
- (10) "external inspection" means an inspection made when a boiler or unfired pressure vessel is in operation;
- (11) "internal inspection" means as complete an examination as can reasonably be made of the internal and external surfaces of a boiler or unfired pressure vessel while it is shut down, with manhole plates, handhole plates or other inspection opening closures removed as required by the inspector;
- (12) "owner or user" means any person that is legally responsible for the safe installation, operation, and maintenance of a boiler or unfired pressure vessel within the state;
- (13) "pressure vessel" means a vessel in which the pressure is obtained from an external source, or by the application of heat from an indirect source, or from a direct source other than those boilers defined in (3) of this subsection;
- (14) "psi" means pounds per square inch;
- (15) "repair" means the work necessary to restore a boiler or unfired pressure vessel to a safe and satisfactory operating condition, in accordance with the provisions of the *NBIC*;
- (16) "NB" means the National Board of Boiler and Pressure Vessel Inspectors;
- (17) "*NBIC*" means the *National Board Inspection Code Manual for Boiler and Pressure Vessel Inspectors*, as adopted in AS 18.60.315 ;

- (18) "R stamp" means the repair stamp issued by the National Board of Boiler and Pressure Vessel Inspectors for the repair of boilers or pressure vessels;
- (19) "VR stamp" means the safety or safety relief valve repair stamp issued by the National Board of Boiler and Pressure Vessel Inspectors;
- (20) "automatic utility hot water heater" means a vessel in which potable water is heated by the combustion of fuel, by electricity, or by any other source, and withdrawn for external use;
- (21) "Btu" means British thermal unit;
- (22) "control copy" means a quality system manual described in the *NBIC*, RA 2151(e);
- (23) "deputy inspector" means an employee of the department assigned by the department chief inspector to conduct inspections under this chapter;
- (24) "kPa" means kilopascal;
- (25) repealed 9/25/2002;
- (26) "special inspector" means an individual commissioned under AS 18.60.240 and 8 AAC 80.040 to perform inspections under this chapter;
- (27) "approved inspector" means an employee of the department appointed by the commissioner and approved by the director to perform inspections of cast iron boilers and domestic hot water heaters under AS 18.60.180 - 18.60.395 and this chapter;
- (28) "National Board" has the same meaning given for the term "NB" in this section;
- (29) "combination boiler-water heater unit" means a water heating device that combines the function of an automatic utility hot water heater and a space heating boiler in a single unit.
- (b) As used in AS 18.60.210 (a)(5), "inside diameter not exceeding six inches" means having a cross sectional area no greater than 28.26 square inches.
- (c) As used in AS 18.60.210 (a)(2), "unfired pressure vessels" means portable "DOT" stamped pressure vessels used for the shipment of liquids or gases under pressure.
- (d) As used in AS 18.60.210(a)(6), "place of public assembly" has the same meaning given "public structures" in AS 18.60.660. (Eff. 6/21/84, Register 90; am 10/21/92, Register 124; am 12/17/99, Register 152; am 11/1/2000, Register 156; am 9/25/2002, Register 163; am 12/6/2003, Register 168; am 9/27/2008, Register 187 am 2/23/2011, Register 197; am 4/24/2020, Register 234)

**Authority:** AS 18.60.180 AS 18.60.315

**Editor's note:** For the purposes of 8 AAC 80, the Anchorage office of the Department of Labor and Workforce Development can be contacted at Mechanical Inspection Section, Division of Labor Standards and Safety, Department of Labor and Workforce Development, 2151 Muldoon Rd., Suite 113, Anchorage, Alaska 99504; telephone: (907) 269-4925.

As of Register 151 (October 1999), the regulations attorney made technical revisions under AS 44.62.125 (b)(6) to reflect the name change of the Department of Labor to the Department of Labor and Workforce Development made by ch. 58, SLA 1999 and the corresponding title change of the commissioner of labor.